Appendix I

Traffic Impact Analysis

Transportation Impact Analysis

Murrieta Costco and Vineyard II

Murrieta, California

Final

March 2020

KITTELSON & ASSOCIATES

Transportation Impact Analysis

Murrieta Costco and Vineyard II

Murrieta, California

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Project No. 21763

March 2020

KITTELSON & ASSOCIATES

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Executive Summary

EXECUTIVE SUMMARY

The Project proposes an approximately 153,362 square foot Costco warehouse, Costco car wash, Costco Gasoline fuel facility with 32 fueling positions (referred to in this report as Costco), and a 79,900 square foot shopping center (referred to in this report as Vineyard II) in the City of Murrieta, California, along the north side of Clinton Keith Road. In conjunction with site development, a new north/south roadway that connects to Clinton Keith Road, Warm Springs Parkway, would be developed along the site frontage. A new signalized intersection on Warm Springs Parkway would jointly serve Costco and the Vineyard II site which is located immediately east of Costco. In addition, an access driveway north of the signal on Warm Springs Parkway would serve Costco and the Vineyard II site. While the access driveway would allow full-movements in the near-term, it would be limited to right-in/right-out movements when Warm Springs Parkway is extended north with future development. A right-in/right-out access driveway south of the signal would serve the Vineyard II site and an additional right-in/right-out access driveway farther south would serve both sites.

Key findings from the analysis are detailed below.

Existing Conditions

- All study intersections currently operate at an acceptable level of service (LOS) during the weekday PM and Saturday midday peak hours, except for the following:
    - Salida Del Sol & Clinton Keith Road: The southbound approach to the intersection operates at a LOS F during the weekday PM peak hour. The intersection does not meet the vehicle volume-based signal warrants in the Manual of Uniform Traffic Control Devices (MUTCD) and there are alternate routes available for vehicles to access a signal on Clinton Keith Road.
    - Elizabeth Lane & Clinton Keith Road: The northbound approach to the intersection operates at a LOS F during the weekday PM peak hour. The intersection does not meet the vehicle volume-based MUTCD signal warrants and 5 vehicles are projected to make a northbound movement.
    - Max Gillis Boulevard/Thompson Road & SR-79: This signalized intersection operates at a LOS F during the weekday PM peak hour and a LOS E during the Saturday midday peak hour. This intersection currently provides a connection between I-215 and SR-79 in the absence of the final segment of the Clinton Keith Extension. When the extension is completed in the future, it will divert traffic currently traveling through this intersection and thus improve operations.
- All study roadway segments operate under capacity and at an acceptable LOS.
- All study freeway segments operate at an acceptable LOS.
- There are queues exceeding the desired threshold at the following locations under existing conditions:
    - Nutmeg Street & Clinton Keith Road (WBL, SBL)
    - California Oaks Road & Clinton Keith Road (WBL, NBL)

        - Note that the northbound left turn storage has recently be extended to 250 feet and therefore the NBL queue does not exceed the storage in place today
    - Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road (WBL)
    - Whitewood Road & Clinton Keith Road (SBL)

Proposed Project Trip Generation

- The Costco portion of the Project is forecast to generate 739 net new and 368 pass-by weekday PM peak hour trips and 1,078 net new and 440 pass-by Saturday midday peak hour trips.
- The Vineyard II portion of the Project is forecast to generate 387 net new and 128 pass-by weekday PM peak hour trips and 568 net new and 188 pass-by Saturday midday peak hour trips.

2021 Project Completion Conditions (Existing volumes + ambient growth + project)

- With the proposed Project, Warm Springs Parkway will be extended north to the northern Project boundary. A signal will be installed to provide access to the Costco site and Vineyard II sites.
- In addition to the three study intersections not meeting standards under existing conditions, the intersection of California Oaks Road & Clinton Keith Road is projected to operate at a LOS E during the weekday PM peak hour. Clinton Keith Road was designed with width to provide six travel lanes in the future, which will require restriping the roadway and potential signal modifications. Given the intersection meets standards under existing conditions, the Project will be responsible for striping the roadway to provide an additional through lane in each direction.
- All study roadway segments continue to operate under capacity and at an acceptable LOS.
- There are queues exceeding the available storage by more than 25-feet (or by more than 25 feet beyond existing conditions for locations that already exceed capacity) at the following locations under 2021 Project Conditions without signal timing adjustments or other mitigation:
    - Nutmeg Street & Clinton Keith Road (WBL, SBL)
    - California Oaks Road & Clinton Keith Road (WBL, NBL)
    - Greer Road/Murrieta Oaks Avenue & Clinton Keith Road (SBL)
    - Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road (WBL)
    - High School West Driveway/Warm Springs Parkway & Clinton Keith Road (EBL)
    - Whitewood Road & Clinton Keith Road (NBL, SBL)

2021 Cumulative Conditions (Existing volumes + ambient growth + project + approved/proposed projects)

- In addition to the study intersections not meeting standards under year 2021 Project Completion Conditions, the following intersections would not meet standards with the addition of the approved/proposed projects:

- Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road: This intersection is projected to operate at a LOS E under year 2021 Project Completion Conditions during the weekday PM and Saturday midday peak hours. The City's plans indicate that Clinton Keith Road will provide six travel lanes in the future, which would enable this intersection to operate within standards. The Project's equitable share of the future improvement is 27.6%.
- Creighton Avenue & Clinton Keith Road: This intersection is projected to operate at a LOS F under year 2021 Cumulative Conditions during the weekday PM and Saturday midday peak hours. The proposed mitigation to provide improved signal coordination would improve operations to LOS C and D for the weekday PM and Saturday midday peak hours, respectively. The proposed access alternatives would affect volume assignment at this intersection however the overall intersection performance would be similar. The City is currently implementing signal coordination along Clinton Keith Road and would routinely update timing plans as traffic volumes change. With updated signal timing, the Project would not have a significant and unavoidable impact at this location.
- Bronco Way & Clinton Keith Road: This intersection is projected to operate at a LOS F under year 2021 Project Completion Conditions during the weekday PM peak hour. The proposed mitigation to provide improved signal coordination would improve operations to LOS C. The City is currently implementing signal coordination along Clinton Keith Road and would routinely update timing plans as traffic volumes change. With updated signal timing, the Project would not have a significant and unavoidable impact at this location.
- Whitewood Road & Clinton Keith Road: This intersection is projected to operate at a LOS E during the weekday PM and Saturday midday peak hours. The City has identified this intersection as not meeting standards in its planning efforts.
- Max Gillis Boulevard/Briggs Road & Leon Road: This intersection is projected to operate at a LOS F during the weekday PM peak hour. This intersection currently serves to provide a connection between I-215 and SR-79. When the Clinton Keith Extension is completed in the future, it will divert traffic currently using Leon Road and Max Gillis Boulevard and improve operations at the intersection.

- All study roadways continue to operate under capacity and at an acceptable LOS, except for the segment of Clinton Keith Road between I-215 Northbound Ramps and High School West Driveway/Warm Spring Parkway, which is projected to operate at a LOS D under year 2021 Cumulative Conditions, in excess of the City's LOS C standard. However, the City's General Plan indicates that LOS D is allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the proposed site and study roadways.
- There are queues exceeding the available storage by more than 25 feet (or by more than 25 feet beyond existing conditions for locations that already exceed capacity) at the following

locations under 2021 Cumulative Conditions without signal timing adjustments or other mitigation:

- Nutmeg Street & Clinton Keith Road (WBL, SBL)
- California Oaks Road & Clinton Keith Road (WBL)
- Greer Road/Murrieta Oaks Avenue & Clinton Keith Road (WBL)
- Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road (EBL, WBL)
- I-215 SB Ramps & Clinton Keith Road (EBR)
- Creighton Avenue & Clinton Keith Road (EBL)
- High School West Driveway/Warm Springs Parkway & Clinton Keith Road (EBL)
- Bronco Way & Clinton Keith Road (EBL)
- Whitewood Road & Clinton Keith Road (EBL, NBL, SBL)
- Whitewood Road & Baxter Road (NBL)

- A detailed signal timing evaluation is recommended along Clinton Keith Road and Warm Springs Parkway to address traffic volume changes and associated queuing. Signal timing adjustment is a regular activity that the City completes to respond to changing traffic conditions. In addition, dual eastbound left-turn lanes are recommended at Clinton Keith Road and Creighton Road to address queue spillback.

2035 Build-Out Conditions

- Because the Project does not propose a zoning change, a long-range analysis is not required per the City's Traffic Impact Analysis Preparation Guide. However, as requested by the City of Murrieta, an additional 2035 General Plan Build-Out Conditions analysis was conducted to ensure that the roadway geometries along Warm Springs Parkway are appropriately designed.
- Study intersections along Warm Springs Parkway and on Clinton Keith Road between I-215 and Warm Springs Parkway operate within standards.
- All study roadways continue to operate under capacity and at an acceptable LOS, except for the segment of Clinton Keith Road between I-215 Northbound Ramps and Warm Spring Parkways, which is projected to operate at a LOS E under year 2035 Build-Out conditions on a weekday, in excess of the City's LOS C standard. However, the City's General Plan acknowledges that certain corridors are projected to exceed the City's performance standard, including Clinton Keith Road. Therefore, the LOS failure on this roadway is not considered a significant impact.
- A detailed signal timing evaluation is recommended along Clinton Keith Road and Warm Springs Parkway to address traffic volume changes and associated queuing. In addition, dual eastbound left-turn lanes are recommended at Clinton Keith Road and Creighton Road to address queue spillback.
- The Project is expected to contribute minimal traffic to the I-215 freeway corridor as compared to the 2035 General Plan Build-Out Year projections.

The California Environmental Quality Act (CEQA) findings related to transportation are summarized in Table 37 in Section 7.6 of this report.

Section 1 Introduction

1.0 INTRODUCTION

1.1 PURPOSE OF TIA AND STUDY OBJECTIVES

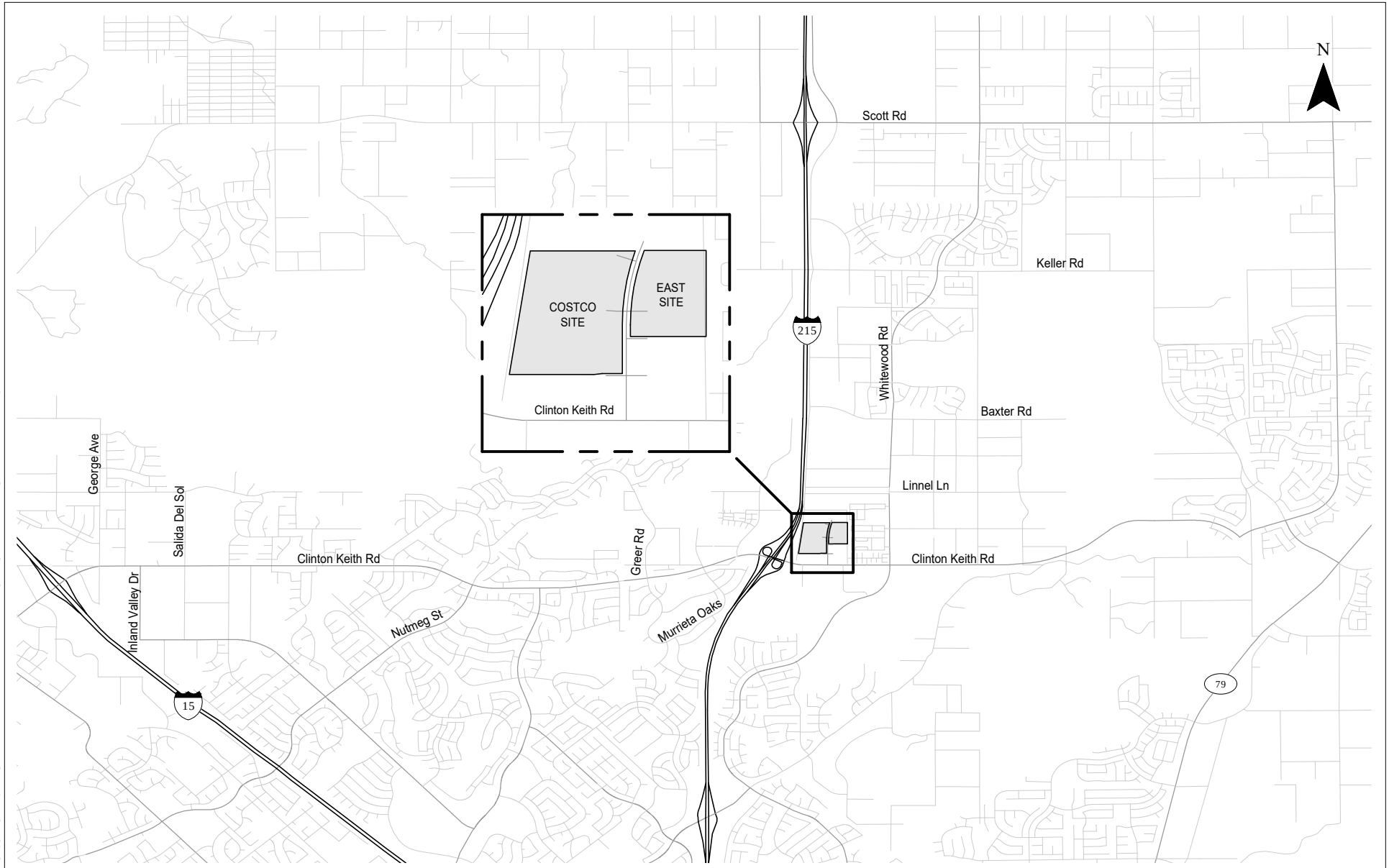
The purpose of this traffic impact analysis (TIA) is to evaluate the traffic impacts associated with the proposed Project, which includes an approximately 153,362 square foot Costco warehouse, Costco car wash, Costco Gasoline fuel facility with 32 fueling positions, and a 79,900 square feet shopping center in the City of Murrieta, California (City).

Per the City's Traffic Impact Analysis Preparation Guide (Reference 1), the TIA analyzes the following conditions:

- Existing Traffic – Based on traffic counts collected in late 2017 and late 2018. The 2017 counts were grown by an annual growth factor to be consistent with the 2018 volumes.
- Project Completion (existing + ambient + project) – Based on existing volumes, background growth, and traffic associated with the proposed project. The Project is expected to be completed in year 2021; as such, three years of background growth were assumed. This scenario serves as the basis for determining project-specific impacts, mitigation, and conditions of approval.
- Cumulative (existing + ambient + project + cumulative) – This scenario also includes other approved projects in the study area expected to be built out by year 2021. This scenario is used to determine whether funded improvements can accommodate the cumulative traffic at the target Level of Service (LOS) identified in the General Plan.
- General Plan Buildout Conditions – This scenario assesses 2035 operations at the site access points on Warm Springs Parkway and at the Clinton Keith Avenue/High School West Driveway-Warm Springs Parkway intersection. While the project is consistent with the zoning in the City of Murrieta's General Plan (Reference 2), this analysis is included, at the direction of City staff, to ensure that the intersections along Warm Springs Parkway are appropriately designed.

1.2 SITE LOCATION AND STUDY AREA

The Project is located in the City of Murrieta, north of Clinton Keith Road and east of Antelope Road. A map of the site vicinity is provided in Figure 1. The study area includes intersections in the City of Murrieta, City of Wildomar, and Riverside County, as noted in Section 2, Area Conditions. The area immediately east of the site is residential and there is a high school south of the site. The area immediately west and south of the site is planned for commercial development.



Site Vicinity
Murrieta, CA

Figure
1

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1.3 DEVELOPMENT PROJECT DESCRIPTION

1.3.1 Project Size and Description

The Project proposes a 153,362 square foot Costco warehouse, Costco car wash, Costco Gasoline fuel facility with 32 fueling positions, and a 79,900 square feet shopping center. Primary access to the site would be provided via Clinton Keith Road and a new north/south roadway – Warm Springs Parkway. The site plan, including access locations, is provided in Figure 2. Secondary access to the Project site would be provided by Creighton Avenue however this access is not guaranteed to be in operation for opening day. Therefore, two access alternatives are analyzed and presented in this report, with and without Creighton Avenue Access. Additional details on the fuel area including a review of vehicle stacking are provided in Appendix "A."

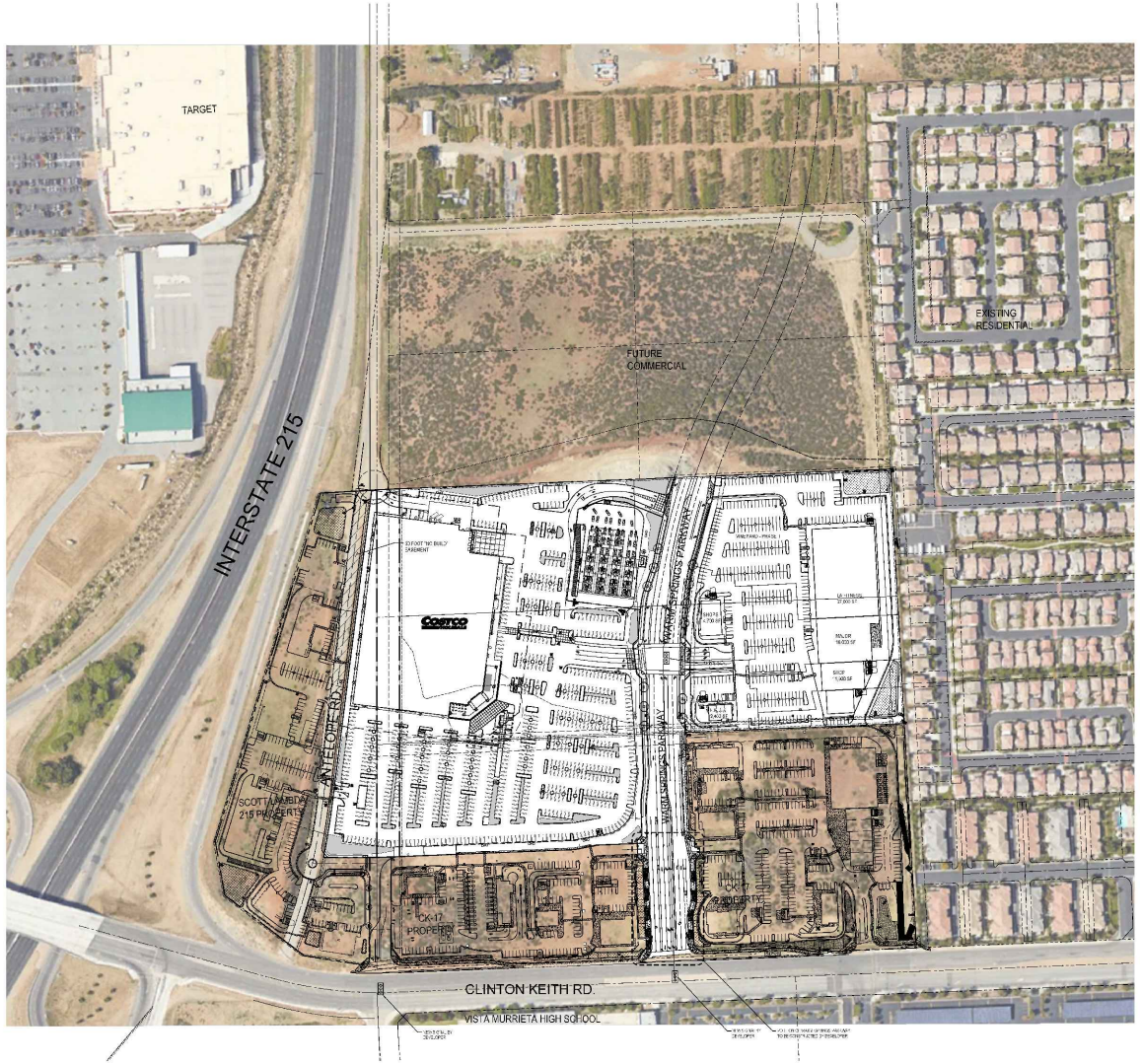
1.3.2 Existing Land Use and Zoning

The property is designated as commercial land use according to the City's 2035 General Plan and is zoned for regional commercial uses. It is currently a vacant lot. The Project does not propose any changes to the existing zoning. Land uses adjacent to the site include a vacant site to the north, commercial uses, Vista Murrieta High School and apartments to the south, residential developments to the east.

The proposed site is bordered by Antelope Road to the west and existing residential development to the east. The sites immediately to the west and south are also planned for commercial development.

The Project anticipates opening in 2021 and is not intended to be phased.

The Scoping Agreement Form from the City of Murrieta was provided to Caltrans for comments, which are provided in Appendix "B." In addition, information on any in-process developments were gathered from the City of Menifee and the County of Riverside.



PROJECT DATA

APPLICANT:

PROJECT ADDRESS: NEC OF I-215 & CLINTON KEITH RD. MURRIETA, CA

APN'S:

LEGAL DESCRIPTION:

ZONING: REGIONAL COMMERCIAL

SETBACKS:

FAR:

SITE DATA:

BUILDING DATA:

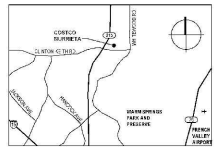
CODE ANALYSIS:

PARKING DATA:

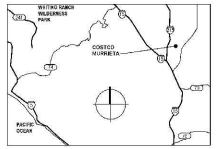
CURRENT OWNERS

UTILITY COMPANIES:

VICINITY MAP



REGIONAL MAP



DEVELOPMENT PLAN
DP-2018-1652

△	DATE	DESCRIPTION
1		RESPONSE TO CITY COMMENTS

0 50' 100' 200'
1" = 100'-0"

COSTCO WHOLESALE
MURRIETA, CA

NEC OF I-215 & CLINTON KEITH RD. MURRIETA, CA

1191 Second Ave, Ste 100
Seattle, WA 98101
206.962.4500
MG2.com
MG2

17-0091-01
APRIL 24, 2019

PRELIMINARY SITE PLAN

DD11-03

COSTCO WHOLESALE
MURRIETA, CA

PRELIMINARY SITE PLAN
APRIL 24, 2019

Project Site Plan
Murrieta, CA

Figure
2

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Section 2 Area Conditions

2.0 AREA CONDITIONS

This section includes the current operational and geometric characteristics of the study roadways and intersections. These conditions would be compared with future conditions later in this report. It also discusses the transit service in the study area.

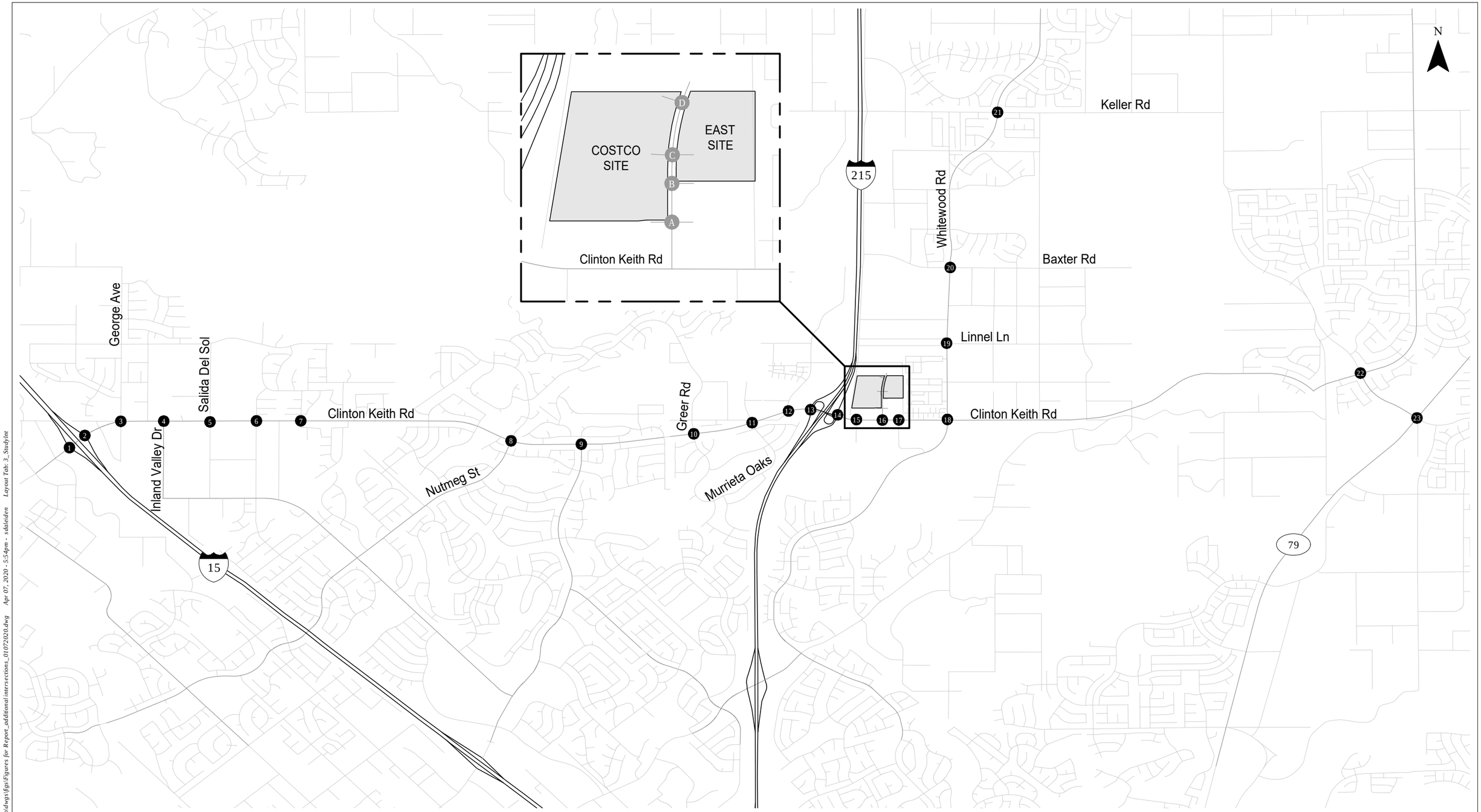
2.1 STUDY AREA

The study intersections were identified through the scoping process with the City. The Scoping Agreement Form documenting the study intersections is provided in Appendix "B." Study intersections include:

1. I-15 SB Ramps & Clinton Keith Road
2. I-15 NB Ramps & Clinton Keith Road
3. George Avenue & Clinton Keith Road
4. Inland Valley Drive & Clinton Keith Road
5. Salida Del Sol & Clinton Keith Road
6. Elizabeth Lane & Clinton Keith Road
7. Smith Ranch Road & Clinton Keith Road
8. Nutmeg Street & Clinton Keith Road
9. California Oaks Road & Clinton Keith Road
10. Greer Road/Murrieta Oaks Avenue West & Clinton Keith Road
11. Mitchell Road/Murrieta Oaks Avenue East & Clinton Keith Road
12. McElwain Road & Clinton Keith Road
13. I-215 SB Ramps & Clinton Keith Road
14. I-215 NB Ramps & Clinton Keith Road
15. Creighton Avenue & Clinton Keith Road
16. High School West Driveway/Warm Springs Parkway & Clinton Keith Road
17. Bronco Way & Clinton Keith Road
18. Whitewood Road & Clinton Keith Road
19. Whitewood Road & Linnel Lane
20. Whitewood Road & Baxter Road
21. Whitewood Road & Keller Road
22. Max Gillis Blvd/Briggs Road & Leon Road
23. Max Gillis Blvd/Thompson Road & SR-79

A. Warm Springs Parkway & Project Driveway A
B. Warm Springs Parkway & Project Driveway B
C. Warm Springs Parkway & Project Driveway C
D. Warm Springs Parkway & Project Driveway D

These intersections are identified in Figure 3 using the numbers and letters above.



- Study Intersection
- Site Driveway

Study Intersections
Murrieta, California

Figure
3

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In addition to the study intersections listed above, the following roadway segments were analyzed:

1. Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway
2. Whitewood Road, north of Clinton Keith Road
3. Warm Springs Parkway, north of Clinton Keith Road (future scenarios)

Per request of Caltrans District 8 staff, freeway mainline segments along I-215 were also evaluated between the Scott Road interchange to the north and Murrieta Hot Springs Road interchange to the south.

2.2 GENERAL PLAN CIRCULATION ELEMENT

The roadway classifications from the General Plan Circulation Element are shown Figure 4.

2.3 TRANSIT SERVICE

Riverside Transit Agency provides bus service in the project area. The Riverside Transit bus line 61 provides service on Clinton Keith Road via a bus stop at the intersection of Clinton Keith Road and the main entrance to the Vista Murrieta High School (Reference 3). This bus lines operates from Sunday to Saturday from approximately 7 AM to 7 PM and provide connections to Menifee and Temecula. During the weekday morning, headways are approximately 30 minutes in the northbound direction and 60 minutes in the southbound direction. During the weekday evening, headways are approximately 60-70 minutes in both directions. On the weekend, headways are approximately 85 minutes.

2.4 PEDESTRIAN AND BICYCLE FACILITIES

In the immediate vicinity of the site, pedestrian facilities include sidewalks and crosswalks. In particular, sidewalks are provided on the south side of Clinton Keith Road and on the north side of Clinton Keith Road from the Project site to Whitewood Road. No sidewalks are provided west of the Project site over the I-215 Freeway. Dedicated crosswalks to cross Clinton Keith Road are limited and are only provided at the signalized intersections of Bronco Way (Vista Murrieta High School entrance) and Whitewood Road.

Class II bike lanes are provided along Clinton Keith Road from Copper Craft Drive to Whitewood Road and on Whitewood Road south of Clinton Keith Road within the project area.

2.5 EXISTING TRAFFIC CONTROLS AND INTERSECTION GEOMETRIES

Descriptions of key roadway facilities in the study area are provided below. The existing traffic controls and geometries at the study intersections are shown in Figure 5.

I-215: I-215 is a north-south interstate highway that provides regional access to Menifee and connects to I-15 to the south. Interchanges along I-215 near the Project site are provided at Clinton Keith Road (just

south of the site) and Scott Road (about 3 miles north of the site). In the study area, I-215 provides three travel lanes in each direction.

I-15: I-15 is a north-south interstate highway that provides regional access to Corona and Temecula. Interchanges along I-15 near the project site are provided at Clinton Keith Road and the interchange with I-215. In the study area, I-15 provides three travel lanes in each direction.

Clinton Keith Road: Clinton Keith Road is an east-west roadway providing primary access to the project site. This roadway is classified as an arterial to the west of the project site. Clinton Keith Road was designed and constructed at its ultimate width which accommodate three travel lanes in each direction. At some locations it is striped as two lanes in each direction with the intent to restripe the roadway to add the additional lanes as traffic volumes increase. Currently there are two eastbound through lanes at all locations and two westbound through lanes at all locations except at Mitchell Road/Murrieta Oaks Avenue, where there are three westbound lanes. During the summer of 2018, an extension of Clinton Keith Road to connect Whitewood Road to Leon Road was constructed. In the future, the roadway will be further extended to SR-79 when funding is available.

Whitewood Road: Whitewood Road is a four-lane major north-south roadway located east of the project site. Whitewood Road serves several residential neighborhoods to the north and south of Clinton Keith Road and an extension from Baxter Road to Keller Road has recently been completed.

Antelope Road: Antelope Road is a north-south local roadway, without access to Clinton Keith Road. It is a 2-lane roadway without sidewalks. The portion of Antelope Road between Clinton Keith Road and the north boundary of the site will be vacated with the proposed development of the Vineyard III project on the site just to the east, and Antelope Road will be cul-de-sacked north of the site.

Warm Springs Parkway: Warm Spring Parkway is a planned north-south roadway, providing direct access to the project site. The roadway will be completed to the north edge of the project boundary with construction of the project. In the future, Warm Springs Parkway will continue north to tie-in to the existing Antelope Road south of Scott Road.

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General Plan 2035 Circulation Map

Exhibit 5-10

General Plan 2035 Circulation Map
Murrieta, California

Figure
4

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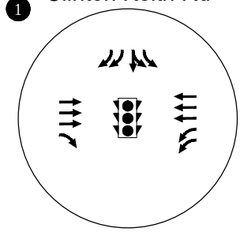
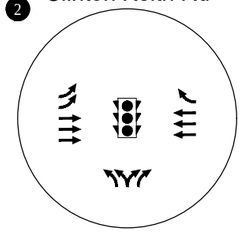
1 I-15 SB Ramps & Clinton Keith Rd



2 I-15 NB Ramps & Clinton Keith Rd



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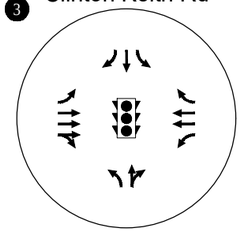
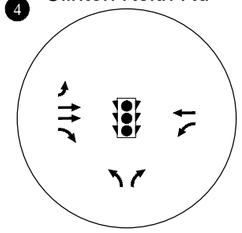
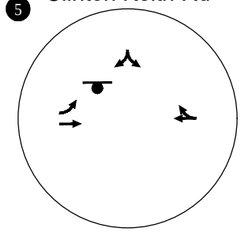


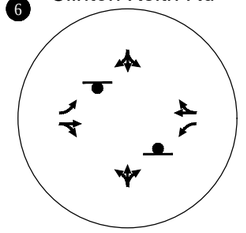
4 Inland Valley Dr & Clinton Keith Rd



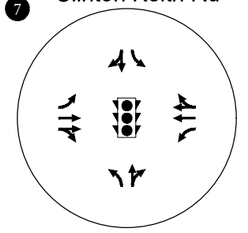
5 Salida Del Sol & Clinton Keith Rd



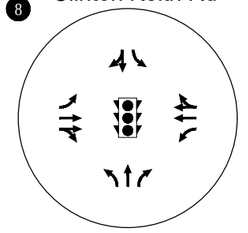
6 Elizabeth Ln & Clinton Keith Rd



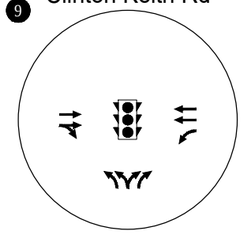
7 Smith Ranch Rd & Clinton Keith Rd



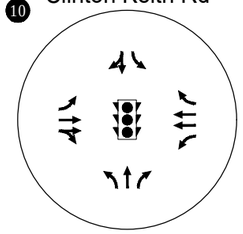
8 Nutmeg St & Clinton Keith Rd



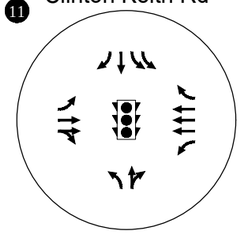
9 California Oaks Rd & Clinton Keith Rd



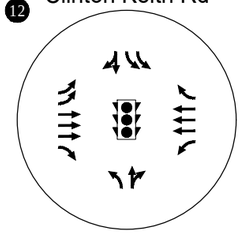
10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



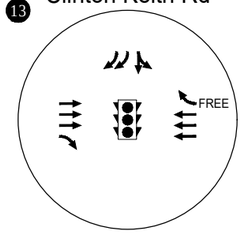
11 Murrieta Oaks Ave E & Clinton Keith Rd



12 McElwain Rd & Clinton Keith Rd



13 I-215 SB Ramps & Clinton Keith Rd



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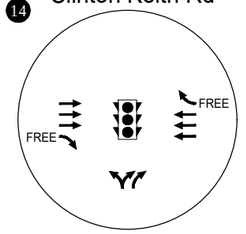
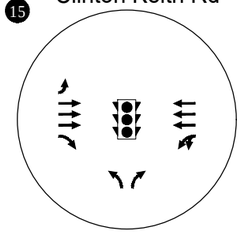
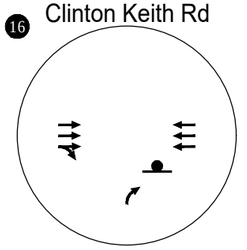


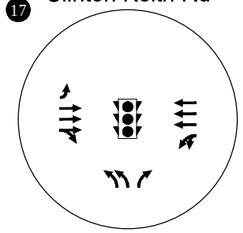
15 Creighton Ave & Clinton Keith Rd



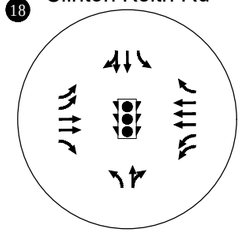
16 High School West Dwy & Clinton Keith Rd



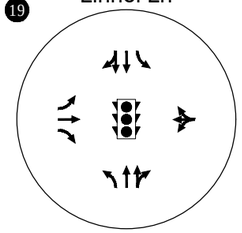
17 Vista Murrieta HS & Clinton Keith Rd



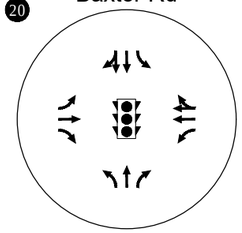
18 Whitewood Rd & Clinton Keith Rd



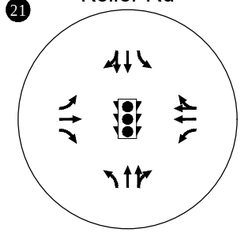
19 Whitewood Rd & Linnel Ln



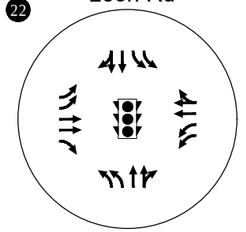
20 Whitewood Rd & Baxter Rd



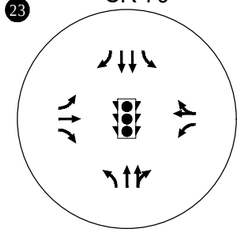
21 Whitewood Rd & Keller Rd



22 Max Gillis Blvd/Briggs Rd & Leon Rd



23 Max Gillis Blvd/Thompson Rd & SR-79



- STOP SIGN
- TRAFFIC SIGNAL

Existing Traffic Controls and Intersection Geometries
Murrieta, California

Figure 5

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Section 3 Analysis Methodology & Significance Criteria

3.0 ANALYSIS METHODOLOGY & SIGNIFICANCE CRITERIA

3.1 ANALYSIS METHODOLOGY

This section describes the methodology used to evaluate the existing and future traffic operating conditions of Project study area.

3.1.1 Intersection Level of Service Analysis

The City of Murrieta Traffic Impact Preparation Guide provides the following methodologies for level of service (LOS) analysis. The Highway Capacity Manual 2010 (HCM 2010, Reference 4) analysis methodology was applied to the study area intersections, per the City's required methodology. The study intersection operational analyses presented in this report were prepared using the Synchro 9 software, which implements the *Highway Capacity Manual* methodology. Due to limitations in the application of the HCM 2010 analysis methodology with Synchro 9, the HCM 2000 methodology would apply in several cases, including intersections with U-turn movements and exclusive pedestrian phases. For this study, U-turn movements were coded as left turns where possible and the following locations were evaluated with HCM 2000:

- Intersections with exclusive pedestrian phases (intersection of California Oaks Road & Clinton Keith Road)

The intersections were analyzed using the existing signal timing. In some cases, signalized intersections are running with cycle lengths over 120 seconds, which is the maximum cycle length cited for use by the City of Murrieta. In some cases, cycle lengths are longer due to the time needed for pedestrian crossing movements or exclusive pedestrian phases. In order to most accurately model field conditions and represent what operations are occurring, the signal timing currently in place was used.

At intersections, level of service (LOS) is defined based on the delay experienced per vehicle. The LOS methodology for signalized intersections accounts for several variables including, but not limited to, the effects of signal type, timing, phasing and progression on average delay. Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. At a TWSC intersection, LOS is based on the delay for the worst operating movement. The LOS for an AWSC intersection is defined by average delay for all movements at the intersection. Table 1 and Table 2 defines average delay per vehicle and LOS for signalized and unsignalized intersections.

Table 1: Level of Service and Average Vehicular Delay Definition for Signalized Intersections

LOS	Delay per Vehicle (seconds)	Definition
A	≤10	LOS A describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable, or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	>10 and ≤20	LOS B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable, or the cycle length is short. More vehicles stop than with LOS A.
C	>20 and ≤35	LOS C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable, or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	>35 and ≤55	LOS D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective, or the cycle length is long. Many vehicles stop, and individual cycle failures are noticeable.
E	>55 and ≤80	LOS F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.
F	>80	LOS F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Exhibit 18-4 from the Highway Capacity Manual 2010.
s/veh: seconds of delay per vehicle

Table 2: Level of Service and Average Vehicular Delay Definition for Unsignalized Intersections

LOS	Delay per Vehicle (seconds)
A	≤10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	>50

Source: Exhibit 19-1 from the Highway Capacity Manual 2010.

3.1.2 Intersection Queuing Analysis

Intersection queuing analysis was conducted for the study intersections. Expected intersection queues and how they compare to intersection geometry and available queue storage has influence on traffic operations. The average and 95th percentile queues as reported by Synchro 9 Highway Capacity Manual (HCM) methodology were used to assess queuing at all study intersections. The queue storage was estimated based on the striped queue storage shown in Google Earth and field verification.

3.1.3 Roadway Segment Analysis

For the roadway average daily traffic (ADT) analysis, weekday and Saturday daily volumes were compared to roadway capacities to determine the volume-to-capacity (v/c) ratio of the segment. The City of Murrieta's General Plan (Reference 2) provides capacities based on the roadway classification in Table 5-2 as well as level-of-service based on ADT. The observed volumes were compared to the capacities corresponding to LOS E. The General Plan provides the maximum two-way ADT volume for each LOS grade C through E, as shown in Table 3.

Table 3: Level of Service

Facility	Number of Lanes	Maximum Two-Way Volume (ADT)		
		LOS C	LOS D	LOS E
Urban Arterial	6	43,100	48,500	53,900
Major	4	27,300	30,700	34,100

Source: Table 5.4-3 from the City of Murrieta's General Plan.

3.1.4 Freeway Analysis

The mainline basic freeway segment, weaving, and merge/diverge analyses were assessed using the Highway Capacity Manual 2010 (HCM 2010) methodology. This methodology correlates measured density for the four types of freeway facilities to a standard level of service (LOS) measure.

Basic Freeway Segments

Peak hour freeway mainline analysis was conducted using the Basic Freeway Segments methodology (Chapter 11, HCM 2010), with calculations performed using the Highway Capacity Software (HCS 2010, Version 6.8). For mainline segments, LOS is measured in terms of density, as shown in Table 4.Density describes the proximity to other vehicles and is related to the freedom to maneuver within the traffic stream and is defined as the number of passenger cars per mile per lane.

Table 4: Level of Service and Density Definition for Basic Freeway Segments

LOS	Density (passenger cars/mile/lane)
A	≤11
B	>11 and ≤18
C	>18 and ≤26
D	>26 and ≤35
E	>35 and ≤45
F	>45 (demand exceeds capacity)

Source: Exhibit 11-5 from the Highway Capacity Manual 2010.

Merge and Diverge Segments

Peak hour ramp operations analysis was conducted using the Freeway Merge Diverge Segments methodology (Chapter 13, HCM 2010), with calculations performed using the Highway Capacity Software (HCS 2010, Version 6.8). For merge/diverge segments, the methodology evaluates the effects of merging traffic onto the freeway on ramps and diverging traffic from the freeway for off ramps. LOS is measured in terms of density (the number of passenger cars per mile per lane), as shown in Table 5.

Table 5: Level of Service and Density Definition for Merge/Diverge Segments

LOS	Density (passenger cars/mile/lane)
A	≤10
B	>10 and ≤20
C	>20 and ≤28
D	>28 and ≤35
E	>35
F	demand exceeds capacity

Source: Exhibit 13-2 from the Highway Capacity Manual 2010.

Freeway Weaving Segments

Peak hour weaving segment operations analysis is conducted using the Freeway Weaving Segments methodology (Chapter 12, HCM 2010), with calculations performed using the Highway Capacity Software (HCS 2010, Version 6.8). For weaving segments, the methodology evaluates the effects of lane-changing maneuvers between closely spaced ramps. LOS is measured in terms of density (the number of passenger cars per mile per lane), as shown in Table 6.

Table 6: Level of Service and Density Definition for Weaving Segments

LOS	Density (passenger cars/mile/lane)
A	≤10
B	>10 and ≤20
C	>20 and ≤28
D	>28 and ≤35
E	>35
F	demand exceeds capacity

Source: Exhibit 12-10 from the Highway Capacity Manual 2010.

3.2 SIGNIFICANCE CRITERIA

Intersection performance measures reported in this study include level of service (LOS) and queuing. Transportation system operations were compared to applicable significance criteria for the City, City of Wildomar, County, and Caltrans. The sections below summarize each of the respective agency standards, as well California Environmental Quality Act (CEQA) standards used for the other transportation analysis topics.

City of Murrieta Criteria

The City of Murrieta General Plan Circulation Element (Reference 2) establishes minimum LOS standards for all streets and intersections within the City. The City of Murrieta's current LOS standard for intersections is LOS D for peak hour intersection operations, and LOS E at freeway interchanges. The City of Murrieta's current LOS standard for roadway segments is LOS C. As an exception, LOS D may be allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the proposed site and study roadways.

The following traffic impacts are considered to be "significant" under CEQA based on the City's Traffic Impact Analysis Preparation Guide (Reference 1):

- If existing traffic conditions exceed the General Plan target LOS.
- If Project traffic, when added to existing traffic, will deteriorate the LOS to below the target LOS, and impacts cannot be mitigated through project conditions of approval.
- If cumulative traffic exceeds the target LOS, and impacts cannot be mitigated through existing infrastructure funding mechanisms.

It should be noted that City Council can approve a development project if target LOS is not met, if the project has overriding benefits.

Given intersection queuing influence on traffic operations, a queuing deficiency is identified in the no-Project condition if the calculated 95th percentile queue length, based on methodology established in the HCM, exceeds the available storage length by more than 25 feet (the average storage length for one

vehicle) since an additional vehicle can be stored within the transition taper without impacting traffic flow. Similarly, a significant queuing impact is determined if the Project causes the calculated 95th percentile queue length to exceed the existing or planned storage capacity by more than 25 feet. For storage lanes that are already deficient without the Project, a significant queuing impact is determined if the Project increases the calculated 95th percentile queue length by more than 25 feet. Where left-turn lanes connect to two-way left-turn lanes, although the calculated queue may exceed the length of the painted left-turn pocket, the presence of the two-way left-turn lane provides additional storage and allows the queue to avoid spilling into through lanes. Therefore, queues exceeding the painted storage length in these situations are not highlighted as existing deficiencies because they do not contribute to operational problems.

Riverside County Criteria

The City of Wildomar defines intersection performance standards consistent with those in the County of Riverside General Plan Circulation Element. Therefore, Riverside County criteria was applied at intersections outside the City of Murrieta, including:

- George Avenue & Clinton Keith Road (Elsinore Area Plan)
- Inland Valley Drive & Clinton Keith Road (Elsinore Area Plan)
- Salida Del Sol & Clinton Keith Road (Elsinore Area Plan)
- Elizabeth Lane & Clinton Keith Road (Elsinore Area Plan)
- Smith Ranch Road & Clinton Keith Road (Elsinore Area Plan)
- Max Gillis Boulevard/Briggs Road & Leon Road (Southwest Area Plan)
- Max Gillis Boulevard/Thompson Road & SR-79 (Southwest Area Plan)

Per the County of Riverside General Plan (Reference 5):

> "Policy C 2.1: The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan (Figure C-1) which are currently County maintained, or are intended to be accepted into the County maintained roadway system:
>
> LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.
>
> LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella

Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.

LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed."

Based on the criteria above, the LOS service standard in the study area is LOS D.

Riverside County does not have established requirements or standards for queuing analysis and does not require said analysis for CEQA compliance. Supplemental queuing analysis for intersections in Riverside County was provided for information purposes only and is not part of the CEQA significant criteria for impact evaluation.

Caltrans Criteria

Per the Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002), Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D (see Appendix "C-3") on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing measures of effectives (MOE) should be maintained. Per the I-215 Transportation Concept Report (Reference 6), acceptable LOS for this study area is LOS D.

CEQA Criteria

Based on Appendix G of the CEQA Guidelines, the Project would have a significant transportation impact if it would do the following:

- Conflict with an applicable plan, ordinance, or policy establishing measures of performance of the circulation system, taking into account all modes of transportation relevant components of the circulation system
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise materially decrease the performance or safety of such facilities
- Result in inadequate emergency access
- Substantially increase hazards due to a design feature (such as sharp curves or dangerous intersections) or incompatible uses (such as farm equipment)

Section 4 Year 2018 Existing Conditions

4.0 YEAR 2018 EXISTING CONDITIONS

4.1 EXISTING TRAFFIC VOLUMES

Manual turning-movement counts were collected at some of the study intersections in November and December 2017. Additional study intersections were added based on comments from the City of Wildomar and Riverside County, resulting in additional counts collected in October 2018. Some of the original study intersections were recounted to provide a basis for adjusting the original count data and assessing the impact of the Clinton Keith Extension, opened in early 2018. The counts were conducted on a typical weekday during the evening (4:00 to 6:00 PM) peak period and on a typical Saturday during the midday peak period (12:00 to 2:00 PM). The resulting traffic volumes for the weekday PM and Saturday midday peak hours are shown in Figure 6A and Figure 6B, respectively.

Roadway daily tube counts were also conducted in November and December 2017 alongside intersection data collection.

Appendix "C" contains the traffic count worksheets used in this study.

Freeway mainline data was collected using Caltrans Performance Measurement System (PeMS) for I-215 where available (Reference 7). For the use of the PeMS data, the following process was used:

- Obtain PeMS freeway mainline and ramp volume data for the week of intersection data collection (November/December 2017)
- Separate data for weekdays (Tuesdays, Wednesdays, and Thursdays) and weekend (Saturdays)
- Determine average weekday peak hour AM and PM volumes and Saturday midday volumes

Not all study freeway segments had adequate peak hour data in PeMS; therefore, the following methodology was adopted at these locations. The peak hour mainline and ramp data from PeMS, as well as ramp termini intersection counts at Clinton Keith Road and Scott Road (sourced from the Makena Hills Traffic Study, 2017), were used to determine a peak hour factor for each study scenario. These peak hour factors were applied to the Annual Average Daily Traffic Data for the month of November 2017 to determine peak hour volumes for all other mainline and ramp segments. PeMS data was obtained during the 2018 intersection data collection period; however, data was unavailable for this time period. As a result, 2017 PeMS data - in combination with 2018 ramp data - was used for the analysis.

Existing Traffic Volumes
Weekday PM Peak Hour
Murrieta, California

Figure
6A

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KITTELSON & ASSOCIATES

Existing Traffic Volumes
Saturday Midday Peak Hour
Murrieta, California

Figure
6B

KITTELSON & ASSOCIATES

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4.2 INTERSECTION ANALYSIS RESULTS

LOS analysis was performed for the weekday PM peak hour and Saturday midday peak hour, using existing turning movement volumes as documented above. Table 7 summarizes the level of service analysis for the study intersections under existing traffic conditions.

Table 7: Existing Conditions Intersection LOS Analysis

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (s)	LOS	Delay (s)	LOS
1	I-15 SB Ramps & Clinton Keith Road	Signal	21.5	C	18.4	B
2	I-15 NB Ramps & Clinton Keith Road	Signal	21.7	C	19.0	B
3	George Avenue & Clinton Keith Road	Signal	23.5	C	21.9	C
4	Inland Valley Drive & Clinton Keith Road	Signal	24.8	C	10.9	B
5	Salida Del Sol & Clinton Keith Road	TWSC	**59.1 (SBL/R)**	**F**	24.6 (SBL/R)	C
6	Elizabeth Lane & Clinton Keith Road	TWSC	**91.1 (NBL/T/R)**	**F**	29.7 (NBL/T/R)	D
7	Smith Ranch Road & Clinton Keith Road	Signal	13.1	B	12.4	B
8	Nutmeg St & Clinton Keith Rd	Signal	34.0	C	16.5	B
9	California Oaks Rd & Clinton Keith Rd	Signal	44.3	D	21.2	C
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	Signal	15.5	B	10.8	B
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	Signal	28.9	C	15.7	B
12	McElwain Rd & Clinton Keith Rd	Signal	32.3	C	25.0	C
13	I-215 SB Ramps & Clinton Keith Rd	Signal	16.3	B	13.7	B
14	I-215 NB Ramps & Clinton Keith Rd	Signal	20.0	B	16.3	B
15	Creighton Ave & Clinton Keith Rd	Signal	6.4	A	5.4	A
16	High School West Dwy & Clinton Keith Rd	TWSC[1]	20.8 (NBR)	C	NA	NA
17	Bronco Way & Clinton Keith Rd	Signal	10.9	B	5.9	A
18	Whitewood Rd & Clinton Keith Rd	Signal	46.7	D	26.8	C
19	Whitewood Rd & Linnel Ln/Lee Ln	Signal	12.8	B	13.9	B
20	Whitewood Rd & Baxter Rd	Signal	18.6	B	13.4	B
21	Whitewood Rd & Keller Rd	Signal	14.9	B	12.8	B
22	Max Gillis Blvd/Briggs Rd & Leon Rd	Signal	35.9	D	24.9	C
23	Max Gillis Blvd/Thompson Rd & SR-79	Signal	**89.4**	**F**	**62.8**	**E**

Source: Kittelson & Associates, Inc. 2019.

Notes:

TWSC: Two-way stop control - delay reported reflects the critical movement, shown in parentheses.

[1] No vehicles were recorded on the northbound approach, so delay could not be calculated.

Boldface type indicates the intersection does not meet the applicable agency standards.

As shown in the table, all study intersections operate at a satisfactory LOS, except for the following:

- Salida Del Sol & Clinton Keith Road: The southbound approach to the intersection operates at a LOS F during the weekday PM peak hour.
- Elizabeth Lane & Clinton Keith Road: The northbound approach to the intersection operates at a LOS F during the weekday PM peak hour.
- Max Gillis Boulevard/Thompson Road & SR-79: This signalized intersection operates at a LOS F during the weekday PM peak hour and a LOS E during the Saturday midday peak hour.

Appendix "D" includes the level of service worksheets. Appendix "E" includes the signal timing and phasing worksheets.

4.3 QUEUING ANALYSIS RESULTS

Per the request of the City, the following supplemental queuing analysis was provided in the vicinity of the project site for information purposes only and is not part of the significant criteria for impact evaluation. Table 8 illustrates the available queue storage, average queue length, and 95th percentile queue length for the turning lanes at each study intersection. Appendix "F" includes the queuing worksheets.

Table 8: Existing Queues

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue	
				Weekday PM	Saturday Midday
8	Nutmeg St & Clinton Keith Rd	EBL	125	20 | 70	10 | 49
		WBL	225	158 | **532**	61 | 198
		NBL	175	28 | 72	20 | 62
		NBR	360[2]	0 | 67	0 | 48
		SBL	50	47 | **110**	21 | 65
9	California Oaks Rd & Clinton Keith Rd	WBL	220[3]	332 | **797**	158 | 301
		NBL	100[4]	116 | **227[4]**	29 | 81
		NBR	485[2]	0 | 120	0 | 78
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	EBL	260	40 | 88	18 | 59
		WBL	150	23 | 59	13 | 46
		WBR	150	13 | 47	9 | 38
		NBL	150	19 | 50	12 | 42
		NBR	150	0 | 5	0 | 0
		SBL	150	70 | 134	46 | 118
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	EBL	150	7 | 37	8 | 38
		WBL	150	75 | **199**	58 | 162
		WBR	160	0 | 0	0 | 0
		NBL	190[2]	12 | 52	11 | 47

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue	
				Weekday PM	Saturday Midday
		SBL	150	1 | 10	1 | 7
		SBR	150	0 | 0	0 | 0
12	McElwain Rd & Clinton Keith Rd	EBL	200 (x2)	123 | 222	74 | 146
		EBR	100	0 | 0	0 | 0
		WBL	175	17 | 55	13 | 47
		WBR	160	14 | 58	0 | 38
		NBL	50	11 | 40	6 | 27
		SBL	235 (x2)	124 | 225	106 | 208
13	I-215 SB Ramps & Clinton Keith Rd	EBR	385	124 | 212	76 | 155
		WBR	380	57 | 79	20 | 60
		SBR	1,100[1]	155 | 221	50 | 103
14	I-215 NB Ramps & Clinton Keith Rd	NBL	960[1]	284 | 473	210 | 278
		NBR	960[1]	244 | 425	59 | 124
15	Creighton Ave & Clinton Keith Rd	EBU	250	3 | 16	2 | 13
		EBR	200	0 | 17	0 | 14
		WBL	235	14 | 45	2 | 12
		NBL	100	19 | 56	14 | 42
		NBR	390[2]	0 | 21	0 | 12
17	Bronco Way & Clinton Keith Rd	EBU	200	8 | 30	0 | 4
		WBL	315	82 | 169	7 | 38
		NBL	355[2]	27 | 62	5 | 26
		NBR	355[2]	0 | 42	0 | 12
18	Whitewood Rd & Clinton Keith Rd	EBL	250 (x2)	188 | 359	69 | 164
		EBR	250	3 | 69	0 | 56
		WBL	200 (x2)	45 | 95	25 | 74
		WBR	350	0 | 0	0 | 0
		NBL	300	152 | 304	50 | 147
		SBL	100	64 | **147**	24 | 84
19	Whitewood Rd & Linnel Ln	EBL	130	13 | 65	9 | 50
		EBR	>500[2]	0 | 0	0 | 32
		NBL	200	8 | 45	7 | 40
		SBL	200	0 | 7	0 | 7
20	Whitewood Rd & Baxter Rd	EBL	215	5 | 37	1 | 14
		EBR	>500[2]	0 | 50	0 | 13
		WBL	125	2 | 23	2 | 21
		NBL	215	54 | 232	14 | 80
		NBR	>500[2]	0 | 0	0 | 0

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue	
				Weekday PM	Saturday Midday
		SBL	200	0 | 7	2 | 22
21	Whitewood Rd & Keller Rd	EBL	175	8 | 79	2 | 41
		EBR	545[2]	0 | 7	0 | 0
		WBL	200	2 | 25	2 | 31
		NBL	225	7 | 68	3 | 46
		SBL	115	2 | 28	1 | 21

Source: Kittelson & Associates, Inc. 2019.

Notes:

[1] Distance to development of separate turn lanes from highway off-ramp.

[2] Approximate distance to adjacent intersection.

[3] Two-way left-turn lanes provides additional storage up to 730 feet.

[4]The City has recently completed a project that has extended this left-turn storage to 250-ft

Boldface type indicates the 95th percentile queue exceeds the available storage by 25 feet or more.

As shown in the table, 95th percentile queues currently exceed storage capacity by more than 25 feet for one or more movements at the following study locations:

- Nutmeg Street & Clinton Keith Road (WBL, SBL)
- California Oaks Road & Clinton Keith Road (WBL, NBL)
    - Note that the northbound left turn storage has recently be extended to 250 feet and therefore the queue does not exceed the storage in place today
- Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road (WBL)
- Whitewood Road & Clinton Keith Road (SBL)

4.4 ROADWAY SEGMENT ANALYSIS

An assessment of average daily traffic (ADT) was conducted for the two analysis roadway segments for existing conditions:

- Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway
- Whitewood Road, north of Clinton Keith Road

Daily counts were collected on a midweek day in November 2017 and on a Saturday in December 2017. The counts were adjusted up to 2018 volumes using the additional intersection turning movement counts collected in 2018. Using this data, LOS for the roadway segments was assessed based on the methodology previously described. The existing LOS is shown in Table 9.

Table 9: Existing Conditions ADT Analysis

Segment	Metric	Weekday	Saturday
Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway	Volume (Daily)	25,264	20,276
	Capacity (Daily, LOS E)	53,900	53,900
	LOS	C	C
	v/c Ratio	0.47	0.38
Whitewood Road, north of Clinton Keith Road	Volume (Daily)	12,504	10,668
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.37	0.31

Source: Kittelson & Associates, Inc. 2019.

Note: The capacities shown are based on roadway classification and taken from the Circulation Element of the City's General Plan Table 5-2 (Reference 2) for roadways operating at a LOS E. The level of service is based on the City's General Plan maximum two-way ADT volume for each LOS grade. The table provides maximum ADT volumes for LOS C, D and E. Clinton Keith Road is an urban arterial and Whitewood Road a major roadway.

As shown in the table, both roadway segments operate under capacity and at a LOS C under existing conditions on both a weekday and Saturday.

4.5 FREEWAY ANALYSIS

The weekday AM peak hour analysis is provided for freeway analysis as requested by Caltrans staff. Table 10 and Table 11 show the existing conditions analysis results for the study segments during weekday AM and PM and the Saturday midday peak hours. Appendix "G" includes the freeway analysis worksheets.

Table 10: Existing Conditions Freeway Analysis - Northbound

I-215 Northbound Segment			Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
Segment ID	Segment Type[1]	Segment Location	Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]
NB-1	Basic	North of Scott Road	14.1	B	24.1	C	-[3]	-[3]
NB-2	Merge	Scott Road On Ramp	18.3	B	26.8	C	-[3]	-[3]
NB-3	Diverge	Scott Road Off Ramp	24.3	C	31.1	D	-[3]	-[3]
NB-4	Basic	Between Scott Road and Clinton Keith On Ramp	15.6	B	24.7	C	18.7	C
NB-5	Merge	Clinton Keith On Ramp	19.4	B	26.8	C	22.2	C
NB-6	Merge	Clinton Keith On Ramp Loop	18.9	B	26.3	C	21.2	C
NB-7	Diverge	Clinton Keith Off Ramp	22.8	C	32.9	D	27.2	C
NB-8	Basic	Between Clinton Keith Off Ramp and Los Alamos On Ramp	14.5	B	26.2	D	19.0	C
NB-9	Merge	Los Alamos On Ramp	18.6	B	28.8	D	22.6	C
NB-10	Diverge	Los Alamos Off Ramp	22.5	C	32.3	D	26.8	C
NB-11	Basic	Between Los Alamos Off Ramp and Murrieta Hot Springs Off Ramp	14.3	B	25.9	C	18.8	B
NB-12	Merge	Murrieta Hot Springs On Ramp	19.1	B	29.4	D	23.1	C
NB-13	Merge	Murrieta Hot Springs On Ramp (Loop)	11.6	B	21.2	C	16.6	B
NB-14	Diverge	Murrieta Hot Springs Off Ramp	11.5	B	25.9	C	19.2	B
NB-15	Basic	South of Murrieta Hot Springs Road	16.4	B	32.9	D	23.9	C

Source: Kittelson & Associates, Inc. 2019.

Notes:

[1] HCM 2010 definition, Basic Freeway Segment, Weaving Segment, Merge Segment, or Diverge Segment

[2] Density expressed in pc/mi/ln, passenger cars per mile per lane

[3] No data available for Saturday peak hour conditions

Table 11: Existing Conditions Freeway Analysis – Southbound

I-215 Northbound Segment			Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
Segment ID	Segment Type[1]	Segment Location	Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]
SB-1	Basic	North of Scott Road	19.2	B	20.3	C	-[3]	-[3]
SB-2	Diverge	Scott Road Off Ramp	27	C	28.1	D	-[3]	-[3]
SB-3	Merge	Scott Road On Ramp	27.2	C	24.8	C	-[3]	-[3]
SB-4	Basic	Between Scott Road and Clinton Keith Off Ramp	22.4	C	20.9	C	23.1	C
SB-5	Diverge	Clinton Keith Off Ramp	29.3	D	28.5	D	29.7	D
SB-6	Merge	Clinton Keith On Ramp Loop	22.2	C	20.1	C	22.6	C
SB-7	Merge	Clinton Keith On Ramp	25.4	C	23.0	C	25.6	C
SB-8	Basic	Between Clinton Keith Off Ramp and Los Alamos On Ramp	22.7	C	19.9	C	23.2	C
SB-9	Diverge	Los Alamos Off Ramp	30.7	D	29.0	D	31.4	D
SB-10	Weave	Between Los Alamos On Ramp and Murrieta Hot Springs	20	C	16.4	B	19.6	B
SB-11	Merge	Murrieta Hot Springs On Ramp (Loop)	31.1	D	24.7	C	29.7	D
SB-12	Merge	Murrieta Hot Springs On Ramp	32.6	D	26.3	C	31.4	D
SB-13	Basic	South of Murrieta Hot Springs Road	30.9	D	22.1	C	28.9	D

Source: Kittelson & Associates, Inc. 2019.

Notes:

[1] HCM 2010 definition, Basic Freeway Segment, Weaving Segment, Merge Segment, or Diverge Segment

[2] Density expressed in pc/mi/ln, passenger cars per mile per lane

[3] No data available for Saturday peak hour conditions

As shown in the tables above, all study segments operate with an acceptable LOS during the analysis time periods.

Section 5 Projected Future Traffic

5.0 PROJECTED FUTURE TRAFFIC

This section describes the development of traffic volumes for the future year 2021 and year 2035 analyses. Traffic volumes were developed for the following scenarios with Project conditions:

- 2021 Project Completion Conditions (Existing volumes + ambient growth + project)
- 2021 Cumulative Conditions (Existing volumes + ambient growth + project + approved/ proposed projects)
- 2035 Build-Out Conditions (informational for Caltrans and for the City for the sizing of Warm Springs Parkway)

5.1 PROJECT TRIP GENERATION

The Project proposes an approximately 153,362 square foot Costco Warehouse with a carwash and a Costco Gasoline fuel station with 32 fueling positions. The approximately 16.4-acre site would provide 798 parking stalls including 17 accessible parking stalls. The proposed site plan exceeds the City's minimum parking requirement of five stalls per thousand square feet (which would equate to 764 spaces).

The proposed Vineyard II development is immediately east of the Costco site across Warm Springs Parkway and is anticipated to include an approximately 79,900 square foot shopping center. Specifically, the site would consist of a 37,000 square foot fitness center; 3,000 square foot fast food restaurant; and 39,900 square feet of other retail uses. Note that the size of the Vineyard II project evolved over the course of this study. The EIR document states a slightly smaller overall square-foot size for the Vineyard II portion of the project. As such, the traffic analysis in this study will be slightly conservative. The Project is the second phase of the Vineyard site on the property just to the south of Costco and Vineyard II.

Both Costco and Vineyard II are anticipated to be completed by 2021.

Table 12 presents trip generation estimates for the proposed Murrieta Costco development and Vineyard II. The trip generation for the Costco Warehouse and fuel station is based on Costco-specific data collected at locations throughout California. The data includes information about pass-by trips, which are existing trips that are on roadways adjacent to the site that stop at the Costco development and then continue on to their ultimate destination when their shopping is concluded. More information is provided in Appendix "H."

The number of trips expected to be generated by Vineyard II were estimated using rates in manual *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE, Reference 8). The Shopping Center land-use (ITE Code 820) was used as this use accounts for "an integrated group of commercial establishments," as is proposed for the site (Reference 8). The pass-by rate applied for the shopping center is based on ITE data as well.

Table 12: Project Trip Generation

Land Use (Size)/Trip Type	Weekday Daily	Weekday PM Peak Hour			Saturday Middy Peak Hour		
		Total	In	Out	Total	In	Out
Costco Warehouse with Fuel Center (153,362 SF)	12,560	1,107	537	570	1,518	773	745
Pass-by trips (33.3% weekday PM, 29.0% Sat mid)[1]	*-4,182[2]*	*-368*	*-184*	*-184*	*-440*	*-220*	*-220*
Net New Costco Trips	**8,378[2]**	**739**	**353**	**386**	**1,078**	**553**	**525**
Vineyard II (ITE Code 820; 79,900 SF)	5,870	515	247	268	756	393	363
Pass-by trips (25.0%)	*-1,468*	*-128*	*-64*	*-64*	*-188*	*-94*	*-94*
Net New Vineyard II Trips	**4,402**	**387**	**183**	**204**	**568**	**299**	**269**

Source: Kittelson & Associates, Inc. 2019.

Notes:

[1] While not accounted for in the trip generation used for the traffic study, it is expected that 31.5% of weekday PM and 20.7% of Saturday midday peak hour trips to/from Costco will be diverted trips.

[2] The number of weekday daily primary and pass-by trips was estimated using weekday PM peak hour trip type percentages.

Note that adjustments for transportation demand management (TDM) or other reductions are not made in the travel demand estimates. In addition, diverted trips are not included in the estimates as these trips are expected to come from Interstate 215 and would function as new trips at many the study intersections. However, it should be noted that these trips do not create similar system capacity or environmental impacts to the regional system as they are not new trips.

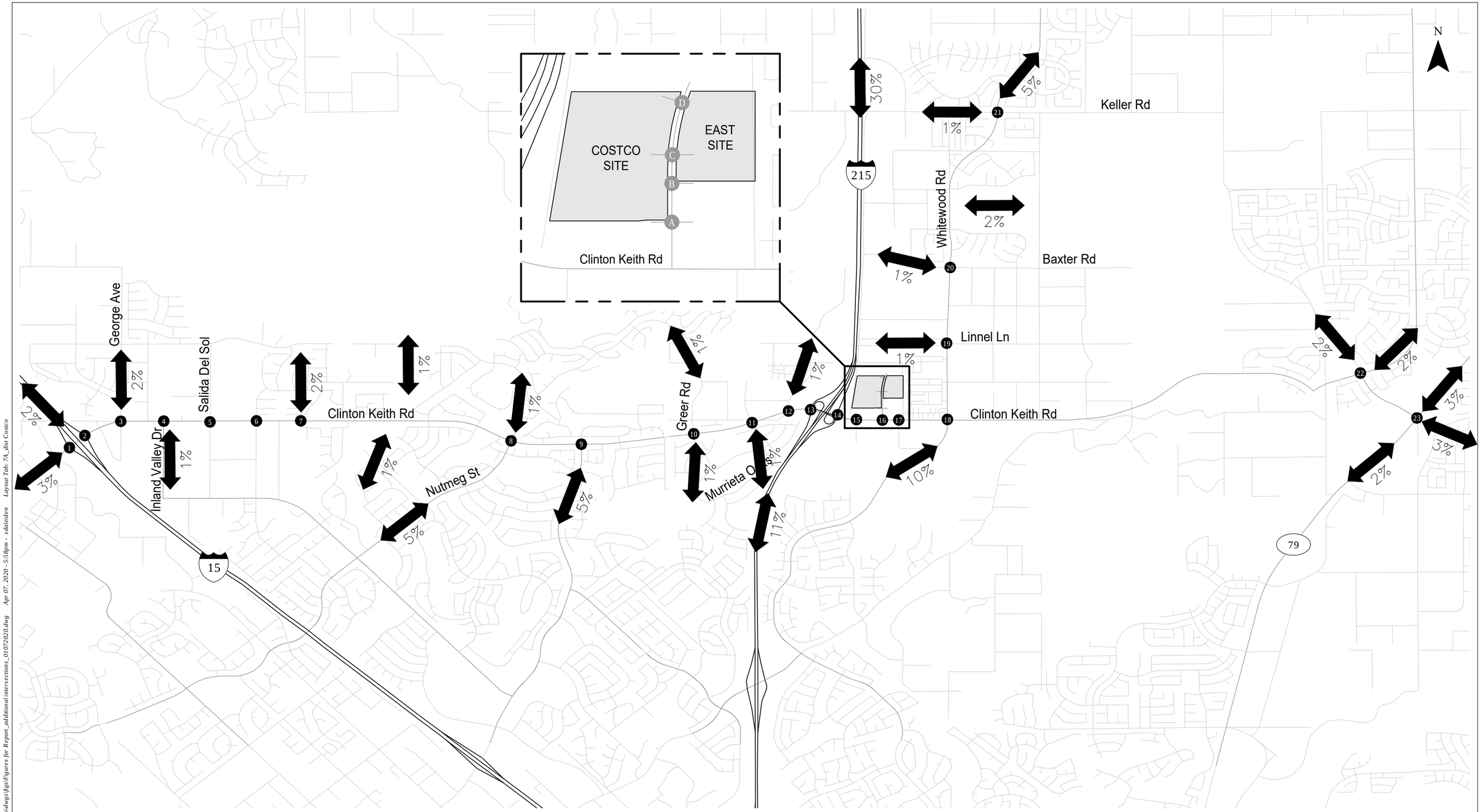
5.1.1 Project Trip Distribution and Assignment

Trip distribution and assignment for the proposed Costco is based on Costco Warehouse membership data as well as review of existing travel patterns in the study area[1]. The trip distribution for the Vineyard II site matches the pattern utilized in *The Vineyard Shopping Center Traffic Impact Analysis* (Reference 9). The same trip distribution patterns were used for the weekday PM peak hour and Saturday midday peak hour.

Figure 7A presents the Costco project trip distribution patterns for the weekday PM and Saturday midday peak hours. Figure 7B illustrates the Costco trip distribution at the site accesses points with the Creighton Avenue access and Figure 7C illustrates the Costco trip distribution at the site access points without the Creighton Avenue access. Figure 8A presents the Vineyard II trip distribution patterns for the weekday PM and Saturday midday peak hours. Figure 8B illustrates the Vineyard II trip distribution at the site accesses points.

Figures 9A and 9B present the total project trip assignment with the Creighton Avenue Access within the study area during the weekday PM and Saturday midday peak hours, respectively. Figures 9C and 9D present the total project trip assignment without the Creighton Avenue Access within the study area during the weekday PM and Saturday midday peak hours, respectively.

[1] Trip patterns for Costco took into consideration that the Costco in Temecula would attract many of the residents who live south of the proposed site. It also took into consideration the new travel patterns with the Clinton Keith extension, providing an east-west connection to Winchester Road and the extension of Whitewood Road to Scott Road.



Trip Distribution
Costco Project
Murrieta, CA

Figure
7A

KITTELSON & ASSOCIATES

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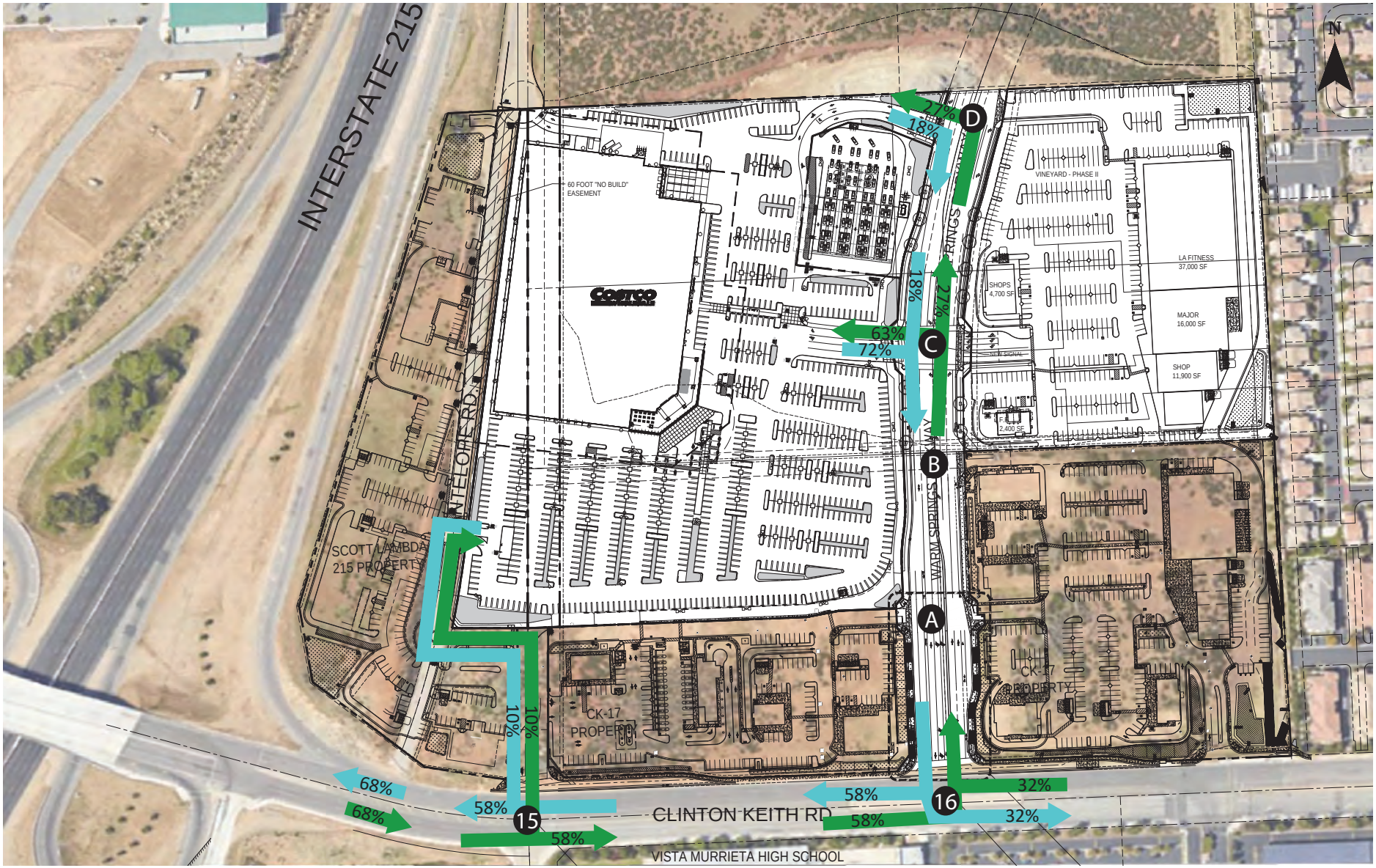

Trips Out

Trips In

Trip Distribution at Site Accesses with Creighton Access Costco Project Murrieta, CA

Figure 7B

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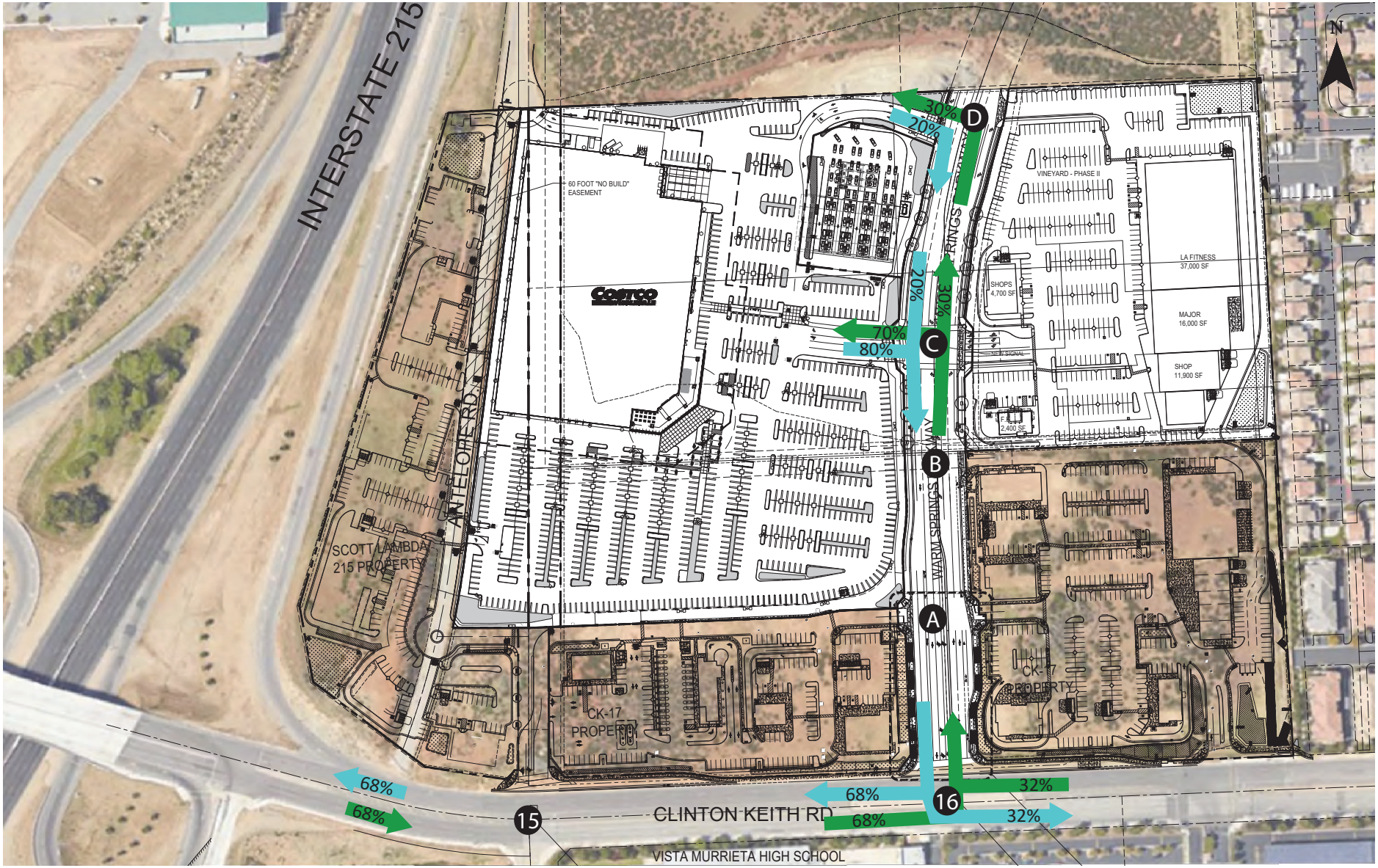

Trips Out

Trips In

Trip Distribution at Site Accesses without Creighton Access Costco Project
Murrieta, CA

Figure
7C

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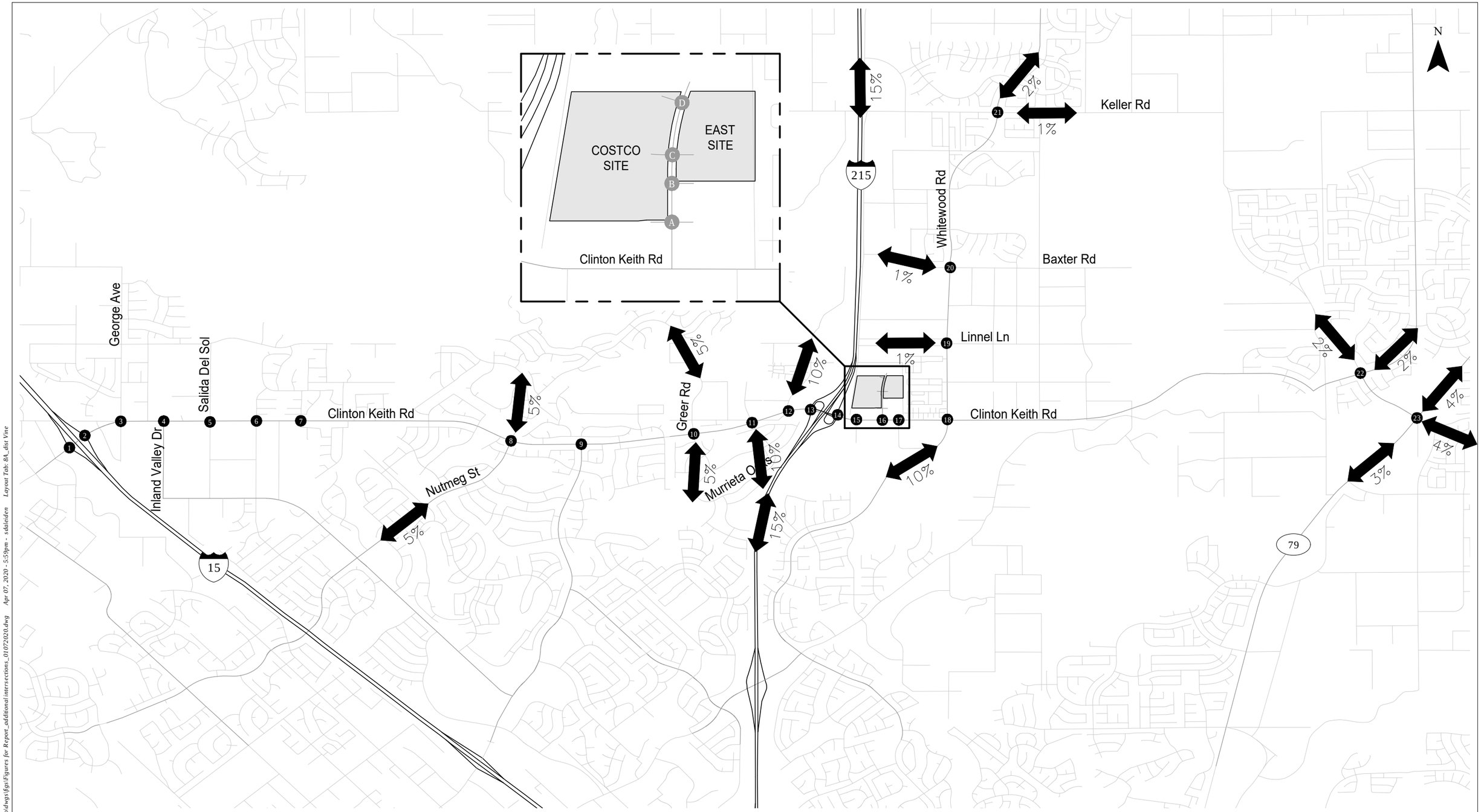

Trip Distribution
Vineyard II Project
Murrieta, CA

Figure
8A

KITTELSON & ASSOCIATES

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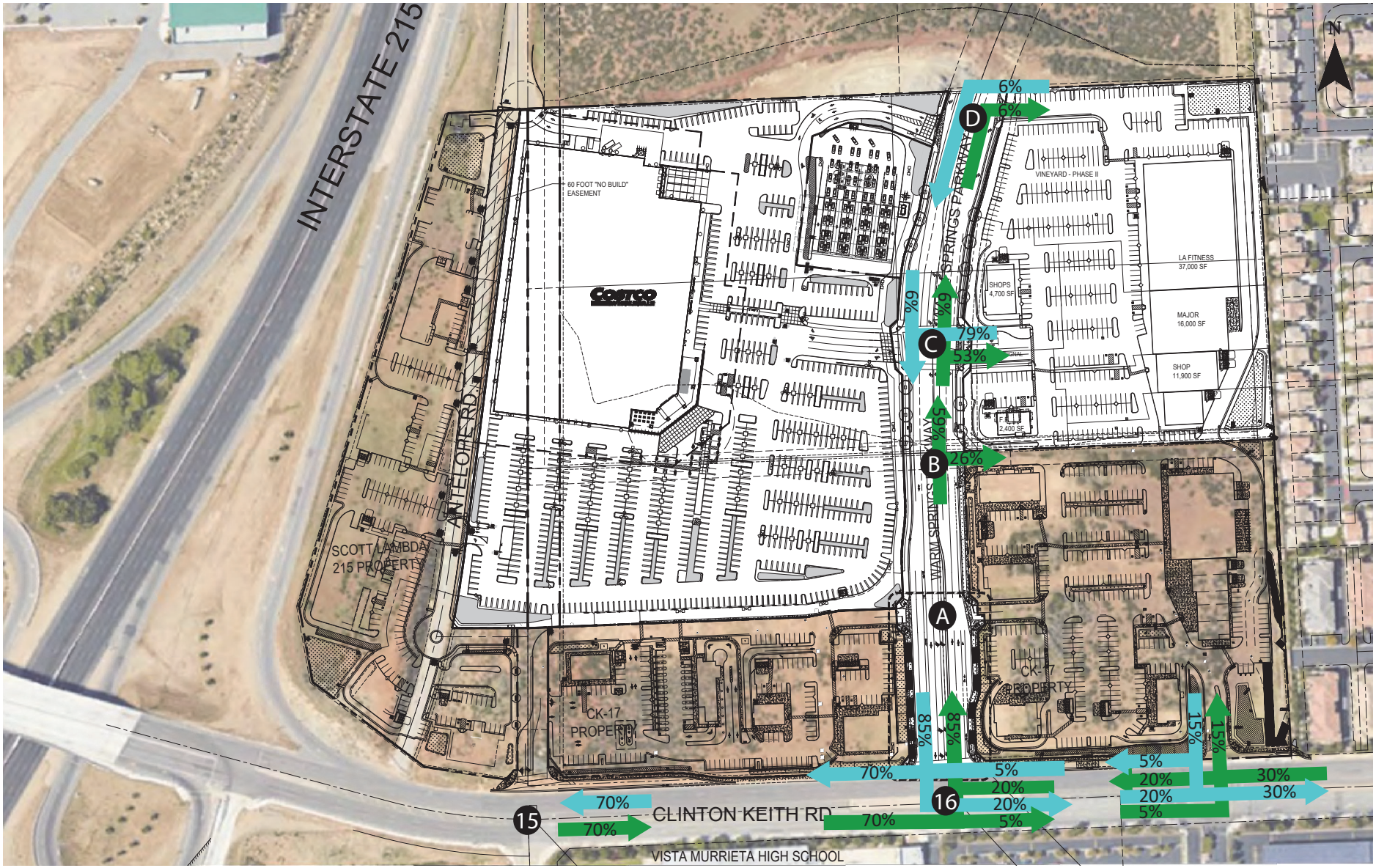

Trips Out

Trips In

Trip Distribution at Site Accesses
Vineyard II Project
Murrieta, CA

Figure
8B

KITTELSON & ASSOCIATES

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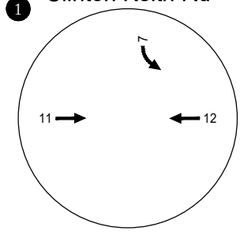
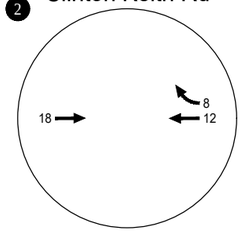
1 I-15 SB Ramps & Clinton Keith Rd



2 I-15 NB Ramps & Clinton Keith Rd



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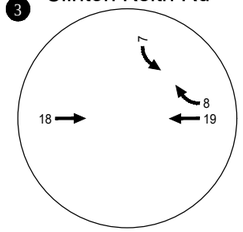
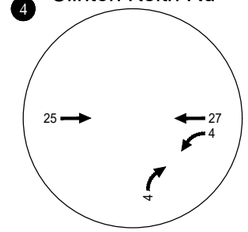
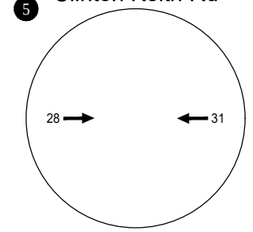


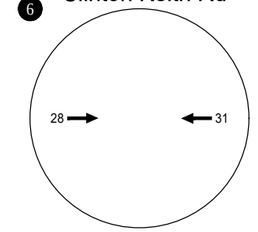
4 Inland Valley Dr & Clinton Keith Rd



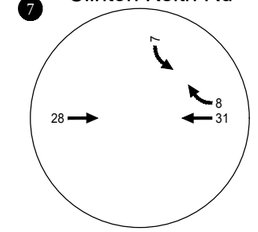
5 Salida Del Sol & Clinton Keith Rd



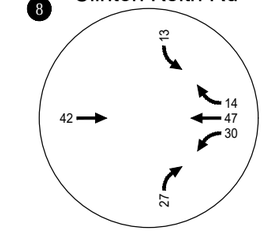
6 Elizabeth Ln & Clinton Keith Rd



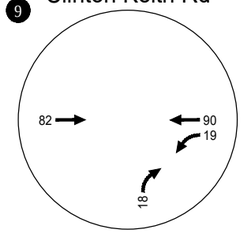
7 Smith Ranch Rd & Clinton Keith Rd



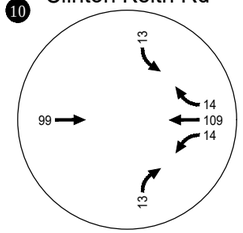
8 Nutmeg St & Clinton Keith Rd



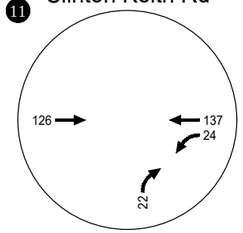
9 California Oaks Rd & Clinton Keith Rd



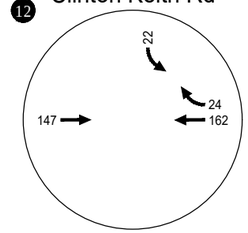
10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



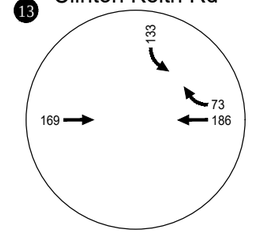
11 Murrieta Oaks Ave E & Clinton Keith Rd



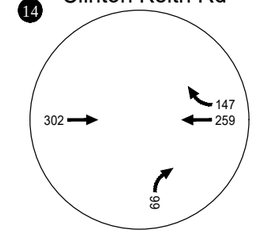
12 McElwain Rd & Clinton Keith Rd



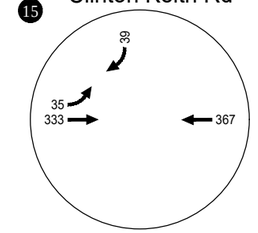
13 I-215 SB Ramps & Clinton Keith Rd



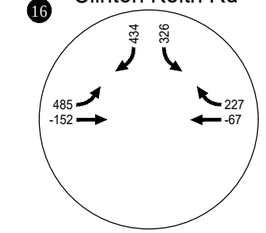
14 I-215 NB Ramps & Clinton Keith Rd



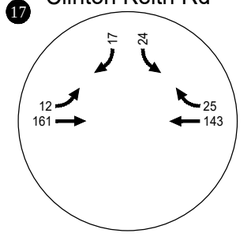
15 Creighton Ave & Clinton Keith Rd



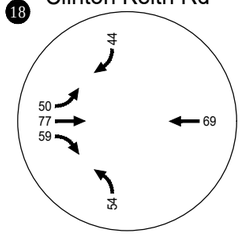
16 HS West/Warm Springs Rd & Clinton Keith Rd



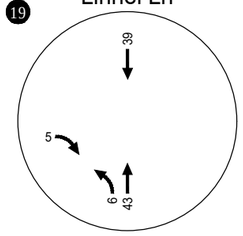
17 Vista Murrieta HS & Clinton Keith Rd



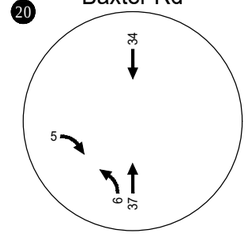
18 Whitewood Rd & Clinton Keith Rd



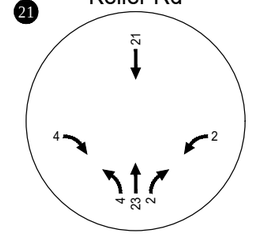
19 Whitewood Rd & Linnel Ln



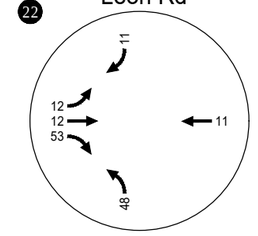
20 Whitewood Rd & Baxter Rd



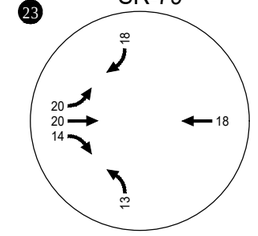
21 Whitewood Rd & Keller Rd



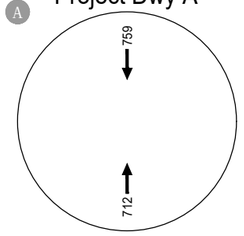
22 Max Gillis Blvd/Briggs Rd & Leon Rd



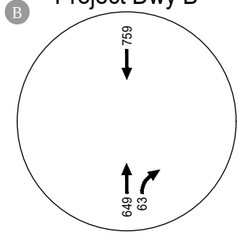
23 Max Gillis Blvd/Thompson Rd & SR-79



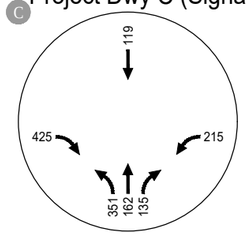
A Warm Springs Pkwy & Project Dwy A



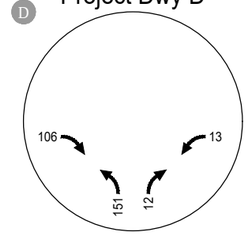
B Warm Springs Pkwy & Project Dwy B



C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D



Note: Negative numbers reflect pass-by trips

Total Project Trip Assignment
Weekday PM Peak Hour with Creighton Avenue Access
Murrieta, California

Figure
9A

KITTELSON & ASSOCIATES

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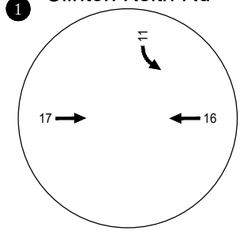
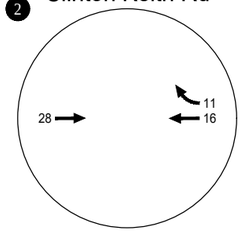
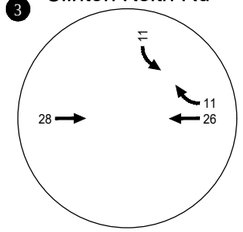
1 I-15 SB Ramps & Clinton Keith Rd



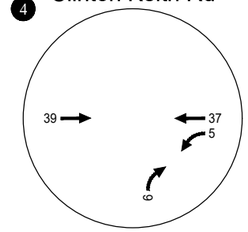
2 I-15 NB Ramps & Clinton Keith Rd



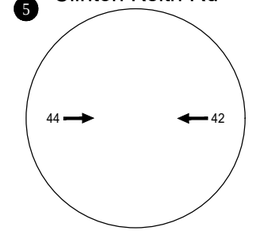
3 George Ave & Clinton Keith Rd



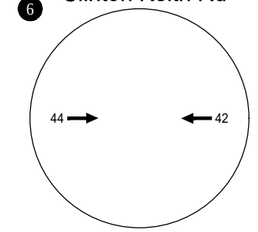
4 Inland Valley Dr & Clinton Keith Rd



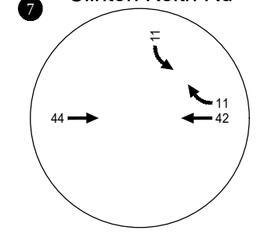
5 Salida Del Sol & Clinton Keith Rd



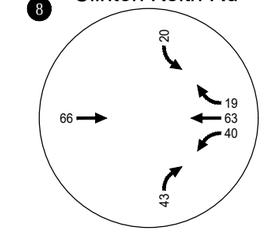
6 Elizabeth Ln & Clinton Keith Rd



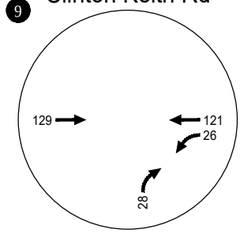
7 Smith Ranch Rd & Clinton Keith Rd



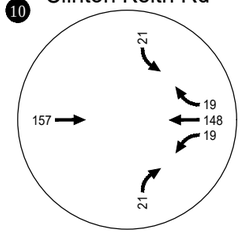
8 Nutmeg St & Clinton Keith Rd



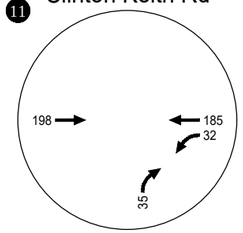
9 California Oaks Rd & Clinton Keith Rd



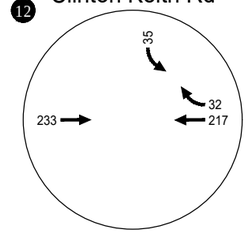
10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



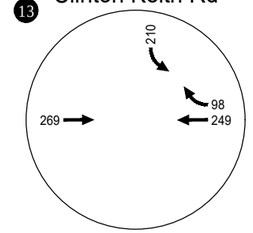
11 Murrieta Oaks Ave E & Clinton Keith Rd



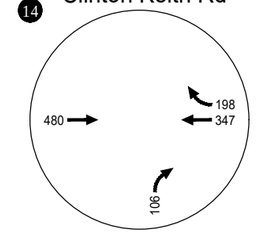
12 McElwain Rd & Clinton Keith Rd



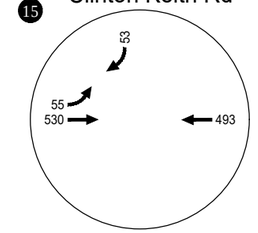
13 I-215 SB Ramps & Clinton Keith Rd



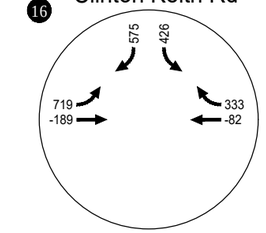
14 I-215 NB Ramps & Clinton Keith Rd



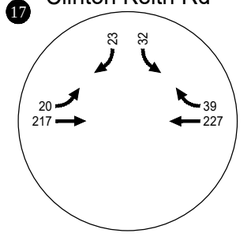
15 Creighton Ave & Clinton Keith Rd



16 HS West/Warm Springs Rd & Clinton Keith Rd



17 Vista Murrieta HS & Clinton Keith Rd



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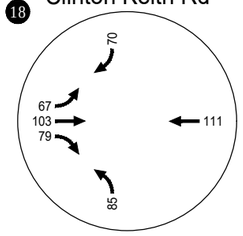
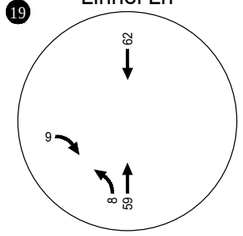
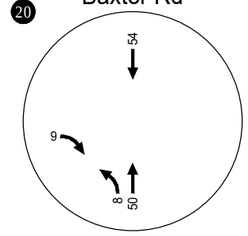


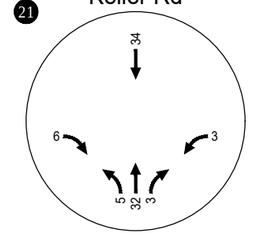
19 Whitewood Rd & Linnel Ln



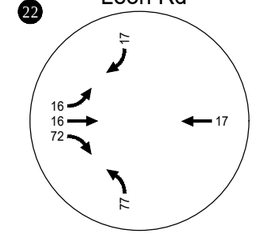
20 Whitewood Rd & Baxter Rd



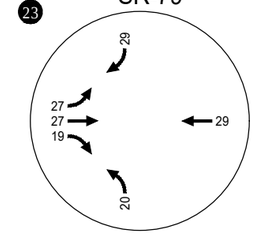
21 Whitewood Rd & Keller Rd



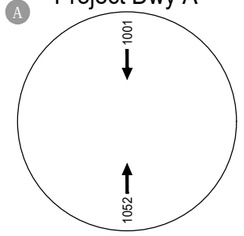
22 Max Gillis Blvd/Briggs Rd & Leon Rd



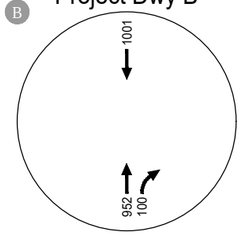
23 Max Gillis Blvd/Thompson Rd & SR-79



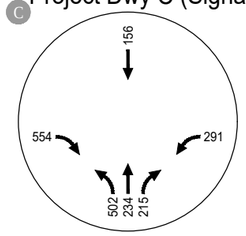
A Warm Springs Pkwy & Project Dwy A



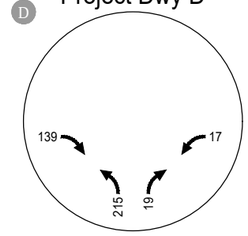
B Warm Springs Pkwy & Project Dwy B



C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D



Note: Negative numbers reflect pass-by trips

Total Project Trip Assignment
Saturday Midday Peak Hour with Creighton Avenue Access
Murrieta, California

Figure
9B

KITTELSON & ASSOCIATES

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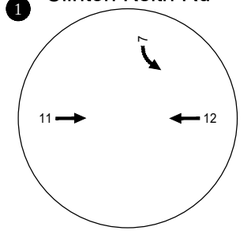
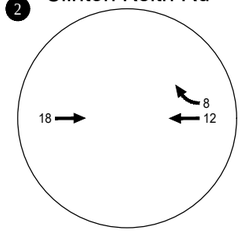
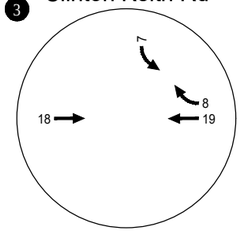
1 I-15 SB Ramps & Clinton Keith Rd



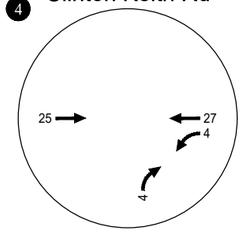
2 I-15 NB Ramps & Clinton Keith Rd



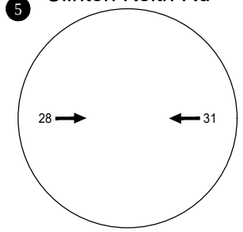
3 George Ave & Clinton Keith Rd



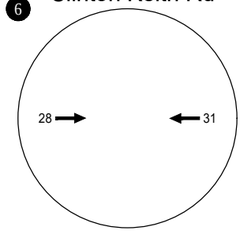
4 Inland Valley Dr & Clinton Keith Rd



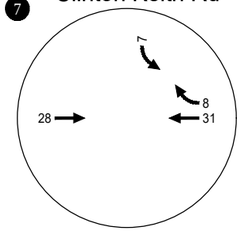
5 Salida Del Sol & Clinton Keith Rd



6 Elizabeth Ln & Clinton Keith Rd



7 Smith Ranch Rd & Clinton Keith Rd



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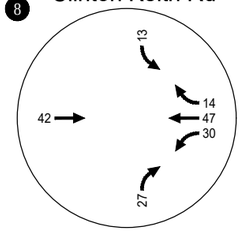

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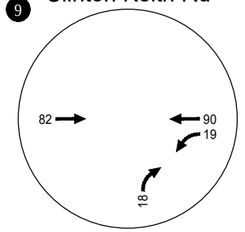

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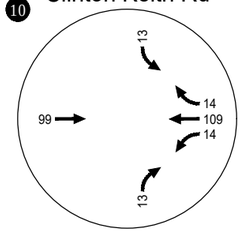

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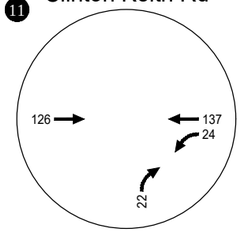

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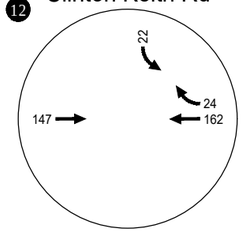

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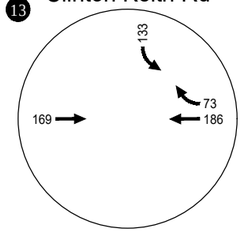

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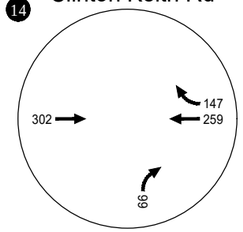

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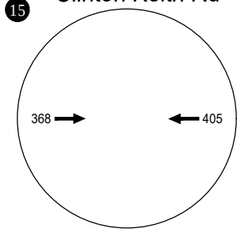

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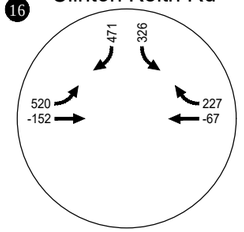

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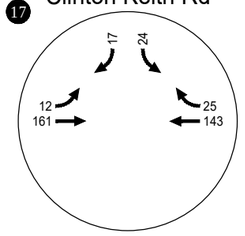

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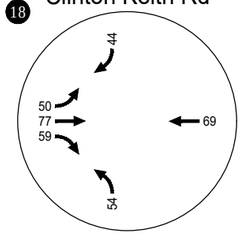

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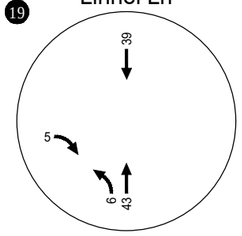

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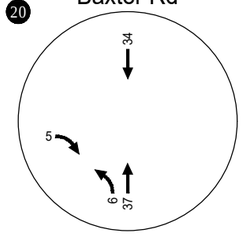
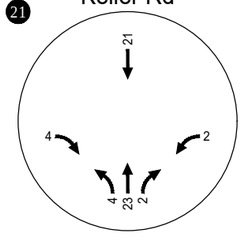


21 Whitewood Rd & Keller Rd



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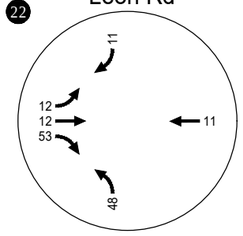
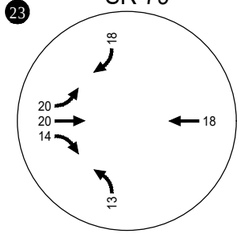


23 Max Gillis Blvd/Thompson Rd & SR-79



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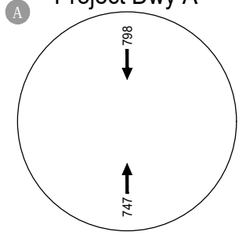

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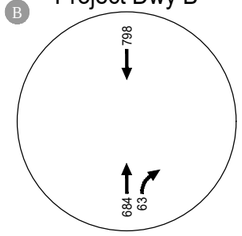

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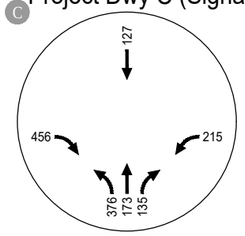

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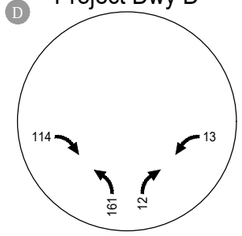

Note: Negative numbers reflect pass-by trips

Total Project Trip Assignment
Weekday PM Peak Hour without Creighton Avenue Access
Murrieta, California

Figure
9C

KITTELSON & ASSOCIATES

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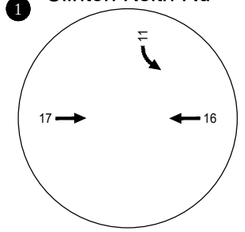
1 I-15 SB Ramps & Clinton Keith Rd



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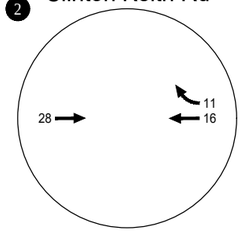

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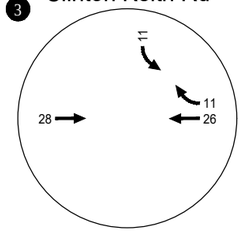

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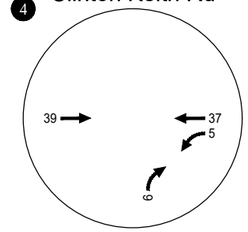

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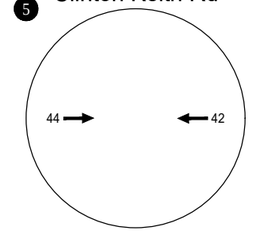

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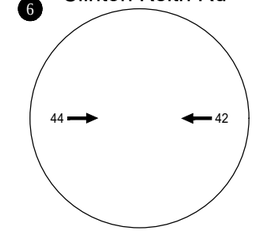

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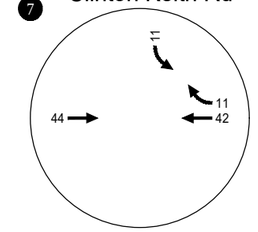

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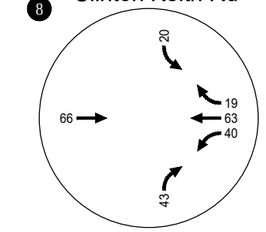

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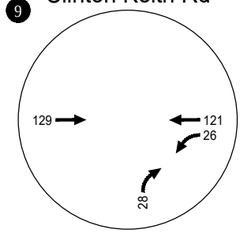

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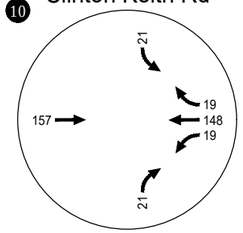

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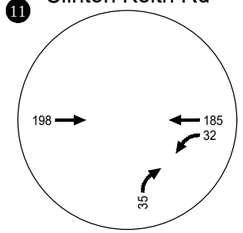

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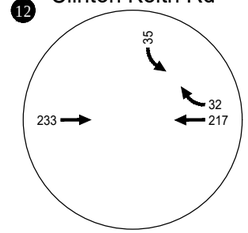

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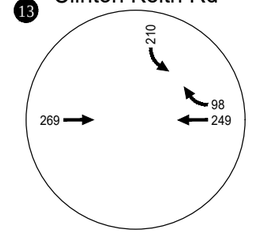

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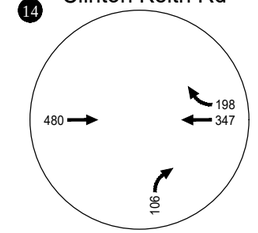

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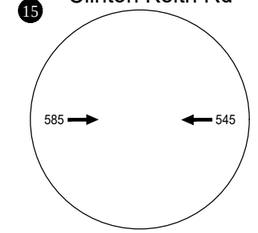

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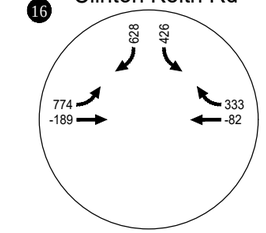

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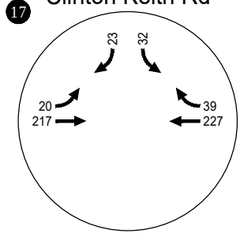

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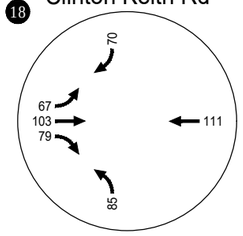

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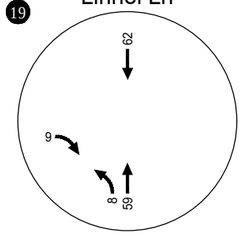

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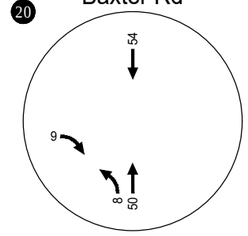

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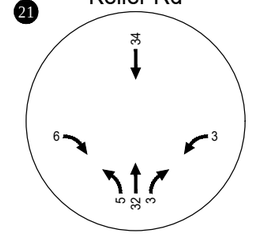
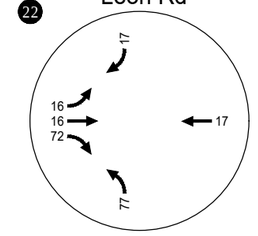
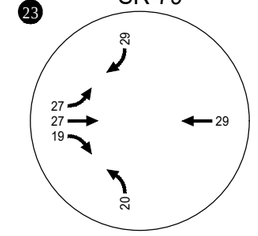


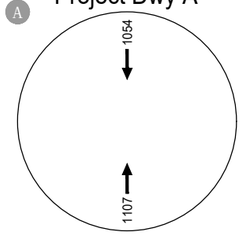
22 Max Gillis Blvd/Briggs Rd & Leon Rd



23 Max Gillis Blvd/Thompson Rd & SR-79



A Warm Springs Pkwy & Project Dwy A



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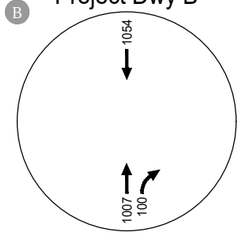
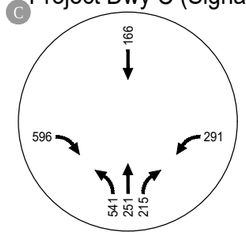
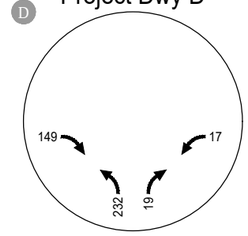


C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D



Note: Negative numbers reflect pass-by trips

Total Project Trip Assignment
Saturday Midday Peak Hour without Creighton Avenue Access
Murrieta, California

Figure
9D

KITTELSON & ASSOCIATES

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5.2 YEAR 2021 PROJECT COMPLETION CONDITIONS

The year 2021 Project completion scenario reflects expected conditions in the year 2021 with ambient growth of existing traffic volumes and development of the proposed Project. The sections below describe development of the year 2021 Project completion volumes.

5.2.1 Ambient Growth

Per the direction of the City, the annual ambient growth is assumed to be 2% per year. Ambient growth accounts for the increase in traffic for reasons not related to the Project or other planned developments (i.e., population changes and increases due to new development outside of the study area). This growth rate was applied to existing traffic volumes for all analysis time periods.

5.2.2 Year 2021 Project Completion Traffic Controls and Intersection Geometries

The following infrastructure changes are anticipated to be in place when the proposed Project opens and were accounted for in the project trip assignment:

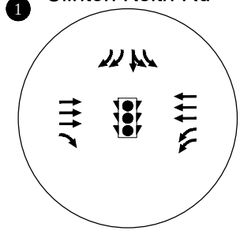
- Development of Warm Springs Parkway from Clinton Keith Road to the north edge of the Project boundary. The intersection of Warm Springs Parkway and Clinton Keith Road will align with the existing high school west driveway on the south side of Clinton Keith Road and be signalized. A signal will be provided on Warm Springs Parkway to serve Costco and the shopping center to the east. In addition, right-in/right-out access driveways are proposed along Warm Springs Parkway, as illustrated in the site plan in Figure 8B.
- Provision of a north leg at the intersections of Creighton Avenue/Clinton Keith Road and Bronco Way/Clinton Keith Road.
- Widening of Clinton Keith Road from the eastern Wildomar city limit to Arya Road to provide two eastbound vehicle lanes and two westbound vehicle lanes. The Project is currently scheduled for construction in the winter of 2020.

In addition, Project Driveway C would operate with the geometric configuration assumed in this study until Warm Springs Parkway is extended north. At that time, it's configuration could be reassessed. The year 2021 traffic controls and intersection geometries are illustrated in Figure 10.

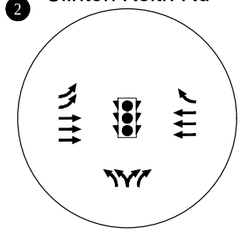
5.2.3 Year 2021 Project Completion Traffic Volumes

The Project is intended to be completed and would open in 2021. Traffic volume for year 2021 conditions account for existing volumes, 2% ambient growth per year, and the Project trips. Year 2021 Project Completion traffic volumes (with Creighton Avenue Access) are shown in Figure 11A and Figure 11B for the weekday PM and Saturday midday peak periods, respectively. Figure 11C and Figure 11D show the weekday PM and Saturday midday peak hour turning movement traffic volumes without Project access at Creighton Avenue, respectively.

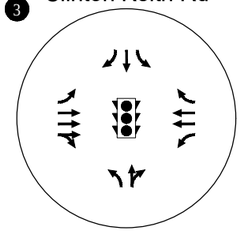
1 I-15 SB Ramps & Clinton Keith Rd



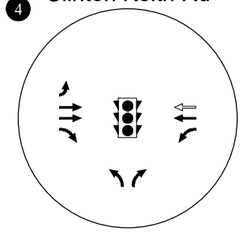
2 I-15 NB Ramps & Clinton Keith Rd



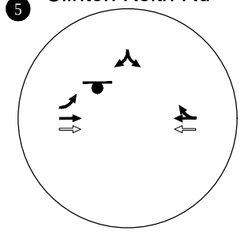
3 George Ave & Clinton Keith Rd



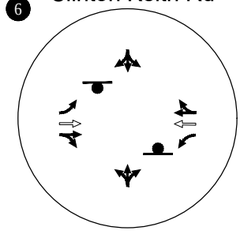
4 Inland Valley Dr & Clinton Keith Rd



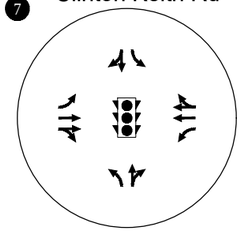
5 Salida Del Sol & Clinton Keith Rd



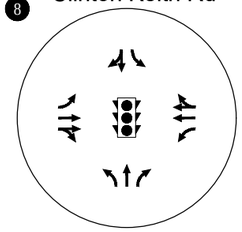
6 Elizabeth Ln & Clinton Keith Rd



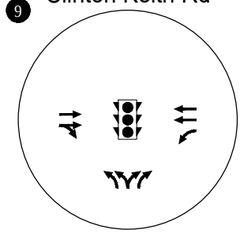
7 Smith Ranch Rd & Clinton Keith Rd



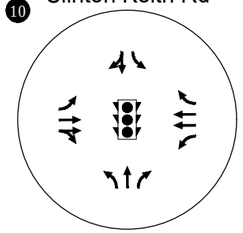
8 Nutmeg St & Clinton Keith Rd



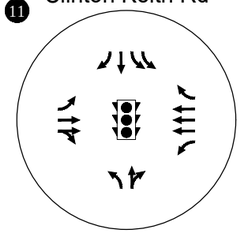
9 California Oaks Rd & Clinton Keith Rd



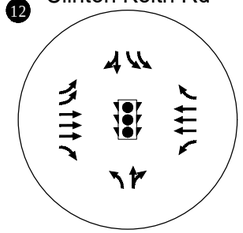
10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



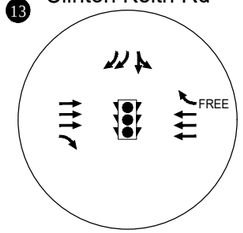
11 Murrieta Oaks Ave E & Clinton Keith Rd



12 McElwain Rd & Clinton Keith Rd



13 I-215 SB Ramps & Clinton Keith Rd



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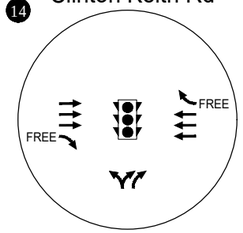
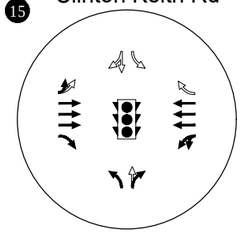
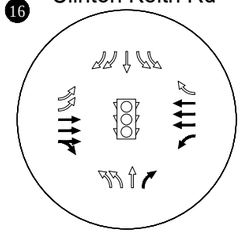


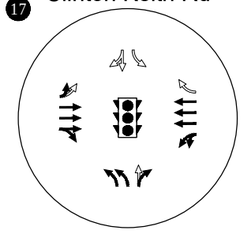
15 Creighton Ave & Clinton Keith Rd



16 HS West/Warm Springs Rd & Clinton Keith Rd



17 Vista Murrieta HS & Clinton Keith Rd



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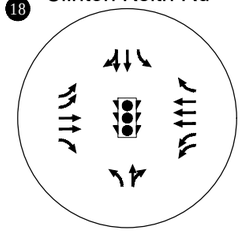

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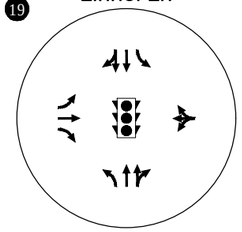

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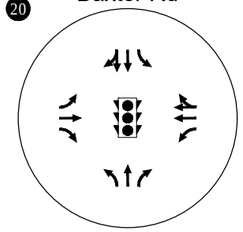

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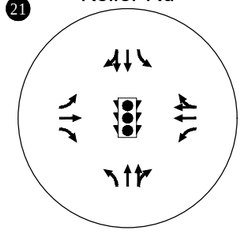

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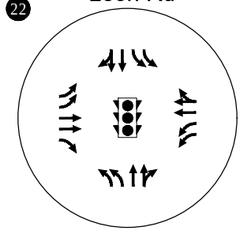
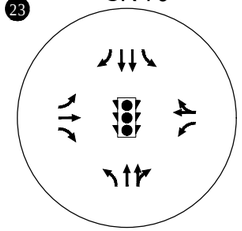


23 Max Gillis Blvd/Thompson Rd & SR-79



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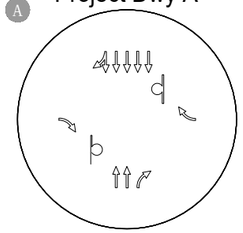

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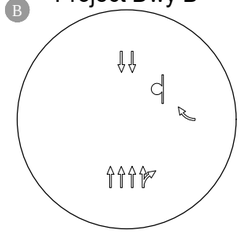

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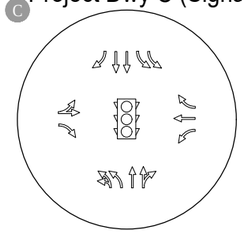

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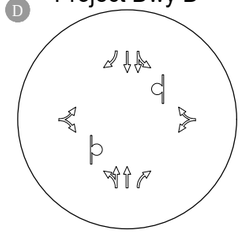

- STOP SIGN
- TRAFFIC SIGNAL
- IMPROVEMENT IN YEAR 2021 SCENARIO

Year 2021 Traffic Controls and Intersection Geometries
Murrieta, California

Figure 10

KITTELSON & ASSOCIATES

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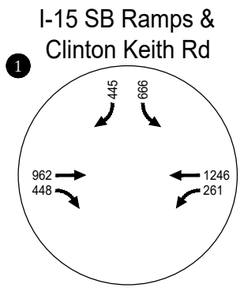

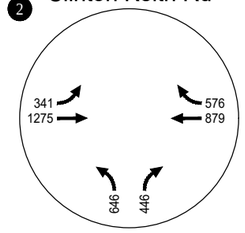

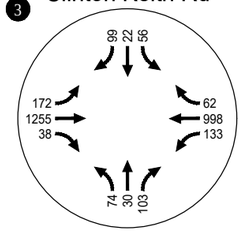

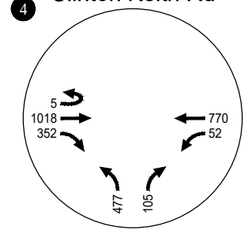

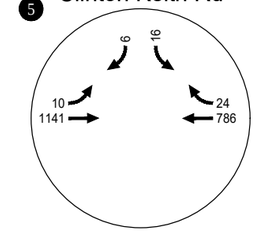

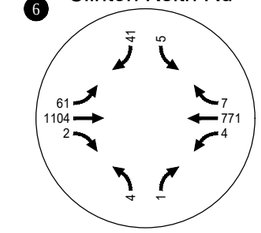

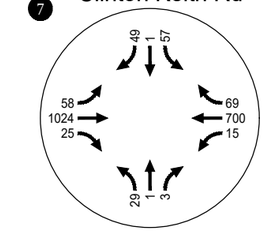

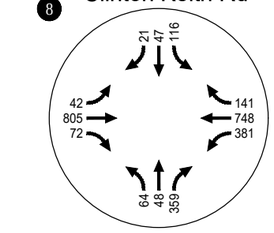

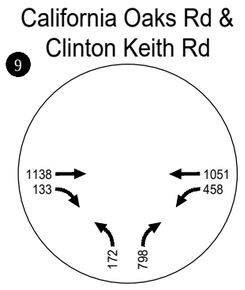

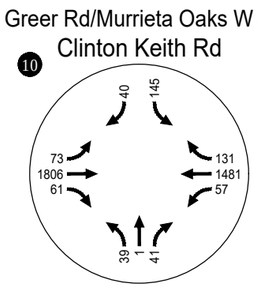

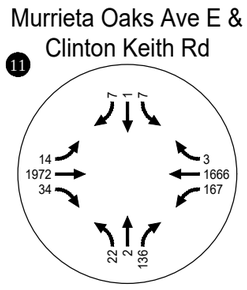

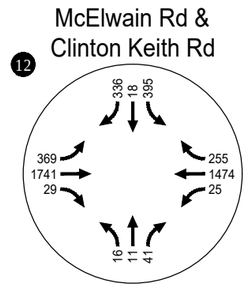

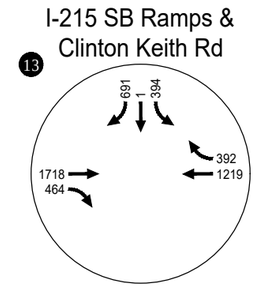

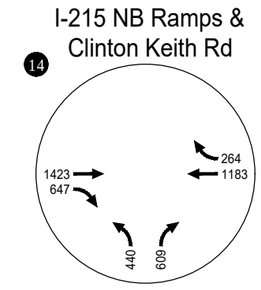

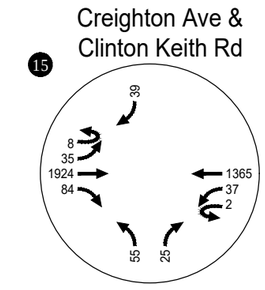

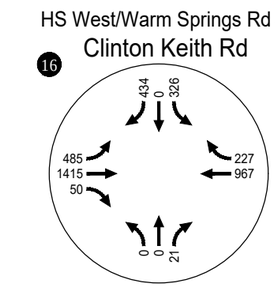

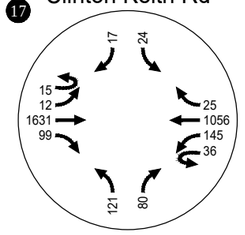

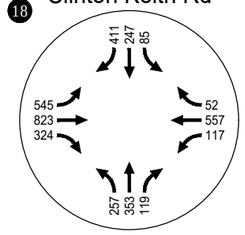

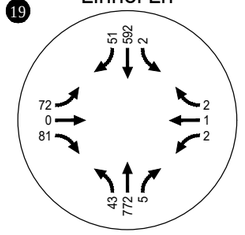

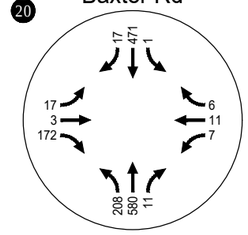

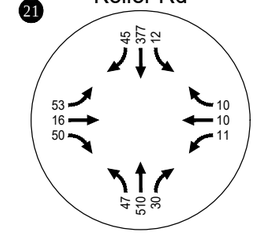

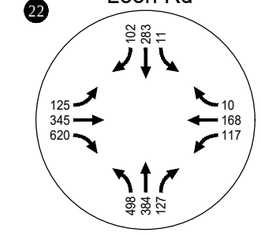

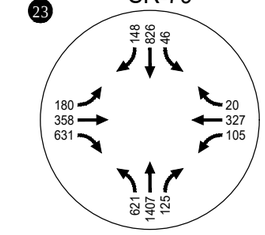

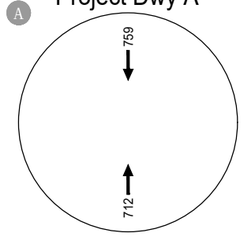

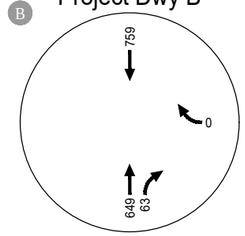

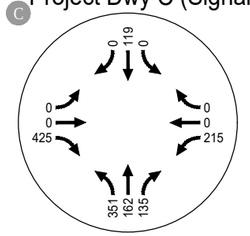

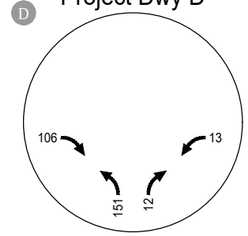

Note: Negative numbers reflect pass-by trips

Year 2021 Project Completion Traffic Volumes with Creighton Avenue Access
Weekday PM Peak Hour
Murrieta, California

Figure
11A

KITTELSON & ASSOCIATES

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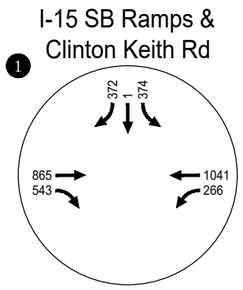

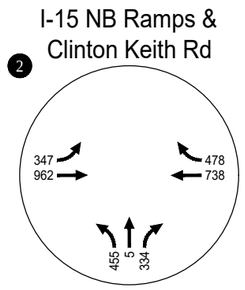

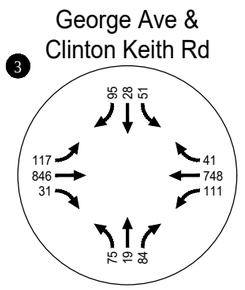

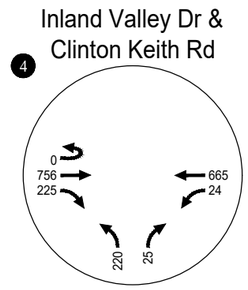

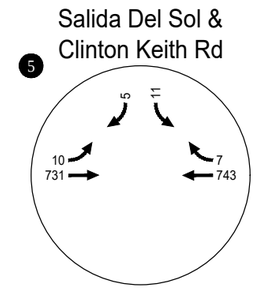

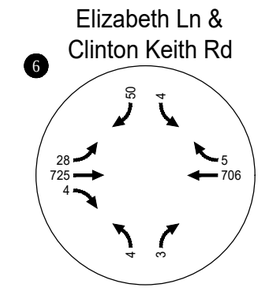

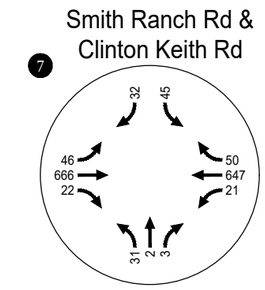

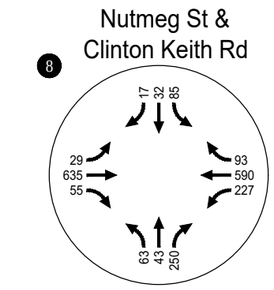

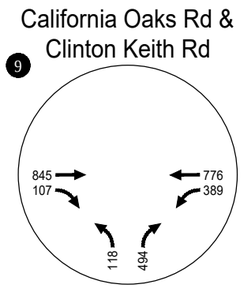

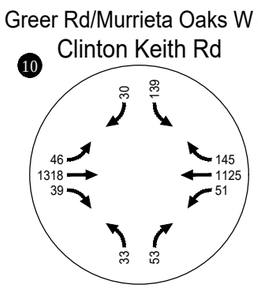

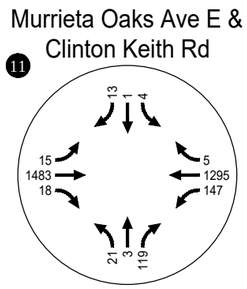

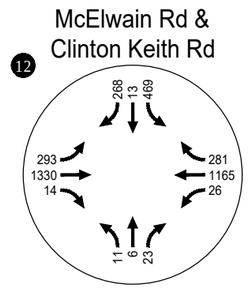

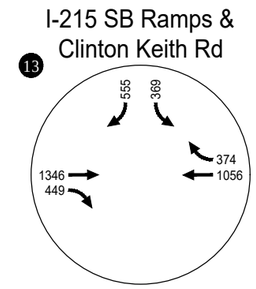

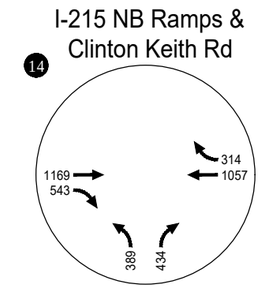

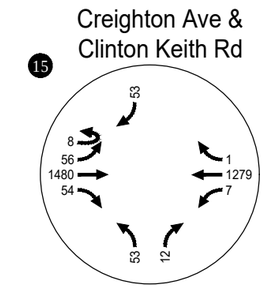

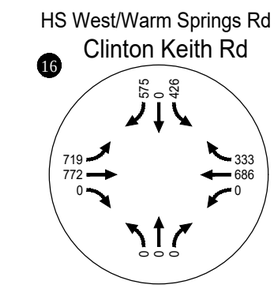

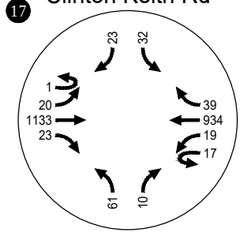

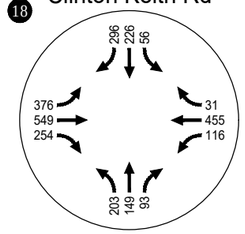

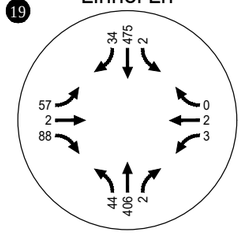

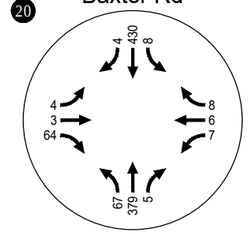

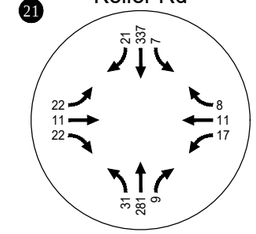

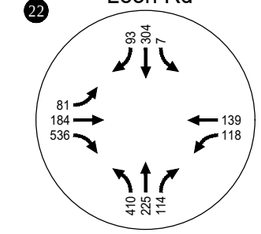

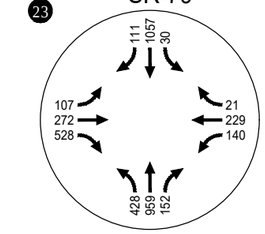

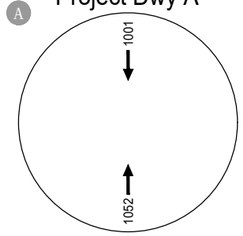

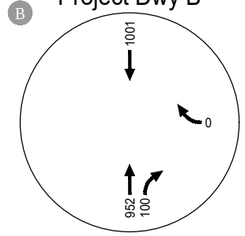

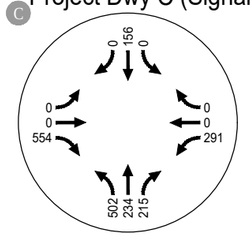

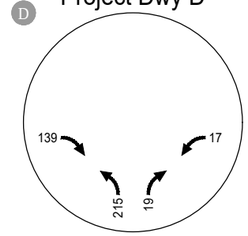

Note: Negative numbers reflect pass-by trips

Year 2021 Project Completion Traffic Volumes with Creighton Avenue Access
Saturday Midday Peak Hour
Murrieta, California

Figure
11B

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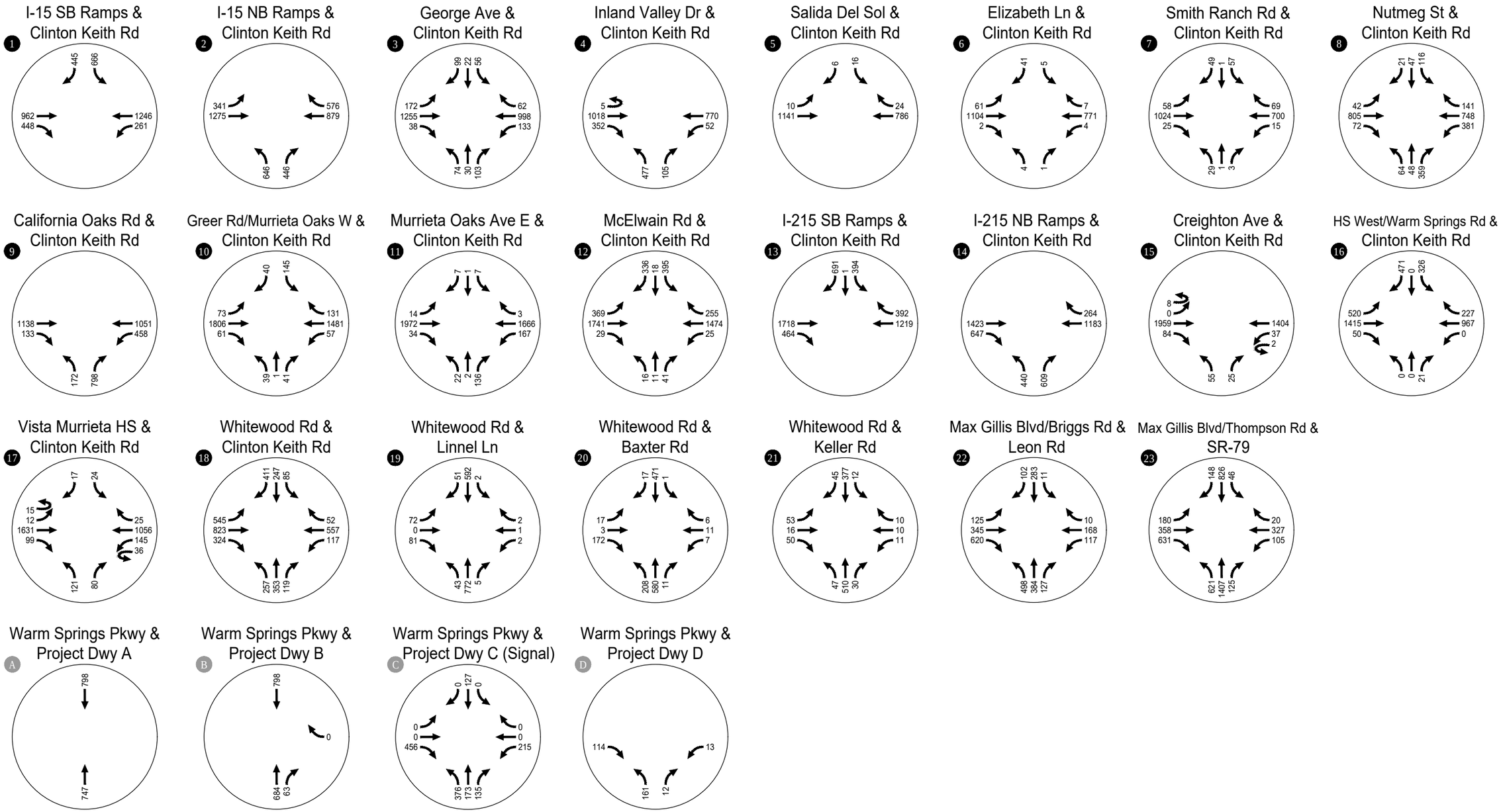

Note: Negative numbers reflect pass-by trips

Year 2021 Project Completion Traffic Volumes without Creighton Avenue Access
Weekday PM Peak Hour
Murrieta, California

Figure
11C

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KITTELSON & ASSOCIATES

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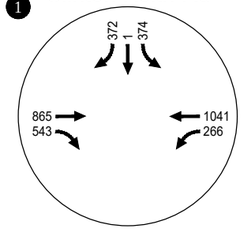
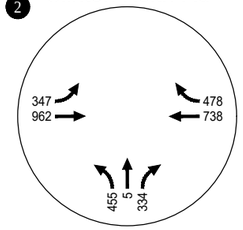
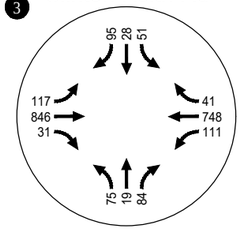


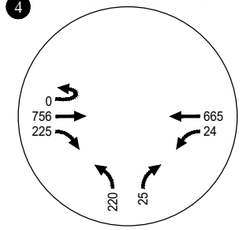
2 I-15 NB Ramps & Clinton Keith Rd



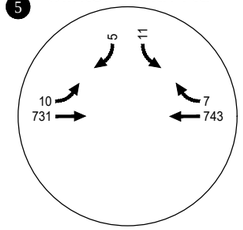
3 George Ave & Clinton Keith Rd



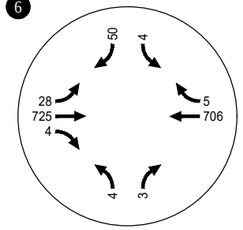
4 Inland Valley Dr & Clinton Keith Rd



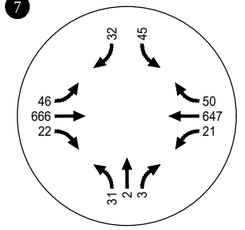
5 Salida Del Sol & Clinton Keith Rd



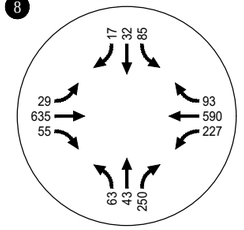
6 Elizabeth Ln & Clinton Keith Rd



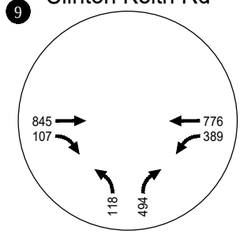
7 Smith Ranch Rd & Clinton Keith Rd



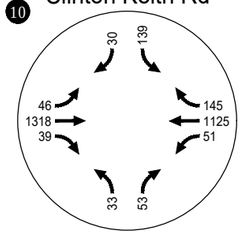
8 Nutmeg St & Clinton Keith Rd



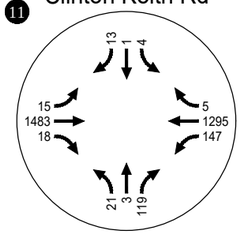
9 California Oaks Rd & Clinton Keith Rd



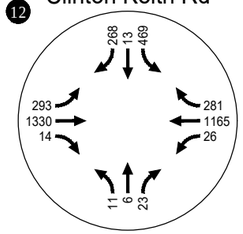
10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



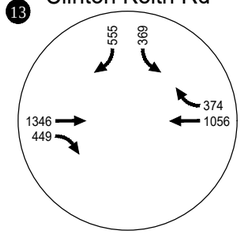
11 Murrieta Oaks Ave E & Clinton Keith Rd



12 McElwain Rd & Clinton Keith Rd



13 I-215 SB Ramps & Clinton Keith Rd



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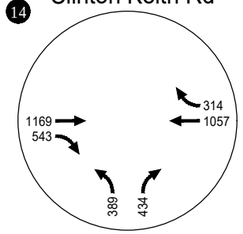
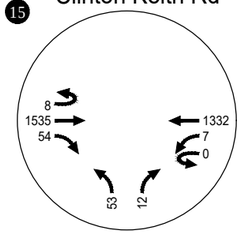
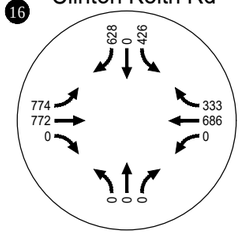


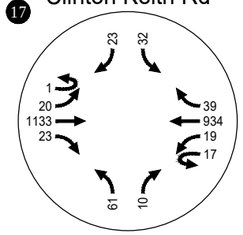
15 Creighton Ave & Clinton Keith Rd



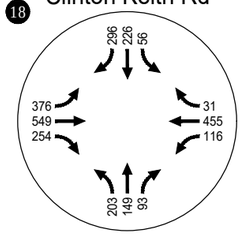
16 HS West/Warm Springs Rd & Clinton Keith Rd



17 Vista Murrieta HS & Clinton Keith Rd



18 Whitewood Rd & Clinton Keith Rd



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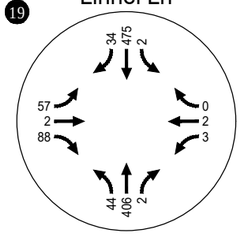
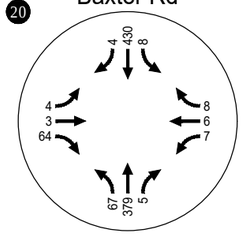
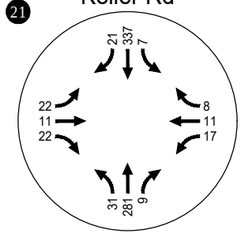


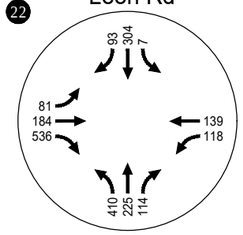
20 Whitewood Rd & Baxter Rd



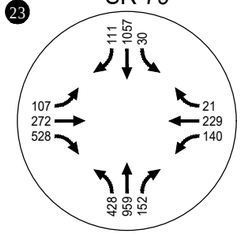
21 Whitewood Rd & Keller Rd



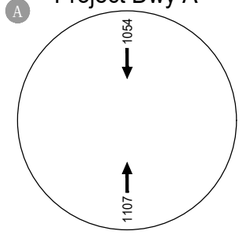
22 Max Gillis Blvd/Briggs Rd & Leon Rd



23 Max Gillis Blvd/Thompson Rd & SR-79



A Warm Springs Pkwy & Project Dwy A



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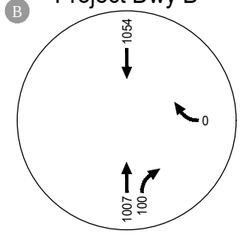
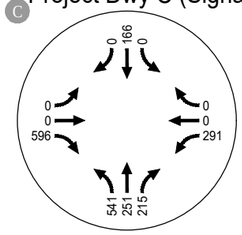
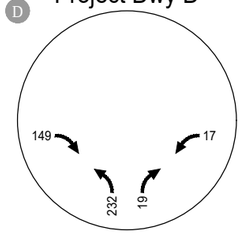


C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D



Note: Negative numbers reflect pass-by trips

Year 2021 Project Completion Traffic Volumes without Creighton Avenue Access
Saturday Midday Peak Hour
Murrieta, California

Figure
11D

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5.3 YEAR 2021 CUMULATIVE CONDITIONS

The Cumulative traffic conditions analysis forecasts how the study area's transportation system would operate with the traffic generated by the approved or proposed projects in the area as well as the Project.

5.3.1 Ambient Growth Rate

The same annual ambient growth rate was used for the cumulative traffic scenario as the Project traffic scenario (2% growth per year). This growth rate was applied to existing traffic volumes.

5.3.2 Approved/Proposed Development Projects Locations

The City of Murrieta and City of Menifee provided a list of approved/proposed projects that would affect traffic volumes in the study area under year 2021 conditions. Table 13 lists the approved/proposed projects accounted for in the Cumulative traffic condition analysis and the locations of the projects are provided in Figure 12.

Table 13: Approved/Proposed Projects List

Project Name	Description
Mitchell Crossing	331 Multi-Family Housing dwelling units 50,000 square foot Specialty Retail
The Orchard	436,735 square foot Shopping Center 215,850 square feet remaining to be built; 100,000 square feet assumed to be built by 2021
Vineyard I Shopping Center (updated)	78,489 square foot Shopping Center 91 Rooms Hotel
Makena Hills	116,200 square foot Medical Office 9,300 square foot Restaurant 206 Rooms Hotel
Adobe Springs	287 Single Family Detached dwelling units 208,500 square foot Business Park
Alderwood	10 Single Family Detached dwelling units
Golden Cities Phase 3	69 Single Family Detached dwelling units
Golden Cities Phase 4	126 Single Family Detached dwelling units
Golden Cities Phase 5	119 Single Family Detached dwelling units
Junction (Menifee)	148,663 square foot Discount Club 140,760 square foot Home Improvement Store 237,377 square foot Retail/Shopping Center
Walmart (Menifee)	205,000 square foot Discount Store 6,680 square foot Automobile Care Center 13,800 square foot Specialty Retail 6,500 square foot High-turn-over (sit-down) Restaurant 6,200 square foot Fast-Food with Drive-thru 16,000 square foot Gas Station w/ Food Mart & Car wash
Vineyard III	5 positions Lube/Tune 5,000 square foot Bank 22,500 square foot Shopping Center 2,500 square foot Fast-food with Drive-thru 5,500 square foot High-turn-over (sit-down) Restaurant

Project Name	Description
Clinton Keith Village (Wildomar)	5,940 square foot Fast-food with Drive-thru 12,840 square foot Variety Store 12 fueling position Convenience Market with Gas Pumps 18,250 square feet of Commercial Retail

Source: Traffic studies and data provided by the City of Murrieta, Menifee, and Wildomar.

5.3.3 Trip Generation for Approved/Proposed Projects

Table 14 provides the trip generation for all approved/proposed projects. The trip generation was taken from traffic studies for the development when available. As no studies included a Saturday midday analysis, the trip generation was estimated based on the data provided on the site development. Detailed trip generation sheets are provided in Appendix "I."

Table 14: Approved/Proposed Projects Trip Generation

		Weekday PM Peak Hour			Saturday Midday Peak Hour[1]		
	Project Name	Total	In	Out	Total	In	Out
1	Mitchell Crossing	341	192	149	382	191	191
2	The Orchard[2]	300	143	157	385	202	183
3	Vineyard I Shopping Center (updated)	531	258	273	775	406	369
4	Makena Hills	607	256	351	671	383	288
5	Adobe Springs	537	244	293	320	171	149
6	Alderwood[3]	10	6	4	9	5	4
7	Golden Cities Phase 3	70	44	26	64	35	29
8	Golden Cities Phase 4	127	80	47	117	63	54
9	Golden Cities Phase 5	119	75	44	111	60	51
10	Junction	1,563	757	806	2,044	1,037	1,007
11	Walmart	1,335	677	658	1,350	689	661
12	Vineyard III	456	230	226	430	221	209
13	Clinton Keith Village	307	155	152	395	201	194
	Total	**6,303**	**3,117**	**3,186**	**7,053**	**3,664**	**3,389**

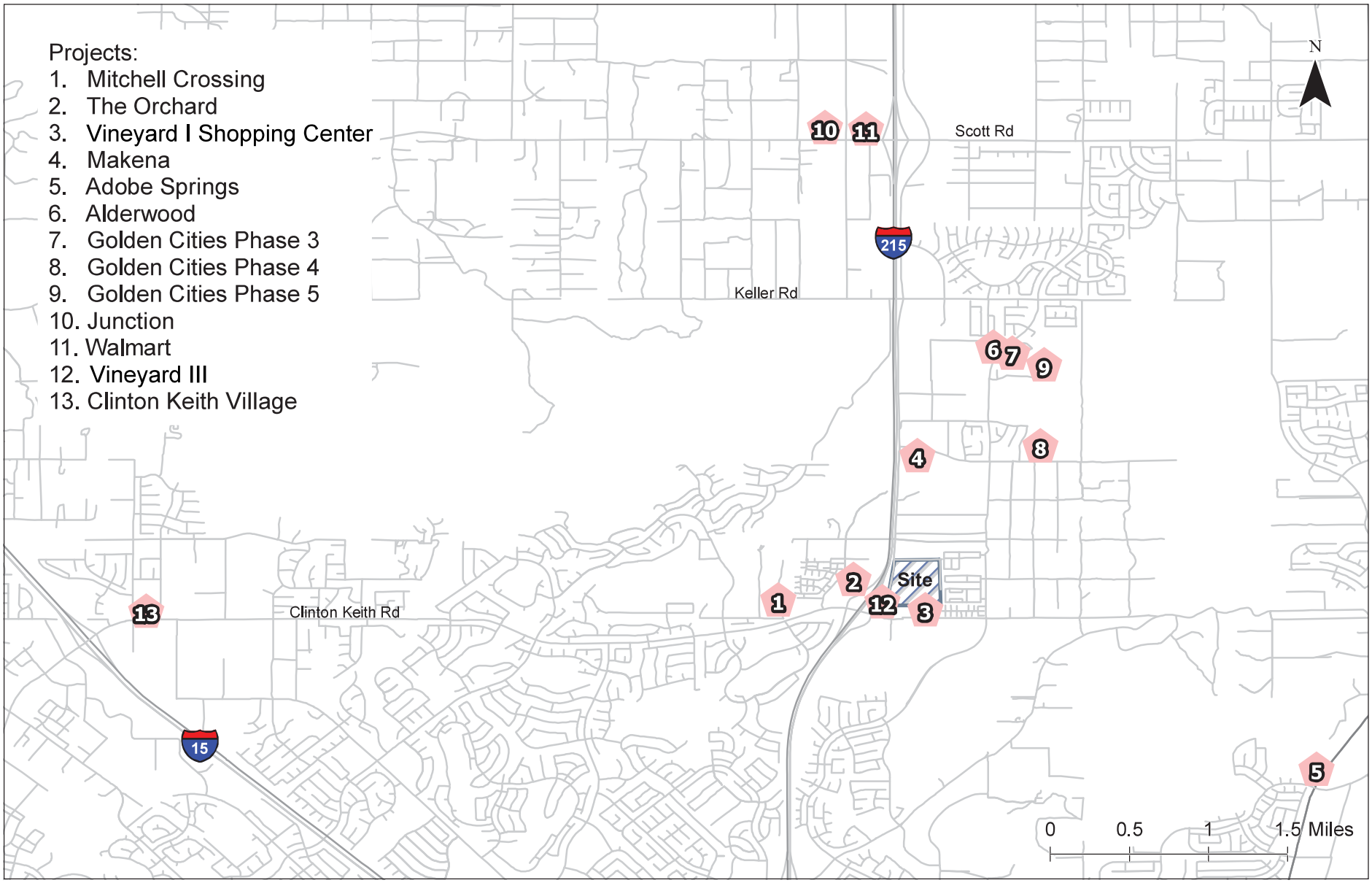
Source: Traffic studies and data provided by the City of Murrieta, Menifee, and Wildomar.

Notes:

[1] The original traffic studies did not include a Saturday midday trip generation. The same approach taken in the original study was utilized to develop a Saturday midday trip generation assessment using the 9th Edition of the Trip Generation Manual (Reference 8)

[2] The Orchard project includes 436,7356 square feet of shopping center development. A portion of the site is already developed, so a total of 215,850 square feet of the shopping center remains to be built. An additional 100,000 SF of development is anticipated by 2021. Therefore, the trips shown are associated with 100,000 square feet of development.

[3] A traffic study was not conducted for Alderwood so trip generation was assessed based on the development type and unit count.



Approved/Proposed Project Locations
Murrieta, CA

Figure
12

KITTELSON & ASSOCIATES

Coordinate System: GCS WGS 1984
Data Source: Delete if there isn't one.

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5.3.4 Trip Distribution and Assignment for Approved/Proposed Projects

Trip distributions for most of the approved/proposed projects were provided in traffic studies for the site or project scoping agreements. For projects without an available trip distribution or with trip distributions not covering the full study area, trips were distributed throughout the Project study area using traffic patterns from existing counts and observations of current areawide access routes. The trip assignment for the approved/proposed projects is provided in Figure 13A and Figure 13B for the weekday PM peak hour and Saturday midday peak hour, respectively.

5.3.5 Year 2021 Cumulative Conditions Traffic Volumes

Year 2021 cumulative traffic volumes include existing counts with ambient growth, trips from approved/proposed projects, and site-generated trips associated with the proposed project. The weekday PM and Saturday midday peak hour turning movement traffic volumes with Project access at Creighton Avenue are shown in Figure 14A and Figure 14B, respectively. Figures 14C and Figure 14D show the weekday PM and Saturday midday peak hour turning movement traffic volumes without Project access at Creighton Avenue, respectively.

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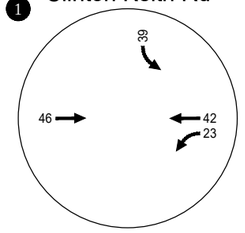

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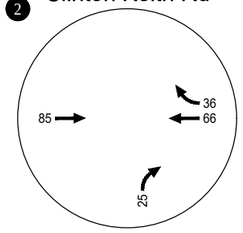
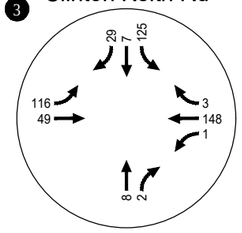
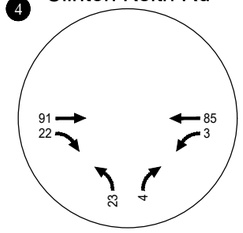


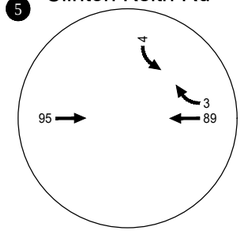
3 George Ave & Clinton Keith Rd



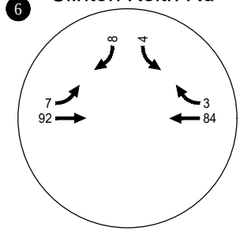
4 Inland Valley Dr & Clinton Keith Rd



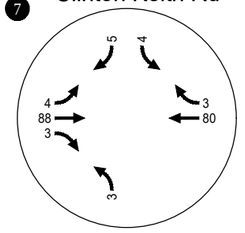
5 Salida Del Sol & Clinton Keith Rd



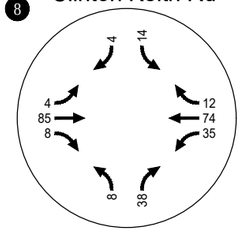
6 Elizabeth Ln & Clinton Keith Rd



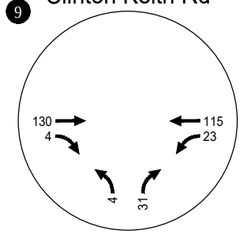
7 Smith Ranch Rd & Clinton Keith Rd



8 Nutmeg St & Clinton Keith Rd



9 California Oaks Rd & Clinton Keith Rd



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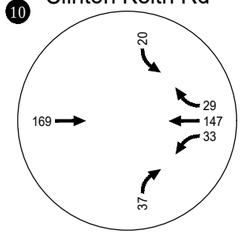

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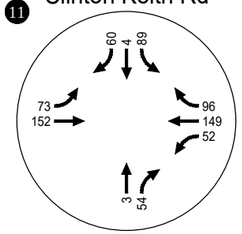

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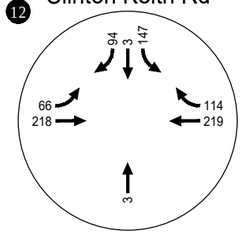
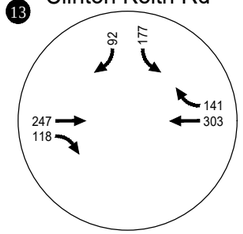


13 I-215 SB Ramps & Clinton Keith Rd



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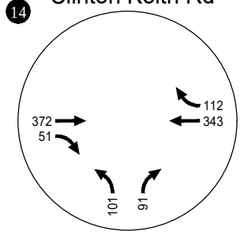

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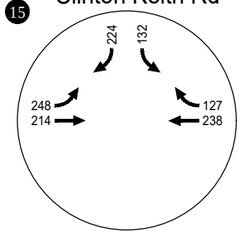

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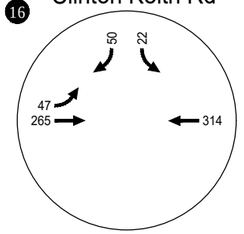

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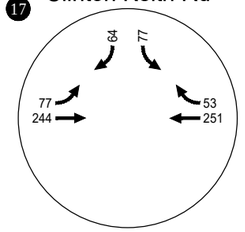
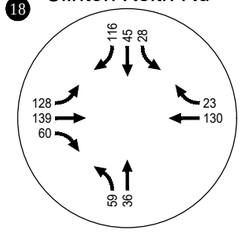


18 Whitewood Rd & Clinton Keith Rd



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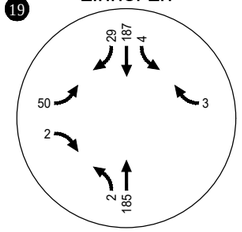

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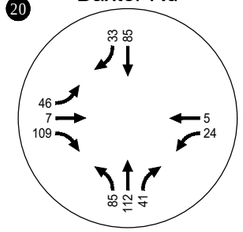

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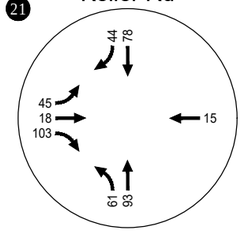
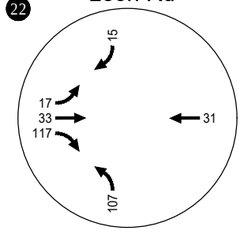
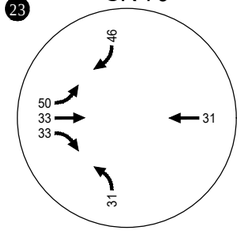


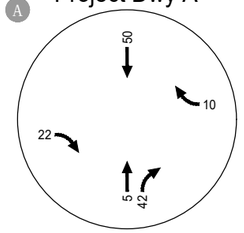
22 Max Gillis Blvd/Briggs Rd & Leon Rd



23 Max Gillis Blvd/Thompson Rd & SR-79



A Warm Springs Pkwy & Project Dwy A



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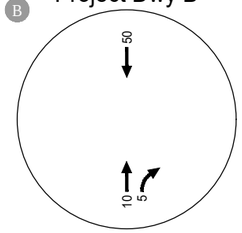
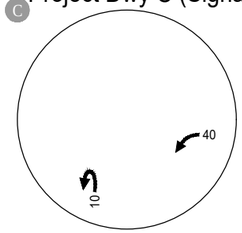


C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D

No Added Trips

Note: Negative numbers reflect pass-by trips

Approved/Proposed Projects Trip Assignment
Weekday PM Peak Hour
Murrieta, California

Figure
13A

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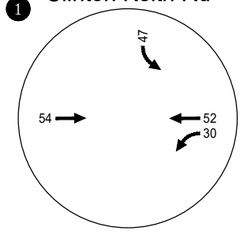
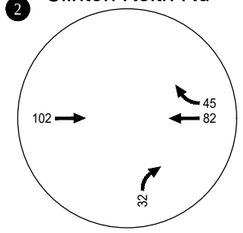
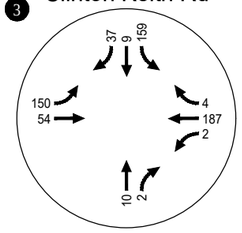
1 I-15 SB Ramps & Clinton Keith Rd



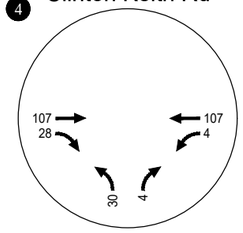
2 I-15 NB Ramps & Clinton Keith Rd



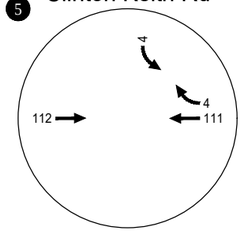
3 George Ave & Clinton Keith Rd



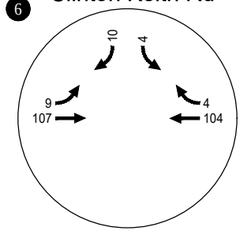
4 Inland Valley Dr & Clinton Keith Rd



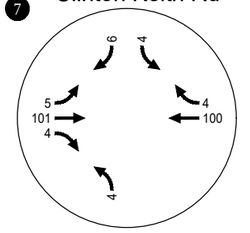
5 Salida Del Sol & Clinton Keith Rd



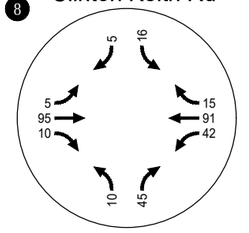
6 Elizabeth Ln & Clinton Keith Rd



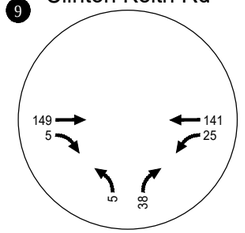
7 Smith Ranch Rd & Clinton Keith Rd



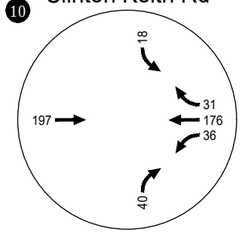
8 Nutmeg St & Clinton Keith Rd



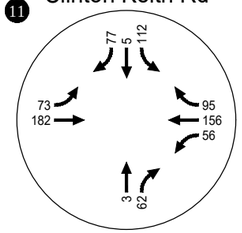
9 California Oaks Rd & Clinton Keith Rd



10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



11 Murrieta Oaks Ave E & Clinton Keith Rd



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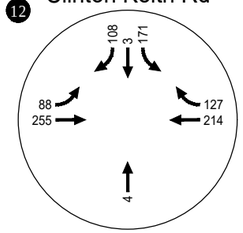
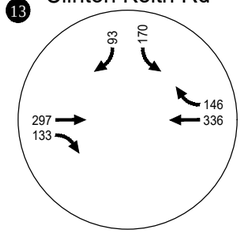


13 I-215 SB Ramps & Clinton Keith Rd



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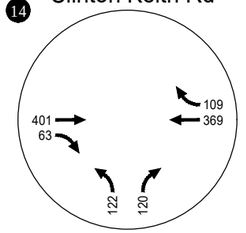
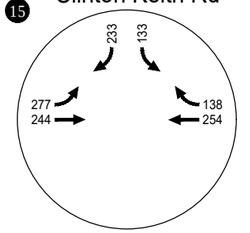
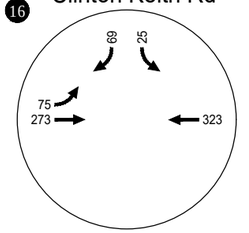


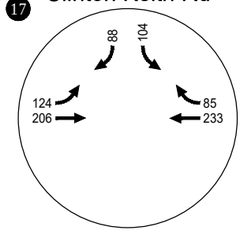
15 Creighton Ave & Clinton Keith Rd



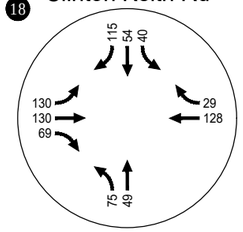
16 HS West/Warm Springs Rd & Clinton Keith Rd



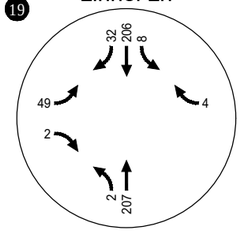
17 Vista Murrieta HS & Clinton Keith Rd



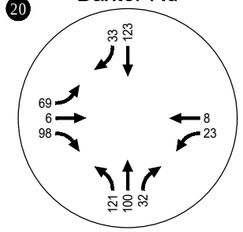
18 Whitewood Rd & Clinton Keith Rd



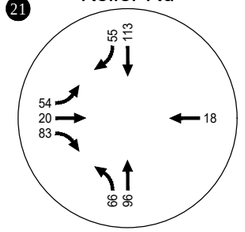
19 Whitewood Rd & Linnel Ln



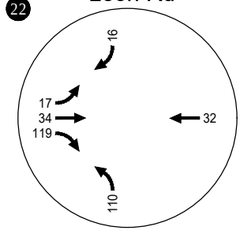
20 Whitewood Rd & Baxter Rd



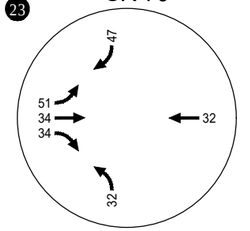
21 Whitewood Rd & Keller Rd



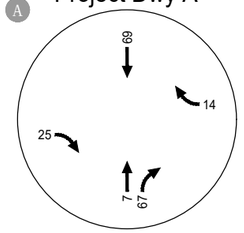
22 Max Gillis Blvd/Briggs Rd & Leon Rd



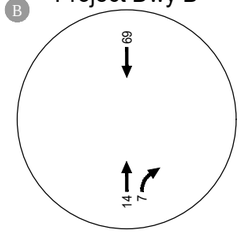
23 Max Gillis Blvd/Thompson Rd & SR-79



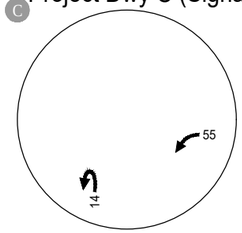
A Warm Springs Pkwy & Project Dwy A



B Warm Springs Pkwy & Project Dwy B



C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D

No Added Trips

Note: Negative numbers reflect pass-by trips

Approved/Proposed Projects Trip Assignment
Saturday Midday Peak Hour
Murrieta, California

Figure
13B

KITTELSON & ASSOCIATES

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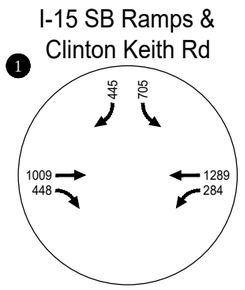

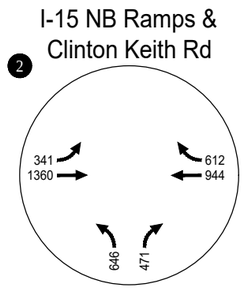

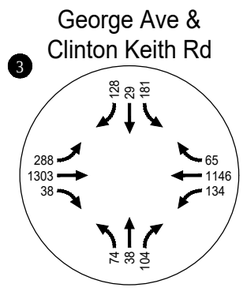

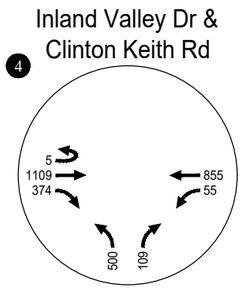

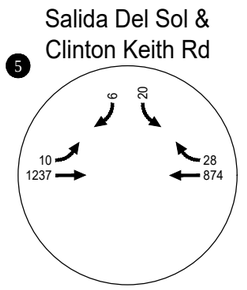

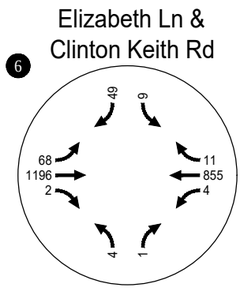

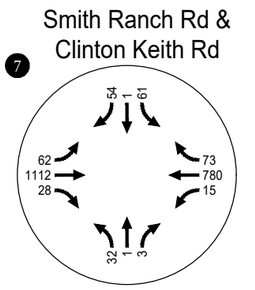

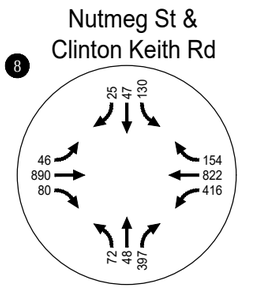

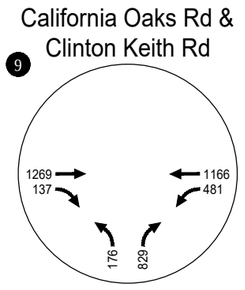

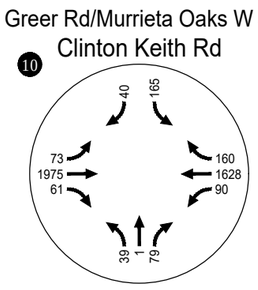

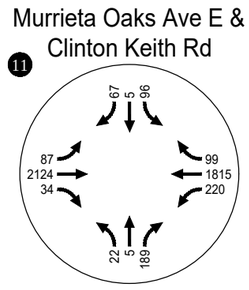

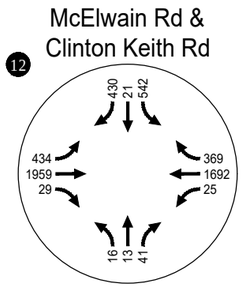

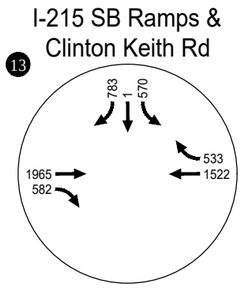

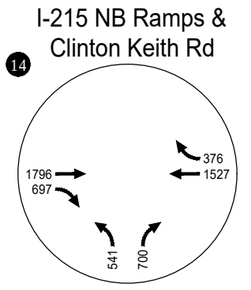

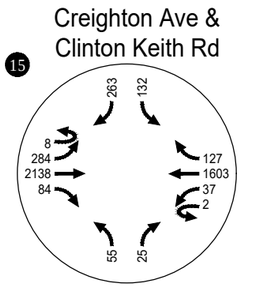

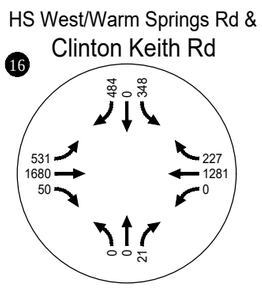

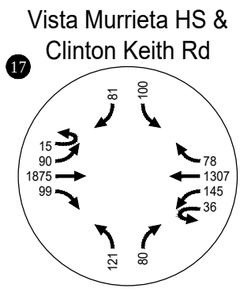

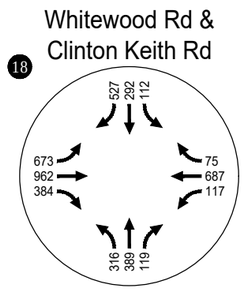

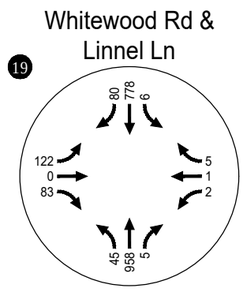

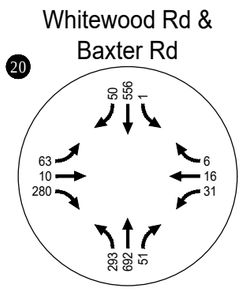

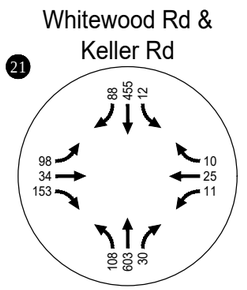

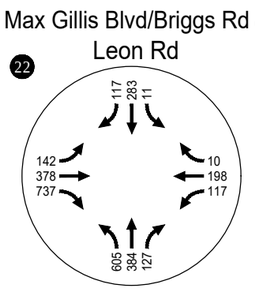

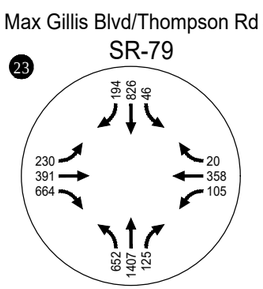

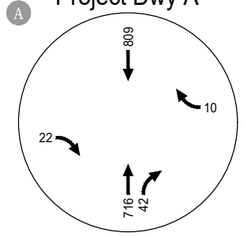

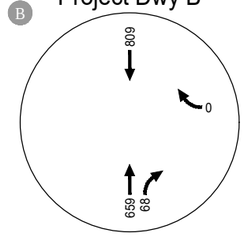

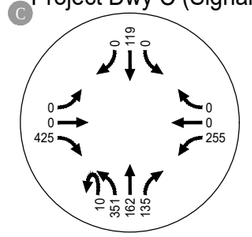

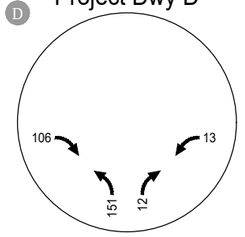

Note: Negative numbers reflect pass-by trips

Year 2021 Cumulative Traffic Volumes with Creighton Avenue Access
Weekday PM Peak Hour
Murrieta, California

Figure
14A

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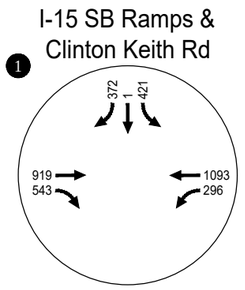

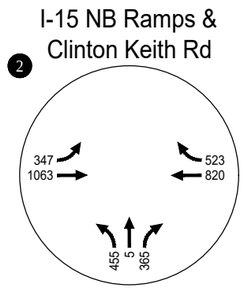

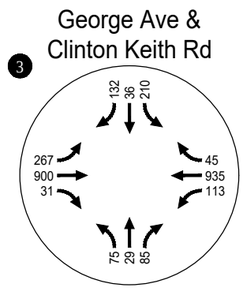

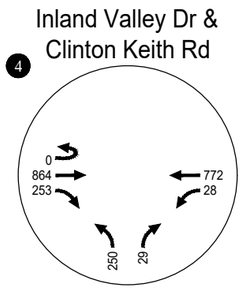

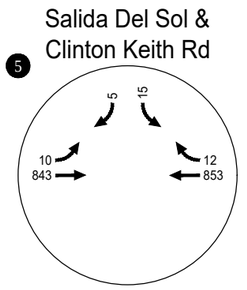

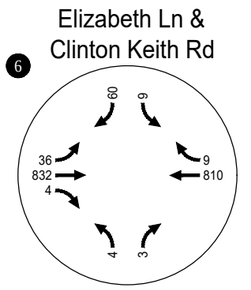

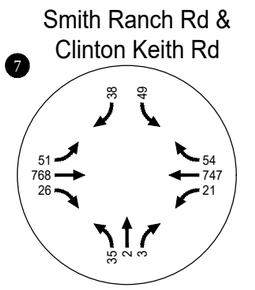

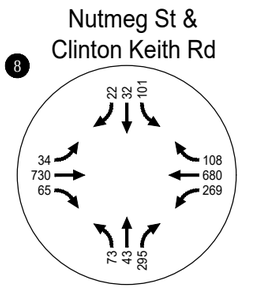

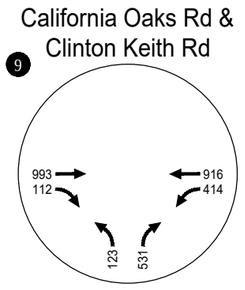

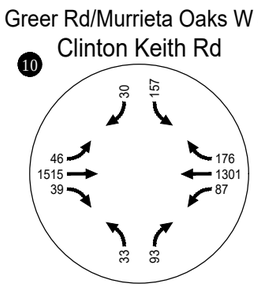

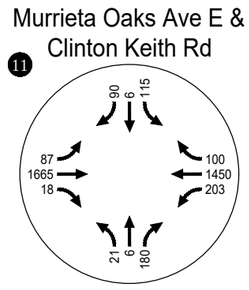

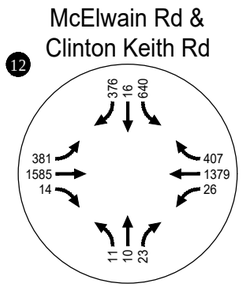

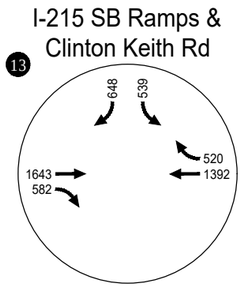

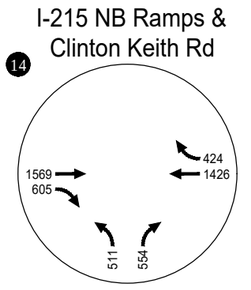

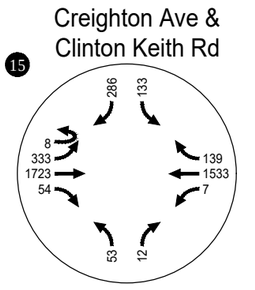

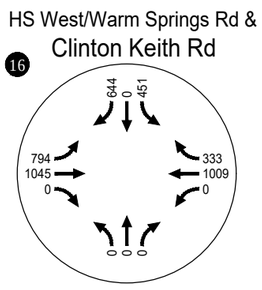

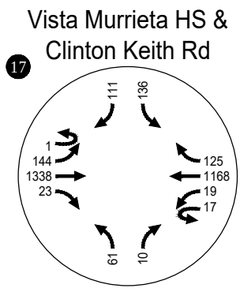

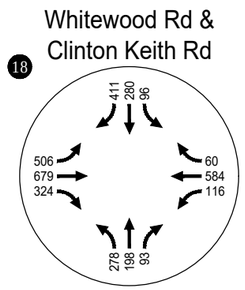

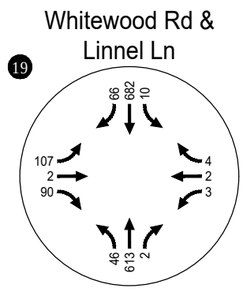

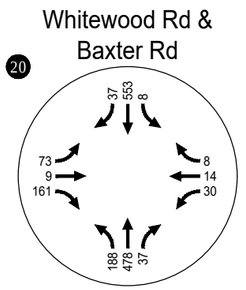

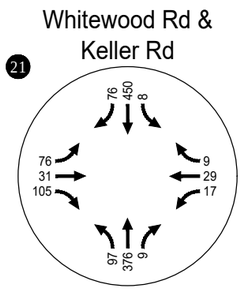

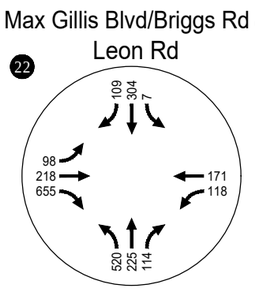

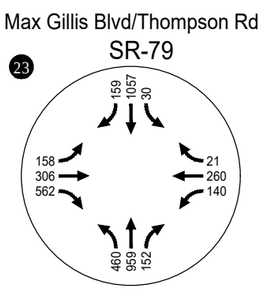

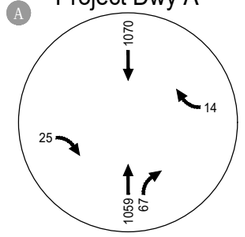

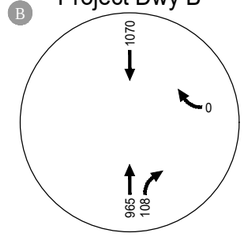

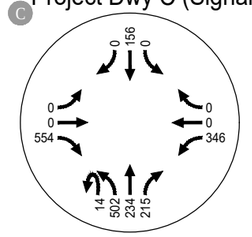

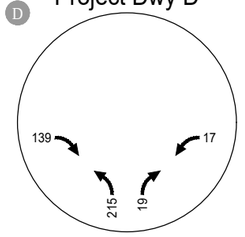

Note: Negative numbers reflect pass-by trips

Year 2021 Cumulative Traffic Volumes with Creighton Avenue Access
Saturday Midday Peak Hour
Murrieta, California

Figure
14B

KITTELSON & ASSOCIATES

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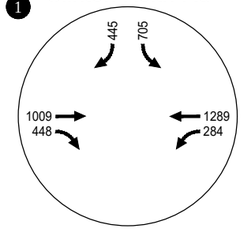
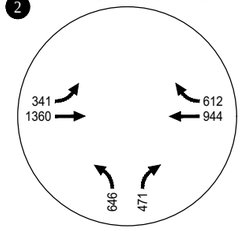
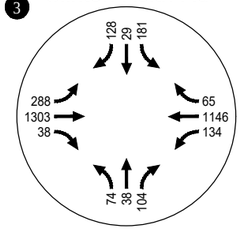
1 I-15 SB Ramps & Clinton Keith Rd



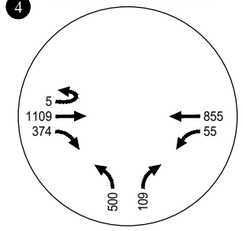
2 I-15 NB Ramps & Clinton Keith Rd



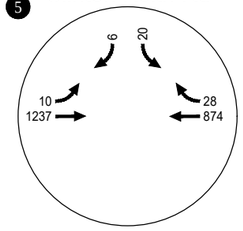
3 George Ave & Clinton Keith Rd



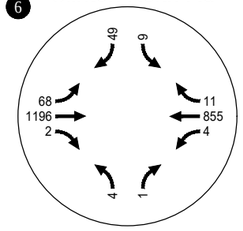
4 Inland Valley Dr & Clinton Keith Rd



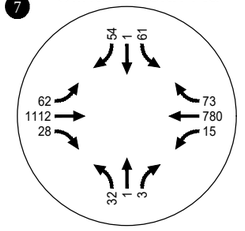
5 Salida Del Sol & Clinton Keith Rd



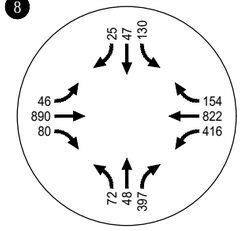
6 Elizabeth Ln & Clinton Keith Rd



7 Smith Ranch Rd & Clinton Keith Rd



8 Nutmeg St & Clinton Keith Rd



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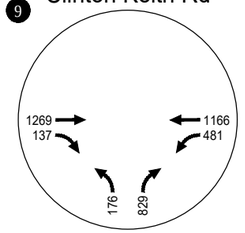
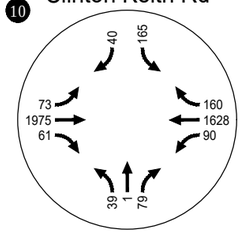
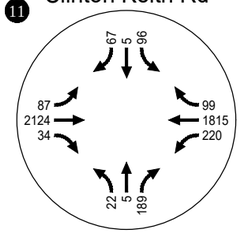


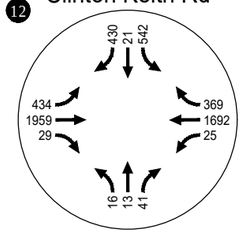
10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



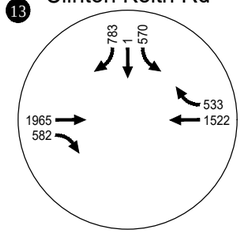
11 Murrieta Oaks Ave E & Clinton Keith Rd



12 McElwain Rd & Clinton Keith Rd



13 I-215 SB Ramps & Clinton Keith Rd



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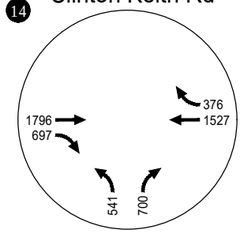
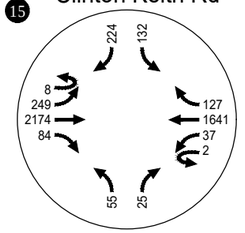
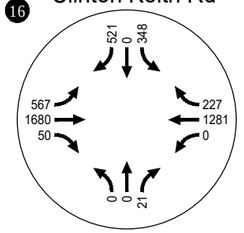


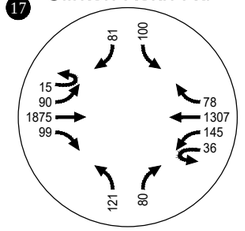
15 Creighton Ave & Clinton Keith Rd



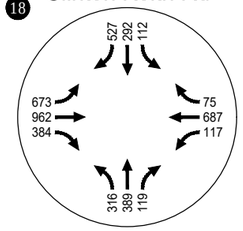
16 HS West/Warm Springs Rd & Clinton Keith Rd



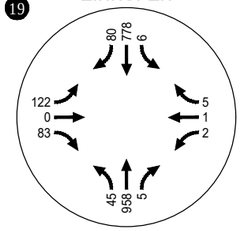
17 Vista Murrieta HS & Clinton Keith Rd



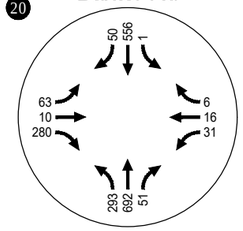
18 Whitewood Rd & Clinton Keith Rd



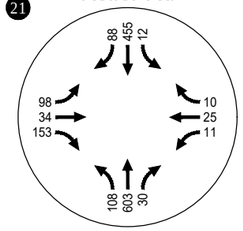
19 Whitewood Rd & Linnel Ln



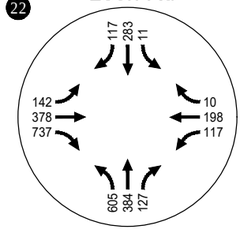
20 Whitewood Rd & Baxter Rd



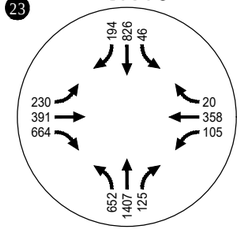
21 Whitewood Rd & Keller Rd



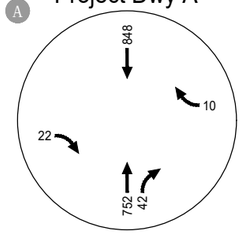
22 Max Gillis Blvd/Briggs Rd & Leon Rd



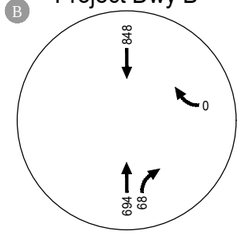
23 Max Gillis Blvd/Thompson Rd & SR-79



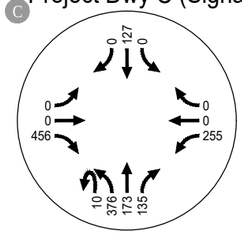
A Warm Springs Pkwy & Project Dwy A



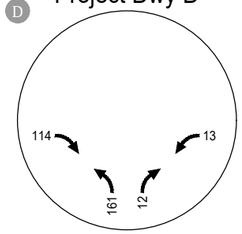
B Warm Springs Pkwy & Project Dwy B



C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D



Note: Negative numbers reflect pass-by trips

Year 2021 Cumulative Traffic Volumes without Creighton Avenue Access
Weekday PM Peak Hour
Murrieta, California

Figure
14C

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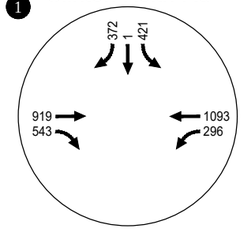
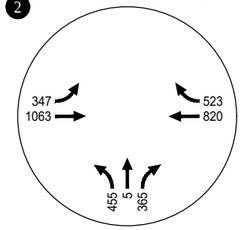
KITTELSON & ASSOCIATES

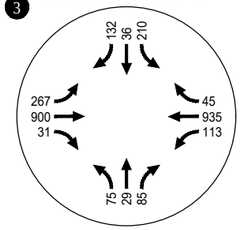
1 I-15 SB Ramps & Clinton Keith Rd



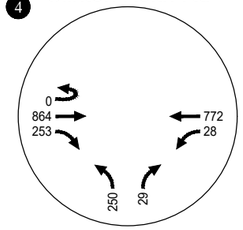
2 I-15 NB Ramps & Clinton Keith Rd



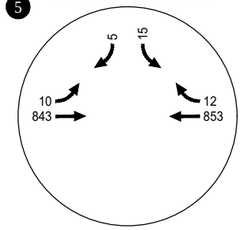
3 George Ave & Clinton Keith Rd



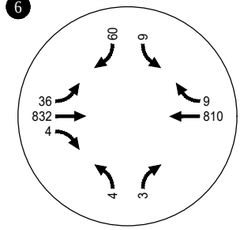
4 Inland Valley Dr & Clinton Keith Rd



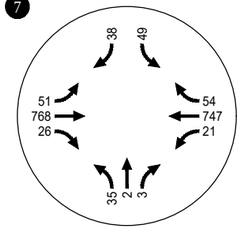
5 Salida Del Sol & Clinton Keith Rd



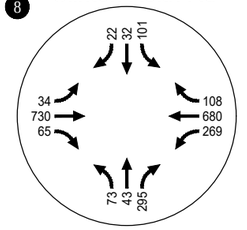
6 Elizabeth Ln & Clinton Keith Rd



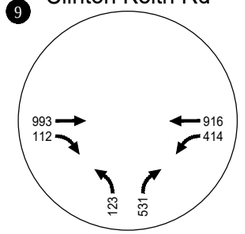
7 Smith Ranch Rd & Clinton Keith Rd



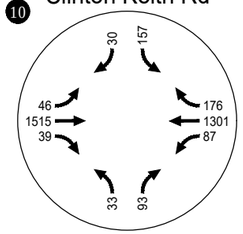
8 Nutmeg St & Clinton Keith Rd



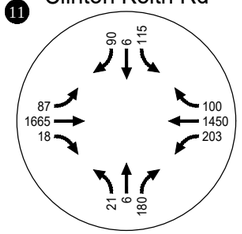
9 California Oaks Rd & Clinton Keith Rd



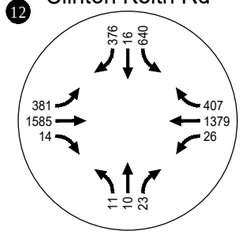
10 Greer Rd/Murrieta Oaks W & Clinton Keith Rd



11 Murrieta Oaks Ave E & Clinton Keith Rd



12 McElwain Rd & Clinton Keith Rd



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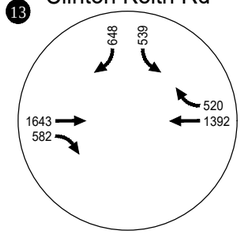

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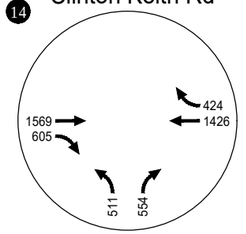
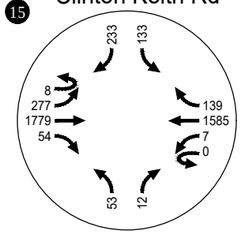
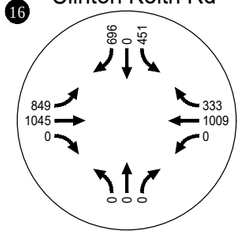


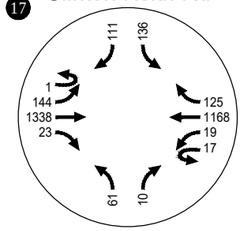
15 Creighton Ave & Clinton Keith Rd



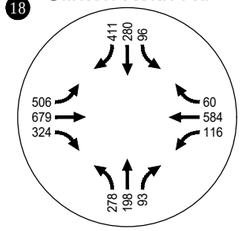
16 HS West/Warm Springs Rd & Clinton Keith Rd



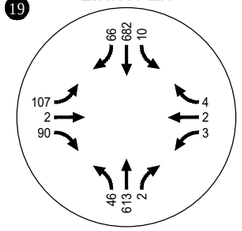
17 Vista Murrieta HS & Clinton Keith Rd



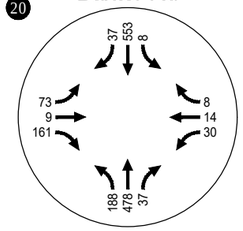
18 Whitewood Rd & Clinton Keith Rd



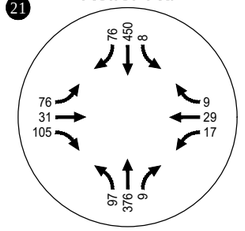
19 Whitewood Rd & Linnel Ln



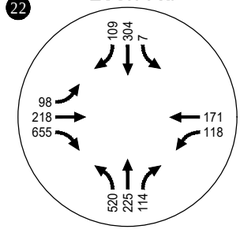
20 Whitewood Rd & Baxter Rd



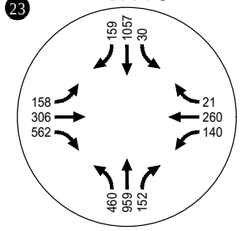
21 Whitewood Rd & Keller Rd



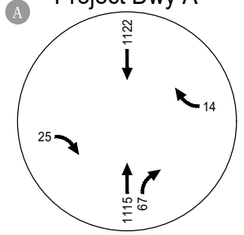
22 Max Gillis Blvd/Briggs Rd & Leon Rd



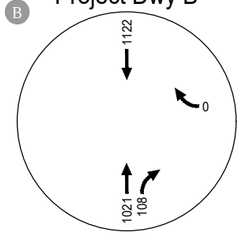
23 Max Gillis Blvd/Thompson Rd & SR-79



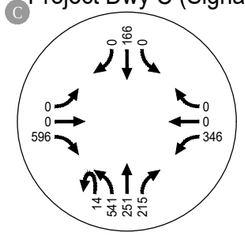
A Warm Springs Pkwy & Project Dwy A



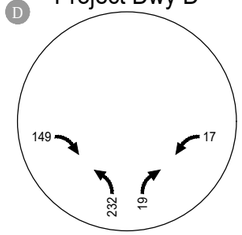
B Warm Springs Pkwy & Project Dwy B



C Warm Springs Pkwy & Project Dwy C (Signal)



D Warm Springs Pkwy & Project Dwy D



Note: Negative numbers reflect pass-by trips

Year 2021 Cumulative Traffic Volumes without Creighton Avenue Access
Saturday Midday Peak Hour
Murrieta, California

Figure
14D

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5.4 YEAR 2035 GENERAL PLAN BUILD-OUT CONDITIONS

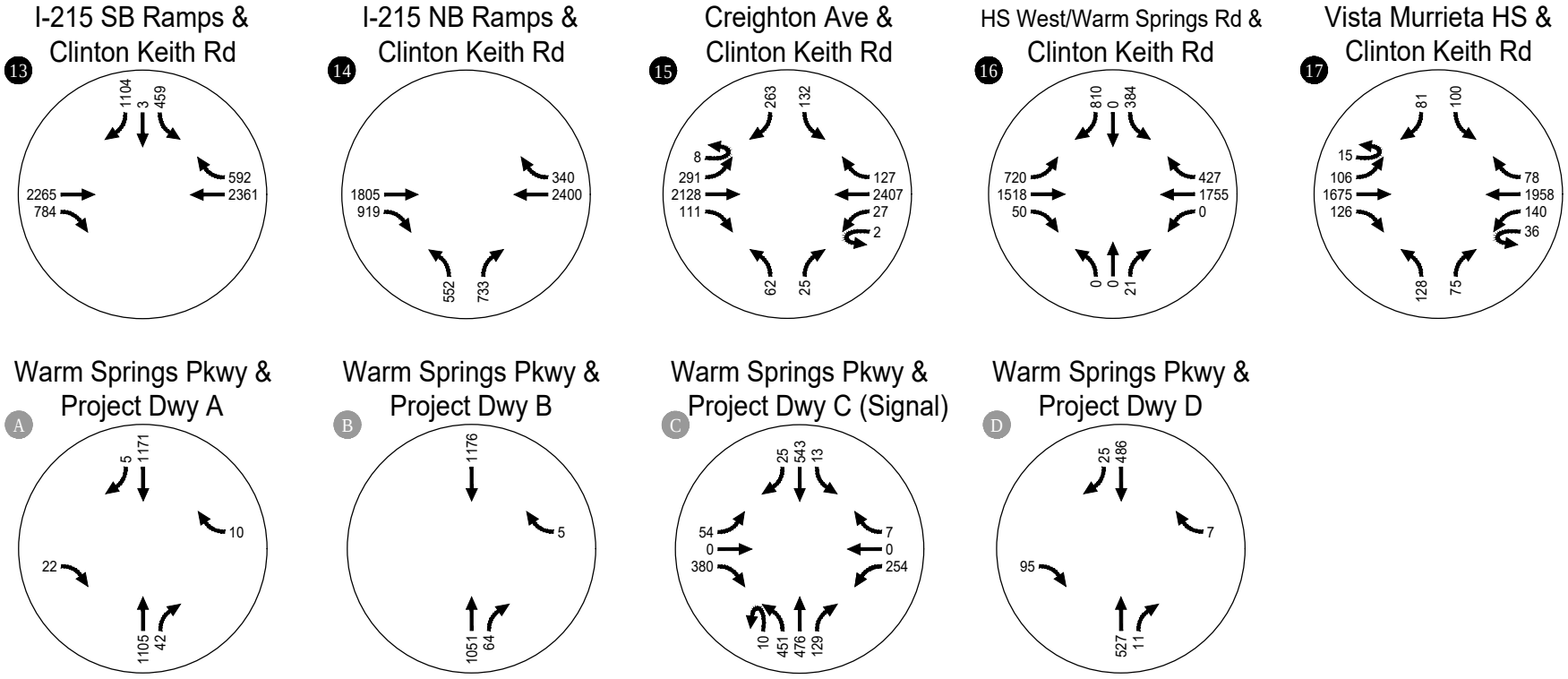
Per scoping comments from the City of Murrieta and Caltrans, an additional 2035 General Plan Build-Out Conditions analysis was conducted to ensure that the roadway geometries along Warm Springs Parkway are appropriately designed and for the I-215 ramp intersections at Clinton Keith Road. Because the Project does not propose a zoning change, a long-range analysis is not required per the City's Traffic Impact Analysis Preparation Guide or for CEQA purposes. Traffic volumes were developed for the weekday PM peak hour under 2035 conditions at intersections along Warm Springs Parkway and the I-215 ramps on Clinton Keith Road. The 2035 volumes include development of the proposed Project and reflect anticipated background growth associated with other developments and planned roadway changes. The volumes were developed in collaboration with the City and considered the following studies:

- City General Plan (Reference 2)
- Antelope Road Realignment Study (Reference 10) – includes build out traffic volumes along Antelope Road and at Creighton Avenue/Clinton Keith Road
- Clinton Keith Road Extension Project Traffic Operations Analysis (Reference 11) – includes 2035 traffic volumes on Clinton Keith Road at Whitewood Road and intersections to the east

In addition, a complete list of Approved/Proposed projects was reviewed and trip generation associated with the projects added to existing volumes and the trips associated with the proposed Project. Appendix "J" includes the full list of Approved/Proposed projects and a figure illustrating how the different sources of information were combined to develop 2035 volumes.

The resulting year 2035 Build-Out traffic volumes for the weekday PM peak hour are shown in Figure 15.

Projections for the freeway corridor are based on the I-215 Transportation Concept Report (TCR). Based on the growth between 2008 and 2035 conditions shown in the TCR, an annual growth rate of 2% per year was calculated and applied to the existing conditions data compiled from PeMS and intersection counts. This is growth rate is also consistent with the City of Murrieta's projections. As the Project does not change development assumptions made for the site, 2035 traffic volumes projected volumes from the TCR would include Project traffic. If the forecast traffic at the Clinton Keith Road ramps were lower than the proposed Project trip assignment, the volumes were increased to ensure adequate representation of Project traffic.



Year 2035 Cumulative Traffic Volumes
Weekday PM Peak Hour
Murrieta, CA

Figure
15

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KITTELSON & ASSOCIATES

Section 6 Traffic Analysis

6.0 TRAFFIC ANALYSIS

Traffic analyses were performed to understand how the study area's transportation system is anticipated to operate with the addition of traffic generated by the proposed Project in future conditions. Traffic analysis was performed for study intersections and roadway segments for the following scenarios:

- 2021 Project Completion Conditions (Existing volumes + ambient growth + project)
- 2021 Cumulative Conditions (Existing volumes + ambient growth + project + approved/proposed projects)
- 2035 Build-Out Conditions

The development of these traffic volumes for each of these scenarios were discussed in the previous section.

6.1 YEAR 2021 PROJECT COMPLETION CONDITIONS

Intersection operations at all study intersections and queues at the ramps were assessed under year 2021 conditions with completion of the proposed Project.

6.1.1 Intersection Operations

Project Completion Conditions were analyzed using existing counts with a 2% annual growth rate applied and added Project trips. The lane configurations and traffic control devices assumed were previously shown in Figure 10. Per the City's direction, signal timing was adjusted to reflect coordination on Clinton Keith Road between Greer Road/Murrieta Oaks Avenue and Bronco Way as needed for each peak hour. A 120-150 second cycle length was assumed at these coordinated intersections per direction from the City. While coordinated signal timing was explored at the other intersections along Clinton Keith Road (Nutmeg Street, California Oaks Road, and Whitewood Road), the intersections would operate better under year 2021 Project Completion conditions as uncoordinated with existing cycle lengths and optimized splits. Appendix "D" includes the level of service worksheets for the year 2021 Project Completion intersection operations. Appendix "E" includes the signal timing and phasing worksheets.

With Creighton Avenue Access

Table 15 shows the Project Completion delays and LOS for the study intersections during weekday PM and Saturday midday peak hours.

Table 15: Year 2021 Project Completion Intersection LOS Analysis – With Creighton Avenue Access

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
1	I-15 SB Ramps & Clinton Keith Road	Signal	24.9	C	18.1	B
2	I-15 NB Ramps & Clinton Keith Road	Signal	27.8	C	20.9	C
3	George Avenue & Clinton Keith Road	Signal	24.7	C	18.0	B
4	Inland Valley Drive & Clinton Keith Road	Signal	20.5	C	9.1	A
5	Salida Del Sol & Clinton Keith Road	TWSC	**37.1 (SBL/R)**	**E**	21.7 (SBL/R)	C
6	Elizabeth Lane & Clinton Keith Road	TWSC	**70.8 (NBL/T/R)**	**F**	24.1 (NBL/T/R)	C
7	Smith Ranch Road & Clinton Keith Road	Signal	13.2	B	13.9	B
8	Nutmeg St & Clinton Keith Rd	Signal	39.8	D	20.6	C
9	California Oaks Rd & Clinton Keith Rd	Signal	**54.4**	**E**	25.4	C
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	Signal	21.9	C	18.9	B
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	Signal	38.5	D	25.9	C
12	McElwain Rd & Clinton Keith Rd	Signal	29.9	C	20.2	C
13	I-215 SB Ramps & Clinton Keith Rd	Signal	13.6	B	11.3	B
14	I-215 NB Ramps & Clinton Keith Rd	Signal	14.5	B	15.1	B
15	Creighton Ave & Clinton Keith Rd	Signal	16.9	B	9.1	A
16	High School West Dwy/Warm Springs Pkwy & Clinton Keith Rd	Signal	24.3	C	41.7	D
17	Bronco Way & Clinton Keith Rd	Signal	48.4	D	11.8	B
18	Whitewood Rd & Clinton Keith Rd	Signal	54.8	D	34.6	C
19	Whitewood Rd & Linnel Ln/Lee Ln	Signal	13.3	B	14.5	B
20	Whitewood Rd & Baxter Rd	Signal	19.4	B	14.1	B
21	Whitewood Rd & Keller Rd	Signal	15.3	B	13.3	B
22	Max Gillis Blvd/Briggs Rd & Leon Rd	Signal	47.8	D	43.0	D
23	Max Gillis Blvd/Thompson Rd & SR-79	Signal	**77.1**	**E**	**77.4**	**E**
A	Warm Springs Pkwy /Project Driveway A	TWSC[1]	NA	NA	NA	NA
B	Warm Springs Pkwy /Project Driveway B	TWSC[1]	NA	NA	NA	NA

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
C	Warm Springs Pkwy /Project Driveway C	Signal	12.0	B	18.6	B
D	Warm Springs Pkwy /Project Driveway D	TWSC	7.5 (NBL)	A	7.6 (NBL)	A

Source: Kittelson & Associates, Inc. 2019.

Notes:

TWSC: Two-way stop control - delay reported reflects the critical movement, shown in parentheses

[1] No east/west turning movements are forecast at this intersection so delay cannot be estimated.

Boldface type indicates locations performing at LOS that does not meet standards.

As shown in Table 15, all intersections are projected to operate with an acceptable LOS except for the following:

- Salida Del Sol & Clinton Keith Road: With the City of Wildomar planned project (additional through lanes on Clinton Keith Road to start construction in winter 2020), the LOS for the southbound approach to the intersection is projected to improve from a LOS F under existing conditions to a LOS E under 2021 Project Completion Conditions during the weekday PM peak hour.
- Elizabeth Lane & Clinton Keith Road: As in existing conditions, the northbound approach to the intersection is projected to operate at a LOS F during the weekday PM peak hour.
- California Oaks Road & Clinton Keith Road: The intersection is projected to operate at a LOS E during the weekday PM peak hour.
- Max Gillis Boulevard/Thompson Road & SR-79: As in existing conditions, this signalized intersection is projected to operate at a LOS E during the weekday PM and Saturday midday peak hours.

Without Creighton Avenue Access

In the event that the northern leg of Creighton Avenue and signal are not constructed when the site develops, the access locations on Warm Springs Parkway are sufficient to serve the site. Trips that were assumed to use Creighton Avenue would instead utilize Warm Springs Parkway and the signalized access (Project Driveway C) or stop-controlled northern access (Project Driveway D). The alternative access plan would affect operations at the High School West Driveway/Warm Springs Parkway and Clinton Keith Road intersection as well as at the Project Driveways along Warm Springs Parkway. Appendix “D” includes the level of service worksheets for the year 2021 Project Completion intersection operations. Appendix “E” includes the signal timing and phasing worksheets.

As shown in the table below, all affected intersections continue to operate at an acceptable LOS.

Table 16: Year 2021 Project Completion Intersection LOS Analysis – Without Creighton Avenue Site Connection

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
15	Creighton Ave & Clinton Keith Rd	Signal	2.4	A	2.8	A
16	High School West Dwy/Warm Springs Pkwy & Clinton Keith Rd	Signal	33.3	C	53.7	D
A	Warm Springs Pkwy /Project Driveway A	TWSC[1]	NA	NA	NA	NA
B	Warm Springs Pkwy /Project Driveway B	TWSC[1]	NA	NA	NA	NA
C	Warm Springs Pkwy /Project Driveway C	Signal	12.5	B	20.5	C
D	Warm Springs Pkwy /Project Driveway D	TWSC	7.5 (NBL)	A	7.6 (NBL)	A

Source: Kittelson & Associates, Inc. 2019.

Notes:

TWSC: Two-way stop control - delay reported reflects the critical movement, shown in parentheses

[1] No east/west turning movements are forecast at this intersection so delay cannot be estimated.

Boldface type indicates locations performing at LOS that does not meet standards.

6.1.2 Queuing Analysis

The following queuing analysis was provided in the vicinity of the site. Synchro 9 was used to assess queues at the study intersections.

With Creighton Avenue Access

Table 17 illustrates the available queue storage, average queue length, and 95th percentile queue length at the turn-lanes for each study intersection. Appendix “F” includes the queuing worksheets.

Table 17: Year 2021 Project Completion Queues – With Creighton Avenue Access

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
8	Nutmeg St & Clinton Keith Rd	EBL	125	28 | 81	13 | 61	-	-
		WBL	225	246 | **506**	95 | **274**	No[5]	Yes
		NBL	175	40 | 89	26 | 82	-	-
		NBR	360[2]	0 | 82	0 | 62	-	-
		SBL	50	77 | **148**	36 | **106**	Yes	Yes
9	California Oaks Rd & Clinton Keith Rd	WBL	220[3]	441 | **959**	239 | 412	Yes	-
		NBL	100[6]	152 | **279**	42 | 102	Yes	-
		NBR	485[2]	0 | 135	0 | 92	-	-
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	EBL	260	51 | 130	44 | 86	-	-
		WBL	150	40 | 107	46 | 95	-	-
		WBR	150	17 | 51	0 | 0	-	-
		NBL	150	24 | 55	28 | 59	-	-
		NBR	150	0 | 0	0 | 0	-	-
		SBL	150	98 | 167	132 | **198**	-	Yes
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	EBL	150	12 | 45	15 | 26	-	-
		WBL	150	150 | **406**	150| **297**	Yes	Yes
		WBR	160	0 | 0	0 | 0	-	-
		NBL	190[2]	19 | 63	18 | 51	-	-
		SBL	150	3 | 14	2 | 8	-	-
		SBR	150	0 | 0	0 | 0	-	-
12	McElwain Rd & Clinton Keith Rd	EBL	200 (x2)	172 | 230	137 | 157	-	-
		EBR	100	0 | 0	0 | 0	-	-
		WBL	175	22 | 50	25 | 51	-	-
		WBR	160	0 |55	7 | 14	-	-
		NBL	50	15 | 42	11 | 33	-	-
		SBL	235 (x2)	185 | 225	226 | 274	-	-
13	I-215 SB Ramps & Clinton Keith Rd	EBR	385	83 | 108	125 | 127	-	-
		WBR	380	95 | 124	195 | 161	-	-
		SBR	1,100[1]	295 | 340	97 | 135	-	-
14	I-215 NB Ramps & Clinton Keith Rd	NBL/R	960[1]	435 | 544	373 | 443	-	-
		NBR	960[1]	427 | 552	331 | 413	-	-
15	Creighton Ave & Clinton Keith Rd	EBL/U	250	40 | 62	63 | 112	-	-
		EBR	250	0 | 1	0 | 0	-	-
		WBL/U	235	38 | 87	6 | 23	-	-

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
		WBR	*150*	0 | 0	0 | 0	-	-
		NBL	100	50 | 98	50 | 94	-	-
		NBT/R	390[2]	0 | 0	0 | 0	-	-
		SBL	*230[2]*	0 | 0	0 | 0	-	-
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd	*EBL*	205 (x2)	321 | 415	210 | **535**	-	Yes
		WBR	250	0 | 7	0 | 50	-	-
		NBL	100	0 | 0	0 | 0	-	-
		NBR	390[2]	0 | 0	0 | 0	-	-
		SBL	350 (x2)	149 | 262	142 | 366	-	-
		SBR	350	0 | 0	0 | 0	-	-
17	Vista Murrieta HS Dwy & Clinton Keith Rd	EBL/U	200	25 | 44	7 | 42	-	-
		WBL/U	315	167 | 320	13 | 62	-	-
		WBR	85	0 | 0	0 | 0	-	-
		NBL	355[2]	57 | 112	10 | 44	-	-
		NBT/R	355[2]	0 | 0	0 | 0	-	-
		SBL	60[2]	22 | 54	11 | 56	-	-
18	Whitewood Rd & Clinton Keith Rd	EBL	250 (x2)	226 | 423	96 | 218	-	-
		EBR	250	30 | 120	0 | 70	-	-
		WBL	200 (x2)	54 | 101	34 | 89	-	-
		WBR	350	0 | 0	0 | 0	-	-
		NBL	300	235 | **477**	114 | 265	Yes	-
		SBL	100	77 | **178**	32 | 100	Yes	-
19	Whitewood Rd & Linnel Ln	EBL	130	21 | 72	10 | 54	-	-
		EBR	>500[2]	0 | 0	0 | 13	-	-
		NBL	200	14 | 54	9 | 51	-	-
		SBL	200	1 | 7	0 | 7	-	-
20	Whitewood Rd & Baxter Rd	EBL	215	6 | 40	1 | 14	-	-
		EBR	>500[2]	0 | 55	0 | 2	-	-
		WBL	125	3 | 24	2 | 20	-	-
		NBL	215	66 | **255**	17 |113	No[5]	-
		NBR	>500[2]	0 | 0	0 | 0	-	-
		SBL	200	0 | 7	2 | 22	-	-
21	Whitewood Rd & Keller Rd	EBL	175	12 | 83	2 | 43	-	-
		EBR	545[1]	0 | 0	0 | 0	-	-
		WBL	200	3 | 29	2 | 36	-	-
		NBL	225	13 | 77	3 | 54	-	-

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
		SBL	115	3 | 29	1 | 20	-	-
C	Warm Springs Pkwy/Project Driveway C	*EBR*	155	1 | 26	38 | 126	-	-
		WBL	100	60 | **168**	117 **| 279**	No[4]	No[4]
		NBL	250 (x2)	51 | 147	100 | 223	-	-
		SBL	100	0 | 0	0 | 0	-	-
		SBR	100	0 | 0	0 | 0	-	-

Source: Kittelson & Associates, Inc. 2019

Notes:

*Impacts determined using 95th percentile queues and a queuing impact is determined if the Project causes the calculated 95th percentile queue length on public streets to exceed the existing or planned storage capacity by more than 25 feet. For storage lanes that are already deficient without the Project, a significant queuing impact is determined if the Project increases the calculated 95th percentile queue length by more than 25 feet. Average queues provided for information.

[1] Distance to development of separate turn lanes from highway off-ramp.

[2] Approximate distance to adjacent intersection.

[3] Two-way left-turn lanes provides additional storage up to 730 feet.

[4] Queues onto private property, not on City streets.

[5] Project contribution to queue is less than 25 feet as compared to existing conditions.

[6]The City recently completed a project to extend the storage for this left-turn lane to 250-ft

Boldface type indicates the 95th percentile queue exceeds the available storage by 25 feet or more.

Italic type indicates the movement does not currently exist.

As shown in the table, 95th percentile queues are projected to exceed storage capacity by more than 25 feet (or by more than 25 feet beyond existing conditions for locations that already exceed capacity) under 2021 Project conditions for one or more movements at the following study locations:

- Nutmeg Street & Clinton Keith Road (WBL, SBL)
- California Oaks Road & Clinton Keith Road (WBL, NBL)
- Greer Road/Murrieta Oaks Avenue & Clinton Keith Road (SBL)
- Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road (WBL)
- High School West Driveway/Warm Springs Parkway & Clinton Keith Road (EBL)
- Whitewood Road & Clinton Keith Road (NBL, SBL)

Without Creighton Avenue Access

The alternative access plan would affect operations at the High School West Driveway/Warm Springs Parkway and Clinton Keith Road intersection as well as at the Project Driveways along Warm Springs Parkway. Table 18 illustrates the available queue storage, average queue length, and 95th percentile queue length at the turn-lanes for each study intersection. Appendix "F" includes the queuing worksheets.

Table 18: Year 2021 Project Completion Queues – Without Creighton Avenue Access

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
15	Creighton Ave & Clinton Keith Rd	EBL/U	250	7 | 12	8 | 21	-	-
		EBR	250	0 | 2	0 | 4	-	-
		WBL/U	235	37 | 79	6 | 23	-	-
		NBL	100	61 | 114	54 | 103	-	-
		NBT/R	390[1]	0 | 0	0 | 0	-	-
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd	*EBL*	205 (x2)	359 **| 464**	232 **| 602**	Yes	Yes
		WBR	250	0 | 7	0 | 50	-	-
		NBL	100	0 | 0	0 | 0	-	-
		NBR	390[1]	0 | 0	0 | 0	-	-
		SBL	350 (x2)	149 | 262	142 **|** 366	-	-
		SBR	350	0 | 0	0 | 0	-	-
C	Warm Springs Pkwy/Project Driveway C	*EBR*	155	6 | 39	52 | 163	-	-
		WBL	100	62 | **174**	122 | **293**	No[2]	No[2]
		NBL	250 (x2)	56 | 157	112 | 244	-	-
		SBL	100	0 | 0	0 | 0	-	-
		SBR	100	0 | 0	0 | 0	-	-

Source: Kittelson & Associates, Inc. 2019

Notes:

*Impacts determined using 95th percentile queues and a queuing impact is determined if the Project causes the calculated 95th percentile queue length on public streets to exceed the existing or planned storage capacity by more than 25 feet. For storage lanes that are already deficient without the Project, a significant queuing impact is determined if the Project increases the calculated 95th percentile queue length by more than 25 feet. Average queues provided for information.

[1] Approximate distance to adjacent intersection.

[2] Queues onto private property, not on City streets.

Boldface type indicates the 95th percentile queue exceeds the available storage.

Italic type indicates the movement does not currently exist.

As shown in the table, the without Creighton access scenario increases the expected queues at the High School West Driveway/Warm Springs Parkway & Clinton Keith Road intersection, particularly for the eastbound left-turn and results in a new queuing impact for the eastbound left-turn during the weekday PM peak (that does not occur in the with Creighton access scenario).

6.1.3 Roadway Segment Analysis

An assessment of average daily traffic (ADT) was conducted for the three roadway segments listed below for year 2021 Project competition conditions:

- Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway
- Whitewood Road, north of Clinton Keith Road
- Warm Springs Parkway, north of Clinton Keith Road

Average daily volumes were developed by applying a growth rate to the existing roadway counts collected in 2017 and adding the projected daily trips associated with the development (based on the overall trip generation and trip distribution).

With Creighton Avenue Access

The resulting v/c ratios on each roadway is shown in Table 19. As shown in the table, all three roadway segments are projected to operate under capacity and at a LOS C under year 2021 Project completion conditions on both a weekday and Saturday.

Table 19: Year 2021 Project Completion ADT Analysis – With Creighton Avenue Access

Segment	Metric	Weekday	Saturday[1]
Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway	Volume (Daily)	34,697	32,024
	Capacity (Daily, LOS E)	53,900	53,900
	LOS	C	C
	v/c Ratio	0.64	0.59
Warm Springs Parkway Road, north of Clinton Keith Road	Volume (Daily)	16,586	21,723
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.49	0.64
Whitewood Road, north of Clinton Keith Road	Volume (Daily)	14,609	12,968
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.43	0.38

Source: Kittelson & Associates, Inc. 2019.

Note: The capacities shown are based on roadway classification and taken from the City's General Plan (Reference 2) for roadways operating at a LOS E. The level of service is based on the City's General Plan maximum two-way ADT volume for each LOS grade. The table provides maximum ADT volumes for LOS C, D and E. Clinton Keith Road is an urban arterial, Warm Springs Parkway is a major roadway, and Whitewood Road a major roadway.

[1] The Saturday daily trip generation for the development was generated based by applying the ratio between Saturday midday peak hour and Saturday daily trip generation in the manual *Trip Generation, 9th Edition* (ITE, Reference 8) to the Costco Saturday midday peak hour trips as the Costco database does not contain Saturday daily trip generation.

Without Creighton Avenue Access

The resulting v/c ratios on each roadway is shown in Table 20. As shown in the table, all three roadway segments are projected to operate under capacity and at a LOS C under year 2021 Project completion conditions on both a weekday and Saturday.

Table 20: Year 2021 Project Completion ADT Analysis – Without Creighton Avenue Access

Segment	Metric	Weekday	Saturday[1]
Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway	Volume (Daily)	35,975	33,770
	Capacity (Daily, LOS E)	53,900	53,900
	LOS	C	C
	v/c Ratio	0.67	0.71
Warm Springs Parkway Road, north of Clinton Keith Road	Volume (Daily)	18,429	24,137
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.54	0.71
Whitewood Road, north of Clinton Keith Road	Volume (Daily)	14,609	12,968
	Capacity (Daily, LOS E)	34,100	34,100
	LOs	C	C
	v/c Ratio	0.43	0.38

Source: Kittelson & Associates, Inc. 2019.

Note: The capacities shown are based on roadway classification and taken from the City's General Plan (Reference 2) for roadways operating at a LOS E. The level of service is based on the City's General Plan maximum two-way ADT volume for each LOS grade. The table provides maximum ADT volumes for LOS C, D and E. Clinton Keith Road is an urban arterial, Warm Springs Parkway is a major roadway, and Whitewood Road a major roadway.

[1] The Saturday daily trip generation for the development was generated based by applying the ratio between Saturday midday peak hour and Saturday daily trip generation in the manual *Trip Generation, 9th Edition* (ITE, Reference 8) to the Costco Saturday midday peak hour trips as the Costco database does not contain Saturday daily trip generation.

6.2 YEAR 2021 CUMULATIVE CONDITIONS

Intersection operations at all study intersections and queues at the ramps were assessed under year 2021 conditions with completion of the proposed Project as well as approved/proposed projects.

6.2.1 Intersection Operations

Year 2021 Cumulative Conditions were analyzed using existing traffic counts with a 2% annual growth rate applied, Project trips added, and approved/proposed projects included. Appendix "D" includes the level of service worksheets for the year 2021 Cumulative Conditions intersection operations. Appendix "E" includes the signal timing and phasing worksheets.

With Creighton Avenue Access

The lane configurations and traffic control devices assumed were previously shown in Figure 10. The same cycle lengths and coordination plans for the year 2021 Project Completion scenario were applied to year 2021 Cumulative analysis. Table 21 shows the Year 2021 Cumulative Conditions delays and LOS for the study intersections during weekday PM and Saturday midday peak hours.

Table 21: Year 2021 Cumulative Conditions Intersection LOS Analysis – With Creighton Avenue Access

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
1	I-15 SB Ramps & Clinton Keith Road	Signal	25.8	C	18.8	B
2	I-15 NB Ramps & Clinton Keith Road	Signal	30.0	C	21.0	B
3	George Avenue & Clinton Keith Road	Signal	31.2	C	28.7	C
4	Inland Valley Drive & Clinton Keith Road	Signal	22.2	C	10.0	B
5	Salida Del Sol & Clinton Keith Road	TWSC	**52.2 (SBL/R)**	**F**	29.0 (SBL/R)	D
6	Elizabeth Lane & Clinton Keith Road	TWSC	**95.4 (NBL/T/R)**	**F**	31.7 (NBL/T/R)	D
7	Smith Ranch Road & Clinton Keith Road	Signal	14.0	B	13.2	B
8	Nutmeg St & Clinton Keith Rd	Signal	52.0	D	25.7	C
9	California Oaks Rd & Clinton Keith Rd	Signal	**67.7**	**E**	29.7	C
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	Signal	35.8	D	22.0	C
11	Mitchell Road/Murrieta Oaks Ave & Clinton Keith Rd	Signal	**79.0**	**E**	**69.7**	**E**
12	McElwain Rd & Clinton Keith Rd	Signal	42.8	D	24.8	C
13	I-215 SB Ramps & Clinton Keith Rd	Signal	15.5	B	10.1	B
14	I-215 NB Ramps & Clinton Keith Rd	Signal	15.9	B	14.6	B
15	Creighton Ave & Clinton Keith Rd	Signal	**89.7**	**F**	**117.6**	**F**
16	High School West Dwy/Warm Springs Pkwy & Clinton Keith Rd	Signal	21.6	C	35.0	D
17	Bronco Way & Clinton Keith Rd	Signal	**87.3**	**F**	18.8	B
18	Whitewood Rd & Clinton Keith Rd	Signal	**77.2**	**E**	**58.5**	**E**
19	Whitewood Rd & Linnel Ln/Lee Ln	Signal	15.7	B	15.6	B
20	Whitewood Rd & Baxter Rd	Signal	33.6	C	21.1	C
21	Whitewood Rd & Keller Rd	Signal	19.1	B	18.4	B
22	Max Gillis Blvd/Briggs Rd & Leon Rd	Signal	**80.7**	**F**	51.0	D
23	Max Gillis Blvd/Thompson Rd & Hwy 79	Signal	**115.5**	**F**	**82.0**	**F**
A	Warm Springs Pkwy/Project Driveway A	TWSC[1]	13.3 (EBR)	B	15.6 (EBR)	C
B	Warm Springs Pkwy/Project Driveway B	TWSC[2]	NA	NA	NA	NA
C	Warm Springs Pkwy/Project Driveway C	Signal	14.1	B	25.7	C
D	Warm Springs Pkwy/Project Driveway D	TWSC	7.5 (NBL)	A	7.6 (NBL)	A

Source: Kittelson & Associates, Inc. 2019

Notes:

TWSC: Two-way stop control - delay reported reflects the critical movement, shown in parentheses

[1] The HCM methodology is designed to analyze TWSC intersections with up to three lanes. Therefore, this RIRO intersection

was modeled assuming no more than three north/south through lanes.
[2] No east/west turning movements are forecast at this intersection so delay cannot be estimated.
Boldface type indicates locations performing at LOS that does not meet standards.

As shown in the table, all intersections are projected to operate with an acceptable LOS except for the following:

- Salida Del Sol & Clinton Keith Road: As under existing conditions, the southbound approach to the intersection is projected to operate at LOS F during the weekday PM peak hour.
- Elizabeth Lane & Clinton Keith Road: As under existing and year 2021 Project Completion conditions, the northbound approach to the intersection is projected to operate at a LOS F during the weekday PM peak hour.
- California Oaks Road & Clinton Keith Road: The intersection is projected to operate at a LOS E during the weekday PM peak hour.
- Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road: The intersection is projected to operate at a LOS E during the weekday PM and Saturday midday peak hours.
- Creighton Avenue & Clinton Keith Road: The intersection is projected to operate at a LOS F during the weekday PM and Saturday midday peak hours.
- Bronco Way & Clinton Keith Road: The intersection is projected to operate at LOS F during the weekday PM peak hour.
- Whitewood Road & Clinton Keith Road: The intersection is projected to operate at a LOS E during the weekday PM and Saturday midday peak hours.
- Max Gillis Boulevard/Briggs Road & Leon Road: The intersection is projected to operate at a LOS F during the weekday PM peak hour.
- Max Gillis Boulevard/Thompson Road & SR-79: The intersection is projected to operate at a LOS F during the weekday PM and Saturday midday peak hours.

Without Creighton Avenue Access

In the event that the northern leg of Creighton Avenue and signal are not constructed when the site develops, the access locations on Warm Springs Parkway are sufficient to serve the site. Trips that were assumed to use Creighton Avenue would instead utilize Warm Springs Parkway and the signalized access (Project Driveway C) or stop-controlled northern access (Project Driveway D). The alternative access plan would affect operations at the High School West Driveway/Warm Springs Parkway and Clinton Keith Road intersection as well as at the Project Driveways along Warm Springs Parkway. Appendix “D” includes the level of service worksheets for the year 2021 Project Completion intersection operations. Appendix “E” includes the signal timing and phasing worksheets.

Table 22: Year 2021 Cumulative Intersection LOS Analysis – Without Creighton Avenue Site Connection

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
15	Creighton Ave & Clinton Keith Rd	Signal	**81.4**	**F**	**126.4**	**F**
16	High School West Dwy/Warm Springs Pkwy & Clinton Keith Rd	Signal	22.0	C	41.9	D
A	Warm Springs Pkwy /Project Driveway A	TWSC	13.5 (EBR)	B	16.2 (EBR)	C
B	Warm Springs Pkwy /Project Driveway B	TWSC[1]	0.0	A	0.0	A
C	Warm Springs Pkwy /Project Driveway C	Signal	14.5	B	27.3	C
D	Warm Springs Pkwy /Project Driveway D	TWSC	7.5 (NBL)	A	7.6 (NBL)	A

Source: Kittelson & Associates, Inc. 2019.
Notes:
TWSC: Two-way stop control - delay reported reflects the critical movement, shown in parentheses
[1] No east/west turning movements are forecast at this intersection so delay cannot be estimated.
Boldface type indicates locations performing at LOS that does not meet standards.

As shown in the table, all intersections are projected to operate with an acceptable LOS except for the following:

- Creighton Avenue & Clinton Keith Road: The intersection is projected to operate at LOS F during the weekday PM and Saturday midday peak hours. This is also the case in the with Creighton Avenue site access scenario.

6.2.2 Queuing Analysis

The following queuing analysis was provided in the vicinity of the site. Synchro 9 was used to assess queues at the study intersections. Appendix "F" includes the queuing worksheets.

With Creighton Avenue Access

Table 23 illustrates the available queue storage, average queue length, and 95th percentile queue length at the turn-lanes for each study intersection.

Table 23: Year 2021 Cumulative Conditions Queues – With Creighton Avenue Access

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
8	Nutmeg St & Clinton Keith Rd	EBL	125	36 | 88	18 | 71	-	-
		WBL	225	304 | **602**	136 | **332**	Yes	Yes
		NBL	175	53 | 98	36 | 99	-	-
		NBR	360[2]	0 | 86	0 | 69	-	-
		SBL	50	100 | **166**	52 | **132**	No[5]	Yes
9	California Oaks Rd & Clinton Keith Rd	WBL	220[3]	542 | **1047**	316 | 472	Yes	-
		NBL	100[6]	162 | **294**	58 | 113	No[5]	-
		NBR	485[2]	0 | 137	0 | 95	-	-
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	EBL	260	53 | 145	44 | 86	-	-
		WBL	150	66 | **179**	84 | 173	Yes	-
		WBR	150	24 | 64	0 | 0	-	-
		NBL	150	24 | 55	28 | 58	-	-
		NBR	150	0 | 15	0 | 18	-	-
		SBL	150	113 | **188**	149 | **217**	No[5]	No[5]
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	EBL	150	89 | 170	89 | **180**	-	Yes
		WBL	150	263 | **533**	251 | **423**	Yes	Yes
		WBR	160	10 | 51	0 | 8	-	-
		NBL	190[2]	21 | 63	18 | 51	-	-
		SBL	150	50 | 85	55 | 96	-	-
		SBR	150	0 | 41	0 | 14	-	-
12	McElwain Rd & Clinton Keith Rd	EBL	200 (x2)	208 | 303	200 | 225	-	-
		EBR	100	0 | 0	0 | 0	-	-
		WBL	175	23 | 38	24 | 39	-	-
		WBR	160	37 | 97	13 | 21	-	-
		NBL	50	15 | 42	11 | 33	-	-
		SBL	235 (x2)	248 | 315	304 | 368	-	-
13	I-215 SB Ramps & Clinton Keith Rd	EBR	385	226 | 369	**443 | 631**	**-**	Yes
		WBR	380	183 | 347	146 | 283	-	-
		SBR	1,100[1]	317 | 396	129 | 192	-	-
14	I-215 NB Ramps & Clinton Keith Rd	NBL/R	960[1]	526 | 769	511 | 561	-	-
		NBR	960[1]	512 | 774	478 | 631	-	-
15	Creighton Ave & Clinton Keith Rd	EBL/U	250	257 | **564**	**439** | **627**	Yes	Yes
		EBR	250	0 | 5	0 | 0	-	-
		WBL/U	235	37 | 59	7 | 26	-	-
		WBR	150	3 | 9	9 | 68	-	-
		NBL	100	49 | 96	53 | 99	-	-

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
		NBT/R	390[2]	0 | 0	0 | 0	-	-
		SBL	230[2]	193 | **331**	220 | **364**	No[4]	No[4]
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd	EBL	205 (x2)	378 | **473**	306 | **625**	Yes	Yes
		WBR	250	2 | 45	37 | 134	-	-
		NBL	100	0 | 0	0 | 0	-	-
		NBR	390[2]	0 | 0	0 | 0	-	-
		SBL	350 (x2)	158 | 286	184 | 396	-	-
		SBR	350	0 | 6	0 | 0	-	-
17	Bronco Way & Clinton Keith Rd	EBL/U	200	135 | **258**	76 | **306**	Yes	Yes
		WBL/U	315	176 | 325	19 | 70	-	-
		WBR	85	0 | 11	5 | 56	-	-
		NBL	355[2]	58 | 89	15 | 43	-	-
		NBT/R	355[2]	0 | 0	0 | 0	-	-
		SBL	60[2]	127 | **244**	62 | **178**	No[4]	No[4]
18	Whitewood Rd & Clinton Keith Rd	EBL	250 (x2)	354 | **576**	236 | 344	Yes	-
		EBR	250	73 | 180	23 | 111	-	-
		WBL	200 (x2)	65 | 111	57 | 101	-	-
		WBR	350	0 | 14	0 | 0	-	-
		NBL	300	421 | **624**	258 | **408**	Yes	Yes
		SBL	100	119 | **217**	91 | **165**	Yes	Yes
19	Whitewood Rd & Linnel Ln	EBL	130	47 | 135	35 | 106	-	-
		EBR	>500[2]	0 | 0	0 | 40	-	-
		NBL	200	19 | 68	17 | 61	-	-
		SBL	200	3 | 19	4 | 23	-	-
20	Whitewood Rd & Baxter Rd	EBL	215	27 | 100	26 | 111	-	-
		EBR	>500[2]	0 | 65	0 | 51	-	-
		WBL	125	16 | 60	14 | 59	-	-
		NBL	215	148 | **469**	81 | **263**	Yes	Yes
		NBR	>500[2]	0 | 12	0 | 1	-	-
		SBL	200	1 | 7	4 | 26	-	-
21	Whitewood Rd & Keller Rd	EBL	175	43 | 143	34 | 109	-	-
		EBR	545[2]	0 | 49	0 | 42	-	-
		WBL	200	5 | 31	8 | 38	-	-
		NBL	225	48 | 155	43 | 131	-	-

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
		SBL	115	5 | 33	4 | 24	-	-
C	Warm Springs Pkwy/Project Driveway C	*EBR*	155	1 | 25	35 | 112	-	-
		WBL	100	77 | **208**	**155 | 327**	-	No[4]
		NBL	250 (x2)	57 | 152	119 | 252	-	-
		SBL	100	0 | 0	0 | 0	-	-
		SBR	100	0 | 0	0 | 0	-	-

Source: Kittelson & Associates, Inc. 2019

Notes:

*Impacts determined using 95th percentile queues and a queuing impact is determined if the Project causes the calculated 95th percentile queue length on public streets to exceed the existing or planned storage capacity by more than 25 feet. For storage lanes that are already deficient without the Project, a significant queuing impact is determined if the Project increases the calculated 95th percentile queue length by more than 25 feet. Average queues provided for information.[1] Distance to development of separate turn lanes from highway off-ramp.

[2] Approximate distance to adjacent intersection.

[3] Two-way left-turn lanes provides additional storage up to 730 feet.

[4] Queues onto private property, not on City streets.

[5] Project contribution to queue is less than 25 feet as compared to 2021 Project Completion conditions.

[6]The City recently completed a project to extend this left-turn lane storage to 250-ft

Boldface type indicates the 95th percentile queue exceeds the available storage by 25 feet or more.

Italic type indicates the movement does not currently exist.

As shown in the table, 95th percentile queues are projected to exceed storage capacity by more than 25 feet (or by more than 25 feet beyond existing conditions for locations that already exceed capacity) under 2021 Cumulative Conditions for one or more movements at the following study locations:

- Nutmeg Street & Clinton Keith Road (WBL, SBL)
- California Oaks Road & Clinton Keith Road (WBL)
- Greer Road/Murrieta Oaks Avenue & Clinton Keith Road (WBL)
- Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road (EBL, WBL)
- I-215 SB Ramps & Clinton Keith Road (EBR)
- Creighton Avenue & Clinton Keith Road (EBL)
- High School West Driveway/Warm Springs Parkway & Clinton Keith Road (EBL)
- Bronco Way & Clinton Keith Road (EBL)
- Whitewood Road & Clinton Keith Road (EBL, NBL, SBL)
- Whitewood Road & Baxter Road (NBL)

Without Creighton Avenue Access

The alternative access plan would affect operations at the High School West Driveway/Warm Springs Parkway and Clinton Keith Road intersection as well as at the Project Driveways along Warm Springs Parkway. Table 24 illustrates the available queue storage, average queue length, and 95th percentile queue length at the turn-lanes for each study intersection in the 2021 Cumulative Conditions without the Creighton Avenue access. Appendix "F" includes the queuing worksheets.

Table 24: Year 2021 Cumulative Conditions Queues – Without Creighton Avenue Access

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue		Project Impact*	
				Weekday PM	Saturday Midday	Weekday PM	Saturday Midday
15	Creighton Ave & Clinton Keith Rd	EBL/U	250	223 | **479**	**319 | 494**	Yes	Yes
		EBR	250	0 | 5	0 | 0	-	-
		WBL/U	235	36 | 60	7 | 26	-	-
		WBR	150	0 | 9	9 | 68	-	-
		NBL	100	49 | 96	53 | 99	-	-
		NBT/R	390[1]	0 | 0	0 | 0	-	-
		SBL	230[1]	193 | **331**	220 | **364**	No[2]	No[2]
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd	EBL	205 (x2)	**418 | 513**	336 | **690**	Yes	Yes
		WBR	250	2 | 45	37 | 134	-	-
		NBL	100	0 | 0	0 | 0	-	-
		NBR	390[1]	0 | 0	0 | 0	-	-
		SBL	350 (x2)	158 | 286	184 | 396	-	-
		SBR	350	0 | 18	0 | 0	-	-
C	Warm Springs Pkwy/Project Driveway C	*EBR*	155	6 | 39	50 | 152	-	No[2]
		WBL	100	78 | **210**	162 | **337**	-	No[2]
		NBL	250 (x2)	60 | 157	132 | 275	-	-
		SBL	100	0 | 0	0 | 0	-	-
		SBR	100	0 | 0	0 | 0	-	-

Source: Kittelson & Associates, Inc. 2019

Notes:

*Impacts determined using 95th percentile queues and a queuing impact is determined if the Project causes the calculated 95th percentile queue length on public streets to exceed the existing or planned storage capacity by more than 25 feet. For storage lanes that are already deficient without the Project, a significant queuing impact is determined if the Project increases the calculated 95th percentile queue length by more than 25 feet. Average queues provided for information.

[1] Approximate distance to adjacent intersection.

[2]Queues onto private property, not on City streets.

Boldface type indicates the 95th percentile queue exceeds the available storage.

Italic type indicates the movement does not currently exist.

As shown in the table, 95th percentile queues are projected to exceed storage capacity under 2021 Cumulative conditions for one or more movements at the following study locations within the public street system:

- Creighton Avenue & Clinton Keith Road (EBL/U)
- High School West Driveway/Warm Springs Parkway & Clinton Keith Road (EBL)

6.2.3 Roadway Segment Analysis

An assessment of average daily traffic (ADT) was conducted for year 2021 cumulative conditions. Average daily volumes were developed by adding the daily trips associated with the approved/proposed projects (developed by factoring up the peak hour volumes based on the ratio of daily to peak hour volumes observed in existing counts) to the year 2021 project completion volumes. This accounts for background growth, project trips, and approved/proposed projects.

With Creighton Avenue Access

The resulting v/c ratios on each roadway is shown in Table 25. As shown in the table, the segment of Clinton Keith Road between I-215 Northbound Ramps and Warm Spring Parkways is projected to operate at a LOS D under year 2021 Cumulative Conditions, in excess of the City's LOS C standard. However, the City's General Plan indicates that LOS D is allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the proposed site and study roadways.

Table 25: Year 2021 Cumulative Conditions ADT Analysis – With Creighton Avenue Access

Segment	Metric	Weekday	Saturday
Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway	Volume (Daily)	43,782	43,672
	Capacity (Daily, LOS E)	53,900	53,900
	LOS	D	D
	v/c Ratio	0.81	0.81
Warm Springs Parkway Road, north of Clinton Keith Road	Volume (Daily)	17,764	23,694
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.52	0.69
Whitewood Road, north of Clinton Keith Road	Volume (Daily)	17,726	17,695
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.52	0.52

Source: Kittelson & Associates, Inc. 2019.

Note: The capacities shown are based on roadway classification and taken from the City's General Plan (Reference 2) for roadways operating at a LOS E. The level of service is based on the City's General Plan maximum two-way ADT volume for each LOS grade. The table provides maximum ADT volumes for LOS C, D and E. Clinton Keith Road is an urban arterial, Warm Springs Parkway is a major roadway, and Whitewood Road a major roadway.

Without Creighton Avenue Access

The resulting v/c ratios on each roadway is shown in Table 26. As shown in the table, the segment of Clinton Keith Road between I-215 Northbound Ramps and Warm Spring Parkways is projected to operate at a LOS D under year 2021 Cumulative Conditions, in excess of the City's LOS C standard. However, the City's General Plan indicates that LOS D is allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the proposed site and study roadways.

Table 26: Year 2021 Cumulative Conditions ADT Analysis – Without Creighton Avenue Access

Segment	Metric	Weekday	Saturday
Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway	Volume (Daily)	45,060	45,418
	Capacity (Daily, LOS E)	53,900	53,900
	LOS	D	D
	v/c Ratio	0.81	0.81
Warm Springs Parkway Road, north of Clinton Keith Road	Volume (Daily)	19,607	26,107
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.57	0.77
Whitewood Road, north of Clinton Keith Road	Volume (Daily)	17,726	17,695
	Capacity (Daily, LOS E)	34,100	34,100
	LOS	C	C
	v/c Ratio	0.52	0.52

Source: Kittelson & Associates, Inc. 2019.

Note: The capacities shown are based on roadway classification and taken from the City's General Plan (Reference 2) for roadways operating at a LOS E. The level of service is based on the City's General Plan maximum two-way ADT volume for each LOS grade. The table provides maximum ADT volumes for LOS C, D and E. Clinton Keith Road is an urban arterial, Warm Springs Parkway is a major roadway, and Whitewood Road a major roadway.

6.3 SUPPLEMENTAL YEAR 2035 GENERAL PLAN BUILD-OUT CONDITIONS

The year 2035 General Plan Build-Out conditions analysis was conducted to assess operations and roadway sizing for Warm Springs Parkway and at the I-215 interchange. Because the Project does not propose a zoning change, a long-range analysis is not required per the City's Traffic Impact Analysis Preparation Guide or for CEQA. The analysis below was conducted for the weekday PM peak hour to ensure that adequate capacity was provided along Warm Springs Parkway and for information requested by Caltrans. Signal timing was assumed to be coordinated along Clinton Keith Road and was optimized based on projected volumes. In addition, roadway segment analysis is provided per the direction of City staff and evaluation of the freeway corridor is provided per direction from Caltrans staff. Project access on Creighton Avenue was assumed for this analysis.

6.3.1 Intersection Operations

Table 27 shows the Year 2035 Build-Out Conditions delays and LOS for the study intersections during weekday PM peak hour.

Table 27: Year 2035 Build-Out Conditions Intersection LOS Analysis

ID	Intersection	Traffic Control	Weekday PM Peak	
			Delay (sec)	LOS
13	I-215 SB Ramps & Clinton Keith Rd	Signal	18.0	B
14	I-215 NB Ramps & Clinton Keith Rd	Signal	22.6	C
15	Creighton Ave & Clinton Keith Rd	Signal	45.8	D
16	High School West Dwy/Warm Springs Pkwy & Clinton Keith Rd	Signal	52.2	D
17	Bronco Way & Clinton Keith Rd	Signal	44.4	D
A	Warm Springs Pkwy/Project Driveway A	TWSC[1]	16.6 (EBR)	C
B	Warm Springs Pkwy/Project Driveway B	TWSC[1]	15.3 (WBR)	C
C	Warm Springs Pkwy/Project Driveway C	Signal	25.4	C
D	Warm Springs Pkwy/Project Driveway D	TWSC	10.9 (EBR)	B

Source: Kittelson & Associates, Inc. 2019

Notes:

TWSC: Two-way stop control - delay reported reflects the critical movement, shown in parentheses

[1] The HCM methodology is designed to analyze TWSC intersections with up to three lanes. Therefore, this RIRO intersection was modeled assuming no more than three north/south through lanes.

Boldface type indicates locations performing at LOS that does not meet standards.

As shown in the table above, all study locations are projected to operate at satisfactory LOS D or better during the weekday PM peak hour under the Year 2035 Build-Out conditions. The proposed five lane cross-section of Warm Springs Parkway (with additional turn lanes at intersections) will provide adequate capacity through the 2035 General Plan build-out.

6.3.2 Queuing Analysis

Per the request of the City, the following queuing analysis was provided in the vicinity of the site for the 2035 General Plan build-out. Synchro 9 was used to assess queues at the study intersections. Table 28 illustrates the available queue storage and 95th percentile queue lengths at the turn-lanes for each study intersection. Appendix “F” includes the queuing worksheets.

Table 28: Year 2035 Project Completion Queues

ID	Intersection	Movement	Available Storage (ft)	Average | 95th Percentile Queue - Weekday PM
13	I-215 SB Ramps & Clinton Keith Rd	EBR	385	**701** | **1027**
		WBR	380	131 | 130[4]
		SBR	1,100[2]	668 | 821
14	I-215 NB Ramps & Clinton Keith Rd	NBL/R	960[2]	660 | 925
		NBR	960[2]	668 | 957
15	Creighton Ave & Clinton Keith Rd	EBL/U	250	422 | **536**
		EBR	200	3 | 4
		WBL/U	235	34 | 43
		WBR	150	9 | 11
		NBL	100	70 | **126**
		NBT/R	390[2]	0 | 0
		SBL	230[1]	150 | **326**
16	High School West Dwy/Warm Springs Pkwy & Clinton Keith Rd	*EBL*	205 (x2)	577 | **689**
		WBR	250	2 | 9
		NBL	100	0 | 0
		NBR	390[1]	0 | 0
		SBL	350 (x2)	202 | 354
		SBR	350	315 | 275[4]
17	Bronco Way & Clinton Keith Rd	EBL/U	200	138 | **261**
		WBL/U	315	208 | 116[4]
		WBR	85	0 | 0
		NBL	355[1]	71 | 105
		NBT/R	355[1]	0 | 0
		SBL	60[1]	113 | 229
C	Warm Springs Pkwy/Project Driveway C	*EBR*	155	96 | 179[3]
		WBL	100	**133 | 265[3]**
		NBL (x2)	250	124 | 227
		SBL	100	3 | 13
		SBR	100	0 | 0

Source: Kittelson & Associates, Inc. 2019

Notes:

[1] Approximate distance to adjacent intersection.

[2] Distance to development of separate turn lanes from highway off-ramp.

[3] Queues onto private property, not on City streets.

[4] The 95th percentile queue is less than the 50th percentile queue due to how Synchro calculates each queue length. Upstream metering is only performed with the 95th percentile queue. When the 95th percentile volumes cause the corresponding approach of the upstream intersection to be over capacity, volumes are metered and the 95th percentile queue can be less than the 50th percentile queue.

Boldface type indicates the 95th percentile queue exceeds the available storage by 25 feet or more.

Italic type indicates the movement does not currently exist.

As shown in the table, 95th percentile queues are projected to exceed storage capacity under 2035 Build-Out conditions for one or more movements at the following study locations:

- I-215 SB Ramps & Clinton Keith Road
- Creighton Avenue & Clinton Keith Road
- High School West Driveway/Warm Springs Parkway & Clinton Keith Road
- Bronco Way & Clinton Keith Road

Appendix "D" includes the level of service worksheets for the year 2035 Build-Out intersection operations. Appendix "E" includes the signal timing and phasing worksheets.

6.3.3 Roadway Segment Analysis

An assessment of average daily traffic (ADT) was conducted for year 2035 Build-Out conditions for the weekday. Average daily volumes were developed by assume the same ratio between peak hour and daily counts observed under existing conditions. The resulting v/c ratios on each roadway is shown in Table 29. As shown in the table, the segment of Clinton Keith Road between I-215 Northbound Ramps and Warm Spring Parkways is projected to operate at a LOS E under year 2035 Build-Out conditions on a weekday, in excess of the City's LOS C standard. However, the City's General Plan acknowledges that certain corridors are projected to exceed the City's performance standard, including Clinton Keith Road.

Table 29: Year 2035 Build-Out Conditions ADT Analysis

Segment	Metric	Weekday
Clinton Keith Road, between I-215 Northbound Ramps and Warm Springs Parkway	Volume (Daily)	52,240
	Capacity (Daily, LOS E)	53,900
	LOS	E[1]
	v/c Ratio	0.97
Warm Springs Parkway, north of Clinton Keith Road	Volume (Daily)	26,468[2]
	Capacity (Daily, LOS E)	34,100
	LOS	C
	v/c Ratio	0.68
Whitewood Road, north of Clinton Keith Road	Volume (Daily)	26,764
	Capacity (Daily, LOS E)	34,100
	LOS	C
	v/c Ratio	0.78

Source: Kittelson & Associates, Inc. 2019.

Notes:

The capacities shown are based on roadway classification and taken from the City's General Plan (Reference 2) for roadways operating at a LOS E. The level of service is based on the City's General Plan maximum two-way ADT volume for each LOS grade. The table provides maximum ADT volumes for LOS C, D and E. Clinton Keith Road is an urban arterial, Warm Springs Parkway is a major roadway, and Whitewood Road a major roadway.

[1]See Page 5-12 in Murrieta General Plan 2035

[2] The volume projected on Whitewood Road is based on the City's General Plan (Reference 2) and Clinton Keith Road Extension Project Traffic Operations Analysis (Reference 11)

6.3.4 Freeway Analysis

Per the request of Caltrans, freeway analysis was prepared for City of Murrieta build-out conditions. Table 30 and Table 31 show the 2035 General Plan Build-Out Conditions analysis results for the study segments during weekday AM and PM and the Saturday midday peak hours. Appendix "G" includes the freeway analysis worksheets.

Table 30: 2035 General Plan Build-Out Freeway Analysis - Northbound

I-215 Northbound Segment			AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
Segment ID	Segment Type[1]	Segment Location	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
NB-1	Basic	North of Scott Road	19.7	C	40.4	E	-[3]	-[3]
NB-2	Merge	Scott Road On Ramp	24.1	C	35.6	E	-[3]	-[3]
NB-3	Diverge	Scott Road Off Ramp	30.7	D	39.3	D	-[3]	-[3]
NB-4	Basic	Between Scott Road and Clinton Keith On Ramp	22.3	C	42.0	E	28.0	D
NB-5	Merge	Clinton Keith On Ramp	25.4	C	37.1	E	29.1	D
NB-6	Merge	Clinton Keith On Ramp Loop	25.3	C	35.3	E	28.4	D
NB-7	Diverge	Clinton Keith Off Ramp	28.9	D	42.0	F	34.1	D
NB-8	Basic	Between Clinton Keith Off Ramp and Los Alamos On Ramp	20.4	C	46.5	F	28.7	D
NB-9	Merge	Los Alamos On Ramp	24.8	C	38.6	F	30.3	D
NB-10	Diverge	Los Alamos Off Ramp	28.5	D	41.3	F	33.7	D
NB-11	Basic	Between Los Alamos Off Ramp and Murrieta Hot Springs Off Ramp	20.0	C	45.3	F	28.2	D
NB-12	Merge	Murrieta Hot Springs On Ramp	25.5	C	39.5	F	30.9	D
NB-13	Merge	Murrieta Hot Springs On Ramp (Loop)	15.4	B	28.5	D	22.3	C
NB-14	Diverge	Murrieta Hot Springs Off Ramp	19.0	B	37.8	F	29.6	D
NB-15	Basic	South of Murrieta Hot Springs Road	23.7	C	71.6	F	39.9	E

Source: Kittelson & Associates, Inc. 2019.

Notes:

[1] HCM 2010 definition, Basic Freeway Segment, Weaving Segment, Merge Segment, or Diverge Segment

[2] Density expressed in pc/mi/ln, passenger cars per mile per lane

[3] No data available for Saturday peak hour conditions

Table 31: 2035 General Plan Build-Out Conditions Freeway Analysis – Southbound

I-215 Northbound Segment			AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
Segment ID	Segment Type[1]	Segment Location	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
SB-1	Basic	North of Scott Road	29.0	D	31.4	D	-[3]	-[3]
SB-2	Diverge	Scott Road Off Ramp	33.8	D	35.1	D	-[3]	-[3]
SB-3	Merge	Scott Road On Ramp	36.2	E	33.0	D	-[3]	-[3]
SB-4	Basic	Between Scott Road and Clinton Keith Off Ramp	36.2	E	32.6	D	37.8	E
SB-5	Diverge	Clinton Keith Off Ramp	36.6	E	35.8	E	37.0	E
SB-6	Merge	Clinton Keith On Ramp Loop	29.8	D	26.9	C	30.3	D
SB-7	Merge	Clinton Keith On Ramp	34.0	D	30.8	D	34.2	D
SB-8	Basic	Between Clinton Keith Off Ramp and Los Alamos On Ramp	36.9	E	30.5	D	38.0	E
SB-9	Diverge	Los Alamos Off Ramp	38.2	E	36.4	E	39.0	E
SB-10	Weave	Between Los Alamos On Ramp and Murrieta Hot Springs	28.5	D	-	F	-	F
SB-11	Merge	Murrieta Hot Springs On Ramp (Loop)	41.9	F	33.1	D	40.0	F
SB-12	Merge	Murrieta Hot Springs On Ramp	43.8	F	35.1	E	42.1	F
SB-13	Basic	South of Murrieta Hot Springs Road	62.8	F	35.5	E	55.2	F

Source: Kittelson & Associates, Inc. 2019.

Notes:

[1] HCM 2010 definition, Basic Freeway Segment, Weaving Segment, Merge Segment, or Diverge Segment

[2] Density expressed in pc/mi/ln, passenger cars per mile per lane

[3] No data available for Saturday peak hour conditions

As shown in the tables above, multiple study segments are projected to operate with an unacceptable LOS E or F under 2035 General Plan Build-Out Conditions. As the Project does not change development assumptions made for the site, Build-Out Year 2035 traffic volumes would include Project traffic.

Section 7 Findings and Recommendations

7.0 FINDINGS AND RECOMMENDATIONS

This section provides a summary of the traffic analysis, documented in the previous section.

7.1 TRAFFIC IMPACTS AND LEVELS OF SERVICE ANALYSIS

7.1.1 Intersection Level of Service

Based on the operational analysis documented in Section 6 of this report, Table 32 lists these locations and the operations under each scenario.

Table 32: Intersections not Meeting LOS Standards

ID	Intersection	Traffic Control	Standard	Level of Service (Weekday PM | Saturday Midday)			Impact Type
				Existing	Year 2021 Project Completion	Year 2021 Cumulative	
5	Salida Del Sol & Clinton Keith Road	TWSC	LOS D	**F** | C (SBL/R)	**E** |C (SBL/R)	**F** | D (SBL/R)	Existing + Project + Cumulative
6	Elizabeth Lane & Clinton Keith Road	TWSC	LOS D	**F** | D (NBL/T/R)	**F** | C (NBL/T/R)	**F** | D (NBL/T/R)	Existing + Project + Cumulative
9	California Oaks Rd & Clinton Keith Rd	Signal	LOS D	D | C	**E** | C	**E** | C	Project + Cumulative
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	Signal	LOS D	C | B	D | C	**E** | **E**	Cumulative
15	Creighton Ave & Clinton Keith Rd (with Creighton Access)	Signal	LOS D	A | A	B | A	**F** | **F**	Cumulative
15	Creighton Ave & Clinton Keith Rd (without Creighton Access)	Signal	LOS D	A | A	B | A	**F** | **F**	Cumulative
17	Bronco Way & Clinton Keith Rd	Signal	LOS D	B | A	D | B	**F** | B	Cumulative
18	Whitewood Rd & Clinton Keith Rd	Signal	LOS D	D | C	D | C	**E** | **E**	Cumulative
22	Max Gillis Blvd/Briggs Rd & Leon Rd	Signal	LOS D	D | C	D | D	**F** | D	Cumulative
23	Max Gillis Blvd/ Thompson Road & SR-79	Signal	LOS D	**F** | **E**	**E** | **E**	**F** | **F**	Existing + Project + Cumulative

Source: Kittelson & Associates, Inc. 2019.

Boldface type indicates locations performing at LOS that does not meet standards.

Each of these intersections is discussed below. Three intersections do not meet LOS standards under Existing Conditions. One additional intersection is projected to not meet LOS standards under Year 2021 Project Completion conditions. Five additional intersections, beyond those under Existing and Project Conditions, are projected to not meet LOS standards under Year 2021 Cumulative conditions.

In addition, the intersections along Warm Springs Parkway and on Clinton Keith Road from the I-215 Ramps to Warm Springs Parkway were also assessed under 2035 Build-Out Conditions. All intersections are projected to operate at an acceptable level of service with the planned lane configurations and traffic control devices.

Salida Del Sol & Clinton Keith Road

The southbound approach to this three-legged, stop-controlled intersection is projected to operate at a LOS E or F during the weekday PM peak hour under existing conditions and the future scenarios studied and, therefore, is an **existing** impact. The intersection is outside of the lead agency, City of Murrieta, and under the jurisdiction of the City of Wildomar. Project trips do not contribute to the critical movement where 26 vehicles make a southbound left- or right-turn under 2021 Cumulative Conditions during the weekday PM peak hour. Volume-based signal warrants from the MUTCD[2] were completed for this location as provided in Appendix "K." The City of Wildomar's CIP includes a future DIF traffic signal improvement at this intersection. If the intersection were signalized, it would operate at a LOS A during the weekday PM peak hour under 2021 Cumulative Conditions, within the City's standards. The Synchro output sheets are provided in Appendix "L." There are alternate routes available for vehicles to access a signal on Clinton Keith Road (George Avenue half a mile to the west and Smith Ranch Road half a mile to the east), so vehicles experiencing long delays or challenges turning onto Clinton Keith Road at Salida Del Sol during peak periods have other options available.

In addition, future widening of Clinton Keith Road to six lanes is identified in a City of Wildomar CIP project scheduled for construction beginning in the winter of 2020. Widening would improve operations to a LOS D during the weekday PM peak hour under 2021 Cumulative Conditions, therefore addressing the LOS deficiency. The Synchro output sheets are provided in Appendix "L." The Project will pay the Transportation Uniform Mitigation Fee (TUMF) required of all developments in participating jurisdictions. The TUMF Program provides funds from new developments to make improvements to the transportation system in Western Riverside County. As noted in the Administrative Plan for the TUMF (Reference 12), "by establishing a fee on new development in the sub-region, local agencies have established a mechanism by which developers effectively contribute their "fair share" toward sustaining the regional transportation system." The Clinton Keith Road corridor (widening and traffic signals) is identified in the fund. As the implementation of the mitigation measures is outside of the lead agency's jurisdiction and

[2] Warrant #1 (Eight-Hour Vehicular Volume), Warrant #2 (Four-Hour Vehicular Volume), Warrant #3 (Peak Hour)

full funding and implementation for the mitigations cannot be guaranteed by Project opening, the impact is considered significant and unavoidable.

Elizabeth Lane & Clinton Keith Road

The northbound approach to this four-legged, stop-controlled intersection is projected to operate at a LOS F during the weekday PM peak hour under exiting conditions and future scenarios studied and is therefore an **existing** impact. Of the 5 vehicles projected to make a northbound movement under 2021 Cumulative Conditions during the weekday PM peak hour, all are existing vehicles (presumably associated with the storage facility southeast of the intersection). Volume-based signal warrants from the MUTCD[3] were completed for this location as summarized in Appendix "K." The City of Wildomar's CIP includes a future DIF traffic signal improvement at this intersection. If the intersection were signalized, it would operate at a LOS A during the weekday PM peak hour under 2021 Cumulative Conditions, within the City's standards. The Synchro output sheets are provided in Appendix "L." This intersection is also located outside of the jurisdiction of the lead agency, the City of Murrieta, and is in the City of Wildomar.

The planned widening of Clinton Keith Road to six-lanes improves operations at the intersection but does not fully mitigate the LOS failure. With the widening, the intersection would operate at a LOS F and delay of 53.8 seconds during the weekday PM peak hour under 2021 Cumulative Conditions (compared to a delay of 95.4 seconds without the additional lanes). The Synchro output sheets are provided in Appendix "L." Again, the Project will pay the Transportation Uniform Mitigation Fee (TUMF) required of all developments in participating jurisdictions and the Clinton Keith Road corridor (widening and traffic signals) is identified in the fund. As the implementation of the mitigation measures is outside of the lead agency's jurisdiction and full funding and implementation for the mitigations cannot be guaranteed by Project opening, the impact is considered significant and unavoidable.

California Oaks Road & Clinton Keith Road and Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road

The City's General Plan shows a future cross-section of six lanes along Clinton Keith Road at California Oaks Road and Murrieta Oaks Avenue. Based on discussions with the City, Clinton Keith Road was designed and constructed at its ultimate width, but striped as two lanes in each direction at some locations with the intent to restripe the roadway to add the additional lanes when traffic volumes warrant it. Currently there are two eastbound through lanes at all locations and two westbound through lanes at all locations except at Mitchell Road/Murrieta Oaks Avenue, where there are three westbound lanes. Restriping the road to accommodate an additional through lane in the eastbound direction would significantly improve operations at all locations, as shown in Table 33. The Synchro output sheets are provided in Appendix "L."

Table 33: 2021 Cumulative Conditions Intersection LOS Analysis – Additional Eastbound Through Lane on Clinton Keith Road

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
9	California Oaks Rd & Clinton Keith Rd	Signal	40.7	D	19.5	B
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	Signal	31.8	C	33.0	C

Source: Kittelson & Associates, Inc. 2019.
Boldface type indicates locations performing at poor LOS.

The intersection of California Oaks Road & Clinton Keith Road meets standards under existing conditions but is projected to operate at a LOS E during the weekday PM peak hour under 2021 **Project Completion Conditions**. Therefore, the Project is responsible designing, funding, and constructing the roadway restriping and making any signal timing modifications necessary at this intersection. The Project would coordinate with the City of Murrieta for implementation. The proposed mitigation measure provides for striping an additional eastbound through lane between California Oaks Road and Nutmeg Street with a receiving lane east of California Oaks Road and three loop detectors for the new lane at the signal of California Oaks Road. Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road is projected to meet standards under Year 2021 Project Completion Conditions, but not under Year 2021 Cumulative Conditions and thus is a 2021 **Cumulative Conditions impact**. The City of Murrieta requires a proportionate share contribution at intersections that meet standards under Project Completion Conditions but not under Cumulative Conditions. The City utilizes the methodology in the Caltrans *Guide for the Preparation of Traffic impact Studies* (December 2002). The guide indicates that the equitable share for a proposed project's traffic impact is:

$$P = \frac{T}{T_B - T_E}$$

Where:

- P = The equitable share for the proposed project's traffic impact
- T = The vehicle trips generated by the project during the peak hour of adjacent State highway facility in vehicles per hour, vph
- T_B = The forecasted traffic volume on an impacted State highway facility at the time of general plan build-out (e.g., 20 year model or the furthest future model date feasible), vph
- T_E = The traffic volume existing on the impacted State highway facility plus other approved projects that will generate traffic that has yet to be constructed/opened, vph

This approach was applied to the intersection, as shown in Table 34.

Table 34: Equitable Share Assessment

ID	Intersection	T (Weekday PM Peak Hour Project Trips)	T_B (2035 Volumes[1])	T_E (Existing + A/P Project Trips)	P (Equitable Share)	Estimated Cost of Mitigation[2]	Estimated Project Fair Share Cost
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	309	5,362	3,512+732= 4,244	27.6%	$4,900	$1,400

Source: Kittelson & Associates, Inc. 2019
Notes:
[1] Based on the City of Murrieta General Plan
[2] Rounded costs based on cost estimate developed by Kittelson based of aerial imagery. Assumes restriping and signal detection. The cost estimate for the improvements is provided in Appendix "L."

The total cost of additional striping and signal detection for Mitchell Road/Murrieta Oaks Avenue is estimated as $5,000 with the Project fair share cost of approximately $1,400. The mitigation measure proposed requires the Project to pay their fair share to provide striping for approximately 1,100 linear feet, 3 loop detectors at Murrieta Oaks Avenue, and associated costs for mobilization and traffic control. The cost estimate methodology and unit costs/final dollar amount shall be approved by the Director of Public Works/City Engineer. With the implementation of the proposed mitigation measures, the impact at California Oaks Road & Clinton Keith Road would be considered less than significant. As the remaining funds for the impacts at Clinton Keith Road at Mitchell Road/Murrieta Oaks Avenue have not been identified and the mitigation cannot be guaranteed, the impact remains significant and unavoidable.

Creighton Avenue & Clinton Keith Road

With Creighton Avenue Access

The intersection of Creighton Avenue & Clinton Keith Road meets standards under existing conditions and 2021 Project Completion Conditions but is projected to operate at a LOS F during the weekday PM and Saturday midday peak hours under 2021 Cumulative Conditions. This is a **Cumulative Conditions impact**. As signal coordination was kept constant between the 2021 Project Completion and Cumulative conditions, a revised coordination plan is needed to account for the additional traffic from approved and pending projects. The mitigation measure would reduce intersection operations to LOS C during the weekday PM peak hour and LOS D during Saturday midday peak hour. The Synchro output sheets are provided in Appendix "L." The City is currently implementing signal coordination along Clinton Keith Road and would routinely update timing plans as traffic volumes change. With updated signal timing, the Project would have a less than significant impact at this location.

Without Creighton Avenue Access

The intersection of Creighton Avenue & Clinton Keith Road meets standards under existing conditions and 2021 Project Completion Conditions but is projected to operate at a LOS F during the weekday PM and Saturday midday peak hours under 2021 Cumulative Conditions. This is a **Cumulative Conditions**

impact. As signal coordination was kept constant between the 2021 Project Completion and Cumulative conditions, a revised coordination plan is needed to account for the additional traffic from approved and pending projects. The mitigation measure would reduce intersection operations to LOS B during the weekday PM peak hour and LOS D during Saturday midday peak hour. The Synchro output sheets are provided in Appendix "L." The City is currently implementing signal coordination along Clinton Keith Road and would routinely update timing plans as traffic volumes change. With updated signal timing, the Project would have a less than significant impact at this location.

Per the City of Murrieta, the Vineyard III project will be conditioned for dual eastbound left-turn lanes at Creighton Avenue & Clinton Keith Road at a certain level of development (5,000 sf Tire Store, 3,000 sf High-Turnover (Sit-Down) Restaurant, and 5,000 sf Drive-In Bank). It is expected the approach to Creighton Avenue & Clinton Keith Road will be a negotiation between the Project applicant and the owners of Vineyard I and III, as any project access to the Costco property would require travel through the Vineyard I property. The significant impact at this intersection would occur only if this access is provided and, in that case, construction of a dual eastbound left turn lane would mitigate this intersection. Until that is constructed, it is anticipated a connection to the Costco property from Creighton Avenue would be restricted.

Bronco Way & Clinton Keith Road

The intersection of Bronco Way & Clinton Keith Road meets standards under existing conditions and 2021 Project Completion Conditions but is projected to operate at a LOS F during the weekday PM peak hour under 2021 Cumulative Conditions. This is a **Cumulative Conditions** impact. As signal coordination was kept constant between the 2021 Project Completion and Cumulative conditions, a revised coordination plan is needed to account for the additional traffic from approved and pending projects. Adjusted signal timing would reduce intersection operations to LOS C during the weekday PM peak hour. The Synchro output sheets are provided in Appendix "L." The City is currently implementing signal coordination along Clinton Keith Road and would routinely update timing plans as traffic volumes change. With updated signal timing, the Project would have a less than significant impact at this location.

Whitewood Road & Clinton Keith Road

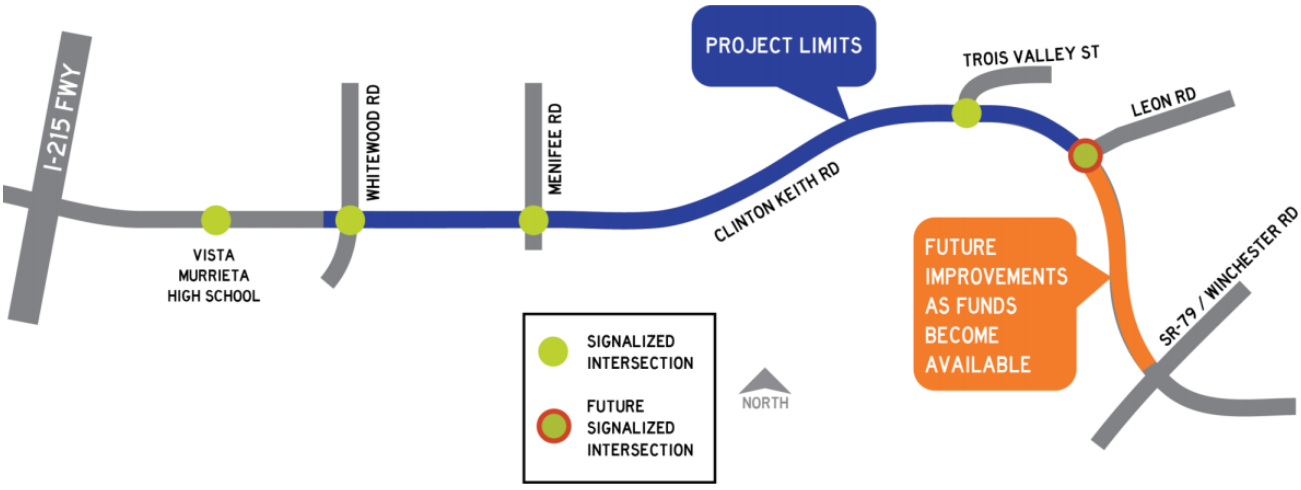
The signalized intersection of Whitewood Road & Clinton Keith Road is projected to operate at a LOS E under 2021 Cumulative Conditions. This is a **Cumulative Conditions** impact. The City's General Plan has identified the operational failure projected at the intersection of Whitewood Road & Clinton Keith Road and the City Council has adopted overriding considerations at this location in the current General Plan (per resolution 11-2768). Nonetheless the project is calculated to have a cumulative impact at this intersection. The City currently has a project in their CIP (project #8389) to add dual northbound and southbound left-turn lanes at this intersection along with restriping and the Project will contributed a proportional contribution to this CIP project. This mitigation would improve operations at this intersection however is not guaranteed to be completed by the Project build out. Therefore, the Project would have a significant and unavoidable impact at this location until the CIP project is completed.

Max Gillis Boulevard/Briggs Road & Leon Road, Max Gillis Boulevard/Thompson Road & SR-79

The signalized intersection of Max Gillis Boulevard/Briggs Road & Leon Road is projected to meet the level of service standards under 2021 Project Completion Conditions. With the addition of traffic associated with approved/pending projects, operations would degrade during the weekday PM peak hour to a LOS E, which does not meet the County's LOS D standard. This is a **Cumulative Conditions** impact. The signalized intersection of Max Gillis Boulevard/Thompson Road & SR-79 does not meet standards under existing conditions or the year 2021 scenarios. Under all scenarios, the intersection is projected to operate at a LOS E or F during both the weekday PM peak hour and Saturday midday peak hour. This is an **existing** impact.

Both intersections currently serve to provide a connection between I-215 and SR-79. A planned extension of Clinton Keith Road (shown in Figure 16) will provide an alternative route for traffic using Max Gillis Boulevard. Without the final piece of the Clinton Keith Road extension between Leon Road and SR-79, eastbound right-turn and northbound left-turn volumes at both the Max Gillis Boulevard/Briggs Road & Leon Road and Max Gillis Boulevard/Thompson Road & SR-79 intersections are high as vehicles use the intersections to connect between Clinton Keith Road and SR-79. The Clinton Keith Extension will be completed in the future between Leon Road and SR-79, which will provide an additional route for traffic currently using Leon Road and Max Gillis Boulevard. Additional improvements at the intersections (such as provision of an overlap for the eastbound right-turn) could improve operations in the interim.

Figure 16: Future Clinton Keith Road Extension



Source: https://rcprojects.org/clinton-keith-extension-1/

In order to estimate operations at the intersections with the extension in place, volumes were adjusted to account for anticipated changes in traffic patterns. Based on the *Clinton Keith Road Extension Project Traffic Operations Analysis* (Reference 11), approximately 51 percent of traffic volumes on Clinton Keith Road northwest of Leon Road would use the Clinton Keith Road extension and 49 percent would use Leon Road. Therefore, eastbound right-turns and northbound left-turns at Max Gillis Boulevard/Briggs Road & Leon Road were reduced by 51 percent to account for rerouting to Clinton Keith Road with the extension

in place. The reduced traffic volumes from Max Gillis Boulevard/Briggs Road & Leon Road were also carried forward to the affected movements at Max Gillis Boulevard/Thompson Road & SR-79. The extension of Clinton Keith Road to SR-79 would significantly improve operations at both locations, as shown in Table 35. The Synchro output sheets are provided in Appendix "L."

Please note that the *Clinton Keith Road Extension Project Traffic Operations Analysis* (Reference 11) shows year 2035 PM peak hour operations at Max Gillis Boulevard/Briggs Road & Leon Road as LOS C and at Max Gillis Boulevard/Thompson Road & SR-79 as LOS D.

Table 35: Year 2021 Cumulative Conditions Intersection LOS Analysis – Clinton Keith Road Extension

ID	Intersection	Traffic Control	Weekday PM Peak		Saturday Midday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
22	Max Gillis Blvd/Briggs Rd & Leon Rd	Signal	25.6	C	21.6	C
23	Max Gillis Blvd/Thompson Rd & Hwy 79	Signal	51.9	D	54.6	D

Source: Kittelson & Associates, Inc. 2019.
Boldface type indicates locations performing at poor LOS.

The intersection of Max Gillis Boulevard/Briggs Road & Leon Road meets standards under 2021 Project Completion Conditions and a future improvement is identified that will improve operations at this intersection as well as Max Gillis Boulevard/Thompson Road & SR-79. As previously noted, the Project will pay the TUMF required of all developments in participating jurisdictions. The TUMF Program provides funds from new developments to make improvements to the transportation system in Western Riverside County. The Clinton Keith Road extension is identified in the fund. As the implementation of the mitigation measure is outside of the lead agency's jurisdiction and full funding for the extension mitigation has not been identified, the mitigation measure cannot be guaranteed to be implemented by Project opening and the impact is considered significant and unavoidable.

7.1.2 Intersection Queues

Based on the operational analysis documented in Section 6 of this report, there are several intersections where peak hour 95th percentile queue exceed available storage by more than 25-feet or by greater than 25-feet in addition to previous conditions for locations that already exceed storage. Table 36 lists these locations and the operations under all scenarios studied.

Table 36: Intersections with Queues Exceeding Determined Threshold

ID	Intersection	Movement	Available Storage (ft)	95th Percentile Queues (Weekday PM | Saturday Midday)			Impact* Type
				Existing	Year 2021 Project Completion	Year 2021 Cumulative	
8	Nutmeg St & Clinton Keith Rd	WBL	225	**532** | 198	506 | **274**	**602** | **332**	Existing + Project + Cumulative
		SBL	50	**110** | 65	**148** | **106**	**166 | 132**	Existing + Project + Cumulative
9	California Oaks Rd & Clinton Keith Rd	WBL	220	**797 | 301**	**959 | 412**	**1047 | 472**	Existing + Project + Cumulative
		NBL	100[1]	**227** | 81	**279** | 102	294 | 113	Existing + Project
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	WBL	150	59 | 46	107 | 95	**179** | **173**	Cumulative
		SBL	150	134 | 118	167 | **198**	188 | 217	Project
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	EBL	150	37 | 38	45 | 26	170 | **180**	Cumulative
		WBL	150	**199** | 162	**406** | **297**	**533** | **423**	Existing + Project + Cumulative
13	I-215 SB Ramps & Clinton Keith Rd	EBR	385	212 | 155	108 | 127	369 | **631**	Cumulative
15	Creighton Ave & Clinton Keith Rd (with Creighton Access)	EBL	250	16 | 13	62 | 112	**564** | **627**	Cumulative
15	Creighton Ave & Clinton Keith Rd (without Creighton Access)	EBL	250	16 | 13	12 | 21	**479** | **494**	Cumulative
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd (with Creighton Access)	EBL	205 (x2)	Does Not Exist	415 | **535**	**473** | **625**	Project + Cumulative
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd (without Creighton Access)	EBL	205 (x2)	Does Not Exist	**464** | **602**	**513** | **690**	Project + Cumulative
17	Bronco Way & Clinton Keith Rd	EBL	200	30 | 4	44 | 42	**258** | **306**	Cumulative
18	Whitewood Rd & Clinton Keith Rd	EBL	250 (x2)	359 | 164	423 | 218	**576** | **344**	Cumulative
		NBL	300	304 | 147	**477** | 265	**624** | **408**	Project + Cumulative
		SBL	100	**147** | 84	**178** | 100	**217** | **165**	Existing + Project + Cumulative

20	Whitewood Rd & Baxter Rd	NBL	215	232 | 80	255 | 113	**469** | **263**	Cumulative

Source: Kittelson & Associates, Inc. 2019.

[1]The City recently completed a project to extend this left-turn lane storage to 250-ft

Boldface type indicates the 95th percentile queue on public streets exceeds the available storage by 25 feet or more or by more than 25 feet beyond previous queue for locations that already exceed available storage.

*Impacts determined using 95th percentile queues and a queuing impact is determined if the Project causes the calculated 95th percentile queue length on public streets to exceed the existing or planned storage capacity by more than 25 feet. For storage lanes that are already deficient without the Project, a significant queuing impact is determined if the Project increases the calculated 95th percentile queue length by more than 25 feet. Average queues provided for information.

A mitigation approach was developed for queuing given its potential influence on traffic operations. Queuing impact was determined to be significant and a mitigation was identified for queues where the 95th-percentile queue length exceeds the storage length by more than 25 feet. For storage lanes that are already deficient without the Project, queuing impact was determined to be significant and mitigation was identified if the Project increases the calculated 95th-percentile queue length by at least 25 feet. Therefore, a queuing impact is considered mitigated if the queues are reduced to within 25 feet of the storage available or within 25 feet of the already deficient queue occurring under existing conditions. Each of these impacted intersections are discussed below.

Nutmeg Street & Clinton Keith Road

This is an **existing** as well as a **Project** and **Cumulative** Condition impact. The westbound and southbound left turn queues do not meet standards under existing conditions during the Weekday PM peak hour. The Project impact occurs during the Saturday Midday peak hour for the westbound left turn and in both the Weekday PM peak hour and Saturday Midday peak hour for the southbound left turn. The Cumulative queuing conditions impact occurs during both the Weekday PM peak hour and the Saturday Midday peak hour for the westbound and southbound left turns. As signal coordination was kept constant between the existing and 2021 Project Completion conditions, optimizing signal timing at the intersection would reduce queues to within 25 feet of existing conditions for the Project condition. The Project impact is therefore considered mitigated and less than significant. Signal retiming is a regular practice completed by the City to respond to changes in traffic volumes that occur over time.

The cumulative impact would require optimizing signal timing and restriping the westbound and southbound left turns to provide additional storage. Queues for the Weekday PM peak hour can be reduced to 524 feet for the westbound left and 161 feet for the southbound left with optimized signal timing. The existing Weekday PM peak hour queue is 532 feet, therefore the reduced queue of 524 feet reduces the impact to less than significant. Queues for the Saturday Midday peak hour can be reduced to 315 feet for the westbound left and 116 feet for the southbound left with optimized signal timing. The westbound left turn lane would need to be extended by 75 feet to 300 feet and the southbound left turn lane would be extended by 100 feet to 150 feet to accommodate the mitigated queues. As this is a cumulative impact, the Project fair share is calculated for each turn movement per the fair share methodology discussed earlier. The Synchro output sheets are provided in Appendix "M." While these

mitigations are feasible, timing of implementation cannot be guaranteed by project build out. As such, they are significant and unavoidable impacts.

California Oaks Road & Clinton Keith Road

There are **existing** as well as a **Project** and **Cumulative** Condition queuing impacts at this location. The westbound and northbound left-turn queues do not meet the thresholds under existing conditions during the Weekday PM peak hour. The westbound left also does not meet thresholds under existing conditions during the Saturday Midday peak hour. The Project queuing impact occurs during the Weekday PM peak hour for the westbound and northbound left turns and during the Saturday Midday peak hour for the westbound left turn. Mitigations for LOS impacts require striping a third eastbound through/right turn lane and optimizing signal timing. Queues for the Weekday PM peak hour can be reduced to 810 feet for the westbound left and 205 feet for the northbound left with the mitigation measures necessary for LOS mitigations. As the reduced westbound left queue is within 25 feet of the base condition (797 feet under existing conditions), the impact is less than significant. Note that a City CIP project has recently extended the northbound left turn lane storage to 250 feet therefore the queue is considered mitigated.

Under cumulative conditions, queuing impacts occur for the westbound left turn and the westbound left turn queues continue to increase during both peak hours. Providing 200-feet of additional storage, along with signal timing optimization, will accommodate the westbound left-turn queues during the critical Weekday PM peak. The Project will contribute a proportional share to extending the available westbound left-turn storage but the complete funding for the mitigation cannot be guaranteed by Project buildout and therefore the impact is considered significant and unavoidable. The Synchro output sheets are provided in Appendix "M." Signal retiming is a regular practice completed by the City to respond to changes in traffic volumes that occur over time.

Greer Road/Murrieta Oaks Avenue & Clinton Keith Road

Project and **Cumulative** conditions queuing impacts occur at this location. The Project queuing impact occurs during the Saturday Midday peak hour for the southbound left turn. Providing an additional 50 feet of storage for a total storage capacity of 200 feet would accommodate Project queues. With this mitigation in place, the Project impact is considered mitigated and less than significant.

The cumulative impact occurs during the Weekday PM and Saturday midday peak hours for the westbound left turn. As part of LOS mitigation measures at adjacent intersections, signal coordination was applied at this intersection. The signal timing optimization and signal coordination reduces westbound left turn queues to less than significant (156 feet). The Synchro output sheets are provided in Appendix "M."

Mitchell Road/Murrieta Oaks Avenue & Clinton Keith Road

This is a **Cumulative** impact for the eastbound left turn and an **existing, Project, and Cumulative** impact for the westbound left turn. Project queuing impact occurs during the Weekday PM and Saturday Midday

peak hours for the westbound left turn. With signal timing optimization, westbound queues can be reduced to 221 feet for Weekday PM peak hour and 226 feet for the Saturday Midday peak hour. Providing an additional 100 feet of storage for a total storage capacity of 250 feet would accommodate Project queues. Signal retiming is a regular practice completed by the City to respond to changes in traffic volumes that occur over time.

Under cumulative conditions, the westbound left turn queues continue to increase during the Weekday PM and Saturday Midday peak hours. With signal timing optimization and coordination, westbound queues can be reduced to 363 feet for the Weekday PM peak hour and 332 feet for Saturday Midday peak hour. Providing an additional 200 feet of storage for a total storage capacity of 350 feet would accommodate cumulative queues. In addition, the eastbound left turn is impacted under cumulative conditions. Optimizing signal timing and coordination at the intersection would reduce eastbound left turn queues to 100 feet which can be accommodated in the existing 150-foot pocket. Signal retiming is a regular practice completed by the City to respond to changes in traffic volumes that occur over time. The timing of implementation of extending the left turn lane storage cannot be guaranteed by project build out. As such, the impact is considered significant and unavoidable impacts. The City will create a CIP for this improvement and the Project will contribute a proportional fair share contribution. As this is a cumulative impact, the Project fair share is calculated for each turn movement per the fair share methodology discussed earlier. The Synchro output sheets are provided in Appendix "M."

I-215 SB Ramps & Clinton Keith Road

This is a **Cumulative** conditions impact. The cumulative impact occurs during the Saturday Midday peak hour for the eastbound right turn. As part of LOS mitigation measures at adjacent intersections, signal coordination was applied at this intersection. The signal timing optimization and signal coordination reduces eastbound right turn queue to 449 feet. A potential mitigation measure would provide an additional storage by extending the right turn pocket, however, space is not available to extend the turn lane given the spacing with the adjacent intersection. Therefore, the Cumulative impact is considered significant and unavoidable. The City should continue to evaluate traffic signal timing or metering the queue with the upstream traffic signal to improve operations on a corridor wide level. The Synchro output sheets are provided in Appendix "M."

Creighton Avenue & Clinton Keith Road

With Creighton Avenue Access

This is a **Cumulative** conditions impact. The cumulative impact occurs during the Weekday PM and Saturday Midday peak hours for the eastbound left turn. A second eastbound left turn lane would provide an additional storage and throughput at the signal, reducing the Weekday PM peak hour queue to 202 feet and the Saturday Midday peak hour queue to 247 feet. As this is a cumulative impact, the Project fair share is calculated for each turn movement per the fair share methodology discussed earlier. The

Synchro output sheets are provided in Appendix "M." If the additional left turn lane is not provided, access to the Project would likely not be provided from Creighton Avenue.

Without Creighton Avenue Access

This is a **Cumulative** conditions impact. Without the Creighton Avenue access, queues are lower at this intersection, however, queues are expected to continue to exceed storage capacity beyond the threshold of significance. A second eastbound left turn lane would provide an additional storage and throughput reducing the Weekday PM peak hour queue to 186 feet and the Saturday Midday peak hour queue to 165 feet. As this is a cumulative impact, the Project fair share is calculated for each turn movement per the fair share methodology discussed earlier. However, as the Project does not contribute trips to the movement in the "without Creighton Avenue access" scenario, the Project would not be required to contribute to this improvement. The Synchro output sheets are provided in Appendix "M."

High School West Driveway/ Warm Springs Parkway & Clinton Keith Road

With Creighton Avenue Access

This is a **Project** and a **Cumulative** conditions impact. The Project queuing impact occurs during the Saturday Midday peak hour for the eastbound left turn. Providing an additional 70 feet of storage for a total storage capacity of 275 feet per lane would accommodate Project queues. As this intersection is not yet built, the City CIP project for this intersection has accommodated this additional storage and will be completed by 2021. The Project impact is therefore considered mitigated and less than significant.

Under cumulative conditions, the eastbound left turn queues continue to increase during the Weekday PM and Saturday Midday peak hours. Providing an additional 30 feet of storage for a total storage capacity of 305 feet in each left turn lane would accommodate cumulative queues. As this intersection is not yet built, the City CIP project for this intersection can accommodate this additional storage. The cumulative impact is therefore considered mitigated and less than significant.

Without Creighton Avenue Access

This is a **Project** and a **Cumulative** conditions impact. Without the Creighton Avenue access, the Project contributes additional trips to eastbound left turn and queues increase with Project impacts during the Weekday PM and Saturday Midday peak hours. Providing an additional 90 feet of storage for a total storage capacity of 295 feet per lane would accommodate Project queues. As this intersection is not yet built, the City CIP project for this intersection has accommodated this additional storage and will be completed by 2021. The Project impact is therefore considered mitigated and less than significant.

Under cumulative conditions without the Creighton Avenue access, the Project contributes additional trips to eastbound left turn and queues increase with Project impacts during the Weekday PM and Saturday Midday peak hours. Providing an additional 45 feet of storage for a total storage capacity of 340 feet per lane would accommodate Project queues. As this intersection is not yet built, the City CIP project

for this intersection can accommodate this additional storage. The Project impact is therefore considered mitigated and less than significant.

Bronco Way & Clinton Keith Road

This is a **Cumulative** conditions impact. The cumulative queuing impact occurs during the Weekday PM and Saturday Midday peak hours for the eastbound left turn. With signal timing optimization and coordination, eastbound queues can be reduced to 164 feet for Weekday PM peak hour and 271 feet for the Saturday Midday peak hour. The Saturday Midday peak hour queues would continue to exceed storage capacity by 71 feet. A mitigation measure would provide an additional storage by extending the left turn pocket. The project will contribute a proportional fair share to extending the turn lane by 71 feet. However, the full funding and implementation of this mitigation cannot be guaranteed by Project build out, so the impact is considered significant and unavoidable. The Synchro output sheets are provided in Appendix "M."

Whitewood Road & Clinton Keith Road

There are **existing, Project**, and **Cumulative** conditions queuing impacts at this intersection. The southbound left turn queue does not meet the threshold under existing conditions. The Project queuing impact occurs during the Weekday PM peak hour for the northbound left turn and southbound left turn. The City of Murrieta has a CIP project to provide dual northbound and southbound left turn lanes at this intersection which would improve intersection operations and accommodate the projected queues, however, this project will require additional right-of-way and cannot be guaranteed to be completed by the Project buildout year. The Project should extend the northbound and southbound left turn lanes to the extent possible within the available space and right-of-way, but this will not fully mitigate the Project impact. Therefore, the impact is considered significant and unavoidable. In addition, the City should consider signal timing changes or metering the queue with the upstream traffic signal to improve operations.

Under cumulative conditions, the northbound and southbound left turn queues continue to increase during the Weekday PM and Saturday Midday peak hours. The City of Murrieta has a CIP project to provide dual northbound and southbound left turn lanes at this intersection which would improve intersection operations and accommodate the projected queues, however, this CIP project will require additional right-of-way. In addition, the City should signal timing changes or metering the queue with the upstream traffic signal to improve operations at a corridor wide level.

In addition, there is a Cumulative conditions impact for the eastbound left turn lane. Providing an additional 35 feet of storage for each eastbound left turn lane for a total storage capacity of 570 feet (285 feet in each turn lane) would accommodate the cumulative condition queues. This mitigation would require removing part of the existing raised median. As this is a cumulative impact, the Project fair share is calculated for each turn movement per the fair share methodology discussed earlier.

Whitewood Road & Baxter Road

This is a **Cumulative** conditions impact. Under cumulative conditions, the northbound left turn queue continues to increase during the Weekday PM and Saturday Midday peak hours. Restriping the existing northbound turn lane with an additional 285 feet of storage (for a total of 500 feet) would accommodate cumulative queues. The cumulative impact is therefore considered significant and unavoidable as full funding and implementation of the restriping cannot be guaranteed by Project build out. The Synchro output sheets are provided in Appendix "M."

7.1.3 Roadway Segment Level of Service

Based on the operational analysis documented in Section 6 of this report, all study area roadway segments are projected to operate with acceptable LOS for the 2021 Project Completion conditions. Under 2021 Cumulative conditions, the segment of Clinton Keith Road between I-215 Northbound Ramps and Warm Spring Parkways is projected to operate at a LOS D on a Saturday, in excess of the City's LOS C standard. The City's General Plan indicates that LOS D is allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the proposed site and study roadways, therefore the LOS D is not considered a significant impact. Under 2035 General Plan Build-Out Conditions, the segment of Clinton Keith Road between I-215 Northbound Ramps and Warm Spring Parkways is projected to operate at a LOS E on a weekday, in excess of the City's LOS C standard. However, the City's General Plan acknowledge that certain corridors are projected to exceed the City's performance standard, including Clinton Keith Road. Therefore, the LOS on this roadway is not considered to be unacceptable conditions and the Project would not result in a significant impact.

7.1.4 Freeway Level of Service

Under 2035 General Build-Out Conditions, the I-215 corridor is projected to generally operate below the target LOS D threshold. The future projections indicate that additional capacity is required along the six-lane mainline corridor. The poor performance at ramp merge/diverge areas can also be attributed to overcapacity operations along the mainline. The I-215 Transportation Concept Report recommends expansion of the mainline segment to eight lanes to accommodate the increased demand. The Project contributes minimal traffic to the mainline corridor: less than 1% during the weekday AM peak hour, 2% or less during the weekday PM peak hour and 4% or less during the Saturday peak hour. Based on the significance criteria, the mainline corridor base case operations of LOS E or F would be maintained with the minimal addition of Project traffic. Therefore, the Project is not anticipated to cause a significant impact to the freeway mainline facilities.

7.2 TRAFFIC SIGNAL WARRANT ANALYSIS

As indicated in Section 7.1.1, the unsignalized intersections of Salida Del Sol & Clinton Keith Road and Elizabeth Lane & Clinton Keith Road do not meet signal warrants. All other study intersections on Clinton Keith Road are currently signalized, except for the intersection of the High School West Driveway & Clinton Keith Road. With the development of the north leg of this intersection as Warm Springs Parkway,

the intersection will be signalized. In addition, a traffic signal is recommended on Warm Springs Parkway at access C to serve Costco and the shopping center immediately to the east. Other access driveways along Warm Springs Parkway will be limited to right-in/right-out movements given the intersection spacing and projected queuing. Therefore, no additional traffic signal warrant analyses are needed.

7.3 CIRCULATION RECOMMENDATIONS

The intersection geometries in Figure 10 illustrate the recommended roadway and intersection improvements on Warm Springs Parkway with site development. These improvements include:

- Construct Warm Springs Parkway from Clinton Keith Road to the north Project boundary. Warm Springs Parkway will be designed to provide four vehicle travel lanes (plus turn lanes at intersections), bike lanes and sidewalks. The roadway will be stubbed at the north site boundary for future extension.
- At the intersection of Warm Springs Parkway and Clinton Keith Road, install a traffic signal and provide the following in addition to the existing lanes:
    - Dual northbound left-turn lanes;
    - Northbound through lane;
    - Dual southbound left-turn lanes;
    - Southbound through lane;
    - Dual southbound right-turn lanes;
    - Westbound right-turn lane; and,
    - Dual eastbound left-turn lanes.
- Provide a right-in/right-out access at the southern access driveway (Warm Springs Parkway/Project Driveway A) with two northbound through lanes, a northbound right-turn lane, four southbound through lanes (feeding the southbound approach at Clinton Keith Road), a southbound shared through/right-turn lane, an eastbound right-turn lane, and a westbound right-turn lane.
- Provide a right-in/right-out access to serve the Vineyard II site (Warm Springs Parkway/Project Driveway B) with three northbound through lanes, a northbound through/right-turn lane, two southbound through lanes, and a westbound right-turn lane.
- Install a traffic signal at the main Costco access driveway (Warm Springs Parkway/Project Driveway C) with the following:
    - Dual northbound left-turn lanes with 250 feet of storage;
    - A northbound through-lane and shared through/right-turn lane;
    - Dual southbound left-turn lanes with 100 feet of storage;
    - Two southbound through-lanes;
    - Southbound right-turn lane with 100 feet of storage;
    - Westbound exclusive left-turn, through, and right turn lanes; and

  - Two eastbound exiting lanes, one shared through/left turn lane and an exclusive right turn lane.
- Provide a full-movement access driveway at the north site access (Warm Springs Parkway/Project Driveway D) in the near-term, with a northbound shared left-turn through lane, one northbound through lane, a northbound right-turn lane, a southbound shared left-turn/through lane, one southbound through lane, a southbound right-turn lane, an eastbound shared left/right-turn lane, and a westbound shared left/right-turn lane. The access will be limited to right-in/right-out when Warm Springs Parkway is extended further north.

The site plan in Figure 2 also illustrates the improvements planned on the transportation network around the site in conjunction with other developments, including at the intersections of Creighton Avenue & Clinton Keith Road and Vista Murrieta High School Driveway & Clinton Keith Road. These include the following:

- Provision of a north leg at the intersection of Creighton Avenue & Clinton Keith Road, including an exclusive eastbound left-turn, westbound right-turn, exclusive southbound left-turn, and shared southbound through/right-turn lane.
- Provision of a north leg at the intersection of Bronco Way & Clinton Keith Road, including an exclusive eastbound left-turn, westbound right-turn, exclusive southbound left-turn, shared southbound through/right-turn lane, and northbound through/right-turn lane.

7.4 TRANSIT IMPACTS

The Riverside Transit bus line 61 provides service on Clinton Keith Road via a bus stop at the intersection of Clinton Keith Road and the main entrance to the Vista Murrieta High School (Reference 3). The services along line 61 would not be affected by the Project. The existing bus stop is located with access considerations to Vista Murrieta High School and would not be relocated for the Project. The Project would not alter the existing route. In addition, the addition of the Warm Springs Parkway signal would minimally affect operations along the corridor as the Clinton Keith Road corridor would operate with coordinated signals with priority given to east-west travel. Overall, the Project would not create a significant impact to the Riverside Transit bus line 61.

Route 23 also offers service to the project site. Normal operation of Route 23 does not include direct access to the project site; however, an alternate route has a stop at Vista Murrieta High School and operates twice daily at 2:45 p.m. and 3:10 p.m. when school is in session. The existing bus stop is located with access considerations to Vista Murrieta High School and is being relocated by the shopping center south of the project in conjunction with the construction of the initial segment of Warm Springs Parkway. The project would not further alter the existing route.

7.5 PEDESTRIAN AND BICYCLE IMPACTS

The Project would provide sidewalks along Clinton Keith Road and Warm Springs Parkway along the Project site consistent with the City of Murrieta guidelines. The Project would not affect existing sidewalks or crosswalks along Clinton Keith Road and would provide additional crosswalk facilities across Clinton Keith Road at the signalized Warm Springs Parkway intersection and at the Vista Murrieta High School entrance (west leg). The Project would also provide pedestrian connections onto the site at the south right-in/right-out driveway and at the signalized primary access point. The pedestrian facilities provided on-site are consistent with the City of Murrieta guidelines.

The Project would provide Class II bike lanes on Warm Springs Parkway between Clinton Keith Road and the Project site boundary. The Project would not propose to alter existing bicycle or pedestrian facilities.

Overall, the Project would not create a significant impact to the pedestrian and bicycle facilities in the vicinity of the Project site.

7.6 CEQA CONCLUSIONS

Per the City of Murrieta's significance criteria, if a cumulative impact cannot be mitigated through existing infrastructure funding mechanisms, the impact is considered significant. Table 37 below outlines the types of impacts at each location and the CEQA conclusions. The funding mechanisms and timing for the proposed mitigation measure of expanding the Clinton Keith Road corridor at Clinton Keith Road at Murrieta Oaks Avenue cannot be explicitly identified for 2021 Cumulative Conditions. Therefore, Project impacts at Murrieta Oaks Avenue & Clinton Keith Road are considered significant and unavoidable for the interim 2021 Cumulative Conditions. In addition, the following intersections are identified to have significant and unavoidable impacts and are located outside of the City of Murrieta's jurisdiction: Clinton Keith Road & Salida Del Sol, Clinton Keith Road & Elizabeth Lane, Max Gills Boulevard & Briggs Road/Leon Road and at Max Gillis Boulevard & Thompson Road/SR-79.

Table 37 outlines each operational and queuing impact along with a mitigation, the feasibility of that mitigation, and a resulting determination of significance.

Table 37: CEQA Impact Summary

ID	Intersection	Type of Impact	Jurisdiction	Mitigation Measure	Mitigation Feasibility	Significance
Existing/Project Impacts						
5	Salida Del Sol & Clinton Keith Rd	LOS	Wildomar	Restriping Clinton Keith to 3 travel lanes in each direction Add traffic signal per Wildomar CIP	Restriping can be accommodated within existing pavement and is scheduled for winter 2020 construction Signal included in Wildomar CIP	Significant and Unavoidable: full funding and implementation for mitigations cannot be guaranteed by Project buildout Project will contribute to TUMF fees which fund county wide improvements including the Clinton Keith corridor ***Note this is also an existing impact***
6	Elizabeth Lane & Clinton Keith Road	LOS	Wildomar	Restripe/widen Clinton Keith Road to 3 travel lanes in each direction Add traffic signal per Wildomar CIP	Restriping/widening scheduled for winter 2020 construction Signal included in Wildomar CIP	Significant and Unavoidable: full funding and implementation for mitigations cannot be guaranteed by Project buildout Project will contribute to TUMF fees which fund county wide improvements including the Clinton Keith corridor ***Note this is also an existing impact***
9	California Oaks Rd & Clinton Keith Rd	LOS	Murrieta	Restripe to provide additional EB through lane (including signal detection at California Oaks)	Feasible	Less than significant provided the Project constructs the roadway restriping and associated signal detection

ID	Intersection	Type of Impact	Jurisdiction	Mitigation Measure	Mitigation Feasibility	Significance
23	Max Gillis Blvd/ Thompson Road & SR-79	LOS	County/ Caltrans/ Murrieta	Future Clinton Keith extension	Future plan for Clinton Keith extension will provide alternate route for traffic. Project will contribute to TUMF funds	Significant and Unavoidable: although Project will contribute to TUMF funds for future extension the full funding and implementation not guaranteed by project buildout and the County is project lead therefore outside of the lead agency control ***Note this is also an existing impact***
9	California Oaks Rd & Clinton Keith Rd	Queue (WBL) Queue (NBL)	Murrieta	Stripe 3rd EB travel lane (see LOS mitigation) Note that the City CIP project has extended NB LT storage to 250 ft already	Feasible	Less than significant provided Project completes lane striping and associated signal detection ***Note this is also an existing impact***
10	Greer Rd/Murrieta Oaks Ave & Clinton Keith Rd	Queue (SBL)	Murrieta	Restripe additional 50 ft of storage for the SB LT (for a total storage of 200 ft)	Feasible	Less than significant provided mitigation is completed by Project
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	Queue (WBL)	Murrieta	Provide additional 100 ft of storage for WB LT (total storage of 250 ft)	Feasible	Less than Significant provided Project completes additional storage ***Note this is also an existing impact***
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd (with Creighton Access)	Queue (EBL)	Murrieta	Provide additional 70 ft of storage (for a total of 275 ft storage)	Feasible as intersection is under design and the design has been modified to include additional storage	Less than significant

ID	Intersection	Type of Impact	Jurisdiction	Mitigation Measure	Mitigation Feasibility	Significance
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd (without Creighton Access)	Queue (EBL)	Murrieta	Provide additional 90 ft of storage (for a total of 295 ft of storage)	Feasible as intersection is under design and the design has been modified to include additional storage	Less than significant
18[1]	Whitewood Rd & Clinton Keith Rd	Queue (NBL)	Murrieta	Extend the NB and SB LT lanes to the extent possible within available ROW and spacing Contribute proportional share to the City CIP project to provide dual NB and SB LT lanes which will mitigate the impact	Feasible	Significant and Unavoidable: right-of-way restrictions prohibit extending turn lanes to the total length needed There is a CIP project planned to provide dual NB and SB LT lanes and Project will contribute proportional fair share (see Cumulative discussion) City has adopted an ordinance of overriding consideration at this intersection pending the upcoming CIP project ***Note the SBL is also an existing impact***
		Queue (SBL)				
Cumulative Mitigations						
5	Salida Del Sol & Clinton Keith Rd	LOS	Wildomar	Same as in Project Condition	Same as in Project Condition	Same as in Project Condition ***Note this is also an existing impact***
6	Elizabeth Lane & Clinton Keith Road	LOS	Wildomar	Same as in Project Condition	Same as in Project Condition	Same as in Project Condition ***Note this is also an existing impact***
9	California Oaks Rd & Clinton Keith Rd	LOS	Murrieta	Same as in Project Condition	Same as in Project Condition	Same as in Project Condition

ID	Intersection	Type of Impact	Jurisdiction	Mitigation Measure	Mitigation Feasibility	Significance
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	LOS	Murrieta	Contribute proportional fair share to restripe additional EB travel lane on Clinton Keith Rd between California Oaks Rd and Mitchell Rd/Murrieta Oaks Ave (approximately 1,100 linear feet) plus signal detection	Feasible	Significant and unavoidable: timing for implementation of mitigation cannot be guaranteed by Project buildout City will create a CIP for this mitigation and Project will contribute a proportional fair share to the improvement
15	Creighton Ave & Clinton Keith Rd (with Creighton Access)	LOS	Murrieta	Add second EB left turn lane	Mitigation to be provided by the Vineyard III development per conditions of approval	Less than significant assuming second EB left turn lane is provided. It is anticipated that access to the Costco property will not be provided from Creighton Ave until the second left turn lane is constructed
18[1]	Whitewood Rd & Clinton Keith Rd	LOS	Murrieta	Contribute proportional share to City CIP project to provide dual NB and SB LT lanes which will mitigate the impact (CIP project 8389)	Mitigation will require additional right-of-way and full funding/implementation cannot be guaranteed by Project buildout	Significant and Unavoidable: right-of-way restrictions and full funding for implementation not guaranteed by project buildout City has adopted an ordinance of overriding consideration at this intersection pending the upcoming CIP project
22	Max Gillis Blvd/Briggs Rd & Leon Rd	LOS	Murrieta	Future Clinton Keith extension	Future plan for Clinton Keith extension will provide alternate route for traffic. Project will contribute to TUMF funds	Significant and Unavoidable: although Project will contribute to TUMF funds for future extension the full funding and implementation not guaranteed by project buildout

ID	Intersection	Type of Impact	Jurisdiction	Mitigation Measure	Mitigation Feasibility	Significance
23	Max Gillis Blvd/ Thompson Road & SR-79	LOS	County/ Caltrans/ Murrieta	Future Clinton Keith extension	Future plan for Clinton Keith extension will provide alternate route for traffic. Project will contribute to TUMF funds	Significant and Unavoidable: although Project will contribute to TUMF funds for future extension the full funding and implementation not guaranteed by project buildout ***Note this is also an existing impact***
8	Nutmeg St & Clinton Keith Rd	Queue (WBL) Queue (SBL)	Murrieta	Contribute proportional share towards additional 75 ft of storage for WB LT lane (300 ft total) and additional 100 ft of storage for SB LT lane (150 ft total)	Feasible	Significant and Unavoidable: full funding for implementation not guaranteed by project buildout
9	California Oaks Rd & Clinton Keith Rd	Queue (WBL)	Murrieta	Contribute proportional share toward providing an additional 200 ft of storage for WB LT lane (total storage of 350 ft)	Feasible	Significant and unavoidable: timing for implementation of mitigation cannot be guaranteed by Project buildout City will create a CIP for this mitigation and Project will contribute a proportional fair share to the improvement ***Note this is also an existing impact***
11	Mitchell Rd/Murrieta Oaks Ave & Clinton Keith Rd	Queue (WBL)	Murrieta	Contribute proportional share towards providing an additional 200 ft of storage for WB LT lane (total storage of 350 ft)	Feasible but would require removing part of the existing raised median	Significant and unavoidable: timing for implementation of mitigation cannot be guaranteed by Project buildout City will create a CIP for this mitigation and Project will contribute a proportional fair share to the improvement ***Note this is also an existing impact***

ID	Intersection	Type of Impact	Jurisdiction	Mitigation Measure	Mitigation Feasibility	Significance
13	I-215 SB Ramps & Clinton Keith Rd	Queue (EBR)	Murrieta	Extend storage for EB RT queue	Additional storage is still required in addition to signal optimization and geometry is constrained due to right-of-way	Significant and Unavoidable: it is not possible to extend queue storage due to right-of-way restrictions and spacing to the storage of adjacent traffic signal
15	Creighton Ave & Clinton Keith Rd (with Creighton Access)	Queue (EBL)	Murrieta	Add second EB left turn lane	Mitigation to be provided by the Vineyard III development (Planning Case No. DP-2018-1691) per conditions of approval	Less than significant assuming second EB left turn lane is provided. It is anticipated that access to the Costco property will not be provided from Creighton Ave until the second left turn lane is constructed
15	Creighton Ave & Clinton Keith Rd (without Creighton Access)	Queue (EBL)	Murrieta	Add second EB left turn lane	Mitigation to be provided by the Vineyard III development (Planning Case No. DP-2018-1691) per conditions of approval	Less than significant assuming second EB left turn lane is provided. Without access to the Costco property from Creighton Ave, the Project would not add any trips to this movement and would not contribute to the intersection.
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd (with Creighton Access)	Queue (EBL)	Murrieta	Provide a total of 315 ft of storage in each LT lane	Feasible as intersection is under design and the design plan has been modified to include additional storage City CIP will be completed prior to project opening	Less than significant

ID	Intersection	Type of Impact	Jurisdiction	Mitigation Measure	Mitigation Feasibility	Significance
16	High School West Dwy/ Warm Springs Pkwy & Clinton Keith Rd (without Creighton Access)	Queue (EBL)	Murrieta	Provide a total of 345 ft of storage in each LT lane	Feasible as intersection is under design and the design plan has been modified to include additional storage City CIP will be completed prior to project opening	Less than significant
17	Bronco Way & Clinton Keith Rd	Queue (EBL)	Murrieta	Contribute proportional share to extend EB LT lane storage by 71 ft (for a total storage of 271 ft)	Feasible	Significant and Unavoidable: funding and implementation of mitigation cannot be guaranteed by project opening
18[1]	Whitewood Rd & Clinton Keith Rd	Queue (EBL) Queue (NBL) Queue (SBL)	Murrieta	Extend the NB and SB LT lanes to the extent possible Contribute proportional share to City CIP project (#8389) planned to provide dual NB and SB LT lanes which will mitigate the impact Contribute proportional share to extend the dual EB LT lanes by 35 ft to a total of 285 ft for each EB LT lane	Extending the left turn pockets to the maximum extent feasible will not fully mitigate the impact Mitigation will require additional right-of-way and full funding/implementation cannot be guaranteed by Project buildout	Significant and Unavoidable: right-of-way restrictions and full funding for implementation not guaranteed by project buildout City has adopted an ordinance of overriding consideration at this intersection pending the upcoming CIP project ***Note the SBL is also an existing and project impact***
20	Whitewood Rd & Baxter Rd	Queue (NBL)	Murrieta	Contribute proportional share to provide 285 ft of additional storage for the NB LT lane to a total of 500 ft	Feasible	Significant and Unavoidable: as mitigation implementation cannot be guaranteed by Project build out

Source: Kittelson & Associates, Inc. 2020
1: See City Ordinance Resolution 11-2768

Section 8 References

8.0 REFERENCES

1. City of Murrieta. *Traffic Impact Analysis Preparation Guide*. October 2013.
2. City of Murrieta. *General Plan 2035.* 2010.
3. Riverside Transit Agency. Available at: https://www.riversidetransit.com/
4. Transportation Research Board. *Highway Capacity Manual*. 2010.
5. County of Riverside. *County of Riverside General Plan.* Various update dates.
6. Caltrans District 8. *I-215 Transportation Concept Report*. September 2012.
7. Caltrans. Performance Measurement System (PeMS)
8. Institute of Transportation Engineers. *Trip Generation, 9th Edition.* 2012.
9. Trames Solutions Inc. *The Vineyard Shopping Center Traffic Impact Analysis*. February 2, 2016.
10. Rick Engineering Company. *Antelope Road Realignment Precise Alignment Study*. September 5, 2006, revised October 19, 2016.
11. LSA Associates, Inc. *Clinton Keith Road Extension Project Traffic Operations Analysis*. May 21, 2015.
12. Western Riverside Council of Governments. *Transportation Uniform Mitigation Fee Administrative Plan*. January 7, 2019.

Transportation Impact Analysis

Murrieta Costco and Vineyard II

Murrieta, California

Final

March 2020

KITTELSON & ASSOCIATES

Appendix A Vehicle Stacking at Fuel Station

Appendix A Vehicle Stacking at Fuel Station

APPENDIX A. VEHICLE STACKING AT FUEL STATION

The proposed fuel addition would provide a total of 32 fueling positions. The queueing area beyond the pumps extending toward the parking area measures approximately 134 feet. Exhibit 1 illustrates the queue storage area which holds 34 vehicles in queue in addition to the 32 vehicles at the fueling positions.

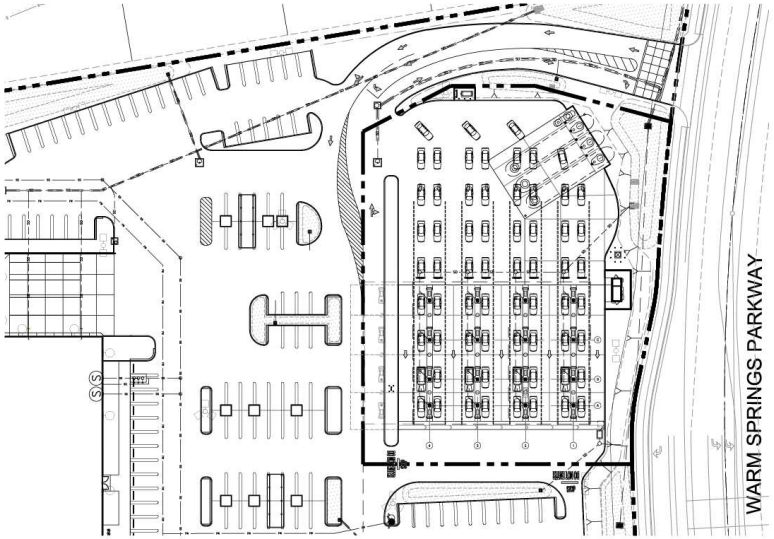
Vehicular queuing data has been collected at other representative Costco Gasoline fueling facility sites to provide reliable information related to the anticipated queues for the proposed facility. For purposes of this analysis, Costco Gasoline queuing data collected in 2016 and 2017 was gathered from Costco Gasoline sites each having 22 or more fueling positions. Table 1 summarizes the four comparable locations. Observed queues were reported for maximum, average, and 95th percentile scenarios during both the Weekday PM peak hour and during a Weekend Midday peak. The 95th percentile queue is defined to be the queue length (in vehicles) that has only a 5-percent probability of being exceeded during the analysis time period. The industry standard methodology for queuing analysis considers the 95th percentile queues.

Table 1. Costco Gasoline Stacking Observations

Location	Dates Collected	Size (pumps)	Weekday PM Peak Queue					Weekend Midday Peak Queue				
			Volume	Min	Max	Average	95th	Volume	Min	Max	Average	95th
Tustin II, CA	7/28/16 & 7/30/16	22	662	11	35	26	34	610	14	38	29	35
Richmond, CA	2/15/18 & 2/17/18	22	588	0	14	6	12	666	5	22	13	19
Rohnert Park, CA	8/18/16 & 8/20/16	24	498	0	8	3	7	632	0	22	8	16
Concord, CA	8/25/16 & 8/27/16	24	550	0	10	3	8	700	11	32	19	28
NE San Jose, CA	2/9/17 & 2/11/17	24	458	6	6	1	3	686	10	31	20	29
Cypress, CA	10/19/17 & 10/21/17	24	654	0	17	7	15	740	1	19	9	19
Hawthorne, CA	10/19/17 & 10/21/17	24	284	0	7	3	7	386	9	21	14	20
Average			**555**	**6**	**20**	**12**	**18**	**638**	**10**	**29**	**19**	**27**

As shown in Table 1, the highest recorded 95th percentile queue was 35 vehicles observed at the Tustin II Costco Gasoline site during the Weekend Midday peak period while the lowest 95th percentile queue was 16 vehicles and was observed at both the Rohnert Park Costco Gasoline sites. The average 95th percentile queue for all four sites is 26 vehicles. With queueing space provided for 34 vehicles, the 95th percentile as well as maximum observed queue of 35 vehicles can be accommodated with minimal interference to site circulation.

Exhibit 1: Fuel Area Stacking Plan



STACKING PLAN

SCALE: 1" = 40'-0"

Appendix B Scoping Form and Comments from Caltrans

Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

This letter acknowledges the City of Murrieta Engineering Department requirements for traffic impact analysis of the following project. The analysis must follow the City of Murrieta Public Works Department Traffic Study Guidelines dated October 2013.

Case No. (Required for submittal) _____
Related Cases - _____
SP No. _____
EIR No. _____
GPA No. _____
CZ No. _____
Project Name: Costco Murrieta
Project Address: North of Clinton Keith Road, between Antelope Road and Whitewood Road.
Project Description: 151,340 sf Costco Warehouse with car wash and 32 fueling stations and 79,900 sf Shopping Center East

	Consultant	Developer
Name:	Kittelson and Associates	Costco Wholsale
Address:	750 The City Drive, Ste 410, Orange, CA 92686	9 Corporate Park, Ste 230, Irvine, CA 92606
Telephone:	(714) 468-1182	(714) 978-5027

A. Trip Generation Source: (ITE 9th Edition or other)

Current GP Land Use: Commercial
Current Zoning: Commercial
Proposed Land Use: Commercial
Proposed Zoning: Commercial

15

Current Trip Generation	In	Out	Total
AM Trips	0	0	0
PM Trips	0	0	0

Proposed Trip Generation*

In	Out	Total
Weekday AM is not required by discussion with City		
Proposed Trip Generation for Weekday PM and Saturday Midday is attached.		

Internal Trip Allowance ☐Yes ☒No (_____ % Trip Discount)
Pass-By Trip Allowance ☒Yes ☐No (33% % Trip Discount)

A pass-by trip discount of up to 25% is allowed for appropriate land uses. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: N 43 % S 33 % E 12 % W 12 %
(attach exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year: 2020 (Costco and Shopping Center East) Annual Ambient Growth Rate: % 2%

Phase Year(s) NA
Other area projects to be analyzed: To be provided by the City, the County of Riverside, and City of Menifee for cumulative projects.

Model/Forecast methodology: Growth rate to be provided by the City for Project Opening Year 2020 and buildout analysis for intersections along Warm Spring Parkway.

D. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. See attached.
2.
3.
4.
5.
6.
7.
8.
9.
10.

E. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. Clinton Keith Rd, between I-215 NB Ramps & Warm Springs Rd
2. Whitewood Rd, north of Clinton Keith Rd
3. Warm Springs Parkway (future scenarios)
4.
5.
6.
7.
8.
9.
10.

F. Site Plan (please attach reduced copy)

G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Engineering Department) See attached.

H. Existing Conditions
Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts Counts were collected on Wednesday November 15, 2017 and Saturday, December 2, 2017.

Recommended by:

Consultant's Representative _____ Date _____

Scoping Agreement Submitted on _____

Revised on _____

Approved Scoping Agreement:

City Of Murrieta Engineering Department _____ Date 1/9/18

D. Study Intersections

1. Nutmeg St/Clinton Keith Rd
2. California Oaks Rd/Clinton Keith Rd
3. Greer Rd/Clinton Keith Rd
4. Murrieta Oaks Ave/Clinton Keith Rd
5. McElwain Rd/Clinton Keith Rd
6. I-215 SB Ramps/Clinton Keith Rd
7. I-215 NB Ramps/Clinton Keith Rd
8. Creighton Ave/Clinton Keith Rd
9. Warm Springs Rd/Clinton Keith Rd
10. Vista Murrieta High School/Clinton Keith Rd
11. Whitewood Rd/Clinton Keith Rd
12. Whitewood Rd/Linnel Lane
13. Whitewood Rd/Baxter Rd
14. Whitewood Rd/Keller Rd
15. All Project Driveways (Costco and Shopping Center East Driveways)
16. CK 17 Driveways onto Public Roads

G. Specific Issues to be addressed in Study:

1. Buildout analysis required for intersections along Warm Springs Parkway.
2. Perform queueing analysis at all study intersections.
3. All intersections along Warm Springs Parkway and along Clinton Keith Road will need to be analyzed as a coordinated system.
4. Caltrans will be contacted to verify if additional analysis is required. At a minimum, merge/diverge analysis is required at all Caltrans ramps.

KITTELSON & ASSOCIATES
750 THE CITY DRIVE, SUITE 410
ORANGE, CA 92868
P 714.468.1997

MEMORANDUM

Date: January 3, 2018

Project #: 21763.0

To: Bob Moehling , City of Murrieta
Cc: Jennifer Murillo, Costco Wholesale

From: Neelam Dorman and Kelly Laustsen, Kittelson & Associates, Inc.
Project: Murrieta Costco
Subject: Proposed Murrieta Costco Trip Generation Information

Costco Wholesale is proposing to develop a warehouse, car wash and Costco Gasoline fuel station east of Interstate 215 and north of Clinton Keith Road in Murrieta, California. This memorandum provides an overview of trip generation rates and trip characteristics of Costco Warehouses with fuel stations and car washes based on surveys of similar Costco locations. In addition, a second phase of commercial development is proposed adjacent to the Costco site. The trip generation and distribution associated with this phase is also provided.

PROPOSED DEVELOPMENT PLAN

Costco Wholesale is planning construct a new warehouse, car wash, and fuel station on the Warm Springs Road (proposed) north of Clinton Keith Road in Murrieta, California. The proposed site is currently vacant with development approved just south of the site. Access to the proposed Costco warehouse and fuel station is planned to occur via a new signalized intersection along Warm Springs Road, which is proposed with the development to the south. The Costco Warehouse would be the first phase of development with a second shopping center phase proposed across Warm Springs Road.

The proposed Costco warehouse is anticipated to be approximately 151,340 square feet in size and will include a car wash and four-island fuel station with the ability to expand to a fifth island. Each island provides six fueling positions, for a total of twenty-four fueling positions. Figure 1 illustrates a preliminary proposed site plan. It should be noted that the site layout and size of the property will evolve as the project progresses towards the formal development application submittal.

The proposed Phase 2 development is immediately east of the Costco site and anticipated to include an approximately 79,900 square foot shopping center. Specifically, the site would consist of a 37,000 square foot fitness center; 3,000 square foot fast food restaurant; and 39,900 square feet of other retail use. The preliminary site plan is provided in Figure 2.

Figure 1 – Costco Site Plan

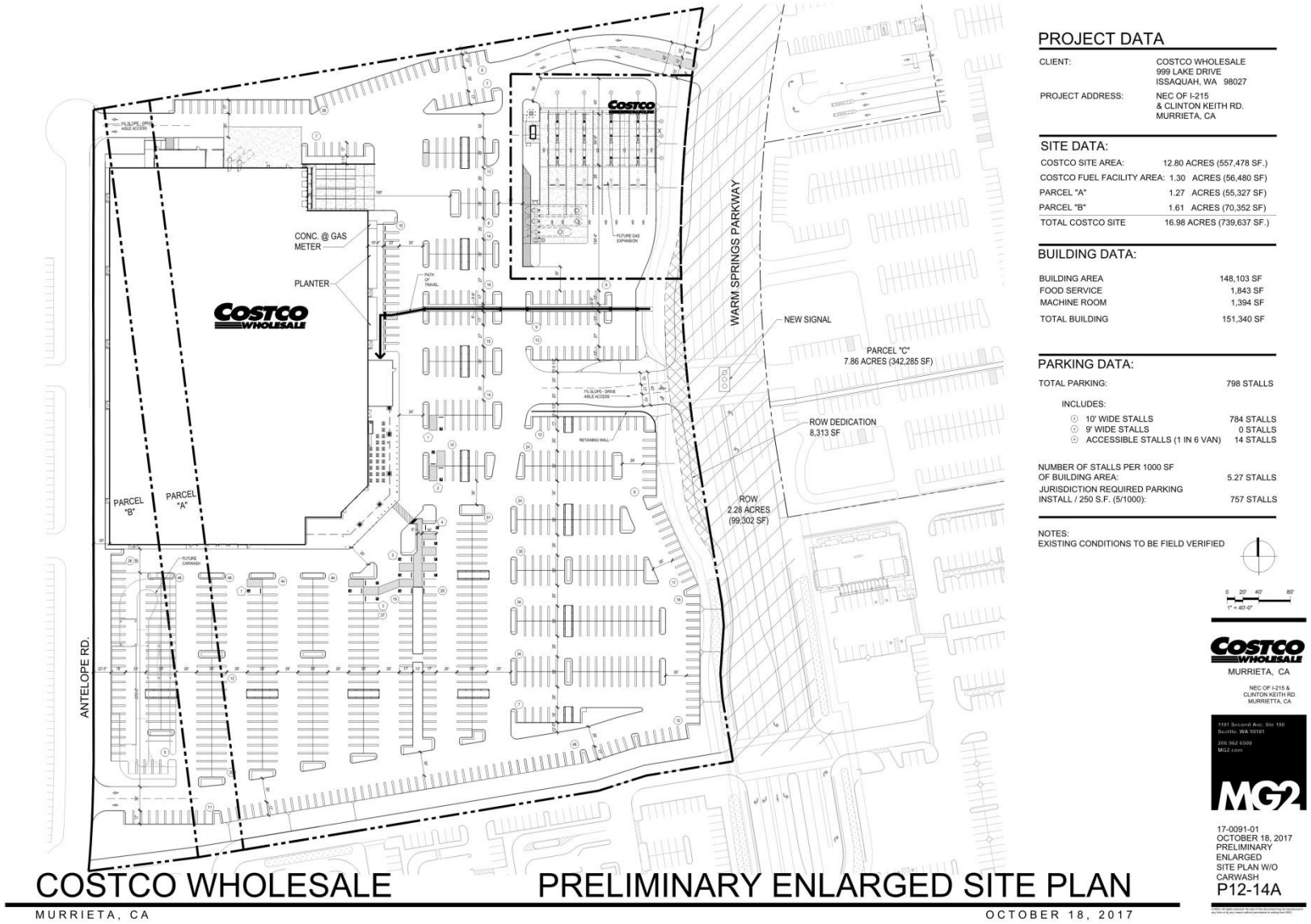
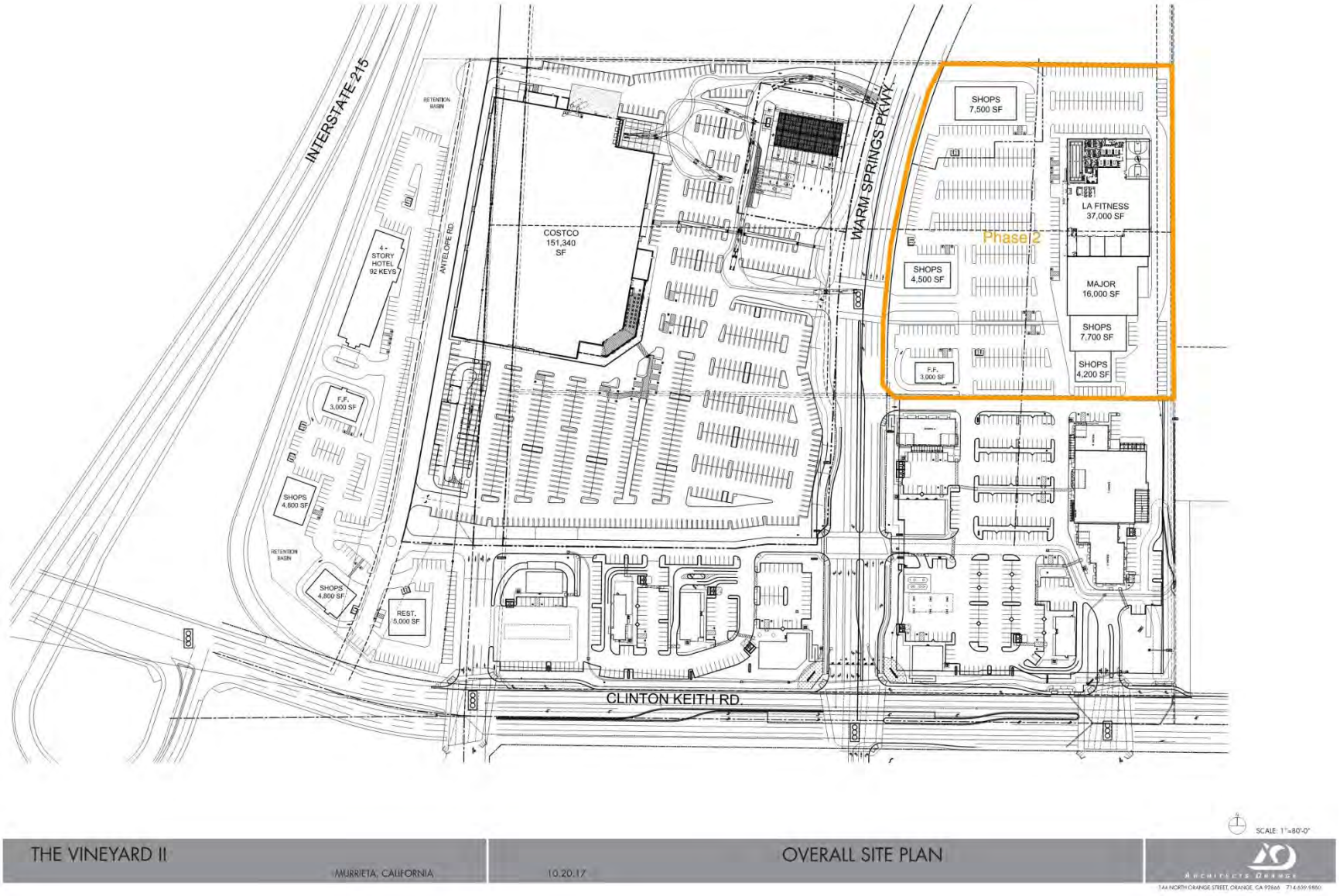


Figure 2 – Phase 2 Site Plan



COSTCO SITE TRIP ESTIMATES

COSTCO WHOLESALE CHARACTERISTICS

For the past 15 years, Kittelson & Associates, Inc. (KAI) has maintained a database of traffic data and travel characteristics for Costco Wholesale. This includes facilities with gas stations, which are included in the overall trip generation. The database contains transportation information such as trip rates, trip type percentages, and parking demand for Costco locations in the United States, as well as Canada and Mexico. A large portion of the data is from existing Costco sites in the Pacific Northwest. The data base is updated and refined each time new Costco traffic counts or information become available to KAI. Costco has recently started to add car washes at some sites, so data on the trip impact associated with the car washes is minimal. However, based on transaction data from a number of Costco sites with car washes, there is a very high rate of internalization between the car wash and Warehouse or fuel station.

Costco has invested significant effort into developing this site-specific trip generation database for both their warehouses and their fuel stations because of the unique characteristics of Costco customer travel that exists due to membership requirements and the nature of Costco sales. These unique elements apply to the trip generation and distribution for Costco warehouses, Costco Gasoline fuel stations, and the interaction of trips between the two. Base on the database, Costco sites typically generate higher traffic volumes than other land uses with similar building sizes. Costco Gasoline fuel stations all function as ancillary uses to the main Costco Warehouses. Like other Costco services, fuel can only be purchased by members. Payment can only be made with credit card and, unlike traditional gas/service station operations, there are no other automotive services (such as repairs) or other type of sales (including food or sundries) associated with the Costco Gasoline facility. All Costco Gasoline facilities have a minimum of one attendant working at all times who is responsible for expediting members' use of the fuel pumps, directing entering vehicles to available pump locations, and managing on-site queues from the pumps.

Like the Costco Gasoline fuel stations, the Costco Car Wash is for members only and requires a Costco membership card for use. The car wash is typically staffed by two attendants who are trained to manage the circulation of cars at the payment kiosks and entering and exiting the car wash facility. The car wash, like the fuel station, functions as an ancillary use to the Warehouse with significant internalization.

TRIP CHARACTERISTICS

In addition to overall trip rates, the Costco database includes customer survey information to provide the percentage of primary, pass-by, and diverted trips, as further described below.

- *Primary Trips:* entirely new trips on the roadway system for the express purpose of driving to and from Costco

- *Pass-by Trips:* existing trips that are on roadways adjacent to the site which allow motorists to turn into the Costco development and then continue on to their ultimate destination when their shopping is concluded
- *Diverted-Linked Trips:* existing trips on nearby roadways in which motorists make a decision to drive out-of-direction for a distance to stop at Costco and, when their shopping is concluded, continue on their trip to the ultimate destination

We recommend that the trip generation prepared for the Murrieta Costco site account for pass-by and diverted trip impacts at the study intersections, subject to applicable review agencies approvals. Typically, pass-by trips have an impact only at the site-access driveways, whereas the impact of diverted trips could extend throughout the study area intersections (these would be modeled similar to net new trips at many or all of the study area intersections). The key difference between inclusion and omission of the diverted trips is related to the overall vehicle miles traveled (VMT), as diverted trips do not create the same system impacts (air quality, noise, and freeway impacts) that entirely new trips to the system could create.

The Costco sites in the database are located in a variety of locations, some adjacent to freeways/arterials, while others are located a couple of blocks or more away. This variation in warehouse locations results in differences in diverted and pass-by trips between locations. For example, sites adjacent to major arterial roadways tend to exhibit a high percentage of pass-by trips and a lower percentage of diverted trips. Similarly, Costco facilities located a block or two away from a freeway tend to experience a higher percentage of diverted trips. Given these factors, diverted and pass-by trips should be considered together with engineering judgment used to account for these two trip characteristics.

TRIP GENERATION ESTIMATE

The Costco database was queried to develop the trip generation estimate for the Murrieta Costco since the database provides use-specific data that most accurately represents the anticipated traffic characteristics of Costco. The database includes 20 Costco Warehouses with fuel stations in California, Oregon, Washington, Montana, Utah, and Colorado. The locations include warehouses ranging in size from 120,000 square-feet to 162,115 square-feet, with an average size of 143,102 square-feet. The Costco Gasoline fuel stations that accompany these warehouses range between 12 and 16 fuel pumps. The trip generation for the fuel stations is correlated to the overall warehouse size regardless of the number of fueling positions. Table 1 summarizes the average trip rates recorded at Costco warehouses as well as portion of primary, pass-by, and diverted trips. Due to the high rate of internalization anticipated between the car wash, fuel station, and Warehouse, and fact that the car wash and fuel station act as ancillary use to the Warehouse, the trip generation is expected to account for the car wash trips and fuel station trips.

Table 1. Average Trip Characteristics for a Costco Warehouse with Fuel Station

Land Use/Trip Type	Weekday Daily Trip Rate (per KSF)	Weekday PM Peak Hour			Saturday Midday Peak Hour		
		Trip Rate (per KSF)	Portion In	Portion Out	Trip Rate (per KSF)	Portion In	Portion Out
Costco Warehouse With Fuel Station	81.9	7.2	49%	51%	9.9	51%	49%
Portion Primary Trips	*No Data*	*35.2%*			*50.3%*		
Portion Pass-by Trips	*No Data*	*33.3%*			*29.0%*		
Portion Diverted Trips	*No Data*	*31.5%*			*20.7%*		

Table 2 presents trip generation estimates for the proposed Murrieta Costco Warehouse and fuel station based on the data shown in Table 1. Note that adjustments for transportation demand management (TDM) or other reductions are not made in Table 2. In addition, diverted trips are not included in the table as these trips are expected to come from Interstate 215 and function as new trips at the study intersections. However, it should be noted that these trips do not create similar system capacity or environmental impacts as new trips to the system because these trips generally provide no impact beyond the study area.

Table 2. Proposed Murrieta Costco Warehouse with Fuel Station Trip Generation Estimate

Land Use/Trip Type	Size	Weekday Daily Trips	Weekday PM Peak Hour Trips			Saturday Middy Peak Hour Trips		
			Total	In	Out	Total	In	Out
Costco Warehouse With Fuel Center	151,340 SF	12,395	1,092	530	562	1,499	763	736
Pass-by Trips (33.3% weekday PM, 29.0% Sat mid)		*-4,130*	*-364*	*-182*	*-182*	*-434*	*-217*	*-217*
Net New Trips		**8,265**	**728**	**348**	**380**	**1,065**	**546**	**519**

Notes: While not accounted for in the trip generation for purposes of the traffic study, it is expected that 31.5% of weekday PM and 20.7% of Saturday midday peak hour trips will be diverted trips.

The number of weekday daily primary and pass-by trips was estimated using weekday PM peak hour trip type percentages.

The City's *Traffic Impact Analysis Preparation Guide* (Reference 1) indicates that a pass-by trip discount of up to 25% is allowed for appropriate land uses. Therefore, the trip generation estimate using Costco data was compared to the trip generation calculated using the standard reference manual, *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE, Reference 2), assuming a 25% pass-by rate. The results are shown in Table 3.

Table 3. Proposed Murrieta Costco Warehouse with Fuel Station Trip Generation Comparison

Data Source	Daily Trip Generation Rate	Net New Trips		
		Weekday Daily	Weekday PM Peak Hour	Saturday Midday Peak Hour
Costco Database	81.9	8,265	728	1,065
ITE – Land Use Code 857	41.8	4,745	474	723
Difference (Costco Database – ITE Data)		**3,520**	**254**	**342**

As shown in the table, the Costco-specific data results in a higher net new trip generation estimate for the weekday daily, weekday PM peak hour, and Saturday midday peak hour trip generation.

COSTCO GASOLINE FUEL STATION TRIP GENERATION

The Costco trip generation estimates in Tables 1 and 2 account for Costco Gasoline fuel station trips as well as warehouse trips. However, supplemental information on Costco fuel stations is provided to estimate trips from the proposed development during the weekday AM peak hour. During the weekday AM peak hour, the Costco Warehouse is closed to the public and only serving limited employee or delivery trips. As previously indicated, Costco fuel can only be purchased by members and no other automotive services (such as repairs) or other type of sales (including food or sundries) are provided at Costco Gasoline facilities. Typical peak activity at Costco Gasoline facilities occurs during the weekend midday.

The Costco database includes trip generation data for Costco fuel stations, collected by video reduction or vehicle tube counts at existing Costco Gasoline facilities. Information related to pass-by trip percentages was collected by interviewing Costco Gasoline customers about their trip patterns. The average trip generation rate for Costco Gasoline facilities during the weekday AM peak hour is shown in Table 4 along with an estimate of trips at the proposed Murrieta Costco Gasoline fuel station. The trip generation rate is based on data at eight Costco Gasoline sites in Arizona, California[1] and Oregon with 20 or more fueling positions per site.

Table 4. Costco Fuel Center Trip Characteristics – Weekday AM Peak Hour

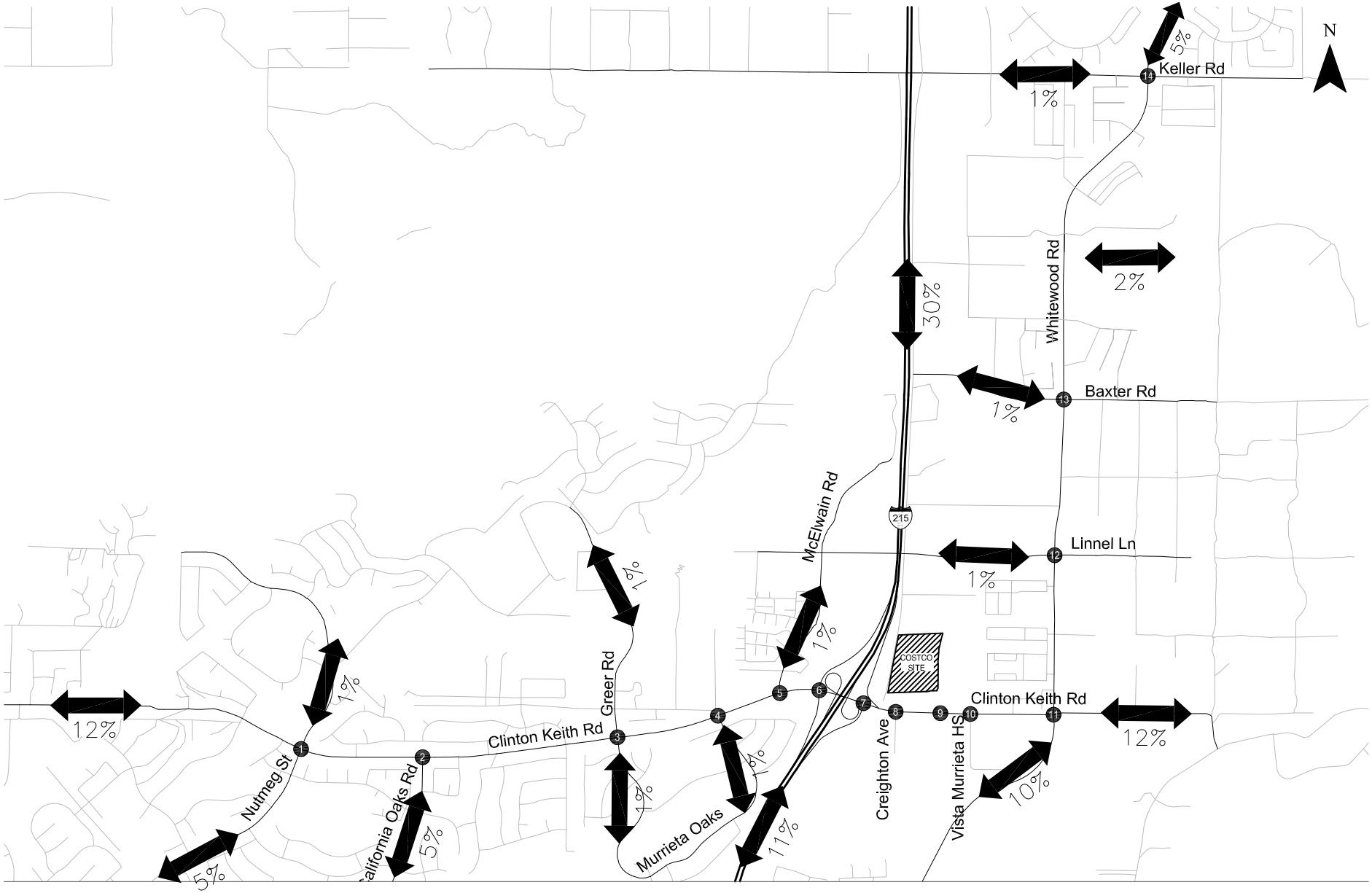
Land Use/Trip Type	Weekday AM Peak Hour	
	Rate	Trips
Costco Gasoline Fuel Station	13.98 trips/fuel position	448 trips
Portion Pass-by Trips	*32.5%*	*-146*
	Net New Trips	**302**

As indicated in the table, the trip generation during the weekday AM peak hour is significantly lower than the weekday PM peak hour or Saturday midday peak hour (shown in Table 2) given that the warehouse is not open during the weekday AM peak hour. Therefore, it is recommended to analyze the weekday PM and Saturday midday peak hour conditions in order to understand operations during the critical time periods.

COSTCO TRIP DISTRIBUTION AND ASSIGNMENT

A proposed distribution for the Costco-generated trips was developed based on a review of Costco member households by square mile within the region. The proposed distribution and assignment of Saturday midday peak hour trips is provided in Figure 3 and Figure 4, respectively. The same distribution is proposed for the weekday PM peak hour. The Saturday midday peak hour assignment is shown as it is the more critical time period for the Costco site.

[1] California locations include Sunnyvale, Tustin, Rancho Del Ray, Rohnert Park, Concord, and San Jose.



Trip Distribution - Costco
Murrieta, CA

Figure
03

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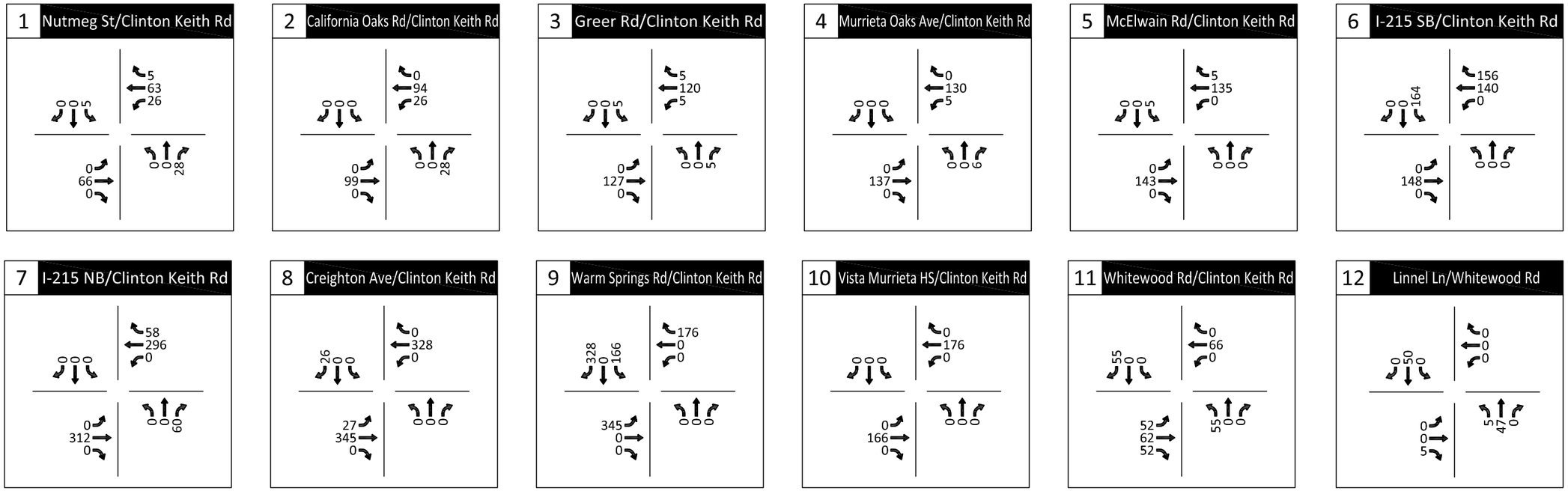

Trip Assignment - Costco
Weekend Peak Hour
Murrieta, CA

Figure
04

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PHASE 2 TRIP ESTIMATES

The number of trips expected to be generated by the proposed Phase 2 development were estimated using rates in manual *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE, Reference 2). The Shopping Center land-use (ITE Code 820) was used as this use accounts for "an integrated group of commercial establishments," as is proposed for the site (Reference 2). Table 5 shows the estimated trip generation.

Table 5: Phase 2 Project Trip Generation

Land Use	Size	Weekday Daily	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Midday Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center (ITE Code 820)	79,900 SF	5,870	84	52	136	247	268	515	393	363	756
Pass-by trips (-25%)		*-1,468*	*-17*	*-17*	*-34*	*-64*	*-64*	*-128*	*-94*	*-94*	*-188*
Net New Trips		**4,402**	**67**	**35**	**102**	**183**	**204**	**387**	**299**	**269**	**568**

Note: The fitted curve equation provided by ITE was used for the trip generation estimate. Consistent with the commercial development just south of the site, a 25% pass-by trip rate was assumed, as documented in *The Vineyard Shopping Center Traffic Impact Analysis* (Reference 3).

As indicated in the table, the trip generation during the weekday AM peak hour is significantly lower than the weekday PM peak hour or Saturday midday peak hour, as with the Costco site. Therefore, it is recommended to analyze the weekday PM and Saturday midday peak hour conditions for the Phase 2 portion of the overall site as well.

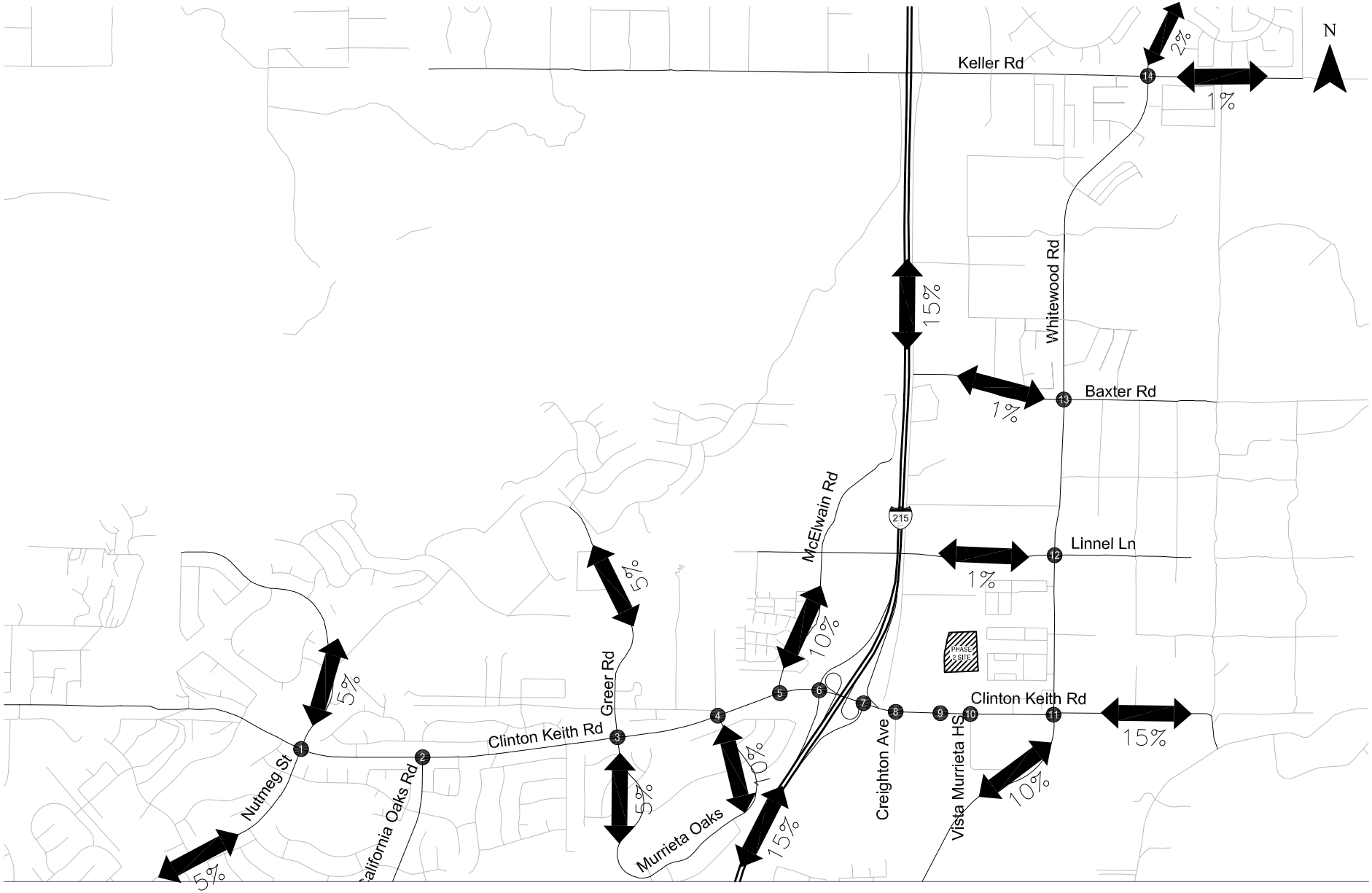
PHASE 2 TRIP DISTRIBUTION AND ASSIGNMENT

The trips associated with the proposed second phase of commercial development were distributed using the same pattern utilized in *The Vineyard Shopping Center Traffic Impact Analysis* (Reference 3), the approved commercial development immediately south. The proposed distribution and assignment of Saturday midday peak hour trips is provided in Figure 5 and Figure 6. The same distribution is proposed for the weekday PM peak hour.

The combined trip assignment for Costco and Phase 2 trips is provided in Figure 7. This assignment was used to information the identification of study intersections for the traffic study.

NEXT STEPS

This memo reflects the trip generation for the Costco site and second phase of commercial development immediately to the east of the Costco site. An initial draft was reviewed by the City and updates were made based on comments received on November 14th, 2017. It accompanies a *Scoping Agreement for Traffic Impact Analysis* form outlining the proposed scope.



Trip Distribution - Phase 2
Murrieta, CA

Figure
05

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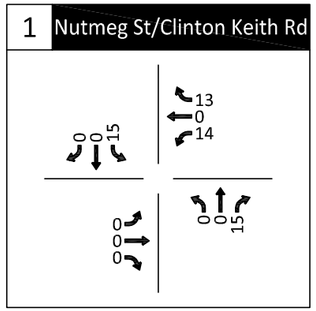
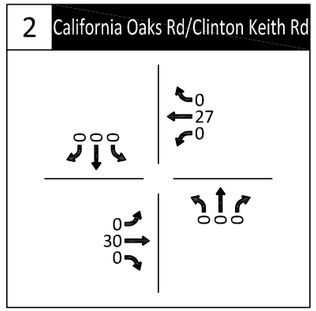
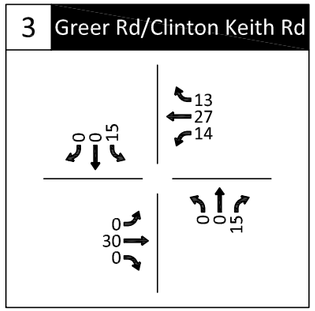
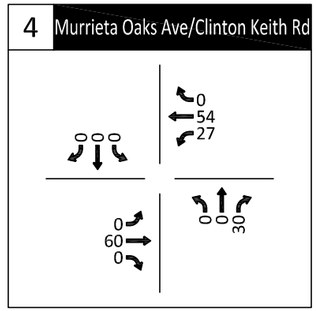
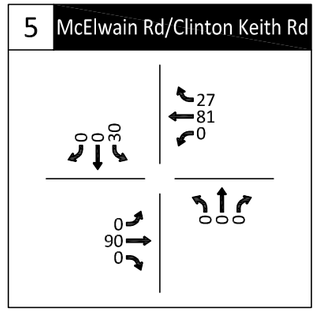
KITTELSON & ASSOCIATES

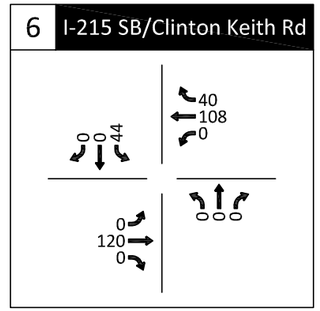


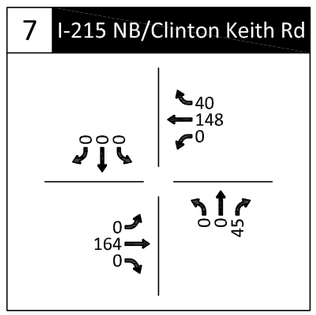


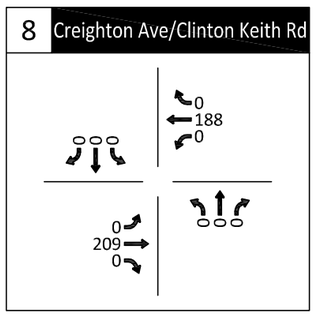


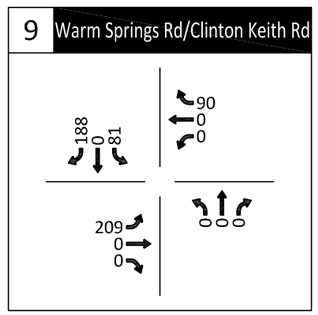


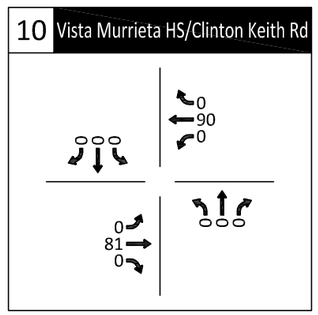


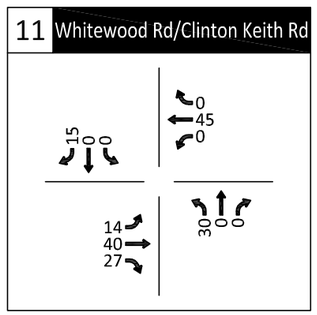


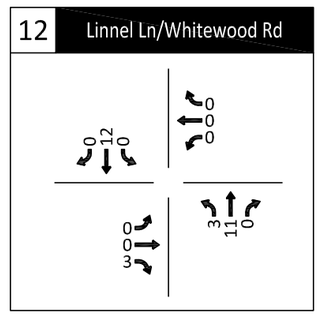


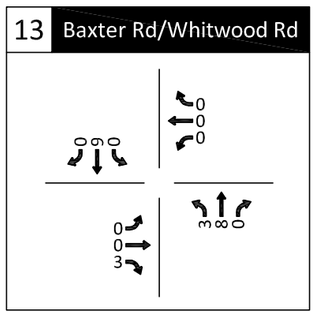


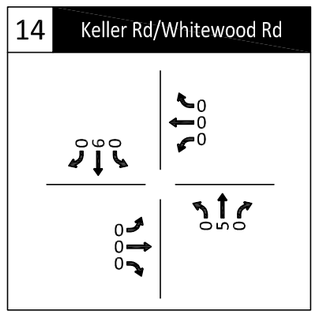












Trip Assignment - Phase 2
Weekend Peak Hour
Murrieta, CA

Figure
06

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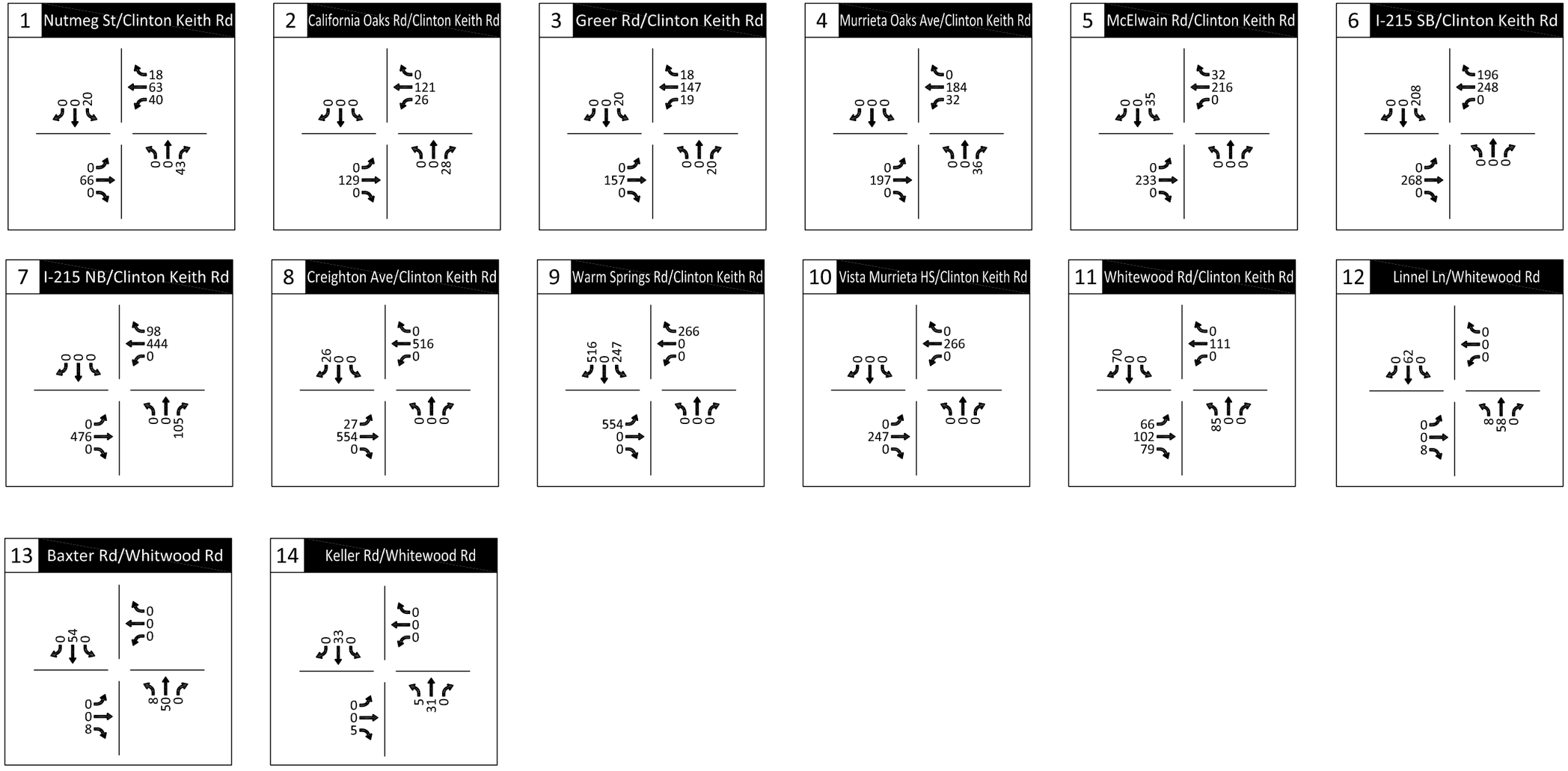

Trip Assignment - Costco & Phase 2
Weekend Peak Hour
Murrieta, CA

Figure
07

KITTELSON & ASSOCIATES

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REFERENCES

1. City of Murrieta. *Traffic Impact Analysis Preparation Guide.* October 2013.
2. Institute of Transportation Engineers. *Trip Generation, 9th Edition.* 2012.
3. Trames Solutions Inc. *The Vineyard Shopping Center Traffic Impact Analysis*. February 2, 2016.

Kelly Laustsen

From: Agyakwa, Kwasi@DOT <Kwasi.Agyakwa@dot.ca.gov>
Sent: Thursday, January 18, 2018 8:39 AM
To: Neelam Dorman
Cc: Kelly Laustsen; Roberts, Mark B@DOT; Pena, Jesus C@DOT; Sarmiento, Tony N@DOT
Subject: RE: Development Project in Murrieta

Good morning,

We've completed the review of the TIA scoping agreement prepared for the Costco in Murrieta project. Our comments are as follows:

A. Trip Generation Source
- a. Using the database of travel characteristics from other Costco stores is ok.
- b. 33% pass-by trips too high. Please explain.
- c. Include AM Peak
  - i. In the AM Peak, will the fuel pumps be available?
  - ii. What about truck traffic? Will it be overnight or AM?

B. **Trip Distribution**
- a. 40% of trips are headed NB, 30% of trips are headed SB
  - i. All of the rooftops are WB. Most trips should be coming from this direction. Right?
  - ii. Additionally the future trip distribution will be different once the Clinton Keith extension to SR-79 is complete.
  - iii. Please revisit the trip distribution patterns by increasing the percentage of EB/WB travel.

C. Background Traffic
- a. Please use SCAG/RivTAM model projections.
- b. Include buildout analysis for all study area intersections.

D. Study Intersections/Segments
- a. Provide Synchro analysis for AM, Mid and PM along Clinton Keith Rd.
  - i. All intersections must be a level of service (LOS) "C".
- b. Roadway Segments
  - i. Add the following segments
    1. Whitewood Road (Murrieta Hot Springs to Clinton Keith Road)
       a. Trip distribution shows 10% of trips heading this direction.
    2. Future Clinton Keith (If it will be completed by 2020?)
    3. I-215 (Murrieta Hot Springs Road to Scott Road)
    4. Antelope Road (from deadend south of Clinton Keith Road to Scott Road)

E. Other Jurisdictional Impacts
- a. Include Clinton Keith extension in future phases (Murrieta/Riverside County)

F. Site Plan
- a. Include truck turning exhibits

G. Specific Issues to be Addressed in the Study
- a. Include proposed ped and bike facilities.
- b. Consider the Travel Demand Management (TDM) ordinance and potential strategies to reduce single occupancy vehicle travel.
- c. Contact RTA to identify transit needs.

i. Once again, consider the TDM ordinance (e.g. park & ride, preferred vanpool/carpool parking, etc.)

H. Existing Conditions

(Page 6) - *COSTCO GASOLINE FUEL STATION TRIP GENERATION*

a. In this section, it states "During the weekday AM peak hour, the Costco Warehouse is closed to the public and only serving limited employee or delivery trips.
   i. Performing an analysis for the Saturday midday peak hour makes sense; however, we must at a minimum adhere to Caltrans requirements contained in these guidelines.
   ii. We still will need the TIA to evaluate the weekday AM Peak hour trips.
   iii. Even if Costco is not open at the time, AM Peak is still important to Caltrans.
b. Include PCE values for trucks.

I. Analysis Scenarios

a. Provide the following additional scenarios.
b. Failure Year
c. 2040 (Use RivTam/SCAG Model)
d. 2040 + Project (Use RivTam/SCAG Model)

Feel free to contact me if you have any questions.

Thanks,

Kwasi Agyakwa, Transportation Planner
California Department of Transportation - District 8
Intergovernmental Review, Community and Regional Planning
464 West 4th Street, 6th Floor, MS 725
San Bernardino, CA 92401-1400
(909) 806-3955

From: Neelam Dorman [mailto:ndorman@kittelson.com]
Sent: Tuesday, January 09, 2018 2:08 PM
To: Agyakwa, Kwasi@DOT <Kwasi.Agyakwa@dot.ca.gov>; Sarmiento, Tony N@DOT <tony.sarmiento@dot.ca.gov>
Cc: Kelly Laustsen <klaustsen@kittelson.com>
Subject: RE: Development Project in Murrieta

Good afternoon Kwasi,

Please find attached the scoping form we're prepared for the proposed Costco development for the City of Murrieta. As you'll see we are planning on conducting merge/diverge analyses on I-215 at the Clinton Keith Road ramps. Please review and let us know if you have any questions.

Tony,

Kwasi directed us to you for signal timing sheets. We will need the signal timing sheets for all Caltrans controlled intersections along Clinton Keith Road. I believe these are only the I-215 NB and SB Ramps but please let me know if Caltrans operates the adjacent intersections.

Thank you both and please feel free to call me if you have any questions.

Sincerley,

Neelam

Neelam Dorman
Senior Engineer

Kittelson & Associates, Inc.
Transportation Engineering / Planning
714.468.1182 (direct)
310.848.7206 (cell)

From: Neelam Dorman
Sent: Thursday, November 09, 2017 10:52 AM
To: 'kwasi.agyakwa@dot.ca.gov'
Cc: Kelly Laustsen
Subject: Development Project in Murrieta

Kwasi,

Thank you for speaking to me today regarding our Costco development project. As we discussed, we'll forward the scoping form with the City of Murrieta next week for your review.

Looking forward to working with you.

Thank you,
Neelam

Neelam Dorman
Senior Engineer

Kittelson & Associates, Inc.
Transportation Engineering / Planning
750 The City Drive, Suite 410
Orange, California 92868
714.468.1997
714.468.1182 (direct)
310.848.7206 (cell)

Streetwise Twitter Facebook

Appendix C Intersection and Tube Count Data

Appendix C Intersection and Tube Count Data

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 15_WDM_15S_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

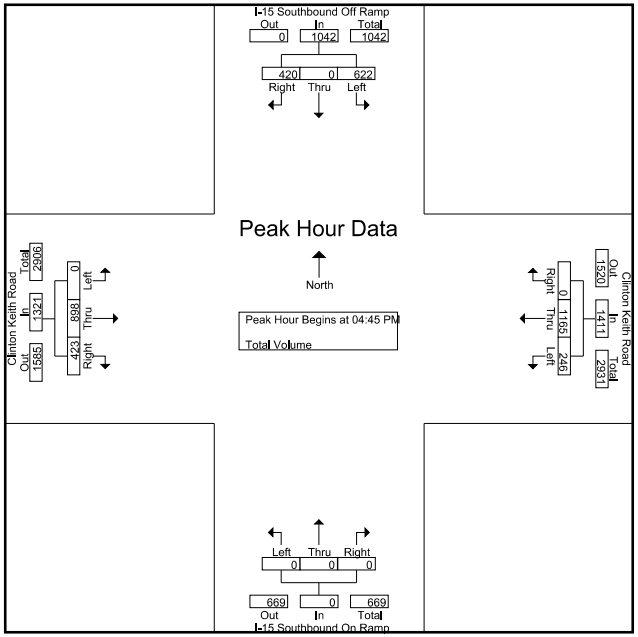
	I-15 Southbound Off Ramp Southbound				Clinton Keith Road Westbound				I-15 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	145	1	94	240	62	269	0	331	0	0	0	0	0	238	110	348	919
04:15 PM	124	0	109	233	54	258	0	312	0	0	0	0	0	243	110	353	898
04:30 PM	136	0	101	237	55	272	0	327	0	0	0	0	0	218	117	335	899
04:45 PM	152	0	110	262	58	294	0	352	0	0	0	0	0	200	117	317	931
Total	557	1	414	972	229	1093	0	1322	0	0	0	0	0	899	454	1353	3647
05:00 PM	165	0	126	291	78	290	0	368	0	0	0	0	0	237	109	346	1005
05:15 PM	147	0	83	230	57	314	0	371	0	0	0	0	0	230	92	322	923
05:30 PM	158	0	101	259	53	267	0	320	0	0	0	0	0	231	105	336	915
05:45 PM	148	0	85	233	58	256	0	314	0	0	0	0	0	235	84	319	866
Total	618	0	395	1013	246	1127	0	1373	0	0	0	0	0	933	390	1323	3709
Grand Total	1175	1	809	1985	475	2220	0	2695	0	0	0	0	0	1832	844	2676	7356
Apprch %	59.2	0.1	40.8		17.6	82.4	0		0	0	0		0	68.5	31.5		
Total %	16	0	11	27	6.5	30.2	0	36.6	0	0	0	0	0	24.9	11.5	36.4	

	I-15 Southbound Off Ramp Southbound				Clinton Keith Road Westbound				I-15 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	152	0	110	262	58	294	0	352	0	0	0	0	0	200	**117**	317	931
05:00 PM	**165**	0	**126**	**291**	**78**	290	0	368	0	0	0	0	0	**237**	109	**346**	**1005**
05:15 PM	147	0	83	230	57	**314**	0	**371**	0	0	0	0	0	230	92	322	923
05:30 PM	158	0	101	259	53	267	0	320	0	0	0	0	0	231	105	336	915
Total Volume	622	0	420	1042	246	1165	0	1411	0	0	0	0	0	898	423	1321	3774
% App. Total	59.7	0	40.3		17.4	82.6	0		0	0	0		0	68	32		
PHF	.942	.000	.833	.895	.788	.928	.000	.951	.000	.000	.000	.000	.000	.947	.904	.954	.939

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 15_WDM_15S_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:00 PM				04:00 PM			
+0 mins.	152	0	110	262	55	272	0	327	0	0	0	0	0	238	110	348
+15 mins.	**165**	0	**126**	**291**	58	294	0	352	0	0	0	0	0	**243**	110	**353**
+30 mins.	147	0	83	230	**78**	290	0	368	0	0	0	0	0	218	**117**	335
+45 mins.	158	0	101	259	57	**314**	0	**371**	0	0	0	0	0	200	117	317
Total Volume	622	0	420	1042	248	1170	0	1418	0	0	0	0	0	899	454	1353
% App. Total	59.7	0	40.3		17.5	82.5	0		0	0	0		0	66.4	33.6	
PHF	.942	.000	.833	.895	.795	.932	.000	.956	.000	.000	.000	.000	.000	.925	.970	.958

Location: Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-15 Southbound Ramps	East Leg Clinton Keith Road	South Leg I-15 Southbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	1	0	0	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg I-15 Southbound Ramps	East Leg Clinton Keith Road	South Leg I-15 Southbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	2	0	0	0	2
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	5	0	0	0	5

Location: Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-15 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

Date: 10/23/2018
Day: Tuesday

	Southbound I-15 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	0	0	0	0	0	0	0	1	3

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City of Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 16_WDM_15N_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	I-15 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-15 Northbound Off Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	189	136	325	151	0	101	252	84	291	0	375	952
04:15 PM	0	0	0	0	0	169	130	299	137	1	103	241	108	265	0	373	913
04:30 PM	0	0	0	0	0	206	135	341	136	1	94	231	67	279	0	346	918
04:45 PM	0	0	0	0	0	201	128	329	148	0	110	258	79	276	0	355	942
Total	0	0	0	0	0	765	529	1294	572	2	408	982	338	1111	0	1449	3725
05:00 PM	0	0	0	0	0	216	125	341	162	0	99	261	85	309	0	394	996
05:15 PM	0	0	0	0	0	209	149	358	166	0	107	273	82	296	0	378	1009
05:30 PM	0	0	0	0	0	192	134	326	133	0	105	238	76	305	0	381	945
05:45 PM	0	0	0	0	0	177	124	301	135	0	112	247	75	317	0	392	940
Total	0	0	0	0	0	794	532	1326	596	0	423	1019	318	1227	0	1545	3890
Grand Total	0	0	0	0	0	1559	1061	2620	1168	2	831	2001	656	2338	0	2994	7615
Apprch %	0	0	0		0	59.5	40.5		58.4	0.1	41.5		21.9	78.1	0		
Total %	0	0	0	0	0	20.5	13.9	34.4	15.3	0	10.9	26.3	8.6	30.7	0	39.3	

	I-15 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-15 Northbound Off Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	201	128	329	148	0	**110**	258	79	276	0	355	942
05:00 PM	0	0	0	0	0	**216**	125	341	162	0	99	261	**85**	**309**	0	**394**	996
05:15 PM	0	0	0	0	0	209	**149**	**358**	**166**	0	107	**273**	82	296	0	378	**1009**
05:30 PM	0	0	0	0	0	192	134	326	133	0	105	238	76	305	0	381	945
Total Volume	0	0	0	0	0	818	536	1354	609	0	421	1030	322	1186	0	1508	3892
% App. Total	0	0	0		0	60.4	39.6		59.1	0	40.9		21.4	78.6	0		
PHF	.000	.000	.000	.000	.000	.947	.899	.946	.917	.000	.957	.943	.947	.960	.000	.957	.964

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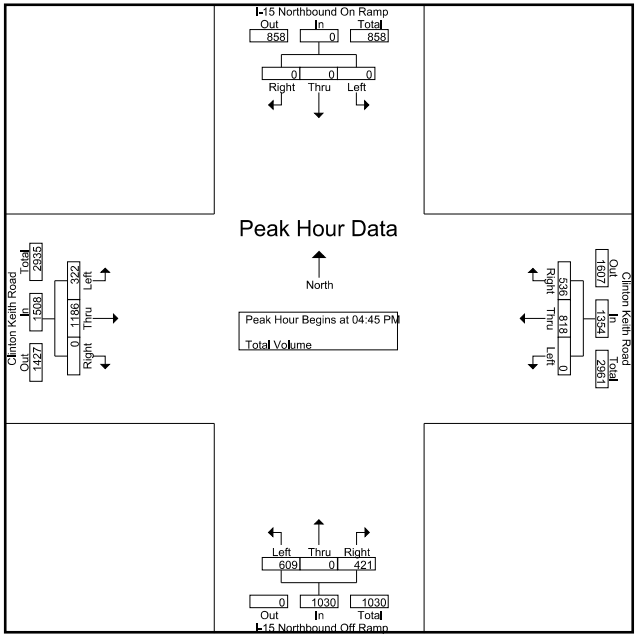
City of Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 16_WDM_15N_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:45 PM				05:00 PM			
+0 mins.	0	0	0	0	0	206	135	341	148	0	**110**	258	**85**	309	0	**394**
+15 mins.	0	0	0	0	0	201	128	329	162	0	99	261	82	296	0	378
+30 mins.	0	0	0	0	0	**216**	125	341	**166**	0	107	**273**	76	305	0	381
+45 mins.	0	0	0	0	0	209	**149**	**358**	133	0	105	238	75	**317**	0	392
Total Volume	0	0	0	0	0	832	537	1369	609	0	421	1030	318	1227	0	1545
% App. Total	0	0	0		0	60.8	39.2		59.1	0	40.9		20.6	79.4	0	
PHF	.000	.000	.000	.000	.000	.963	.901	.956	.917	.000	.957	.943	.935	.968	.000	.980

Location: Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-15 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-15 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	1	0	0	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	1	0	1
12:45 PM	0	0	3	0	3
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	5	0	6

Date: 10/23/2018
Day: Tuesday

	North Leg I-15 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-15 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	2	0	0	0	2
4:30 PM	1	0	1	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	4	0	2	0	6

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Location: Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-15 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

Date: 10/23/2018
Day: Tuesday

	Southbound I-15 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	2	0	4

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City of Wildomar
N/S: George Avenue
E/W: Clinton Keith Road
Weather: Clear

File Name : 17_WDM_George_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	George Avenue Southbound				Clinton Keith Road Westbound				George Avenue Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	12	18	46	31	238	10	279	12	5	17	34	36	267	10	313	672
04:15 PM	9	11	24	44	32	197	8	237	17	10	16	43	33	268	13	314	638
04:30 PM	13	7	23	43	43	247	15	305	20	13	21	54	30	268	8	306	708
04:45 PM	12	3	19	34	25	221	11	257	20	5	27	52	48	264	7	319	662
Total	50	33	84	167	131	903	44	1078	69	33	81	183	147	1067	38	1252	2680
05:00 PM	18	4	23	45	24	252	12	288	20	14	15	49	35	293	7	335	717
05:15 PM	14	8	16	38	29	253	10	292	23	4	23	50	32	291	9	332	712
05:30 PM	8	6	28	42	33	218	15	266	15	6	23	44	45	306	11	362	714
05:45 PM	6	3	26	35	39	200	14	253	12	4	36	52	50	277	9	336	676
Total	46	21	93	160	125	923	51	1099	70	28	97	195	162	1167	36	1365	2819
Grand Total	96	54	177	327	256	1826	95	2177	139	61	178	378	309	2234	74	2617	5499
Apprch %	29.4	16.5	54.1		11.8	83.9	4.4		36.8	16.1	47.1		11.8	85.4	2.8		
Total %	1.7	1	3.2	5.9	4.7	33.2	1.7	39.6	2.5	1.1	3.2	6.9	5.6	40.6	1.3	47.6	

	George Avenue Southbound				Clinton Keith Road Westbound				George Avenue Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**18**	4	23	**45**	24	252	12	288	20	**14**	15	49	35	293	7	335	**717**
05:15 PM	14	**8**	16	38	29	**253**	10	**292**	**23**	4	23	50	32	291	9	332	712
05:30 PM	8	6	**28**	42	33	218	**15**	266	15	6	23	44	45	**306**	**11**	**362**	714
05:45 PM	6	3	26	35	**39**	200	14	253	12	4	**36**	**52**	**50**	277	9	336	676
Total Volume	46	21	93	160	125	923	51	1099	70	28	97	195	162	1167	36	1365	2819
% App. Total	28.8	13.1	58.1		11.4	84	4.6		35.9	14.4	49.7		11.9	85.5	2.6		
PHF	.639	.656	.830	.889	.801	.912	.850	.941	.761	.500	.674	.938	.810	.953	.818	.943	.983

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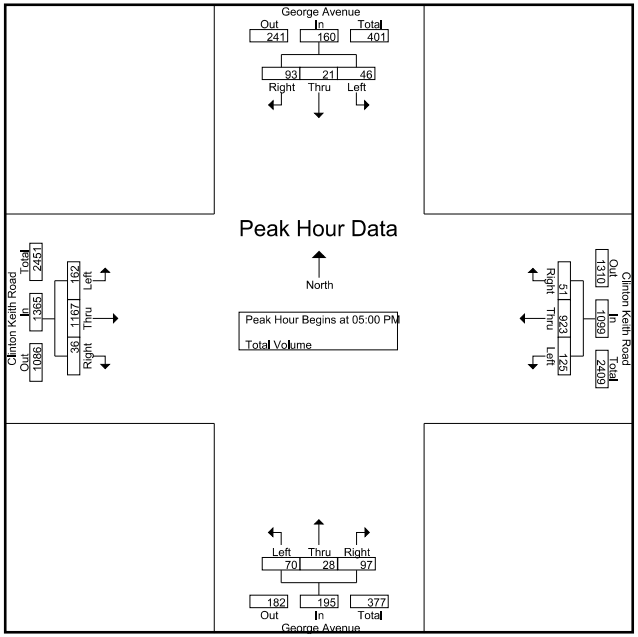
City of Wildomar
N/S: George Avenue
E/W: Clinton Keith Road
Weather: Clear

File Name : 17_WDM_George_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:30 PM				05:00 PM			
+0 mins.	**16**	**12**	18	**46**	**43**	247	**15**	**305**	20	13	21	**54**	35	293	7	335
+15 mins.	9	11	**24**	44	25	221	11	257	20	5	**27**	52	32	291	9	332
+30 mins.	13	7	23	43	24	252	12	288	20	**14**	15	49	45	**306**	**11**	**362**
+45 mins.	12	3	19	34	29	**253**	10	292	**23**	4	23	50	**50**	277	9	336
Total Volume	50	33	84	167	121	973	48	1142	83	36	86	205	162	1167	36	1365
% App. Total	29.9	19.8	50.3		10.6	85.2	4.2		40.5	17.6	42		11.9	85.5	2.6	
PHF	.781	.688	.875	.908	.703	.961	.800	.936	.902	.643	.796	.949	.810	.953	.818	.943

Location: Wildomar
N/S: George Avenue
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg George Avenue Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg George Avenue Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	0	0	2	2	4
12:15 PM	1	1	0	0	2
12:30 PM	0	0	1	1	2
12:45 PM	0	0	0	0	0
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	1	1	2
TOTAL VOLUMES:	1	1	5	4	11

Date: 10/23/2018
Day: Tuesday

	North Leg George Avenue Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg George Avenue Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	2	2	4
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	1	1	0	2
TOTAL VOLUMES:	0	1	3	3	7

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Location: Wildomar
N/S: George Avenue
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound George Avenue			Westbound Clinton Keith Road			Northbound George Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	1	0	0	0	4	0	0	0	5
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	4	0	1	0	6

Date: 10/23/2018
Day: Tuesday

	Southbound George Avenue			Westbound Clinton Keith Road			Northbound George Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	1	0	3

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City of Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 18_WDM_Inland Valley_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Clinton Keith Road Westbound			Inland Valley Road Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	9	167	176	112	23	135	200	92	292	603
04:15 PM	14	140	154	105	24	129	201	94	295	578
04:30 PM	10	182	192	114	19	133	224	82	306	631
04:45 PM	12	163	175	103	17	120	229	75	304	599
Total	45	652	697	434	83	517	854	343	1197	2411
05:00 PM	12	165	177	126	28	154	228	85	313	644
05:15 PM	11	191	202	107	32	139	256	90	346	687
05:30 PM	2	164	166	101	20	121	239	66	305	592
05:45 PM	20	141	161	81	17	98	229	99	328	587
Total	45	661	706	415	97	512	952	340	1292	2510
Grand Total	90	1313	1403	849	180	1029	1806	683	2489	4921
Apprch %	6.4	93.6		82.5	17.5		72.6	27.4		
Total %	1.8	26.7	28.5	17.3	3.7	20.9	36.7	13.9	50.6	

	Clinton Keith Road Westbound			Inland Valley Road Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	10	182	192	114	19	133	224	82	306	631
04:45 PM	**12**	163	175	103	17	120	229	75	304	599
05:00 PM	12	165	177	**126**	28	**154**	228	85	313	644
05:15 PM	11	**191**	**202**	107	**32**	139	**256**	**90**	**346**	**687**
Total Volume	45	701	746	450	96	546	937	332	1269	2561
% App. Total	6	94		82.4	17.6		73.8	26.2		
PHF	.938	.918	.923	.893	.750	.886	.915	.922	.917	.932

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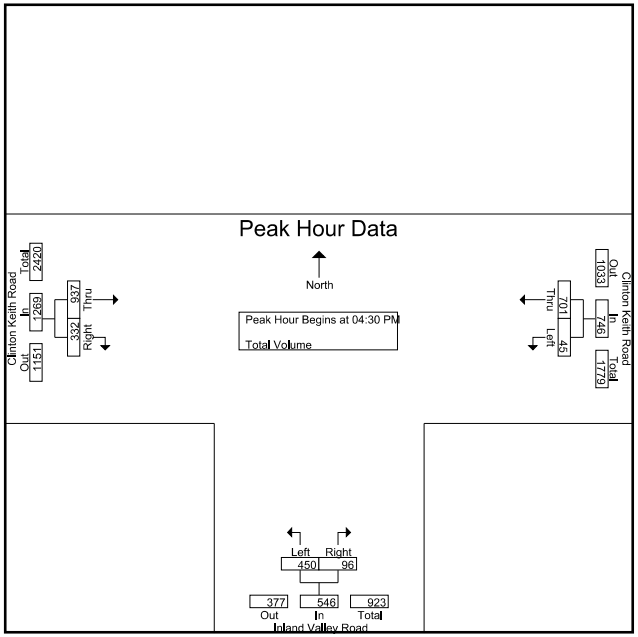
City of Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 18_WDM_Inland Valley_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			05:00 PM		
+0 mins.	10	182	192	114	19	133	228	85	313
+15 mins.	**12**	163	175	103	17	120	**256**	90	**346**
+30 mins.	12	165	177	**126**	28	**154**	239	66	305
+45 mins.	11	**191**	**202**	107	**32**	139	229	**99**	328
Total Volume	45	701	746	450	96	546	952	340	1292
% App. Total	6	94		82.4	17.6		73.7	26.3	
PHF	.938	.918	.923	.893	.750	.886	.930	.859	.934

Location: Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Inland Valley Road	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	1	0	1
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Inland Valley Road	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	2	0	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	3	0	3

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Location: Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Inland Valley Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	2	0	0	0	5	0	7

Date: 10/23/2018
Day: Tuesday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Inland Valley Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	1	0	0	0	1	0	3

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City of Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road
Weather: Clear

File Name : 19_WDM_Salida Del Sol_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Salida Del Sol Southbound			Clinton Keith Road Westbound			Clinton Keith Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	3	5	8	172	3	175	4	212	216	399
04:15 PM	2	3	5	145	6	151	1	228	229	385
04:30 PM	1	3	4	187	2	189	5	232	237	430
04:45 PM	6	2	8	167	8	175	2	246	248	431
Total	12	13	25	671	19	690	12	918	930	1645
05:00 PM	0	2	2	174	3	177	1	261	262	441
05:15 PM	6	2	8	202	8	210	2	280	282	500
05:30 PM	3	0	3	169	4	173	4	263	267	443
05:45 PM	6	0	6	170	5	175	6	240	246	427
Total	15	4	19	715	20	735	13	1044	1057	1811
Grand Total	27	17	44	1386	39	1425	25	1962	1987	3456
Apprch %	61.4	38.6		97.3	2.7		1.3	98.7		
Total %	0.8	0.5	1.3	40.1	1.1	41.2	0.7	56.8	57.5	

	Salida Del Sol Southbound			Clinton Keith Road Westbound			Clinton Keith Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**6**	**2**	**8**	167	**8**	175	2	246	248	431
05:00 PM	0	2	2	174	3	177	1	261	262	441
05:15 PM	6	2	8	**202**	8	**210**	2	**280**	**282**	**500**
05:30 PM	3	0	3	169	4	173	**4**	263	267	443
Total Volume	15	6	21	712	23	735	9	1050	1059	1815
% App. Total	71.4	28.6		96.9	3.1		0.8	99.2		
PHF	.625	.750	.656	.881	.719	.875	.563	.938	.939	.908

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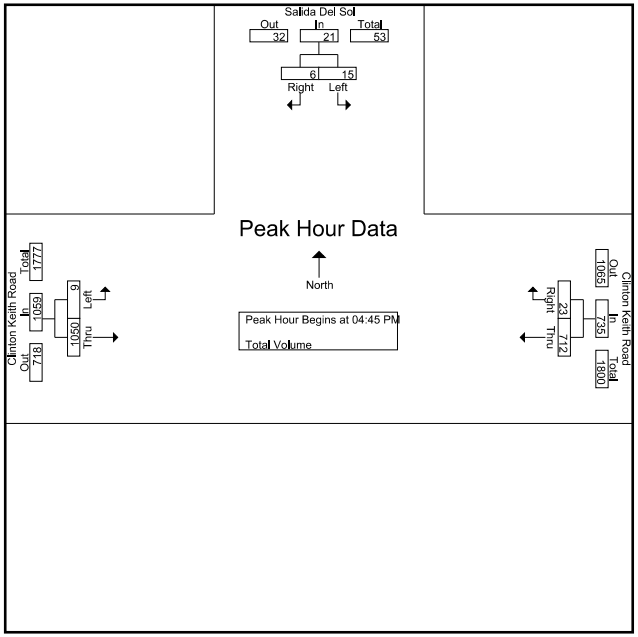
City of Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road
Weather: Clear

File Name : 19_WDM_Salida Del Sol_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:30 PM			04:45 PM		
+0 mins.	3	**5**	**8**	187	2	189	2	246	248
+15 mins.	2	3	5	167	**8**	175	1	261	262
+30 mins.	1	3	4	174	3	177	2	**280**	**282**
+45 mins.	**6**	2	8	**202**	8	**210**	**4**	263	267
Total Volume	12	13	25	730	21	751	9	1050	1059
% App. Total	48	52		97.2	2.8		0.8	99.2	
PHF	.500	.650	.781	.903	.656	.894	.563	.938	.939

Location: Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Salida Del Sol	East Leg Clinton Keith Road	South Leg Dead End	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	1	0	0	0	1
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Salida Del Sol	East Leg Clinton Keith Road	South Leg Dead End	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	1	0	2

Location: Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Salida Del Sol			Westbound Clinton Keith Road			Northbound Dead End			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	2	0	0	0	0	4	0	6

Date: 10/23/2018
Day: Tuesday

	Southbound Salida Del Sol			Westbound Clinton Keith Road			Northbound Dead End			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	1	0	3

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City of Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road
Weather: Clear

File Name : 20_WDM_Elizabeth_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Elizabeth Lane Southbound				Clinton Keith Road Westbound				Elizabeth Lane Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	6	6	0	166	3	169	0	0	1	1	17	213	0	230	406
04:15 PM	3	0	7	10	1	151	2	154	0	0	0	0	13	210	0	223	387
04:30 PM	0	0	8	8	0	178	3	181	0	0	0	0	17	212	1	230	419
04:45 PM	3	0	14	17	0	172	0	172	0	0	0	0	14	240	1	255	444
Total	6	0	35	41	1	667	8	676	0	0	1	1	61	875	2	938	1656
05:00 PM	1	0	4	5	1	171	1	173	1	0	0	1	16	258	1	275	454
05:15 PM	0	0	12	12	1	198	2	201	2	0	1	3	14	259	0	273	489
05:30 PM	1	0	9	10	2	157	4	163	1	0	0	1	14	258	0	272	446
05:45 PM	4	0	9	13	0	166	5	171	0	0	1	1	22	229	0	251	436
Total	6	0	34	40	4	692	12	708	4	0	2	6	66	1004	1	1071	1825
Grand Total	12	0	69	81	5	1359	20	1384	4	0	3	7	127	1879	3	2009	3481
Apprch %	14.8	0	85.2		0.4	98.2	1.4		57.1	0	42.9		6.3	93.5	0.1		
Total %	0.3	0	2	2.3	0.1	39	0.6	39.8	0.1	0	0.1	0.2	3.6	54	0.1	57.7	

	Elizabeth Lane Southbound				Clinton Keith Road Westbound				Elizabeth Lane Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**3**	0	**14**	**17**	0	172	0	172	0	0	0	0	14	240	**1**	255	444
05:00 PM	1	0	4	5	1	171	1	173	1	0	0	1	**16**	258	1	**275**	454
05:15 PM	0	0	12	12	1	**198**	2	**201**	**2**	0	**1**	**3**	14	**259**	0	273	**489**
05:30 PM	1	0	9	10	**2**	157	**4**	163	1	0	0	1	14	258	0	272	446
Total Volume	5	0	39	44	4	698	7	709	4	0	1	5	58	1015	2	1075	1833
% App. Total	11.4	0	88.6		0.6	98.4	1		80	0	20		5.4	94.4	0.2		
PHF	.417	.000	.696	.647	.500	.881	.438	.882	.500	.000	.250	.417	.906	.980	.500	.977	.937

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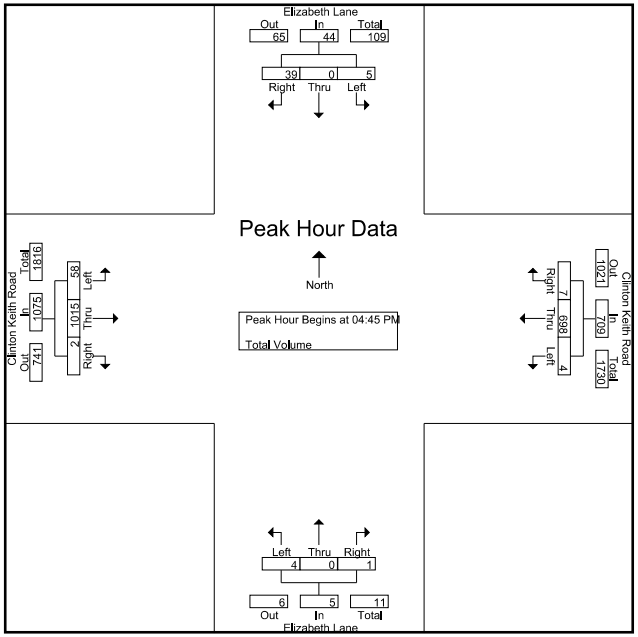
City of Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road
Weather: Clear

File Name : 20_WDM_Elizabeth_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				05:00 PM				04:45 PM			
+0 mins.	**3**	0	**14**	**17**	0	178	**3**	181	1	0	0	1	14	240	**1**	255
+15 mins.	1	0	4	5	0	172	0	172	**2**	0	**1**	**3**	**16**	258	1	**275**
+30 mins.	0	0	12	12	**1**	171	1	173	1	0	0	1	14	**259**	0	273
+45 mins.	1	0	9	10	1	**198**	2	**201**	0	0	1	1	14	258	0	272
Total Volume	5	0	39	44	2	719	6	727	4	0	2	6	58	1015	2	1075
% App. Total	11.4	0	88.6		0.3	98.9	0.8		66.7	0	33.3		5.4	94.4	0.2	
PHF	.417	.000	.696	.647	.500	.908	.500	.904	.500	.000	.500	.500	.906	.980	.500	.977

Location: Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Elizabeth Lane Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Elizabeth Lane Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	1	0	0	0	1
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Elizabeth Lane Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Elizabeth Lane Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	2	0	3

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Location: Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Elizabeth Lane			Westbound Clinton Keith Road			Northbound Elizabeth Lane			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	5	0	7

Date: 10/23/2018
Day: Tuesday

	Southbound Elizabeth Lane			Westbound Clinton Keith Road			Northbound Elizabeth Lane			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

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City of Wildomar
N/S: Smith Ranch Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 21_WDM_Smith Ranch_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Smith Ranch Road Southbound				Clinton Keith Road Westbound				Smith Ranch Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	1	9	20	2	144	12	158	7	2	3	12	17	191	5	213	403
04:15 PM	11	1	7	19	2	140	12	154	3	1	0	4	14	196	6	216	393
04:30 PM	5	0	11	16	3	168	16	187	3	0	0	3	15	196	6	217	423
04:45 PM	8	0	12	20	3	154	17	174	6	1	0	7	14	223	3	240	441
Total	34	2	39	75	10	606	57	673	19	4	3	26	60	806	20	886	1660
05:00 PM	16	0	11	27	4	155	11	170	10	0	1	11	15	230	6	251	459
05:15 PM	10	1	14	25	3	174	16	193	6	0	1	7	13	254	6	273	498
05:30 PM	13	0	9	22	4	148	14	166	5	0	1	6	13	232	9	254	448
05:45 PM	10	0	12	22	6	159	9	174	6	0	2	8	5	221	5	231	435
Total	49	1	46	96	17	636	50	703	27	0	5	32	46	937	26	1009	1840
Grand Total	83	3	85	171	27	1242	107	1376	46	4	8	58	106	1743	46	1895	3500
Apprch %	48.5	1.8	49.7		2	90.3	7.8		79.3	6.9	13.8		5.6	92	2.4		
Total %	2.4	0.1	2.4	4.9	0.8	35.5	3.1	39.3	1.3	0.1	0.2	1.7	3	49.8	1.3	54.1	

	Smith Ranch Road Southbound				Clinton Keith Road Westbound				Smith Ranch Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	0	12	20	3	154	**17**	174	6	**1**	0	7	14	223	3	240	441
05:00 PM	**16**	0	11	**27**	**4**	155	11	170	**10**	0	**1**	**11**	**15**	230	6	251	459
05:15 PM	10	**1**	**14**	25	3	**174**	16	**193**	6	0	1	7	13	**254**	6	**273**	**498**
05:30 PM	13	0	9	22	4	148	14	166	5	0	1	6	13	232	**9**	254	448
Total Volume	47	1	46	94	14	631	58	703	27	1	3	31	55	939	24	1018	1846
% App. Total	50	1.1	48.9		2	89.8	8.3		87.1	3.2	9.7		5.4	92.2	2.4		
PHF	.734	.250	.821	.870	.875	.907	.853	.911	.675	.250	.750	.705	.917	.924	.667	.932	.927

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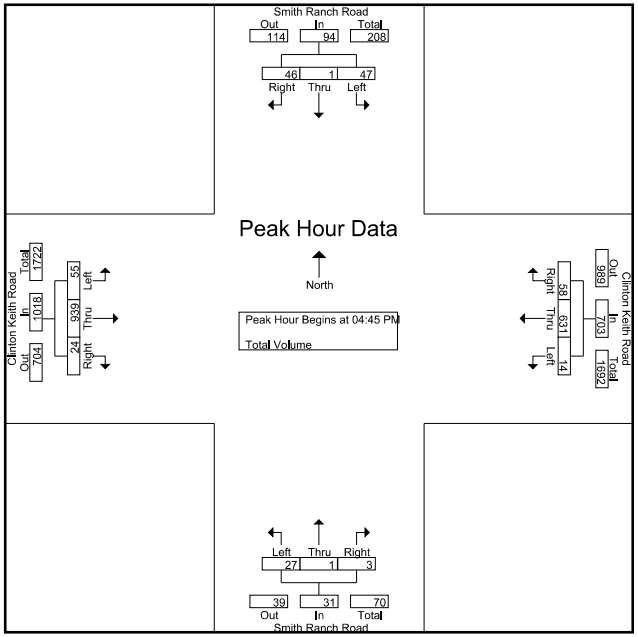
Corona, CA 92878
(951) 268-6268

City of Wildomar
N/S: Smith Ranch Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 21_WDM_Smith Ranch_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				05:00 PM				04:45 PM			
+0 mins.	**16**	0	11	**27**	3	168	16	187	**10**	0	1	**11**	14	223	3	240
+15 mins.	10	**1**	**14**	25	3	154	**17**	174	6	0	1	7	**15**	230	6	251
+30 mins.	13	0	9	22	**4**	155	11	170	5	0	1	6	13	**254**	6	**273**
+45 mins.	10	0	12	22	3	**174**	16	**193**	6	0	**2**	8	13	232	**9**	254
Total Volume	49	1	46	96	13	651	60	724	27	0	5	32	55	939	24	1018
% App. Total	51	1	47.9		1.8	89.9	8.3		84.4	0	15.6		5.4	92.2	2.4	
PHF	.766	.250	.821	.889	.813	.935	.882	.938	.675	.000	.625	.727	.917	.924	.667	.932

Location: Wildomar
N/S: Smith Ranch Road
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Smith Ranch Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Smith Ranch Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	2	0	0	0	2
12:15 PM	1	0	0	0	1
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	0	0	0	3

Date: 10/23/2018
Day: Tuesday

	North Leg Smith Ranch Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Smith Ranch Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	2	2
TOTAL VOLUMES:	0	0	1	3	4

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Corona, CA 92878
951-268-6268

Location: Wildomar
N/S: Smith Ranch Road
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Smith Ranch Road			Westbound Clinton Keith Road			Northbound Smith Ranch Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	5	1	8

Date: 10/23/2018
Day: Tuesday

	Southbound Smith Ranch Road			Westbound Clinton Keith Road			Northbound Smith Ranch Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	1	0	0	0	0	1	0	3

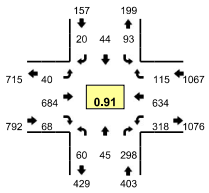
Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Type of peak hour being reported: Intersection Peak

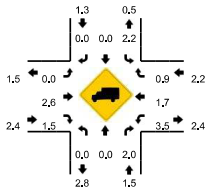
Method for determining peak hour: Total Entering Volume

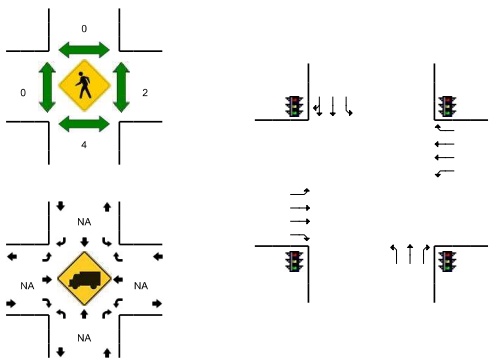
LOCATION: 1 Nutmeg St – Clinton Keith Rd
CITY/STATE: Murrieta, CA

QC JOB #: 14565401
DATE: Wed, Nov 15 2017



Peak-Hour: 4:40 PM – 5:40 PM
Peak 15-Min: 5:10 PM – 5:25 PM





5-Min Count Period Beginning At	1 Nutmeg St (Northbound)				1 Nutmeg St (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	6	23	0	2	5	0	0	4	50	6	0	13	41	11	0	164	
4:05 PM	4	4	15	0	8	2	2	0	6	48	5	0	27	41	6	0	168	
4:10 PM	5	5	22	0	3	2	1	0	1	48	2	0	29	43	6	1	168	
4:15 PM	3	7	23	0	8	4	5	0	4	54	8	0	27	48	10	0	201	
4:20 PM	6	3	16	0	3	6	0	0	4	52	3	0	26	43	11	0	173	
4:25 PM	5	3	17	0	12	5	1	0	4	61	6	0	13	57	4	0	188	
4:30 PM	10	4	16	0	15	5	1	0	2	39	7	0	20	44	9	0	172	
4:35 PM	5	3	14	0	3	4	3	0	3	66	5	0	14	30	12	0	162	
4:40 PM	3	5	22	0	5	3	5	0	6	53	4	0	31	55	7	0	199	
4:45 PM	6	5	21	0	9	3	1	0	4	40	6	0	26	66	6	0	193	
4:50 PM	4	5	12	0	7	5	3	0	4	81	6	0	27	60	7	0	221	
4:55 PM	4	5	24	0	8	4	1	0	3	55	6	0	25	52	4	1	192	2201
5:00 PM	12	4	24	0	9	3	1	0	2	63	4	0	10	40	9	0	181	2218
5:05 PM	3	2	33	0	6	1	0	0	5	48	8	0	23	52	10	0	191	2241
5:10 PM	4	3	40	0	4	4	2	0	0	69	7	1	25	55	10	0	224	2297
5:15 PM	5	1	28	0	12	3	1	0	3	60	7	0	30	47	17	0	214	2310
5:20 PM	5	5	36	0	10	5	1	0	1	49	6	0	33	61	12	0	224	2361
5:25 PM	4	5	15	0	8	6	3	0	5	58	5	0	26	58	13	0	206	2379
5:30 PM	3	3	21	0	5	4	1	0	5	58	5	0	29	37	6	0	177	2384
5:35 PM	7	2	22	0	10	3	1	0	1	50	4	0	32	51	14	0	197	2419
5:40 PM	5	3	25	0	4	8	0	0	3	65	5	0	17	43	7	0	185	2405
5:45 PM	4	2	25	0	11	4	1	0	2	36	7	0	22	30	8	0	152	2364
5:50 PM	6	7	15	0	9	3	2	0	3	37	4	0	16	33	11	0	146	2289
5:55 PM	7	1	24	0	5	6	2	0	6	64	5	0	27	54	10	0	211	2308
Peak 15-Min Flowrates	**Northbound**				**Southbound**				**Eastbound**				**Westbound**				**Total**	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	56	36	416	0	104	48	16	0	16	712	80	4	352	652	156	0	2648	
Heavy Trucks	0	0	4		0	0	0		0	16	0		16	8	0		44	
Pedestrians		0				0				0				4			4	
Bicycles	0	0	2		0	0	0		0	0	0		0	0	0		2	
Railroad																		
Stopped Buses																		

Comments:

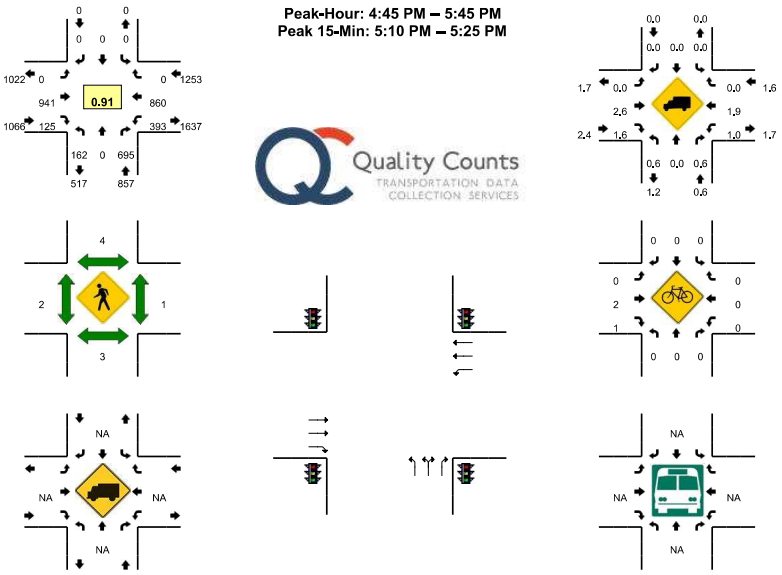
Report generated on 11/29/2017 1:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 2 California Oaks Rd – Clinton Keith Rd | **QC JOB #:** 14565403
CITY/STATE: Murrieta, CA | **DATE:** Wed, Nov 15 2017

Peak-Hour: 4:45 PM – 5:45 PM
Peak 15-Min: 5:10 PM – 5:25 PM



Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

5-Min Count Period	2 California Oaks Rd (Northbound)				2 California Oaks Rd (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	0	57	0	0	0	0	0	0	74	7	0	26	49	0	0	224	
4:05 PM	12	0	46	0	0	0	0	0	0	66	7	0	23	62	0	0	216	
4:10 PM	10	0	52	0	0	0	0	0	0	43	13	0	27	75	0	0	220	
4:15 PM	18	0	36	0	0	0	0	0	0	88	10	0	22	62	0	0	236	
4:20 PM	8	0	46	0	0	0	0	0	0	71	6	0	23	60	0	0	214	
4:25 PM	15	0	38	0	0	0	0	0	0	73	12	0	29	81	0	0	248	
4:30 PM	14	0	45	0	0	0	0	0	0	55	12	0	21	48	0	0	195	
4:35 PM	12	0	36	0	0	0	0	0	0	78	10	0	30	59	0	0	225	
4:40 PM	14	0	53	0	0	0	0	0	0	68	5	0	27	69	0	0	236	
4:45 PM	11	0	66	0	0	0	0	0	0	66	6	0	43	99	0	0	291	
4:50 PM	10	0	56	0	0	0	0	0	0	69	17	0	24	69	0	0	245	
4:55 PM	9	0	58	0	0	0	0	0	0	76	6	0	34	69	0	0	252	2802
5:00 PM	12	0	55	0	0	0	0	0	0	76	11	0	36	64	0	0	254	2832
5:05 PM	14	0	48	0	0	0	0	0	0	92	13	0	30	59	0	1	257	2873
5:10 PM	19	0	66	0	0	0	0	0	0	100	13	0	33	81	0	0	312	2965
5:15 PM	19	0	65	0	0	0	0	0	0	80	10	0	41	67	0	0	282	3011
5:20 PM	12	0	49	0	0	0	0	0	0	77	12	0	32	97	0	0	279	3076
5:25 PM	18	0	59	0	0	0	0	0	0	73	9	0	27	74	0	0	260	3088
5:30 PM	11	0	52	0	0	0	0	0	0	82	9	0	34	61	0	0	249	3142
5:35 PM	15	0	50	0	0	0	0	0	0	74	6	0	32	71	0	0	248	3165
5:40 PM	12	0	71	0	0	0	0	0	0	76	13	0	26	49	0	0	247	3176
5:45 PM	7	0	48	0	0	0	0	0	0	67	9	0	39	65	0	0	235	3120
5:50 PM	14	0	65	0	0	0	0	0	0	53	10	0	26	48	0	0	216	3091
5:55 PM	12	0	44	0	0	0	0	0	0	73	14	0	19	76	0	0	238	3077

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	200	0	720	0	0	0	0	0	0	1028	140	0	424	980	0	0	3492
Heavy Trucks	4	0	8		0	0	0		0	32	0		8	12	0		64
Pedestrians		0				8				0				0			8
Bicycles	0	0	0		0	0	0		0	2	0		0	0	0		2
Railroad																	
Stopped Buses																	

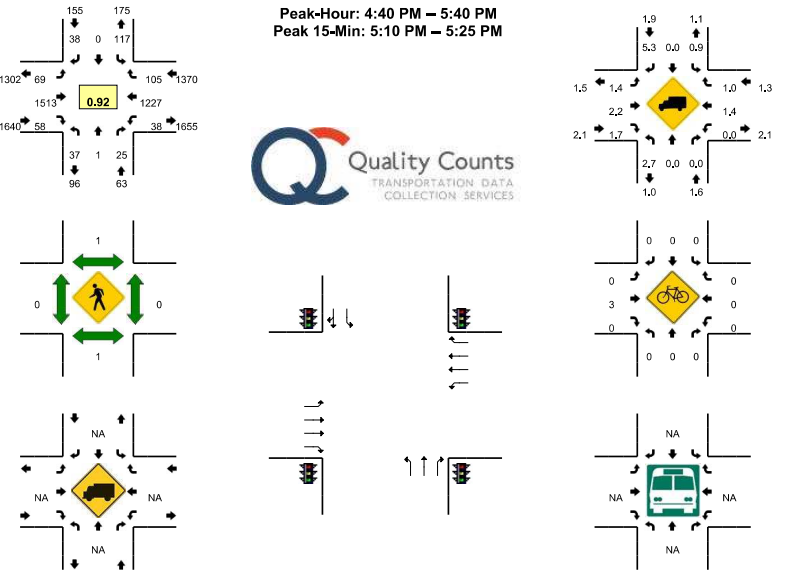
Comments:

Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 3 Greer Rd/Murrieta Ave – Clinton Keith Rd | **QC JOB #:** 14565405
CITY/STATE: Murrieta, CA | **DATE:** Wed, Nov 15 2017

Peak-Hour: 4:40 PM – 5:40 PM
Peak 15-Min: 5:10 PM – 5:25 PM



Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

5-Min Count Period	3 Greer Rd/Murrieta Ave (Northbound)				3 Greer Rd/Murrieta Ave (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	0	4	0	7	0	5	0	6	99	7	0	3	71	13	0	218	
4:05 PM	2	1	3	0	9	0	6	0	4	122	3	0	3	84	10	0	247	
4:10 PM	1	0	1	0	8	1	2	0	6	96	1	0	4	120	16	0	256	
4:15 PM	5	0	1	0	9	0	2	0	11	94	2	0	1	80	14	0	219	
4:20 PM	2	0	0	0	8	0	3	0	3	130	4	0	3	98	8	0	259	
4:25 PM	4	1	3	0	6	1	6	0	7	96	3	0	5	93	11	0	236	
4:30 PM	6	0	4	0	12	1	2	0	7	102	3	0	4	66	7	0	214	
4:35 PM	4	0	0	0	15	0	2	0	5	96	4	0	5	93	10	0	234	
4:40 PM	1	0	2	0	6	0	3	0	5	135	2	0	3	122	8	0	287	
4:45 PM	4	0	3	0	9	0	5	0	4	108	4	0	5	101	10	0	253	
4:50 PM	7	0	1	0	14	0	4	0	5	144	5	0	2	106	4	0	292	
4:55 PM	2	0	3	0	4	0	4	0	9	105	4	0	3	91	8	0	233	2948
5:00 PM	2	0	1	0	12	0	3	0	8	109	6	0	5	88	9	0	243	2973
5:05 PM	3	0	5	0	11	0	4	0	5	135	1	0	3	93	8	0	268	2994
5:10 PM	5	0	3	0	13	0	3	0	3	138	8	0	3	122	9	0	307	3045
5:15 PM	5	1	3	0	14	0	4	0	7	137	6	0	5	90	8	0	280	3106
5:20 PM	2	0	0	0	13	0	1	0	6	130	9	0	0	124	9	0	294	3141
5:25 PM	1	0	2	0	11	0	2	0	6	130	5	0	3	103	8	0	271	3176
5:30 PM	4	0	1	0	5	0	2	0	6	105	5	0	2	92	14	0	236	3198
5:35 PM	1	0	1	0	5	0	3	0	5	137	3	0	4	95	10	0	264	3228
5:40 PM	1	1	2	0	11	0	3	0	8	127	3	0	2	89	11	0	258	3199
5:45 PM	7	0	4	0	7	1	4	0	5	110	9	0	5	72	11	0	235	3181
5:50 PM	4	0	4	0	10	1	1	0	12	109	2	0	3	81	15	0	242	3131
5:55 PM	3	0	0	0	10	0	2	0	6	112	4	0	5	92	9	0	243	3141

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	4	24	0	160	0	32	0	64	1620	92	0	32	1344	104	0	3524
Heavy Trucks	0	0	0		4	0	0		0	44	4		0	24	4		80
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	2	0		0	0	0		2
Railroad																	
Stopped Buses																	

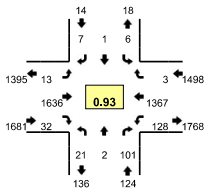
Comments:

Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

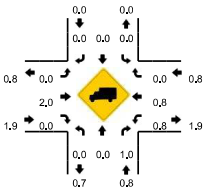
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

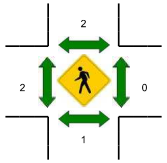
LOCATION: 4 Murrieta Oaks Ave – Clinton Keith Rd | **QC JOB #:** 14565407

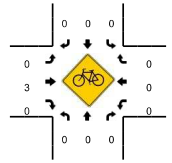
CITY/STATE: Murrieta, CA | **DATE:** Wed, Nov 15 2017

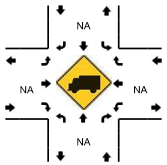


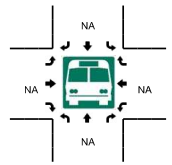
Peak-Hour: 4:40 PM – 5:40 PM
Peak 15-Min: 5:10 PM – 5:25 PM











5-Min Count Period Beginning At	4 Murrieta Oaks Ave (Northbound)				4 Murrieta Oaks Ave (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	0	12	0	0	1	0	0	1	94	2	0	10	94	0	2	220	
4:05 PM	1	0	13	0	1	0	1	0	3	141	2	0	6	91	0	0	259	
4:10 PM	0	0	7	0	0	0	2	0	0	105	3	0	7	126	0	2	252	
4:15 PM	2	0	12	0	0	0	0	0	1	107	3	0	4	103	0	0	232	
4:20 PM	1	0	9	0	0	0	2	0	2	87	1	0	8	93	2	4	209	
4:25 PM	3	0	2	0	2	0	1	0	2	148	4	0	9	110	1	0	282	
4:30 PM	0	0	10	0	0	0	1	0	2	102	4	0	6	78	0	1	204	
4:35 PM	2	1	14	0	0	0	1	0	0	99	3	0	6	106	0	4	236	
4:40 PM	3	0	10	0	0	0	1	0	1	143	4	0	9	112	2	0	285	
4:45 PM	0	0	10	0	0	1	3	0	1	128	2	0	6	136	0	3	290	
4:50 PM	0	0	7	0	1	0	0	0	0	121	4	0	13	110	0	2	258	
4:55 PM	2	0	8	0	2	0	1	0	2	133	4	0	11	108	1	1	273	3000
5:00 PM	1	1	11	0	0	0	0	0	2	128	3	0	5	102	0	5	258	3038
5:05 PM	4	0	10	0	1	0	1	0	1	122	3	0	12	104	0	0	258	3037
5:10 PM	1	0	5	0	0	0	0	0	1	165	1	0	7	115	0	1	296	3081
5:15 PM	1	1	10	0	0	0	0	0	3	148	2	0	6	131	0	1	303	3152
5:20 PM	3	0	5	0	0	0	0	0	1	147	2	0	10	125	0	0	293	3236
5:25 PM	2	0	14	0	1	0	0	0	0	133	3	0	8	104	0	3	268	3222
5:30 PM	3	0	3	0	1	0	0	0	0	116	0	0	8	108	0	3	242	3260
5:35 PM	1	0	8	0	0	0	1	0	1	152	4	0	8	112	0	6	293	3317
5:40 PM	0	0	11	0	0	1	1	0	3	139	3	0	5	101	0	2	266	3298
5:45 PM	3	0	6	0	1	0	0	0	2	127	7	0	8	86	1	1	242	3250
5:50 PM	2	0	7	0	0	0	1	0	0	107	2	0	10	101	0	3	233	3225
5:55 PM	0	0	12	0	0	0	0	0	0	135	2	0	8	104	0	3	264	3216

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	4	80	0	0	0	0	0	20	1840	20	0	92	1484	0	8	3568
Heavy Trucks	0	0	0		0	0	0		0	44	0		4	16	0		64
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

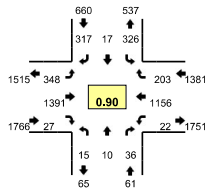
Comments:

Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

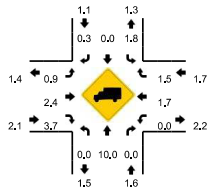
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

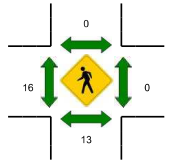
LOCATION: 5 McElwain Rd – Clinton Keith Rd | **QC JOB #:** 14565409

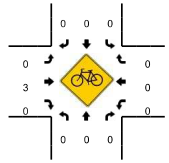
CITY/STATE: Murrieta, CA | **DATE:** Wed, Nov 15 2017

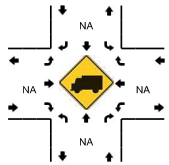


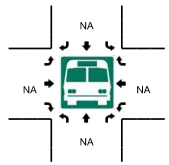
Peak-Hour: 4:40 PM – 5:40 PM
Peak 15-Min: 5:10 PM – 5:25 PM











5-Min Count Period Beginning At	5 McElwain Rd (Northbound)				5 McElwain Rd (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	23	0	17	0	34	72	2	0	4	77	15	0	244	
4:05 PM	1	0	2	0	29	0	24	0	21	120	0	2	0	82	17	0	298	
4:10 PM	1	0	2	0	37	0	29	0	26	88	1	2	2	100	17	0	305	
4:15 PM	0	0	1	0	18	2	28	0	34	84	2	2	1	75	11	0	258	
4:20 PM	3	0	4	0	21	0	31	0	28	73	0	1	0	94	18	0	273	
4:25 PM	0	0	0	0	23	0	29	0	28	106	3	4	2	66	11	1	273	
4:30 PM	0	0	2	0	32	0	25	0	39	78	2	2	1	66	10	0	257	
4:35 PM	4	0	1	0	23	1	23	0	22	94	0	2	2	92	8	0	272	
4:40 PM	2	1	1	0	32	2	32	1	17	121	3	1	3	109	17	0	342	
4:45 PM	1	0	7	0	20	2	27	0	28	116	6	3	2	100	16	0	328	
4:50 PM	2	2	3	0	29	1	34	0	22	90	3	3	2	75	22	0	288	
4:55 PM	3	0	3	0	16	2	21	0	32	121	3	2	1	112	11	0	327	3465
5:00 PM	1	1	3	0	24	1	21	1	21	106	2	2	2	74	17	0	276	3497
5:05 PM	0	0	6	0	24	1	27	1	25	112	4	2	0	96	18	0	316	3515
5:10 PM	3	1	3	0	22	2	24	0	26	144	2	2	2	121	29	0	381	3591
5:15 PM	2	2	3	0	38	1	30	0	40	100	0	5	3	81	19	0	324	3657
5:20 PM	0	0	4	0	29	0	27	0	27	138	0	2	1	130	13	0	371	3755
5:25 PM	1	2	0	0	37	0	23	0	18	113	2	4	0	74	15	0	289	3771
5:30 PM	0	0	1	0	18	0	31	0	30	117	1	1	3	95	12	1	310	3824
5:35 PM	0	1	2	0	34	5	20	0	35	113	1	0	2	89	14	0	316	3868
5:40 PM	1	1	7	0	32	2	23	0	24	116	2	3	3	87	15	0	316	3842
5:45 PM	0	1	1	0	18	2	30	0	42	106	0	2	1	77	17	0	297	3811
5:50 PM	2	0	4	0	42	0	31	1	28	83	1	1	1	87	26	0	307	3830
5:55 PM	1	1	0	0	24	0	12	0	36	113	3	3	1	92	25	0	311	3814

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	12	40	0	356	12	324	0	372	1528	8	36	24	1328	244	0	4304
Heavy Trucks	0	4	0		4	0	0		0	40	0		0	28	4		80
Pedestrians		20				0				24				0			44
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 06_MUR_215S_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

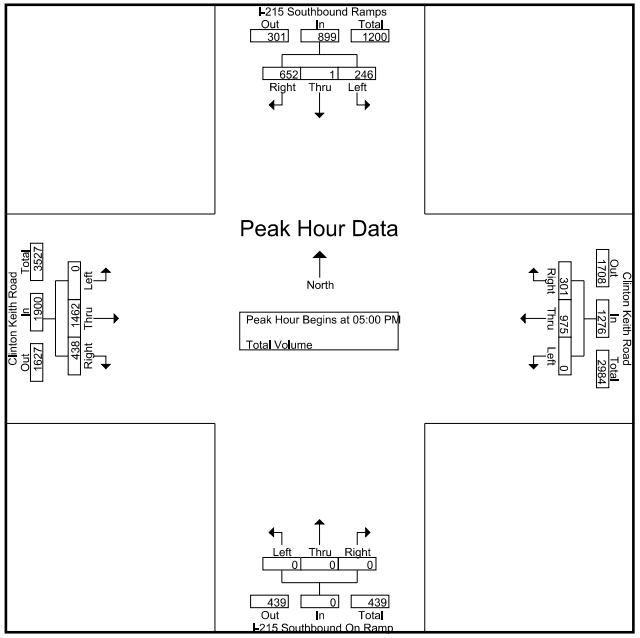
	I-215 Southbound Ramps Southbound				Clinton Keith Road Westbound				I-215 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	45	1	157	203	0	227	72	299	0	0	0	0	0	294	107	401	903
04:15 PM	45	1	156	202	0	232	73	305	0	0	0	0	0	329	83	412	919
04:30 PM	44	0	160	204	0	196	72	268	0	0	0	0	0	319	114	433	905
04:45 PM	68	0	148	216	0	229	63	292	0	0	0	0	0	371	97	468	976
Total	202	2	621	825	0	884	280	1164	0	0	0	0	0	1313	401	1714	3703
05:00 PM	53	0	155	208	0	254	61	315	0	0	0	0	0	340	101	441	964
05:15 PM	69	0	146	215	0	253	83	336	0	0	0	0	0	378	118	496	1047
05:30 PM	67	0	164	231	0	243	85	328	0	0	0	0	0	381	118	499	1058
05:45 PM	57	1	187	245	0	225	72	297	0	0	0	0	0	363	101	464	1006
Total	246	1	652	899	0	975	301	1276	0	0	0	0	0	1462	438	1900	4075
Grand Total	448	3	1273	1724	0	1859	581	2440	0	0	0	0	0	2775	839	3614	7778
Apprch %	26	0.2	73.8		0	76.2	23.8		0	0	0		0	76.8	23.2		
Total %	5.8	0	16.4	22.2	0	23.9	7.5	31.4	0	0	0	0	0	35.7	10.8	46.5	

	I-215 Southbound Ramps Southbound				Clinton Keith Road Westbound				I-215 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	53	0	155	208	0	**254**	61	315	0	0	0	0	0	340	101	441	964
05:15 PM	**69**	0	146	215	0	253	83	**336**	0	0	0	0	0	378	**118**	496	1047
05:30 PM	67	0	164	231	0	243	**85**	328	0	0	0	0	0	**381**	118	**499**	**1058**
05:45 PM	57	**1**	**187**	**245**	0	225	72	297	0	0	0	0	0	363	101	464	1006
Total Volume	246	1	652	899	0	975	301	1276	0	0	0	0	0	1462	438	1900	4075
% App. Total	27.4	0.1	72.5		0	76.4	23.6		0	0	0		0	76.9	23.1		
PHF	.891	.250	.872	.917	.000	.960	.885	.949	.000	.000	.000	.000	.000	.959	.928	.952	.963

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 06_MUR_215S_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:00 PM				04:45 PM			
+0 mins.	53	0	155	208	0	**254**	61	315	0	0	0	0	0	371	97	468
+15 mins.	**69**	0	146	215	0	253	83	**336**	0	0	0	0	0	340	101	441
+30 mins.	67	0	164	231	0	243	**85**	328	0	0	0	0	0	378	**118**	496
+45 mins.	57	**1**	**187**	**245**	0	225	72	297	0	0	0	0	0	**381**	118	**499**
Total Volume	246	1	652	899	0	975	301	1276	0	0	0	0	0	1470	434	1904
% App. Total	27.4	0.1	72.5		0	76.4	23.6		0	0	0		0	77.2	22.8	
PHF	.891	.250	.872	.917	.000	.960	.885	.949	.000	.000	.000	.000	.000	.965	.919	.954

Location: Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-215 Southbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Southbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	1	0	1
12:15 PM	0	0	3	0	3
12:30 PM	0	0	1	0	1
12:45 PM	0	0	0	0	0
1:00 PM	0	0	2	0	2
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	7	0	7

Date: 10/23/2018
Day: Tuesday

	North Leg I-215 Southbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Southbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	6	0	6
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	9	0	9
5:00 PM	0	0	0	0	0
5:15 PM	0	0	2	0	2
5:30 PM	0	0	3	0	3
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	23	0	23

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-215 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	2	0	3

Date: 10/23/2018
Day: Tuesday

	Southbound I-215 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	5	0	0	0	0	0	2	0	7

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 6 I-215 SB Ramps -- Clinton Keith Rd
CITY/STATE: Murrieta, CA

QC JOB #: 14565411
DATE: Wed, Nov 29 2017

Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

5-Min Count Period Beginning At	6 I-215 SB Ramps (Northbound)				6 I-215 SB Ramps (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	7	0	49	0	0	72	24	0	0	58	19	0	229	
4:05 PM	0	0	0	0	11	0	58	0	0	87	28	0	0	62	11	0	257	
4:10 PM	0	0	0	0	3	0	70	0	0	65	24	0	0	52	19	0	233	
4:15 PM	0	0	0	0	8	0	54	0	0	73	38	0	0	63	20	0	256	
4:20 PM	0	0	0	0	11	0	51	0	0	86	37	0	0	67	16	0	268	
4:25 PM	0	0	0	0	12	0	59	0	0	95	38	0	0	57	12	0	273	
4:30 PM	0	0	0	0	8	0	76	0	0	72	40	0	0	48	12	0	256	
4:35 PM	0	0	0	0	4	0	63	0	0	110	36	0	0	60	20	0	293	
4:40 PM	0	0	0	0	7	0	62	0	0	112	38	0	0	52	17	0	288	
4:45 PM	0	0	0	0	12	0	65	0	0	78	27	0	0	59	25	0	266	
4:50 PM	0	0	0	0	10	0	52	0	0	111	35	0	0	63	15	0	286	
4:55 PM	0	0	0	0	12	0	71	0	0	84	41	0	0	86	20	0	314	3219
5:00 PM	0	0	0	0	10	0	54	0	0	92	34	0	0	53	19	0	262	3252
5:05 PM	0	0	0	0	18	0	47	0	0	80	37	0	0	69	22	0	273	3268
5:10 PM	0	0	0	0	13	1	66	0	0	113	43	0	0	78	17	0	331	3366
5:15 PM	0	0	0	0	6	2	67	0	0	102	30	0	0	54	25	0	286	3396
5:20 PM	0	0	0	0	12	0	62	0	0	79	35	0	0	66	12	0	266	3394
5:25 PM	0	0	0	0	8	0	90	0	0	107	32	0	0	66	13	0	316	3437
5:30 PM	0	0	0	0	10	0	65	0	0	83	23	0	0	51	11	0	243	3424
5:35 PM	0	0	0	0	12	0	62	0	0	86	26	0	0	40	9	0	235	3366
5:40 PM	0	0	0	0	14	0	63	0	0	99	30	0	0	78	10	0	294	3372
5:45 PM	0	0	0	0	9	0	71	0	0	82	34	0	0	54	14	0	264	3370
5:50 PM	0	0	0	0	10	0	53	0	0	91	29	0	0	57	11	0	251	3335
5:55 PM	0	0	0	0	10	0	50	0	0	67	39	0	0	62	11	0	239	3260

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	148	12	720	0	0	1180	440	0	0	804	256	0	3560
Heavy Trucks	0	0	0		4	0	0		0	40	8		0	16	0		68
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/8/2017 10:46 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 07_MUR_215N_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	I-215 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-215 Northbound Ramps Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	208	16	224	92	0	89	181	0	180	160	340	745
04:15 PM	0	0	0	0	0	198	27	225	117	0	114	231	0	213	152	365	821
04:30 PM	0	0	0	0	0	188	20	208	79	0	99	178	0	243	138	381	767
04:45 PM	0	0	0	0	0	191	33	224	104	0	120	224	0	271	150	421	869
Total	0	0	0	0	0	785	96	881	392	0	422	814	0	907	600	1507	3202
05:00 PM	0	0	0	0	0	219	23	242	96	0	116	212	0	204	157	361	815
05:15 PM	0	0	0	0	0	246	30	276	102	0	142	244	0	293	157	450	970
05:30 PM	0	0	0	0	0	216	25	241	113	0	134	247	0	290	146	436	924
05:45 PM	0	0	0	0	0	194	14	208	100	0	144	244	0	258	149	407	859
Total	0	0	0	0	0	875	92	967	411	0	536	947	0	1045	609	1654	3568
Grand Total	0	0	0	0	0	1660	188	1848	803	0	958	1761	0	1952	1209	3161	6770
Apprch %	0	0	0		0	89.8	10.2		45.6	0	54.4		0	61.8	38.2		
Total %	0	0	0	0	0	24.5	2.8	27.3	11.9	0	14.2	26	0	28.8	17.9	46.7	

	I-215 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-215 Northbound Ramps Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	191	**33**	224	104	0	120	224	0	271	150	421	869
05:00 PM	0	0	0	0	0	219	23	242	96	0	116	212	0	204	**157**	361	815
05:15 PM	0	0	0	0	0	**246**	30	**276**	102	0	**142**	244	0	**293**	157	**450**	**970**
05:30 PM	0	0	0	0	0	216	25	241	**113**	0	134	**247**	0	290	146	436	924
Total Volume	0	0	0	0	0	872	111	983	415	0	512	927	0	1058	610	1668	3578
% App. Total	0	0	0		0	88.7	11.3		44.8	0	55.2		0	63.4	36.6		
PHF	.000	.000	.000	.000	.000	.886	.841	.890	.918	.000	.901	.938	.000	.903	.971	.927	.922

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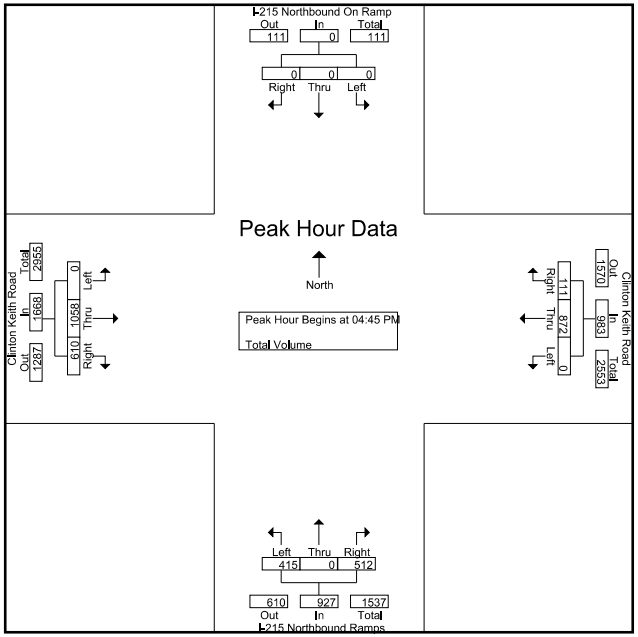
City of Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 07_MUR_215N_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				05:00 PM				04:45 PM			
+0 mins.	0	0	0	0	0	191	**33**	224	96	0	116	212	0	271	150	421
+15 mins.	0	0	0	0	0	219	23	242	102	0	142	244	0	204	**157**	361
+30 mins.	0	0	0	0	0	**246**	30	**276**	**113**	0	134	**247**	0	**293**	157	**450**
+45 mins.	0	0	0	0	0	216	25	241	100	0	**144**	244	0	290	146	436
Total Volume	0	0	0	0	0	872	111	983	411	0	536	947	0	1058	610	1668
% App. Total	0	0	0		0	88.7	11.3		43.4	0	56.6		0	63.4	36.6	
PHF	.000	.000	.000	.000	.000	.886	.841	.890	.909	.000	.931	.959	.000	.903	.971	.927

Location: Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-215 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	4	0	4
12:30 PM	0	0	1	0	1
12:45 PM	0	0	1	0	1
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	7	0	7

Date: 10/23/2018
Day: Tuesday

	North Leg I-215 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	6	0	6
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	3	0	3
5:00 PM	0	0	6	0	6
5:15 PM	0	0	2	0	2
5:30 PM	0	0	3	0	3
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	23	0	23

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-215 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	2	0	3

Date: 10/23/2018
Day: Tuesday

	Southbound I-215 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	208	16	92	0	89	0	180	160	745
4:15 PM	0	0	0	0	198	27	117	0	114	0	213	152	821
4:30 PM	0	0	0	0	188	20	79	0	99	0	233	138	757
4:45 PM	0	0	0	0	191	33	104	0	120	0	281	150	879
5:00 PM	0	0	0	0	219	23	96	0	116	0	214	167	835
5:15 PM	0	0	0	0	246	30	102	0	142	0	293	157	970
5:30 PM	0	0	0	0	216	25	113	0	134	0	290	146	924
5:45 PM	0	0	0	0	194	14	100	0	144	0	258	159	869
TOTAL VOLUMES:	0	0	0	0	1660	188	803	0	958	0	1962	1229	6800

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Corona, CA 92878
951-268-6268

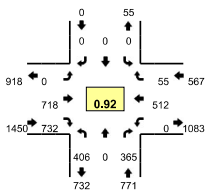
Type of peak hour being reported: Intersection Peak

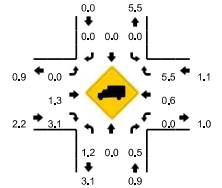
Method for determining peak hour: Total Entering Volume

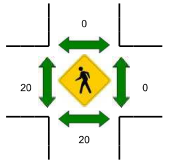
LOCATION: 7 I-215 NB Ramps -- Clinton Keith Rd
CITY/STATE: Riverside, CA

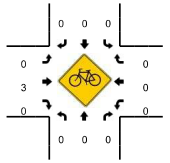
QC JOB #: 14565413
DATE: Wed, Nov 15 2017

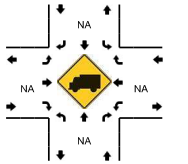
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

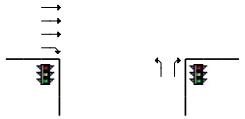


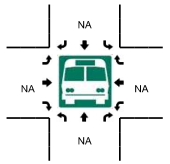












5-Min Count Period Beginning At	7 I-215 NB Ramps (Northbound)				7 I-215 NB Ramps (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	38	0	17	0	0	0	0	0	0	24	43	0	0	39	4	0	165	
4:05 PM	30	0	22	0	0	0	0	0	0	40	42	0	0	39	1	0	174	
4:10 PM	39	0	15	0	0	0	0	0	0	48	63	0	0	50	10	0	225	
4:15 PM	28	0	26	0	0	0	0	0	0	33	56	0	0	52	11	0	206	
4:20 PM	32	0	29	0	0	0	0	0	0	32	50	0	0	43	8	0	194	
4:25 PM	32	0	22	0	0	0	0	0	0	46	49	0	0	41	1	0	191	
4:30 PM	35	0	31	0	0	0	0	0	0	45	47	0	0	36	4	0	198	
4:35 PM	33	0	23	0	0	0	0	0	0	35	39	0	0	37	0	0	167	
4:40 PM	30	0	30	0	0	0	0	0	0	62	65	0	0	45	5	0	237	
4:45 PM	29	0	31	0	0	0	0	0	0	64	68	0	0	46	2	0	240	
4:50 PM	42	0	22	0	0	0	0	0	0	66	51	0	0	38	5	0	224	
4:55 PM	34	0	39	0	0	0	0	0	0	47	51	0	0	46	4	0	221	2442
5:00 PM	35	0	32	0	0	0	0	0	0	46	59	0	0	33	5	0	210	2487
5:05 PM	33	0	28	0	0	0	0	0	0	58	76	0	0	41	7	0	243	2556
5:10 PM	49	0	33	0	0	0	0	0	0	48	63	0	0	44	6	0	243	2574
5:15 PM	29	0	32	0	0	0	0	0	0	75	72	0	0	52	8	0	268	2636
5:20 PM	23	0	34	0	0	0	0	0	0	63	68	0	0	36	1	0	225	2667
5:25 PM	32	0	28	0	0	0	0	0	0	75	57	0	0	48	3	0	243	2719
5:30 PM	35	0	21	0	0	0	0	0	0	59	51	0	0	45	7	0	218	2739
5:35 PM	35	0	35	0	0	0	0	0	0	55	51	0	0	38	2	0	216	2788
5:40 PM	25	0	26	0	0	0	0	0	0	50	50	0	0	40	4	0	195	2746
5:45 PM	42	0	34	0	0	0	0	0	0	55	55	0	0	41	6	0	233	2739
5:50 PM	38	0	24	0	0	0	0	0	0	66	46	0	0	42	4	0	220	2735
5:55 PM	37	0	36	0	0	0	0	0	0	54	47	0	0	39	5	0	218	2732

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	444	0	372	0	0	0	0	0	0	724	844	0	0	548	84	0	3016
Heavy Trucks	8	0	4		0	0	0		0	4	16		0	4	0		36
Pedestrians		16				0				16				0			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/29/2017 1:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: Creighton Avenue
E/W: Clinton Keith Road
Weather: Clear

File Name : 08_MUR_Creighton_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Clinton Keith Road Westbound			Creighton Avenue Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	6	220	226	11	6	17	258	17	275	518
04:15 PM	4	201	205	18	6	24	295	20	315	544
04:30 PM	7	197	204	10	4	14	314	15	329	547
04:45 PM	8	219	227	16	4	20	378	27	405	652
Total	25	837	862	55	20	75	1245	79	1324	2261
05:00 PM	7	236	243	9	6	15	316	11	327	585
05:15 PM	9	271	280	11	6	17	410	26	436	733
05:30 PM	11	216	227	16	8	24	397	15	412	663
05:45 PM	9	207	216	14	4	18	373	27	400	634
Total	36	930	966	50	24	74	1496	79	1575	2615
Grand Total	61	1767	1828	105	44	149	2741	158	2899	4876
Apprch %	3.3	96.7		70.5	29.5		94.5	5.5		
Total %	1.3	36.2	37.5	2.2	0.9	3.1	56.2	3.2	59.5	

	Clinton Keith Road Westbound			Creighton Avenue Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	8	219	227	**16**	4	20	378	**27**	405	652
05:00 PM	7	236	243	9	6	15	316	11	327	585
05:15 PM	9	**271**	**280**	11	6	17	**410**	26	**436**	**733**
05:30 PM	**11**	216	227	16	**8**	**24**	397	15	412	663
Total Volume	35	942	977	52	24	76	1501	79	1580	2633
% App. Total	3.6	96.4		68.4	31.6		95	5		
PHF	.795	.869	.872	.813	.750	.792	.915	.731	.906	.898

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City of Murrieta
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File Name : 08_MUR_Creighton_Clinton Keith Tues
Site Code : 99918787
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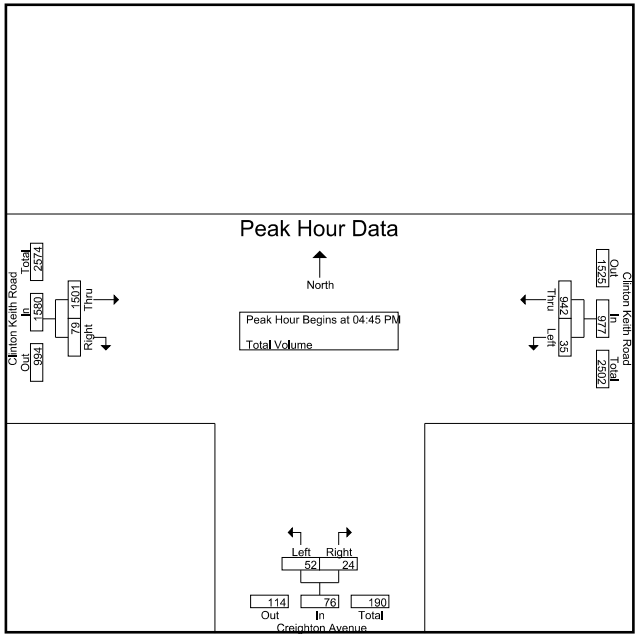
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	8	219	227	**16**	4	20	378	**27**	405
+15 mins.	7	236	243	9	6	15	316	11	327
+30 mins.	9	**271**	**280**	11	6	17	**410**	26	**436**
+45 mins.	**11**	216	227	16	**8**	**24**	397	15	412
Total Volume	35	942	977	52	24	76	1501	79	1580
% App. Total	3.6	96.4		68.4	31.6		95	5	
PHF	.795	.869	.872	.813	.750	.792	.915	.731	.906

Location: Murrieta
N/S: Creighton Avenue
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Creighton Avenue	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Creighton Avenue	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	7	0	7
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	3	0	3
5:00 PM	0	0	6	0	6
5:15 PM	0	0	1	0	1
5:30 PM	0	0	1	0	1
5:45 PM	0	0	1	0	1
TOTAL VOLUMES:	0	0	20	0	20

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951-268-6268

Location: Murrieta
N/S: Creighton Avenue
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Creighton Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

Date: 10/23/2018
Day: Tuesday

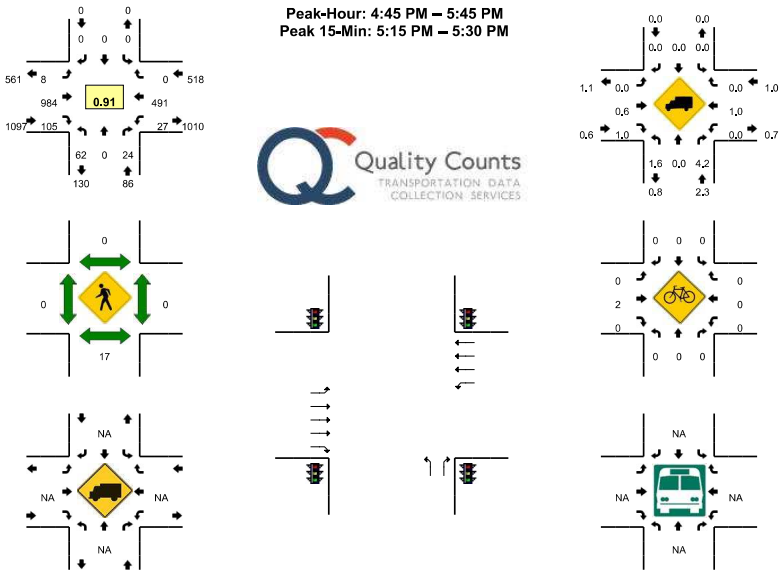
	Southbound Dead End			Westbound Clinton Keith Road			Northbound Creighton Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	4	0	0	0	0	0	2	0	6

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 8 Creighton Ave – Clinton Keith Rd | **QC JOB #:** 14565415
CITY/STATE: Riverside, CA | **DATE:** Wed, Nov 15 2017

Peak-Hour: 4:45 PM – 5:45 PM
Peak 15-Min: 5:15 PM – 5:30 PM



5-Min Count Period Beginning At	8 Creighton Ave (Northbound)				8 Creighton Ave (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	0	3	0	0	0	0	0	0	42	5	0	3	44	0	0	100	
4:05 PM	5	0	4	0	0	0	0	0	0	63	5	0	2	48	0	0	127	
4:10 PM	4	0	1	0	0	0	0	0	0	56	5	0	2	53	0	0	121	
4:15 PM	5	0	3	0	0	0	0	0	0	56	4	1	0	48	0	0	117	
4:20 PM	9	0	1	0	0	0	0	0	0	57	5	0	4	39	0	0	115	
4:25 PM	2	0	3	0	0	0	0	0	0	57	9	1	0	40	0	0	112	
4:30 PM	6	0	5	0	0	0	0	0	0	64	12	3	3	33	0	0	126	
4:35 PM	3	0	4	0	0	0	0	0	0	61	9	0	3	45	0	0	125	
4:40 PM	6	0	5	0	0	0	0	0	0	69	6	0	4	46	0	0	136	
4:45 PM	11	0	0	0	0	0	0	0	0	98	10	1	2	34	0	0	156	
4:50 PM	4	0	1	0	0	0	0	0	0	74	9	0	2	37	0	0	127	
4:55 PM	9	0	1	0	0	0	0	0	0	74	10	0	1	40	0	0	135	1497
5:00 PM	6	0	3	0	0	0	0	0	0	70	6	1	0	34	0	0	120	1517
5:05 PM	4	0	4	0	0	0	0	0	0	73	8	2	2	44	0	0	137	1527
5:10 PM	5	0	2	0	0	0	0	0	0	77	11	1	3	47	0	1	147	1553
5:15 PM	2	0	3	0	0	0	0	0	0	96	10	1	3	49	0	0	164	1600
5:20 PM	2	0	3	0	0	0	0	0	0	89	7	0	2	39	0	0	142	1627
5:25 PM	1	0	3	0	0	0	0	0	0	97	13	1	3	42	0	0	160	1675
5:30 PM	12	0	2	0	0	0	0	0	0	73	6	0	2	51	0	0	146	1695
5:35 PM	6	0	1	0	0	0	0	0	0	78	8	1	3	29	0	0	126	1696
5:40 PM	0	0	1	0	0	0	0	0	0	85	7	0	2	45	0	1	141	1701
5:45 PM	9	0	2	0	0	0	0	0	0	71	9	0	2	44	0	0	137	1682
5:50 PM	4	0	3	0	0	0	0	0	0	84	7	1	3	42	0	1	145	1700
5:55 PM	3	0	0	0	0	0	0	0	0	82	9	0	2	35	0	0	131	1696

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	0	36	0	0	0	0	0	0	1128	120	8	32	520	0	0	1864
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	8	0		16
Pedestrians		20				0				0				0			20
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

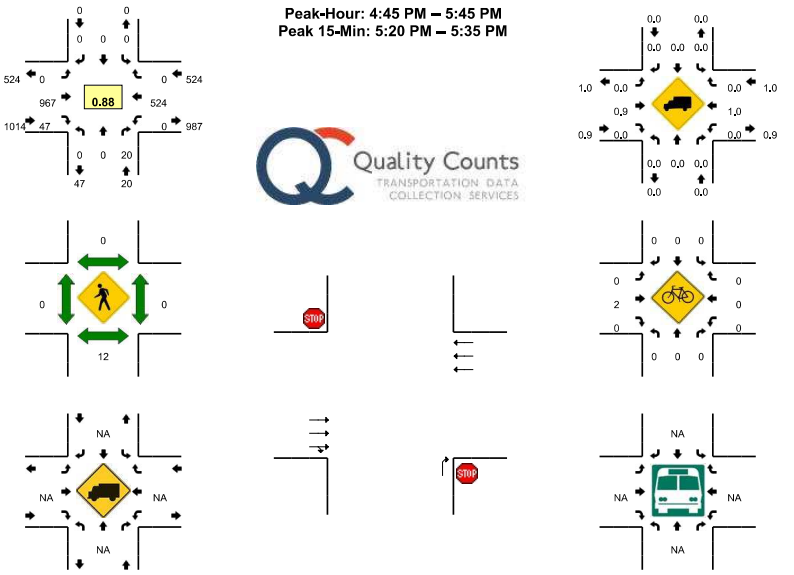
Comments:

Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 9 High School West Dwy – Clinton Keith Rd | **QC JOB #:** 14565417
CITY/STATE: Riverside, CA | **DATE:** Wed, Nov 15 2017

Peak-Hour: 4:45 PM – 5:45 PM
Peak 15-Min: 5:20 PM – 5:35 PM



5-Min Count Period Beginning At	9 High School West Dwy (Northbound)				9 High School West Dwy (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	45	1	0	0	43	0	0	89	
4:05 PM	0	0	0	0	0	0	0	0	0	62	1	0	0	49	0	0	112	
4:10 PM	0	0	1	0	0	0	0	0	0	56	0	0	0	52	0	0	109	
4:15 PM	0	0	3	0	0	0	0	0	0	55	0	0	0	52	0	0	110	
4:20 PM	0	0	2	0	0	0	0	0	0	59	2	0	0	48	0	0	111	
4:25 PM	0	0	0	0	0	0	0	0	0	61	0	0	0	43	0	0	104	
4:30 PM	0	0	0	0	0	0	0	0	0	60	2	0	0	34	0	0	96	
4:35 PM	0	0	0	0	0	0	0	0	0	63	0	0	0	36	0	0	99	
4:40 PM	0	0	0	0	0	0	0	0	0	71	3	0	0	49	0	0	123	
4:45 PM	0	0	1	0	0	0	0	0	0	88	3	0	0	46	0	0	138	
4:50 PM	0	0	0	0	0	0	0	0	0	65	4	0	0	35	0	0	104	
4:55 PM	0	0	1	0	0	0	0	0	0	101	4	0	0	44	0	0	150	1345
5:00 PM	0	0	0	0	0	0	0	0	0	63	4	0	0	29	0	0	96	1352
5:05 PM	0	0	1	0	0	0	0	0	0	74	1	0	0	48	0	0	124	1364
5:10 PM	0	0	3	0	0	0	0	0	0	65	6	0	0	44	0	0	118	1373
5:15 PM	0	0	2	0	0	0	0	0	0	89	1	0	0	49	0	0	141	1404
5:20 PM	0	0	2	0	0	0	0	0	0	101	1	0	0	45	0	0	149	1442
5:25 PM	0	0	1	0	0	0	0	0	0	81	5	0	0	45	0	0	132	1470
5:30 PM	0	0	2	0	0	0	0	0	0	97	8	0	0	53	0	0	160	1534
5:35 PM	0	0	5	0	0	0	0	0	0	68	6	0	0	41	0	0	120	1555
5:40 PM	0	0	2	0	0	0	0	0	0	75	4	0	0	45	0	0	126	1558
5:45 PM	0	0	3	0	0	0	0	0	0	72	7	0	0	40	0	0	122	1542
5:50 PM	0	0	2	0	0	0	0	0	0	73	2	0	0	42	0	0	119	1557
5:55 PM	0	0	1	0	0	0	0	0	0	83	9	0	0	45	0	0	138	1545

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	20	0	0	0	0	0	0	1116	56	0	0	572	0	0	1764
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	8	0		20
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: Creighton Avenue
E/W: Bronco Way
Weather: Clear

File Name : 10_MUR_Bronco_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Clinton Keith Road Westbound			Bronco Way Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
12:00 PM	3	177	180	38	15	53	231	7	238	471
12:15 PM	1	156	157	9	2	11	185	3	188	356
12:30 PM	1	147	148	11	1	12	214	2	216	376
12:45 PM	0	173	173	15	3	18	232	0	232	423
Total	5	653	658	73	21	94	862	12	874	1626
01:00 PM	12	185	197	17	3	20	210	11	221	438
01:15 PM	5	162	167	15	2	17	208	9	217	401
01:30 PM	1	143	144	4	0	4	214	5	219	367
01:45 PM	1	184	185	0	0	0	165	0	165	350
Total	19	674	693	36	5	41	797	25	822	1556
Grand Total	24	1327	1351	109	26	135	1659	37	1696	3182
Apprch %	1.8	98.2		80.7	19.3		97.8	2.2		
Total %	0.8	41.7	42.5	3.4	0.8	4.2	52.1	1.2	53.3	

	Clinton Keith Road Westbound			Bronco Way Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:30 PM										
12:30 PM	1	147	148	11	1	12	214	2	216	376
12:45 PM	0	173	173	15	**3**	18	**232**	0	**232**	423
01:00 PM	**12**	**185**	**197**	**17**	3	**20**	210	**11**	221	**438**
01:15 PM	5	162	167	15	2	17	208	9	217	401
Total Volume	18	667	685	58	9	67	864	22	886	1638
% App. Total	2.6	97.4		86.6	13.4		97.5	2.5		
PHF	.375	.901	.869	.853	.750	.838	.931	.500	.955	.935

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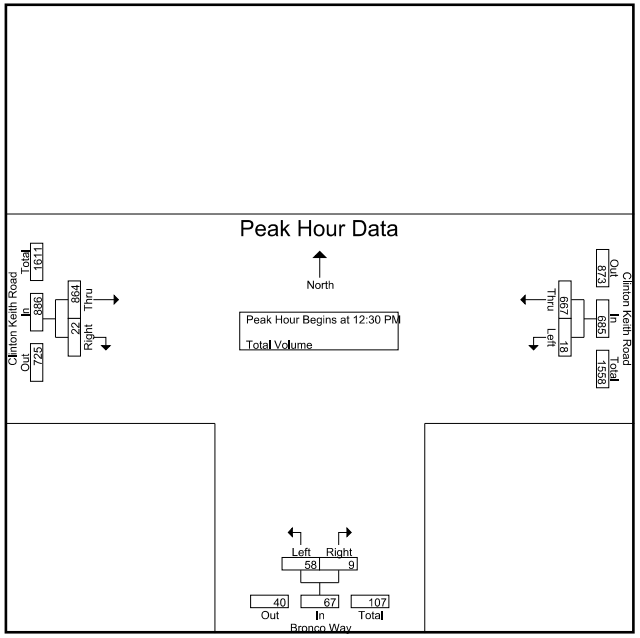
City of Murrieta
N/S: Creighton Avenue
E/W: Bronco Way
Weather: Clear

File Name : 10_MUR_Bronco_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	01:00 PM			12:00 PM			12:45 PM		
+0 mins.	**12**	**185**	**197**	**38**	**15**	**53**	**232**	0	**232**
+15 mins.	5	162	167	9	2	11	210	**11**	221
+30 mins.	1	143	144	11	1	12	208	9	217
+45 mins.	1	184	185	15	3	18	214	5	219
Total Volume	19	674	693	73	21	94	864	25	889
% App. Total	2.7	97.3		77.7	22.3		97.2	2.8	
PHF	.396	.911	.879	.480	.350	.443	.931	.568	.958

Location: Murrieta
N/S: Bronco Way
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Bronco Way	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	1	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	2	0	2
12:45 PM	0	0	0	0	0
1:00 PM	0	1	1	0	2
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	4	0	5

Date: 10/23/2018
Day: Tuesday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Bronco Way	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	2	0	2
5:30 PM	0	1	1	0	2
5:45 PM	0	4	4	0	8
TOTAL VOLUMES:	0	7	7	0	14

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951-268-6268

Location: Murrieta
N/S: Bronco Way
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Bronco Way			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	2	0	3

Date: 10/23/2018
Day: Tuesday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Bronco Way			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	4	0	0	0	0	0	2	0	6

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 10 Vista Murrieta HS Dwy – Clinton Keith Rd

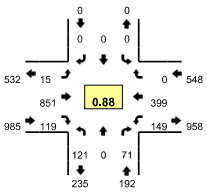
QC JOB #: 14565419

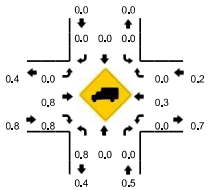
CITY/STATE: Riverside, CA

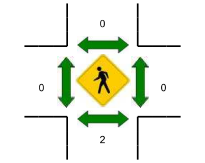
DATE: Wed, Nov 15 2017

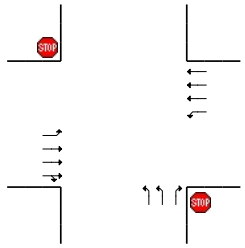
Peak-Hour: 5:00 PM – 6:00 PM

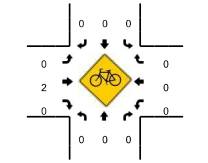
Peak 15-Min: 5:15 PM – 5:30 PM

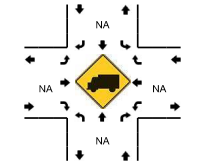


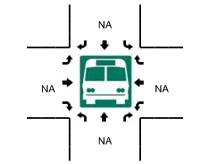












5-Min Count Period Beginning At	10 Vista Murrieta HS Dwy (Northbound)				10 Vista Murrieta HS Dwy (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	0	2	0	0	0	0	0	0	41	3	1	1	41	0	5	99	
4:05 PM	14	0	3	0	0	0	0	0	0	69	4	0	1	34	0	4	129	
4:10 PM	7	0	4	0	0	0	0	0	0	51	3	2	4	44	0	5	120	
4:15 PM	8	0	3	1	0	0	0	0	0	47	7	0	3	48	0	1	118	
4:20 PM	3	0	0	0	0	0	0	0	0	54	3	0	1	37	0	3	101	
4:25 PM	8	0	1	0	0	0	0	0	0	66	4	0	2	32	0	2	115	
4:30 PM	9	0	7	0	0	0	0	0	0	65	6	0	1	26	0	3	117	
4:35 PM	10	0	1	0	0	0	0	0	0	58	3	0	3	35	0	0	110	
4:40 PM	8	0	3	0	0	0	0	0	0	72	5	0	1	43	0	0	132	
4:45 PM	7	0	0	1	0	0	0	0	0	77	7	0	3	28	0	2	125	
4:50 PM	10	0	4	0	0	0	0	0	0	72	8	1	5	26	0	0	126	
4:55 PM	7	0	11	0	0	0	0	0	0	69	2	0	6	37	0	4	136	1428
5:00 PM	14	0	8	0	0	0	0	0	0	69	5	1	7	24	0	0	128	1457
5:05 PM	2	0	9	1	0	0	0	0	0	60	7	1	1	43	0	0	124	1452
5:10 PM	12	0	6	1	0	0	0	0	0	75	6	0	4	39	0	6	149	1481
5:15 PM	9	0	10	0	0	0	0	0	0	85	12	3	9	38	0	5	171	1534
5:20 PM	5	0	6	0	0	0	0	0	0	85	13	1	14	37	0	3	164	1597
5:25 PM	13	0	4	1	0	0	0	0	0	67	12	0	13	37	0	8	155	1637
5:30 PM	7	0	3	0	0	0	0	0	0	77	10	1	17	40	0	2	157	1677
5:35 PM	8	0	4	0	0	0	0	0	0	68	8	0	9	29	0	2	128	1695
5:40 PM	18	0	3	0	0	0	0	0	0	72	6	4	8	25	0	3	139	1702
5:45 PM	8	0	6	0	0	0	0	0	0	63	9	1	13	32	0	2	134	1711
5:50 PM	10	0	6	0	0	0	0	0	0	62	13	1	10	29	0	2	133	1718
5:55 PM	12	0	6	0	0	0	0	0	0	68	18	2	8	26	0	3	143	1725

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	0	80	4	0	0	0	0	0	948	148	16	144	448	0	64	1960
Heavy Trucks	4	0	0		0	0	0		0	12	4		0	4	0		24
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	2	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/29/2017 1:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 11_MUR_Whitewood_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Whitewood Road Southbound				Clinton Keith Road Westbound				Whitewood Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	19	56	73	148	22	94	11	127	31	75	23	129	100	113	37	250	654
04:15 PM	17	45	71	133	28	103	15	146	35	81	23	139	95	157	55	307	725
04:30 PM	18	74	72	164	27	102	10	139	23	66	21	110	109	170	55	334	747
04:45 PM	18	66	82	166	37	108	12	157	49	76	20	145	98	180	76	354	822
Total	72	241	298	611	114	407	48	569	138	298	87	523	402	620	223	1245	2948
05:00 PM	18	57	77	152	22	117	11	150	50	88	29	167	89	160	47	296	765
05:15 PM	28	66	105	199	22	132	16	170	51	96	31	178	138	174	59	371	918
05:30 PM	16	44	82	142	29	103	10	142	42	73	32	147	142	190	68	400	831
05:45 PM	13	49	67	129	24	109	9	142	39	91	25	155	104	170	59	333	759
Total	75	216	331	622	97	461	46	604	182	348	117	647	473	694	233	1400	3273
Grand Total	147	457	629	1233	211	868	94	1173	320	646	204	1170	875	1314	456	2645	6221
Apprch %	11.9	37.1	51		18	74	8		27.4	55.2	17.4		33.1	49.7	17.2		
Total %	2.4	7.3	10.1	19.8	3.4	14	1.5	18.9	5.1	10.4	3.3	18.8	14.1	21.1	7.3	42.5	

	Whitewood Road Southbound				Clinton Keith Road Westbound				Whitewood Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	18	**66**	82	166	**37**	108	12	157	49	76	20	145	98	180	**76**	354	822
05:00 PM	18	57	77	152	22	117	11	150	50	88	29	167	89	160	47	296	765
05:15 PM	**28**	66	**105**	**199**	22	**132**	**16**	**170**	**51**	**96**	31	**178**	138	174	59	371	**918**
05:30 PM	16	44	82	142	29	103	10	142	42	73	**32**	147	**142**	**190**	68	**400**	831
Total Volume	80	233	346	659	110	460	49	619	192	333	112	637	467	704	250	1421	3336
% App. Total	12.1	35.4	52.5		17.8	74.3	7.9		30.1	52.3	17.6		32.9	49.5	17.6		
PHF	.714	.883	.824	.828	.743	.871	.766	.910	.941	.867	.875	.895	.822	.926	.822	.888	.908

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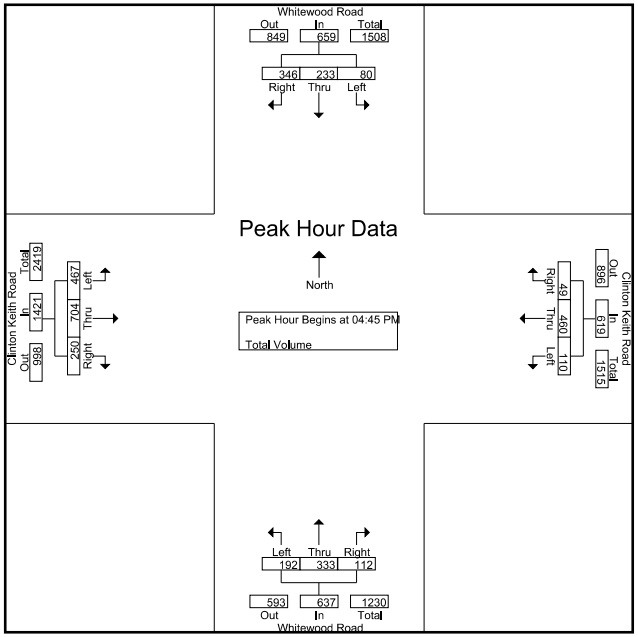
City of Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 11_MUR_Whitewood_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				05:00 PM				04:45 PM			
+0 mins.	18	**74**	72	164	**37**	108	12	157	50	88	29	167	98	180	**76**	354
+15 mins.	18	66	82	166	22	117	11	150	**51**	**96**	31	**178**	89	160	47	296
+30 mins.	18	57	77	152	22	**132**	**16**	**170**	42	73	**32**	147	138	174	59	371
+45 mins.	**28**	66	**105**	**199**	29	103	10	142	39	91	25	155	**142**	**190**	68	**400**
Total Volume	82	263	336	681	110	460	49	619	182	348	117	647	467	704	250	1421
% App. Total	12	38.6	49.3		17.8	74.3	7.9		28.1	53.8	18.1		32.9	49.5	17.6	
PHF	.732	.889	.800	.856	.743	.871	.766	.910	.892	.906	.914	.909	.822	.926	.822	.888

Location: Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Whitewood Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Whitewood Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	1	0	0	0	1
1:30 PM	1	0	0	3	4
1:45 PM	1	0	0	0	1
TOTAL VOLUMES:	3	0	0	3	6

Date: 10/23/2018
Day: Tuesday

	North Leg Whitewood Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Whitewood Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	0	3	3
4:15 PM	0	0	0	2	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	6	7

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Location: Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Whitewood Road			Westbound Clinton Keith Road			Northbound Whitewood Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	1	0	0	0	0	0	1	0	0	1	0	3
12:15 PM	0	2	0	0	0	0	0	4	0	0	0	0	6
12:30 PM	0	1	0	0	1	0	0	1	1	0	0	1	5
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
1:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
1:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	0	1	0	0	11	2	0	1	1	20

Date: 10/23/2018
Day: Tuesday

	Southbound Whitewood Road			Westbound Clinton Keith Road			Northbound Whitewood Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	2
4:15 PM	0	0	2	0	0	1	0	0	0	0	0	1	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	2	1	0	1	1	1	2	0	0	2	10

Counts Unlimited, Inc.
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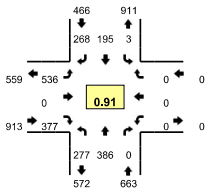
Corona, CA 92878
951-268-6268

Type of peak hour being reported: Intersection Peak

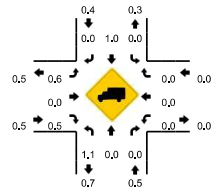
Method for determining peak hour: Total Entering Volume

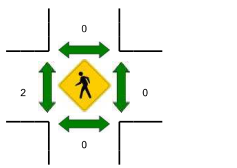
LOCATION: 11 Whitewood Rd – Clinton Keith Rd
CITY/STATE: Riverside, CA

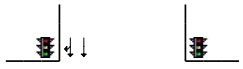
QC JOB #: 14565421
DATE: Wed, Nov 15 2017

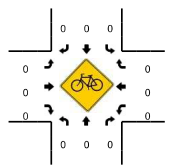


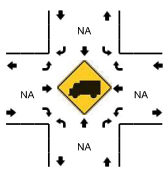
Peak-Hour: 4:55 PM – 5:55 PM
Peak 15-Min: 5:15 PM – 5:30 PM

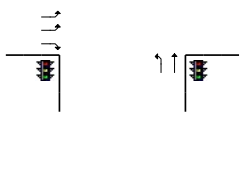


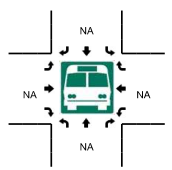












5-Min Count Period Beginning At	11 Whitewood Rd (Northbound)				11 Whitewood Rd (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	18	30	0	0	0	12	20	0	24	0	20	0	0	0	0	0	124	
4:05 PM	21	44	0	0	0	18	23	0	27	0	26	3	0	0	0	0	162	
4:10 PM	20	21	0	0	0	18	24	1	33	0	26	1	0	0	0	0	144	
4:15 PM	22	21	0	0	0	15	30	0	30	0	20	2	0	0	0	0	140	
4:20 PM	17	30	0	0	0	13	18	0	26	0	14	3	0	0	0	0	121	
4:25 PM	21	32	0	0	0	20	23	0	29	0	22	3	0	0	0	0	150	
4:30 PM	15	26	0	0	0	22	14	0	27	0	23	0	0	0	0	0	127	
4:35 PM	22	24	0	0	0	10	14	0	35	0	22	3	0	0	0	0	130	
4:40 PM	17	23	0	0	0	18	26	0	35	0	26	4	0	0	0	0	149	
4:45 PM	14	18	0	0	0	17	20	0	47	0	34	1	0	0	0	0	151	
4:50 PM	14	27	0	0	0	23	15	0	37	0	21	4	0	0	0	0	141	
4:55 PM	20	26	0	0	0	18	22	0	42	0	40	0	0	0	0	0	168	1707
5:00 PM	16	23	0	0	0	11	13	0	57	0	18	1	0	0	0	0	139	1722
5:05 PM	21	23	0	0	0	21	25	0	33	0	40	0	0	0	0	0	163	1723
5:10 PM	21	25	0	0	0	30	27	0	45	0	23	1	0	0	0	0	172	1751
5:15 PM	21	33	0	0	0	22	28	0	48	0	39	1	0	0	0	0	192	1803
5:20 PM	25	29	0	0	0	11	24	0	49	0	37	2	0	0	0	0	177	1859
5:25 PM	26	35	0	0	0	16	33	0	41	0	36	2	0	0	0	0	189	1898
5:30 PM	30	36	0	0	0	15	29	0	37	0	24	1	0	0	0	0	172	1943
5:35 PM	19	34	0	0	0	13	19	1	56	0	29	2	0	0	0	0	173	1986
5:40 PM	20	43	0	0	0	18	19	2	40	0	26	1	0	0	0	0	169	2006
5:45 PM	25	32	0	0	0	11	14	0	39	0	27	1	0	0	0	0	149	2004
5:50 PM	33	47	0	0	0	9	15	0	35	0	38	2	0	0	0	0	179	2042
5:55 PM	27	38	0	0	0	11	13	0	41	0	19	1	0	0	0	0	150	2024
Peak 15-Min Flowrates	**Northbound**				**Southbound**				**Eastbound**				**Westbound**				**Total**	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	288	388	0	0	0	196	340	0	552	0	448	20	0	0	0	0	2232	
Heavy Trucks	4	0	0		0	0	0		8	0	0		0	0	0		12	
Pedestrians		0				0				8				0			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 11/29/2017 1:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
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Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: Whitewood Road
E/W: Linnell Lane/Lee Lane
Weather: Clear

File Name : 12_MUR_Whitewood_Linnel_Lee Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Whitewood Road Southbound				Lee Road Westbound				Whitewood Road Northbound				Linnell Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	108	7	115	0	1	0	1	4	165	0	169	20	1	22	43	328
04:15 PM	0	111	10	121	2	1	0	3	8	166	0	174	14	1	16	31	329
04:30 PM	2	137	13	152	3	1	0	4	7	139	1	147	18	0	23	41	344
04:45 PM	0	134	13	147	0	0	0	0	5	153	1	159	15	0	13	28	334
Total	2	490	43	535	5	3	0	8	24	623	2	649	67	2	74	143	1335
05:00 PM	1	126	15	142	0	0	1	1	10	160	1	171	19	0	26	45	359
05:15 PM	0	149	8	157	0	1	0	1	10	186	1	197	17	0	16	33	388
05:30 PM	1	112	12	125	2	0	1	3	10	189	2	201	17	0	16	33	362
05:45 PM	1	102	8	111	1	0	1	2	6	171	1	178	11	0	26	37	328
Total	3	489	43	535	3	1	3	7	36	706	5	747	64	0	84	148	1437
Grand Total	5	979	86	1070	8	4	3	15	60	1329	7	1396	131	2	158	291	2772
Apprch %	0.5	91.5	8		53.3	26.7	20		4.3	95.2	0.5		45	0.7	54.3		
Total %	0.2	35.3	3.1	38.6	0.3	0.1	0.1	0.5	2.2	47.9	0.3	50.4	4.7	0.1	5.7	10.5	

	Whitewood Road Southbound				Lee Road Westbound				Whitewood Road Northbound				Linnell Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	134	13	147	0	0	0	0	5	153	1	159	15	0	13	28	334
05:00 PM	**1**	126	**15**	142	0	0	**1**	1	**10**	160	1	171	**19**	0	**26**	**45**	359
05:15 PM	0	**149**	8	**157**	0	**1**	0	1	10	186	1	197	17	0	16	33	**388**
05:30 PM	1	112	12	125	**2**	0	1	**3**	10	**189**	**2**	**201**	17	0	16	33	362
Total Volume	2	521	48	571	2	1	2	5	35	688	5	728	68	0	71	139	1443
% App. Total	0.4	91.2	8.4		40	20	40		4.8	94.5	0.7		48.9	0	51.1		
PHF	.500	.874	.800	.909	.250	.250	.500	.417	.875	.910	.625	.905	.895	.000	.683	.772	.930

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Corona, CA 92878
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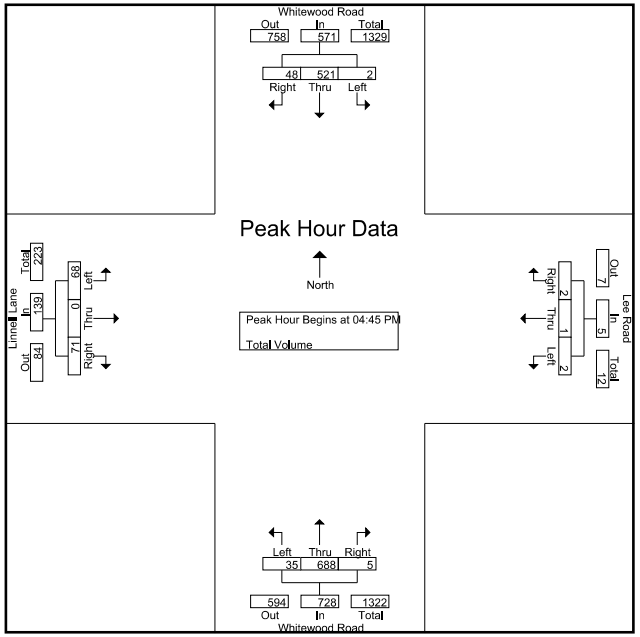
City of Murrieta
N/S: Whitewood Road
E/W: Linnell Lane/Lee Lane
Weather: Clear

File Name : 12_MUR_Whitewood_Linnel_Lee Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	**2**	137	13	152	0	**1**	0	1	**10**	160	1	171	**19**	0	**26**	**45**
+15 mins.	0	134	13	147	2	1	0	3	10	186	1	197	17	0	16	33
+30 mins.	1	126	**15**	142	**3**	1	0	**4**	10	**189**	**2**	**201**	17	0	16	33
+45 mins.	0	**149**	8	**157**	0	0	0	0	6	171	1	178	11	0	26	37
Total Volume	3	546	49	598	5	3	0	8	36	706	5	747	64	0	84	148
% App. Total	0.5	91.3	8.2		62.5	37.5	0		4.8	94.5	0.7		43.2	0	56.8	
PHF	.375	.916	.817	.952	.417	.750	.000	.500	.900	.934	.625	.929	.842	.000	.808	.822

Location: Murrieta
N/S: Whitewood Road
E/W: Linnel Lane/Lee Lane

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Whitewood Road	East Leg Lee Road	South Leg Whitewood Road	West Leg Linnell Lane	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Date: 10/23/2018
Day: Tuesday

	North Leg Whitewood Road	East Leg Lee Road	South Leg Whitewood Road	West Leg Linnell Lane	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	1	0	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	1	3

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Location: Murrieta
N/S: Whitewood Road
E/W: Linnel Lane/Lee Lane

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Whitewood Road			Westbound Lee Road			Northbound Whitewood Road			Eastbound Linnell Lane			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	12	1	0	0	0	0	3	0	0	0	0	16
12:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	5	0	0	0	0	0	0	0	0	0	0	5
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	22	1	0	0	0	0	4	0	0	0	0	27

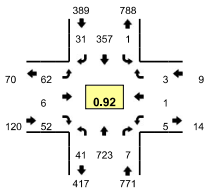
Date: 10/23/2018
Day: Tuesday

	Southbound Whitewood Road			Westbound Lee Road			Northbound Whitewood Road			Eastbound Linnell Lane			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	2	0	0	0	0	0	1	0	0	0	0	3
4:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	2	0	0	0	0	3	0	0	0	0	8

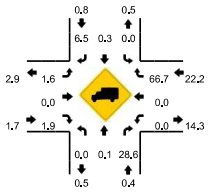
Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

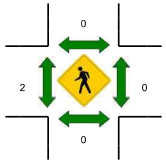
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

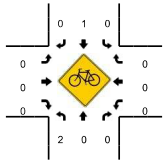
LOCATION: 17 Whitewood Rd – Linnel Ln/Lee Ln | **QC JOB #:** 14565437
CITY/STATE: Riverside, CA | **DATE:** Wed, Nov 15 2017

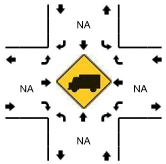


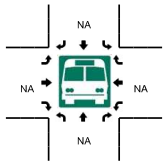
Peak-Hour: 4:50 PM – 5:50 PM
Peak 15-Min: 5:10 PM – 5:25 PM











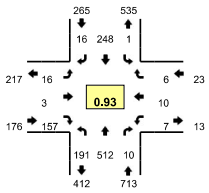
5-Min Count Period Beginning At	17 Whitewood Rd (Northbound)				17 Whitewood Rd (Southbound)				Linnel Ln/Lee Ln (Eastbound)				Linnel Ln/Lee Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	45	1	0	0	28	2	0	3	0	4	0	1	0	0	0	87	
4:05 PM	5	55	1	0	0	45	6	0	6	0	4	0	0	0	0	0	122	
4:10 PM	0	48	0	0	0	33	2	0	9	0	2	0	0	0	0	0	94	
4:15 PM	0	36	1	1	0	29	4	0	5	1	5	0	0	0	0	0	82	
4:20 PM	2	55	0	0	0	35	1	0	1	0	4	0	1	0	1	0	100	
4:25 PM	4	46	0	0	0	20	2	0	6	0	5	0	0	2	0	0	85	
4:30 PM	2	48	0	0	0	27	4	0	9	1	3	0	0	0	1	0	95	
4:35 PM	4	43	0	0	0	29	5	0	2	0	1	0	1	0	0	0	85	
4:40 PM	2	46	0	0	0	33	1	0	0	0	7	0	0	0	0	0	89	
4:45 PM	3	51	1	0	0	25	2	0	5	0	7	0	0	0	0	0	94	
4:50 PM	5	52	0	0	0	22	2	0	5	1	4	0	1	0	0	0	92	
4:55 PM	1	59	0	0	0	31	1	0	7	1	6	0	1	0	2	0	109	1134
5:00 PM	2	61	2	0	0	20	5	0	8	0	4	0	0	0	0	0	102	1149
5:05 PM	5	41	1	0	0	43	5	0	5	2	2	0	0	0	0	0	104	1131
5:10 PM	1	63	0	0	0	47	1	0	6	1	7	0	1	0	1	0	128	1165
5:15 PM	2	64	1	0	1	30	6	0	3	0	2	0	0	0	0	0	109	1192
5:20 PM	1	65	2	0	0	36	3	0	5	0	1	0	0	0	0	0	113	1205
5:25 PM	5	52	0	0	0	31	1	0	4	1	9	0	0	1	0	0	104	1224
5:30 PM	4	55	0	0	0	32	1	0	5	0	7	0	0	0	0	0	104	1233
5:35 PM	4	71	0	1	0	25	2	0	5	0	2	0	2	0	0	0	112	1260
5:40 PM	6	74	1	1	0	22	1	0	4	0	2	0	0	0	0	0	111	1282
5:45 PM	2	66	0	1	0	18	3	0	5	0	6	0	0	0	0	0	101	1289
5:50 PM	1	59	1	0	0	16	2	0	4	0	4	0	0	0	0	0	87	1284
5:55 PM	9	59	0	0	0	15	3	0	8	0	3	0	3	0	0	0	100	1275
Peak 15-Min Flowrates	**Northbound**				**Southbound**				**Eastbound**				**Westbound**				**Total**	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	768	12	0	4	452	40	0	56	4	40	0	4	0	4	0	1400	
Heavy Trucks	0	0	8		0	0	0		0	0	0		0	0	4		12	
Pedestrians		0				0				4				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad Stopped Buses																		

Comments:

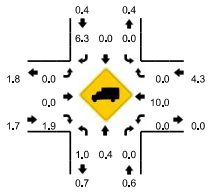
Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

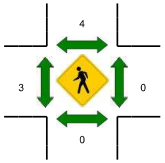
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

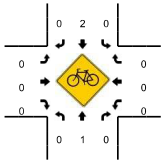
LOCATION: 18 Whitewood Rd – Baxter Rd | **QC JOB #:** 14565439
CITY/STATE: Riverside, CA | **DATE:** Thu, Nov 16 2017

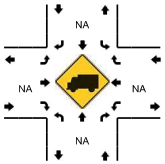


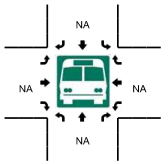
Peak-Hour: 4:40 PM – 5:40 PM
Peak 15-Min: 5:00 PM – 5:15 PM











5-Min Count Period Beginning At	18 Whitewood Rd (Northbound)				18 Whitewood Rd (Southbound)				Baxter Rd (Eastbound)				Baxter Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	9	42	1	0	0	29	2	0	1	0	14	0	0	0	0	0	98	
4:05 PM	10	30	0	0	0	24	1	0	0	0	10	1	0	0	0	0	76	
4:10 PM	18	42	0	0	0	22	1	0	1	0	8	0	0	0	1	0	93	
4:15 PM	16	47	0	0	0	29	1	0	2	1	7	0	1	0	0	0	104	
4:20 PM	9	44	1	0	0	20	2	0	2	0	13	0	0	0	0	0	91	
4:25 PM	12	37	0	0	0	10	0	0	1	0	10	0	0	1	0	0	71	
4:30 PM	8	37	0	0	0	20	0	0	1	0	10	0	0	1	0	0	77	
4:35 PM	13	34	0	0	0	17	1	0	4	0	12	0	1	1	0	0	83	
4:40 PM	15	38	1	0	0	21	2	0	1	0	11	0	2	1	2	0	94	
4:45 PM	11	36	1	0	0	29	1	0	0	0	11	0	1	0	0	0	90	
4:50 PM	20	37	0	0	0	16	4	0	3	0	9	0	0	0	1	0	90	
4:55 PM	14	49	1	0	0	19	1	0	2	1	11	0	0	1	0	0	99	1066
5:00 PM	17	45	1	0	0	22	3	0	0	0	15	0	0	1	0	0	104	1072
5:05 PM	16	35	0	0	0	17	0	1	4	1	27	0	0	2	0	0	103	1099
5:10 PM	16	43	2	0	0	26	2	0	1	0	19	0	1	0	0	0	110	1116
5:15 PM	11	41	1	0	0	25	1	0	2	1	13	0	2	1	0	0	98	1110
5:20 PM	16	46	1	0	0	16	0	0	2	0	9	0	0	0	0	0	90	1109
5:25 PM	22	50	1	0	0	19	1	0	1	0	5	0	1	2	0	0	102	1140
5:30 PM	16	47	0	0	0	18	0	0	0	0	17	0	0	1	3	0	102	1165
5:35 PM	17	45	1	0	0	20	1	0	0	0	10	0	0	1	0	0	95	1177
5:40 PM	16	36	1	0	0	19	3	0	0	0	8	0	0	0	0	0	83	1166
5:45 PM	17	52	0	0	0	14	0	0	0	0	6	0	0	1	0	0	90	1166
5:50 PM	8	41	0	0	0	14	0	0	2	1	15	0	0	1	1	0	83	1159
5:55 PM	8	37	1	0	0	15	1	0	0	0	8	0	1	0	0	0	71	1131
Peak 15-Min Flowrates	**Northbound**				**Southbound**				**Eastbound**				**Westbound**				**Total**	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	196	492	12	0	0	260	20	4	20	4	244	0	4	12	0	0	1268	
Heavy Trucks	0	0	0		0	0	0		0	0	8		0	0	0		8	
Pedestrians		0				0				8				0			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad Stopped Buses																		

Comments:

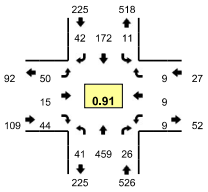
Report generated on 11/29/2017 1:09 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

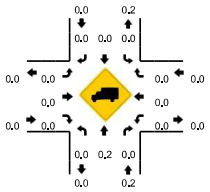
Method for determining peak hour: Total Entering Volume

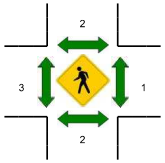
LOCATION: 19 Whitewood Rd – Keller Rd
CITY/STATE: Riverside, CA

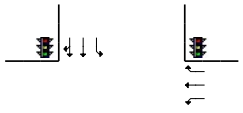
QC JOB #: 14565441
DATE: Wed, Nov 15 2017

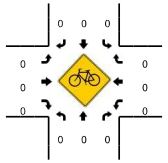


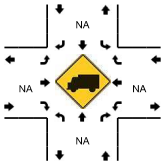
Peak-Hour: 4:55 PM – 5:55 PM
Peak 15-Min: 5:20 PM – 5:35 PM

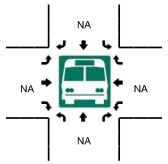












5-Min Count Period Beginning At	19 Whitewood Rd (Northbound)				19 Whitewood Rd (Southbound)				Keller Rd (Eastbound)				Keller Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	31	3	0	1	10	5	0	3	1	4	0	3	2	1	0	67	
4:05 PM	3	24	1	0	1	20	1	0	6	2	3	0	0	1	0	0	62	
4:10 PM	9	40	2	0	4	15	2	0	2	1	5	0	0	2	0	0	82	
4:15 PM	3	30	2	0	3	10	2	0	8	4	2	0	1	1	1	0	67	
4:20 PM	4	24	1	0	1	9	4	0	5	1	3	0	3	1	2	0	58	
4:25 PM	3	27	1	0	1	10	2	0	5	3	3	0	3	1	0	0	59	
4:30 PM	4	23	1	0	0	9	1	0	8	1	1	0	1	2	0	0	51	
4:35 PM	6	38	3	0	0	15	0	0	5	2	2	0	2	1	1	0	75	
4:40 PM	3	30	0	0	2	12	2	0	11	0	1	0	2	2	0	0	65	
4:45 PM	5	27	2	0	0	12	4	0	3	2	1	0	0	0	1	0	57	
4:50 PM	9	29	2	0	0	12	2	0	3	0	2	0	2	1	1	0	63	
4:55 PM	1	30	1	0	0	16	3	0	3	1	2	0	1	0	0	0	58	764
5:00 PM	4	39	4	0	1	8	5	0	2	0	7	0	0	1	1	0	72	769
5:05 PM	4	34	4	0	1	14	5	0	3	2	5	0	0	2	0	0	74	781
5:10 PM	5	30	0	0	3	14	4	0	7	1	10	0	1	0	0	0	75	774
5:15 PM	8	35	3	0	0	19	3	0	4	2	5	0	2	1	0	0	82	789
5:20 PM	1	41	3	0	1	15	4	0	6	0	3	0	2	1	1	0	78	809
5:25 PM	3	38	3	0	2	16	3	0	3	0	2	0	0	0	2	0	72	822
5:30 PM	5	48	4	0	0	17	6	0	5	4	2	0	0	3	1	0	95	866
5:35 PM	0	28	1	0	1	11	3	0	5	3	1	0	1	0	2	0	56	847
5:40 PM	5	51	0	0	1	17	3	0	5	1	3	0	1	0	0	0	87	869
5:45 PM	4	38	2	0	1	14	1	0	4	1	2	0	0	1	0	0	68	880
5:50 PM	1	47	1	0	0	11	2	0	3	0	2	0	1	0	2	0	70	887
5:55 PM	4	38	1	0	0	7	1	0	2	2	1	0	0	0	1	0	57	886

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	508	40	0	12	192	52	0	56	16	28	0	8	16	16	0	980
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				4				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/29/2017 1:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road
Weather: Clear

File Name : 22_Briggs_Max Gilliss_Leon Tue
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Briggs Road Southbound				Leon Road Westbound				Max Gilliss Boulevard Northbound				Leon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	57	17	75	23	37	2	62	92	88	27	207	25	89	116	230	574
04:15 PM	1	56	19	76	28	33	1	62	77	84	23	184	29	84	150	263	585
04:30 PM	2	78	28	108	30	48	2	80	117	97	28	242	25	67	126	218	648
04:45 PM	6	76	22	104	29	30	4	63	118	83	42	243	28	74	143	245	655
Total	10	267	86	363	110	148	9	267	404	352	120	876	107	314	535	956	2462
05:00 PM	1	57	17	75	23	37	2	62	92	88	27	207	25	89	116	230	574
05:15 PM	1	56	19	76	28	33	1	62	97	94	23	214	29	84	150	263	615
05:30 PM	2	78	28	108	30	48	2	80	117	97	28	242	25	67	126	218	648
05:45 PM	6	76	22	104	29	30	4	63	118	83	42	243	28	74	143	245	655
Total	10	267	86	363	110	148	9	267	424	362	120	906	107	314	535	956	2492
Grand Total	20	534	172	726	220	296	18	534	828	714	240	1782	214	628	1070	1912	4954
Apprch %	2.8	73.6	23.7		41.2	55.4	3.4		46.5	40.1	13.5		11.2	32.8	56		
Total %	0.4	10.8	3.5	14.7	4.4	6	0.4	10.8	16.7	14.4	4.8	36	4.3	12.7	21.6	38.6	

	Briggs Road Southbound				Leon Road Westbound				Max Gilliss Boulevard Northbound				Leon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	**78**	**28**	**108**	**30**	**48**	2	**80**	117	**97**	28	242	25	67	126	218	648
04:45 PM	**6**	76	22	104	29	30	**4**	63	**118**	83	**42**	**243**	28	74	143	245	**655**
05:00 PM	1	57	17	75	23	37	2	62	92	88	27	207	25	**89**	116	230	574
05:15 PM	1	56	19	76	28	33	1	62	97	94	23	214	**29**	84	**150**	**263**	615
Total Volume	10	267	86	363	110	148	9	267	424	362	120	906	107	314	535	956	2492
% App. Total	2.8	73.6	23.7		41.2	55.4	3.4		46.8	40	13.2		11.2	32.8	56		
PHF	.417	.856	.768	.840	.917	.771	.563	.834	.898	.933	.714	.932	.922	.882	.892	.909	.951

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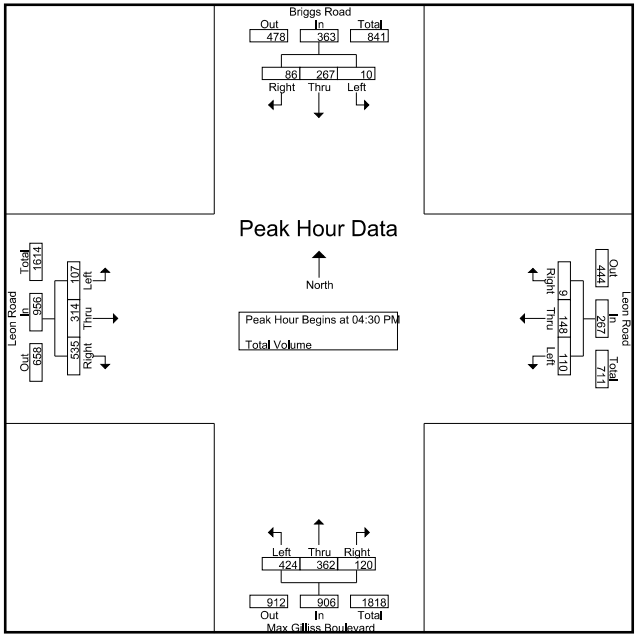
County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road
Weather: Clear

File Name : 22_Briggs_Max Gilliss_Leon Tue
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	1	57	17	75	23	37	2	62	117	**97**	28	242	25	**89**	116	230
+15 mins.	1	56	19	76	28	33	1	62	**118**	83	**42**	**243**	**29**	84	**150**	**263**
+30 mins.	2	**78**	**28**	**108**	**30**	**48**	2	**80**	92	88	27	207	25	67	126	218
+45 mins.	**6**	76	22	104	29	30	**4**	63	97	94	23	214	28	74	143	245
Total Volume	10	267	86	363	110	148	9	267	424	362	120	906	107	314	535	956
% App. Total	2.8	73.6	23.7		41.2	55.4	3.4		46.8	40	13.2		11.2	32.8	56	
PHF	.417	.856	.768	.840	.917	.771	.563	.834	.898	.933	.714	.932	.922	.882	.892	.909

Location: County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Briggs Road Pedestrians	East Leg Leon Road Pedestrians	South Leg Max Gilliss Boulevard Pedestrians	West Leg Leon Road Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Date: 10/23/2018
Day: Tuesday

	North Leg Briggs Road Pedestrians	East Leg Leon Road Pedestrians	South Leg Max Gilliss Boulevard Pedestrians	West Leg Leon Road Pedestrians	
4:00 PM	0	0	0	2	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	2	2
5:15 PM	0	0	0	0	0
5:30 PM	0	0	1	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	4	6

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Location: County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Briggs Road			Westbound Leon Road			Northbound Max Gilliss Boulevard			Eastbound Leon Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	1	0	1	0	0	0	2	4
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
12:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	2	1	0	1	0	0	0	3	9

Date: 10/23/2018
Day: Tuesday

	Southbound Briggs Road			Westbound Leon Road			Northbound Max Gilliss Boulevard			Eastbound Leon Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	2	2	6

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County of Riverside
N/S: Winchester Road (SR-79)
E/W: Max Gillis Boulevard/Thompson Road
Weather: Clear

File Name : 23_CRV_79_Max Gilliss_Thompson Tue
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Winchester Road Southbound				Thompson Road Westbound				Winchester Road Northbound				Max Gilliss Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	12	190	21	223	28	69	2	99	111	263	41	415	26	65	144	235	972
04:15 PM	11	219	24	254	19	47	3	69	128	348	30	506	26	76	123	225	1054
04:30 PM	16	200	19	235	25	62	6	93	127	286	37	450	33	78	143	254	1032
04:45 PM	7	172	21	200	32	70	2	104	113	286	27	426	41	91	163	295	1025
Total	46	781	85	912	104	248	13	365	479	1183	135	1797	126	310	573	1009	4083
05:00 PM	14	193	36	243	20	72	3	95	151	290	28	469	29	77	138	244	1051
05:15 PM	9	183	39	231	21	82	4	107	143	362	21	526	39	87	144	270	1134
05:30 PM	16	192	19	227	27	81	6	114	140	316	28	484	41	78	149	268	1093
05:45 PM	4	211	29	244	31	57	6	94	140	359	41	540	42	77	151	270	1148
Total	43	779	123	945	99	292	19	410	574	1327	118	2019	151	319	582	1052	4426
Grand Total	89	1560	208	1857	203	540	32	775	1053	2510	253	3816	277	629	1155	2061	8509
Apprch %	4.8	84	11.2		26.2	69.7	4.1		27.6	65.8	6.6		13.4	30.5	56		
Total %	1	18.3	2.4	21.8	2.4	6.3	0.4	9.1	12.4	29.5	3	44.8	3.3	7.4	13.6	24.2	

	Winchester Road Southbound				Thompson Road Westbound				Winchester Road Northbound				Max Gilliss Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	14	193	36	243	20	72	3	95	**151**	290	28	469	29	77	138	244	1051
05:15 PM	9	183	**39**	231	21	**82**	4	107	143	**362**	21	526	39	**87**	144	**270**	1134
05:30 PM	**16**	192	19	227	27	81	**6**	**114**	140	316	28	484	41	78	149	268	1093
05:45 PM	4	**211**	29	**244**	**31**	57	6	94	140	359	**41**	**540**	**42**	77	**151**	270	**1148**
Total Volume	43	779	123	945	99	292	19	410	574	1327	118	2019	151	319	582	1052	4426
% App. Total	4.6	82.4	13		24.1	71.2	4.6		28.4	65.7	5.8		14.4	30.3	55.3		
PHF	.672	.923	.788	.968	.798	.890	.792	.899	.950	.916	.720	.935	.899	.917	.964	.974	.964

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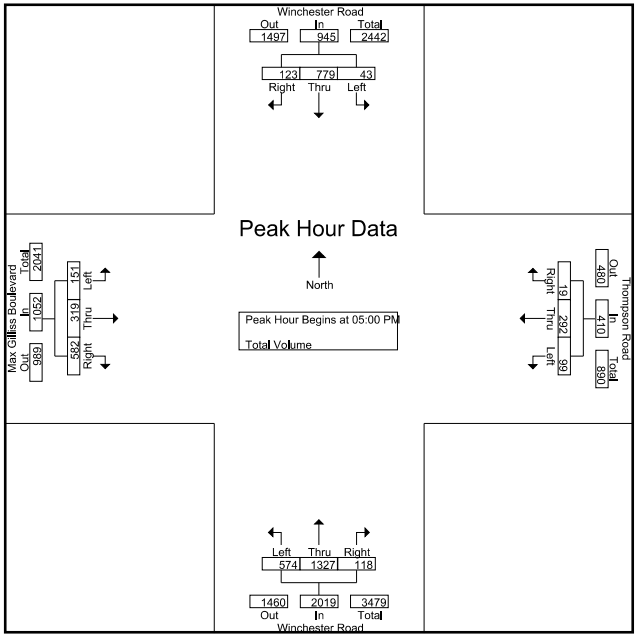
County of Riverside
N/S: Winchester Road (SR-79)
E/W: Max Gillis Boulevard/Thompson Road
Weather: Clear

File Name : 23_CRV_79_Max Gilliss_Thompson Tue
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				05:00 PM				04:45 PM			
+0 mins.	14	193	36	243	**32**	70	2	104	**151**	290	28	469	**41**	**91**	**163**	**295**
+15 mins.	9	183	**39**	231	20	72	3	95	143	**362**	21	526	29	77	138	244
+30 mins.	**16**	192	19	227	21	**82**	4	107	140	316	28	484	39	87	144	270
+45 mins.	4	**211**	29	**244**	27	81	**6**	**114**	140	359	**41**	**540**	41	78	149	268
Total Volume	43	779	123	945	100	305	15	420	574	1327	118	2019	150	333	594	1077
% App. Total	4.6	82.4	13		23.8	72.6	3.6		28.4	65.7	5.8		13.9	30.9	55.2	
PHF	.672	.923	.788	.968	.781	.930	.625	.921	.950	.916	.720	.935	.915	.915	.911	.913

Location: County of Riverside
N/S: Winchester Road
E/W: Max Gilliss Blvd/Thompson Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Winchester Road Pedestrians	East Leg Thompson Road Pedestrians	South Leg Winchester Road Pedestrians	West Leg Max Gilliss Boulevard Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	1	1
1:00 PM	0	0	0	0	0
1:15 PM	0	0	4	1	5
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	4	2	6

Date: 10/23/2018
Day: Tuesday

	North Leg Winchester Road Pedestrians	East Leg Thompson Road Pedestrians	South Leg Winchester Road Pedestrians	West Leg Max Gilliss Boulevard Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	4	0	4

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Location: County of Riverside
N/S: Winchester Road
E/W: Max Gilliss Blvd/Thompson Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Winchester Road			Westbound Thompson Road			Northbound Winchester Road			Eastbound Max Gilliss Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	1	0	0	1	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	5	5
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	1	1	0	2	0	5	10

Date: 10/23/2018
Day: Tuesday

	Southbound Winchester Road			Westbound Thompson Road			Northbound Winchester Road			Eastbound Max Gilliss Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 15_WDM_15S_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	I-15 Southbound Off Ramp Southbound				Clinton Keith Road Westbound				I-15 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	104	1	84	189	67	215	0	282	0	0	0	0	0	201	130	331	802
12:15 PM	105	0	92	197	64	229	0	293	0	0	0	0	0	198	100	298	788
12:30 PM	95	2	79	176	49	210	0	259	0	0	0	0	0	195	142	337	772
12:45 PM	93	0	108	201	63	227	0	290	0	0	0	0	0	221	125	346	837
Total	397	3	363	763	243	881	0	1124	0	0	0	0	0	815	497	1312	3199
01:00 PM	86	0	80	166	60	225	0	285	0	0	0	0	0	205	139	344	795
01:15 PM	89	1	65	155	68	269	0	337	0	0	0	0	0	190	128	318	810
01:30 PM	74	0	98	172	60	246	0	306	0	0	0	0	0	184	120	304	782
01:45 PM	93	5	90	188	65	246	0	311	0	0	0	0	0	152	95	247	746
Total	342	6	333	681	253	986	0	1239	0	0	0	0	0	731	482	1213	3133
Grand Total	739	9	696	1444	496	1867	0	2363	0	0	0	0	0	1546	979	2525	6332
Apprch %	51.2	0.6	48.2		21	79	0		0	0	0		0	61.2	38.8		
Total %	11.7	0.1	11	22.8	7.8	29.5	0	37.3	0	0	0	0	0	24.4	15.5	39.9	

	I-15 Southbound Off Ramp Southbound				Clinton Keith Road Westbound				I-15 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:45 PM																	
12:45 PM	**93**	0	**108**	**201**	63	227	0	290	0	0	0	0	0	**221**	125	**346**	**837**
01:00 PM	86	0	80	166	60	225	0	285	0	0	0	0	0	205	**139**	344	795
01:15 PM	89	**1**	65	155	**68**	**269**	0	**337**	0	0	0	0	0	190	128	318	810
01:30 PM	74	0	98	172	60	246	0	306	0	0	0	0	0	184	120	304	782
Total Volume	342	1	351	694	251	967	0	1218	0	0	0	0	0	800	512	1312	3224
% App. Total	49.3	0.1	50.6		20.6	79.4	0		0	0	0		0	61	39		
PHF	.919	.250	.813	.863	.923	.899	.000	.904	.000	.000	.000	.000	.000	.905	.921	.948	.963

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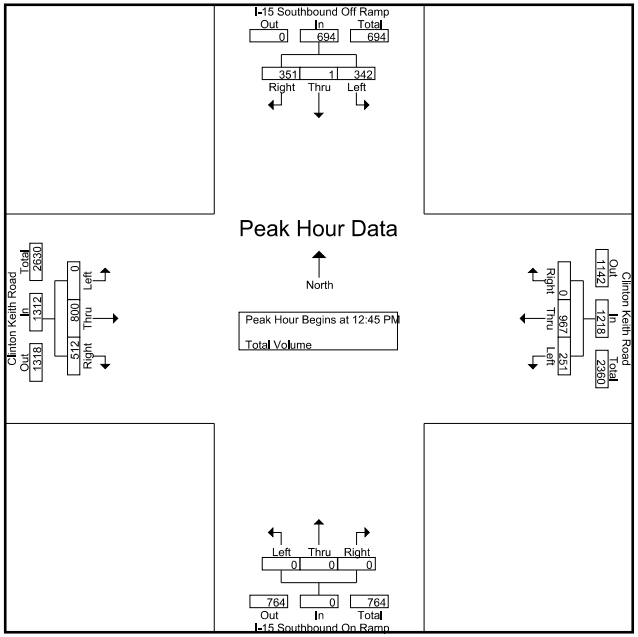
City of Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 15_WDM_15S_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:00 PM				01:00 PM				12:00 PM				12:30 PM			
+0 mins.	104	1	84	189	60	225	0	285	0	0	0	0	0	195	**142**	337
+15 mins.	**105**	0	92	197	**68**	**269**	0	**337**	0	0	0	0	0	**221**	125	**346**
+30 mins.	95	**2**	79	176	60	246	0	306	0	0	0	0	0	205	139	344
+45 mins.	93	0	**108**	**201**	65	246	0	311	0	0	0	0	0	190	128	318
Total Volume	397	3	363	763	253	986	0	1239	0	0	0	0	0	811	534	1345
% App. Total	52	0.4	47.6		20.4	79.6	0		0	0	0		0	60.3	39.7	
PHF	.945	.375	.840	.949	.930	.916	.000	.919	.000	.000	.000	.000	.000	.917	.940	.972

Location: Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-15 Southbound Ramps Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg I-15 Southbound Ramps Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	1	0	0	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg I-15 Southbound Ramps Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg I-15 Southbound Ramps Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	2	0	0	0	2
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	5	0	0	0	5

Location: Wildomar
N/S: I-15 Southbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-15 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

Date: 10/23/2018
Day: Tuesday

	Southbound I-15 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	0	0	0	0	0	0	0	1	3

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City of Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 16_WDM_15N_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	I-15 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-15 Northbound Off Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	0	0	0	0	0	177	111	288	89	1	82	172	71	219	0	290	750
12:15 PM	0	0	0	0	0	171	108	279	121	1	80	202	78	233	0	311	792
12:30 PM	0	0	0	0	0	156	121	277	104	0	73	177	90	198	0	288	742
12:45 PM	0	0	0	0	0	177	101	278	115	3	80	198	88	231	0	319	795
Total	0	0	0	0	0	681	441	1122	429	5	315	749	327	881	0	1208	3079
01:00 PM	0	0	0	0	0	178	105	283	109	1	62	172	89	194	0	283	738
01:15 PM	0	0	0	0	0	201	118	319	127	0	63	190	66	205	0	271	780
01:30 PM	0	0	0	0	0	171	117	288	129	1	51	181	67	195	0	262	731
01:45 PM	0	0	0	0	0	185	117	302	122	0	76	198	54	188	0	242	742
Total	0	0	0	0	0	735	457	1192	487	2	252	741	276	782	0	1058	2991
Grand Total	0	0	0	0	0	1416	898	2314	916	7	567	1490	603	1663	0	2266	6070
Apprch %	0	0	0		0	61.2	38.8		61.5	0.5	38.1		26.6	73.4	0		
Total %	0	0	0	0	0	23.3	14.8	38.1	15.1	0.1	9.3	24.5	9.9	27.4	0	37.3	

	I-15 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-15 Northbound Off Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	0	0	0	0	**177**	111	**288**	89	1	**82**	172	71	219	0	290	750
12:15 PM	0	0	0	0	0	171	108	279	**121**	1	80	**202**	78	**233**	0	311	792
12:30 PM	0	0	0	0	0	156	**121**	277	104	0	73	177	**90**	198	0	288	742
12:45 PM	0	0	0	0	0	177	101	278	115	**3**	80	198	88	231	0	**319**	**795**
Total Volume	0	0	0	0	0	681	441	1122	429	5	315	749	327	881	0	1208	3079
% App. Total	0	0	0		0	60.7	39.3		57.3	0.7	42.1		27.1	72.9	0		
PHF	.000	.000	.000	.000	.000	.962	.911	.974	.886	.417	.960	.927	.908	.945	.000	.947	.968

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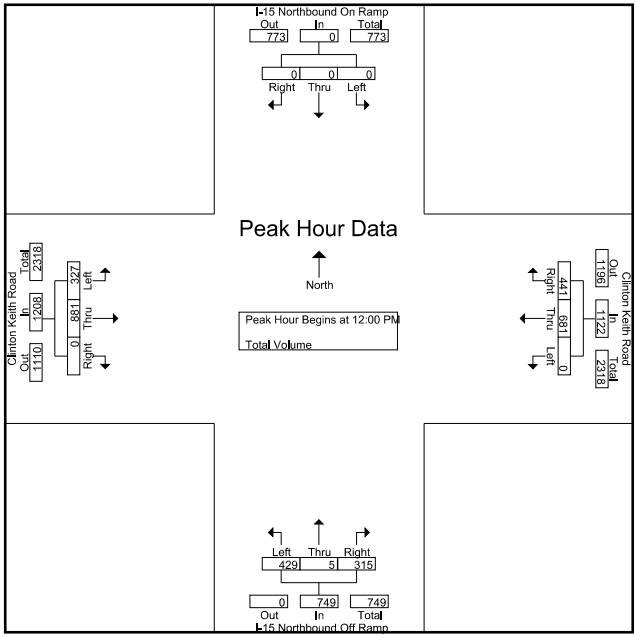
City of Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 16_WDM_15N_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:00 PM				01:00 PM				12:00 PM				12:00 PM			
+0 mins.	0	0	0	0	0	178	105	283	89	1	**82**	172	71	219	0	290
+15 mins.	0	0	0	0	0	**201**	**118**	**319**	**121**	1	80	**202**	78	**233**	0	311
+30 mins.	0	0	0	0	0	171	117	288	104	0	73	177	**90**	198	0	288
+45 mins.	0	0	0	0	0	185	117	302	115	**3**	80	198	88	231	0	**319**
Total Volume	0	0	0	0	0	735	457	1192	429	5	315	749	327	881	0	1208
% App. Total	0	0	0		0	61.7	38.3		57.3	0.7	42.1		27.1	72.9	0	
PHF	.000	.000	.000	.000	.000	.914	.968	.934	.886	.417	.960	.927	.908	.945	.000	.947

Location: Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-15 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-15 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	1	0	0	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	1	0	1
12:45 PM	0	0	3	0	3
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	5	0	6

Date: 10/23/2018
Day: Tuesday

	North Leg I-15 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-15 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	2	0	0	0	2
4:30 PM	1	0	1	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	4	0	2	0	6

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Location: Wildomar
N/S: I-15 Northbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-15 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

Date: 10/23/2018
Day: Tuesday

	Southbound I-15 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-15 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	2	0	4

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City of Wildomar
N/S: George Avenue
E/W: Clinton Keith Road
Weather: Clear

File Name : 17_WDM_George_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	George Avenue Southbound				Clinton Keith Road Westbound				George Avenue Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	8	6	26	40	25	169	9	203	12	5	23	40	30	181	10	221	504
12:15 PM	13	7	21	41	19	158	4	181	20	3	12	35	24	210	7	241	498
12:30 PM	10	7	13	30	36	178	6	220	18	9	17	44	24	182	7	213	507
12:45 PM	7	6	30	43	25	176	10	211	21	1	27	49	32	199	5	236	539
Total	38	26	90	154	105	681	29	815	71	18	79	168	110	772	29	911	2048
01:00 PM	6	5	22	33	15	178	3	196	13	11	12	36	24	169	7	200	465
01:15 PM	11	4	19	34	25	215	5	245	13	9	16	38	24	168	9	201	518
01:30 PM	8	6	22	36	21	191	6	218	18	3	16	37	24	169	7	200	491
01:45 PM	12	5	29	46	20	159	8	187	19	6	18	43	20	194	6	220	496
Total	37	20	92	149	81	743	22	846	63	29	62	154	92	700	29	821	1970
Grand Total	75	46	182	303	186	1424	51	1661	134	47	141	322	202	1472	58	1732	4018
Apprch %	24.8	15.2	60.1		11.2	85.7	3.1		41.6	14.6	43.8		11.7	85	3.3		
Total %	1.9	1.1	4.5	7.5	4.6	35.4	1.3	41.3	3.3	1.2	3.5	8	5	36.6	1.4	43.1	

	George Avenue Southbound				Clinton Keith Road Westbound				George Avenue Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	8	6	26	40	25	169	9	203	12	5	23	40	30	181	**10**	221	504
12:15 PM	**13**	**7**	21	41	19	158	4	181	20	3	12	35	24	**210**	7	**241**	498
12:30 PM	10	7	13	30	**36**	**178**	6	**220**	18	**9**	17	44	24	182	7	213	507
12:45 PM	7	6	**30**	**43**	25	176	**10**	211	**21**	1	**27**	**49**	**32**	199	5	236	**539**
Total Volume	38	26	90	154	105	681	29	815	71	18	79	168	110	772	29	911	2048
% App. Total	24.7	16.9	58.4		12.9	83.6	3.6		42.3	10.7	47		12.1	84.7	3.2		
PHF	.731	.929	.750	.895	.729	.956	.725	.926	.845	.500	.731	.857	.859	.919	.725	.945	.950

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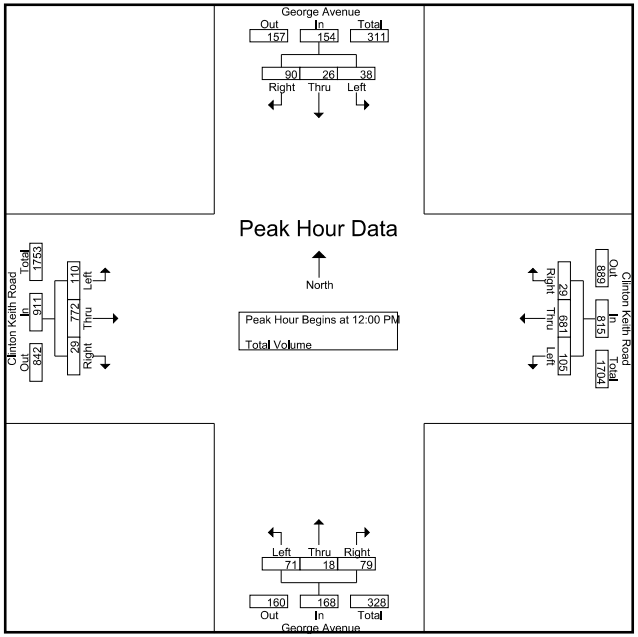
City of Wildomar
N/S: George Avenue
E/W: Clinton Keith Road
Weather: Clear

File Name : 17_WDM_George_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:00 PM				12:30 PM				12:00 PM				12:00 PM			
+0 mins.	8	6	26	40	**36**	178	6	220	12	5	23	40	30	181	**10**	221
+15 mins.	**13**	**7**	21	41	25	176	**10**	211	20	3	12	35	24	**210**	7	**241**
+30 mins.	10	7	13	30	15	178	3	196	18	**9**	17	44	24	182	7	213
+45 mins.	7	6	**30**	**43**	25	**215**	5	**245**	**21**	1	**27**	**49**	**32**	199	5	236
Total Volume	38	26	90	154	101	747	24	872	71	18	79	168	110	772	29	911
% App. Total	24.7	16.9	58.4		11.6	85.7	2.8		42.3	10.7	47		12.1	84.7	3.2	
PHF	.731	.929	.750	.895	.701	.869	.600	.890	.845	.500	.731	.857	.859	.919	.725	.945

Location: Wildomar
N/S: George Avenue
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg George Avenue Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg George Avenue Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	0	0	2	2	4
12:15 PM	1	1	0	0	2
12:30 PM	0	0	1	1	2
12:45 PM	0	0	0	0	0
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	1	1	2
TOTAL VOLUMES:	1	1	5	4	11

Date: 10/23/2018
Day: Tuesday

	North Leg George Avenue Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg George Avenue Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	2	2	4
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	1	1	0	2
TOTAL VOLUMES:	0	1	3	3	7

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Location: Wildomar
N/S: George Avenue
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound George Avenue			Westbound Clinton Keith Road			Northbound George Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	1	0	0	0	4	0	0	0	5
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	4	0	1	0	6

Date: 10/23/2018
Day: Tuesday

	Southbound George Avenue			Westbound Clinton Keith Road			Northbound George Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	1	0	3

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City of Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 18_WDM_Inland Valley_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Clinton Keith Road Westbound			Inland Valley Road Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
12:00 PM	4	143	147	55	1	56	167	62	229	432
12:15 PM	5	135	140	58	5	63	169	52	221	424
12:30 PM	2	172	174	42	3	45	165	41	206	425
12:45 PM	7	143	150	53	9	62	176	57	233	445
Total	18	593	611	208	18	226	677	212	889	1726
01:00 PM	3	170	173	53	6	59	143	37	180	412
01:15 PM	5	168	173	54	7	61	148	40	188	422
01:30 PM	2	153	155	60	2	62	140	57	197	414
01:45 PM	6	137	143	47	3	50	165	51	216	409
Total	16	628	644	214	18	232	596	185	781	1657
Grand Total	34	1221	1255	422	36	458	1273	397	1670	3383
Apprch %	2.7	97.3		92.1	7.9		76.2	23.8		
Total %	1	36.1	37.1	12.5	1.1	13.5	37.6	11.7	49.4	

	Clinton Keith Road Westbound			Inland Valley Road Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	4	143	147	55	1	56	167	**62**	229	432
12:15 PM	5	135	140	**58**	5	**63**	169	52	221	424
12:30 PM	2	**172**	**174**	42	3	45	165	41	206	425
12:45 PM	**7**	143	150	53	**9**	62	**176**	57	**233**	**445**
Total Volume	18	593	611	208	18	226	677	212	889	1726
% App. Total	2.9	97.1		92	8		76.2	23.8		
PHF	.643	.862	.878	.897	.500	.897	.962	.855	.954	.970

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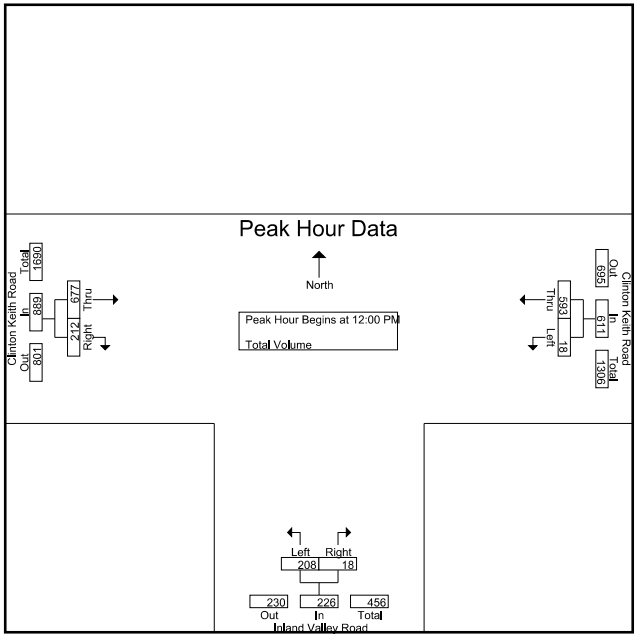
City of Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 18_WDM_Inland Valley_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:30 PM			12:45 PM			12:00 PM		
+0 mins.	2	**172**	**174**	53	**9**	**62**	167	**62**	229
+15 mins.	**7**	143	150	53	6	59	169	52	221
+30 mins.	3	170	173	54	7	61	165	41	206
+45 mins.	5	168	173	**60**	2	62	**176**	57	**233**
Total Volume	17	653	670	220	24	244	677	212	889
% App. Total	2.5	97.5		90.2	9.8		76.2	23.8	
PHF	.607	.949	.963	.917	.667	.984	.962	.855	.954

Location: Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Inland Valley Road	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	1	0	1
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Inland Valley Road	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	2	0	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	3	0	3

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Location: Wildomar
N/S: Inland Valley Road
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Inland Valley Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	2	0	0	0	5	0	7

Date: 10/23/2018
Day: Tuesday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Inland Valley Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	1	0	0	0	1	0	3

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City of Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road
Weather: Clear

File Name : 19_WDM_Salida Del Sol_Clinton Keith SAT
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Salida Del Sol Southbound			Clinton Keith Road Westbound			Clinton Keith Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
12:00 PM	1	1	2	159	1	160	4	149	153	315
12:15 PM	0	5	5	127	2	129	6	172	178	312
12:30 PM	0	1	1	165	1	166	1	168	169	336
12:45 PM	6	0	6	151	0	151	3	185	188	345
Total	7	7	14	602	4	606	14	674	688	1308
01:00 PM	4	2	6	160	2	162	4	138	142	310
01:15 PM	0	2	2	185	4	189	1	157	158	349
01:30 PM	3	3	6	156	7	163	2	147	149	318
01:45 PM	2	2	4	138	4	142	3	170	173	319
Total	9	9	18	639	17	656	10	612	622	1296
Grand Total	16	16	32	1241	21	1262	24	1286	1310	2604
Apprch %	50	50		98.3	1.7		1.8	98.2		
Total %	0.6	0.6	1.2	47.7	0.8	48.5	0.9	49.4	50.3	

	Salida Del Sol Southbound			Clinton Keith Road Westbound			Clinton Keith Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:30 PM										
12:30 PM	0	1	1	165	1	166	1	168	169	336
12:45 PM	**6**	0	**6**	151	0	151	3	**185**	**188**	345
01:00 PM	4	**2**	6	160	2	162	**4**	138	142	310
01:15 PM	0	2	2	**185**	**4**	**189**	1	157	158	**349**
Total Volume	10	5	15	661	7	668	9	648	657	1340
% App. Total	66.7	33.3		99	1		1.4	98.6		
PHF	.417	.625	.625	.893	.438	.884	.563	.876	.874	.960

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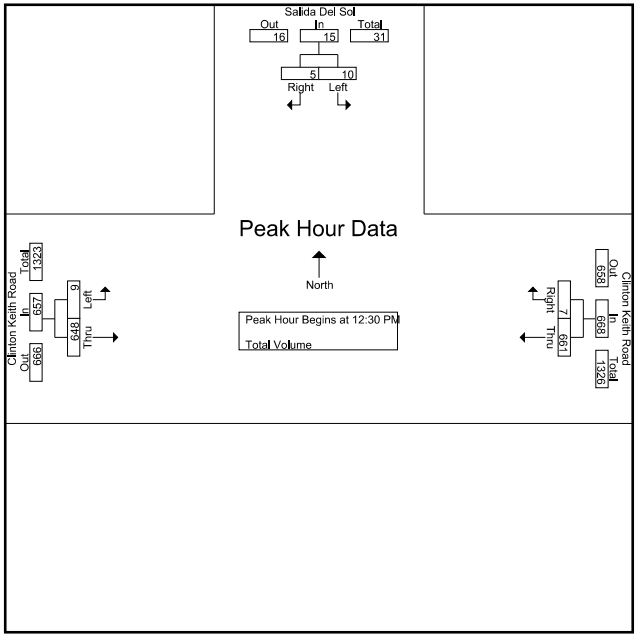
City of Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road
Weather: Clear

File Name : 19_WDM_Salida Del Sol_Clinton Keith SAT
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:45 PM			12:30 PM			12:00 PM		
+0 mins.	**6**	0	**6**	165	1	166	4	149	153
+15 mins.	4	2	6	151	0	151	**6**	172	178
+30 mins.	0	2	2	160	2	162	1	168	169
+45 mins.	3	**3**	6	**185**	**4**	**189**	3	**185**	**188**
Total Volume	13	7	20	661	7	668	14	674	688
% App. Total	65	35		99	1		2	98	
PHF	.542	.583	.833	.893	.438	.884	.583	.911	.915

Location: Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Salida Del Sol	East Leg Clinton Keith Road	South Leg Dead End	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	1	0	0	0	1
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Salida Del Sol	East Leg Clinton Keith Road	South Leg Dead End	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	1	0	2

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Location: Wildomar
N/S: Salida Del Sol
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Salida Del Sol			Westbound Clinton Keith Road			Northbound Dead End			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	2	0	0	0	0	4	0	6

Date: 10/23/2018
Day: Tuesday

	Southbound Salida Del Sol			Westbound Clinton Keith Road			Northbound Dead End			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	1	0	3

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City of Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road
Weather: Clear

File Name : 20_WDM_Elizabeth_Clinton Keith SAT
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Elizabeth Lane Southbound				Clinton Keith Road Westbound				Elizabeth Lane Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	0	0	14	14	0	135	2	137	0	0	1	1	10	133	2	145	297
12:15 PM	0	0	5	5	0	124	1	125	1	0	1	2	8	168	2	178	310
12:30 PM	1	0	11	12	0	165	0	165	1	0	3	4	5	166	0	171	352
12:45 PM	1	0	17	18	0	129	0	129	0	0	0	0	9	178	3	190	337
Total	2	0	47	49	0	553	3	556	2	0	5	7	32	645	7	684	1296
01:00 PM	0	0	6	6	0	162	5	167	1	0	0	1	4	141	0	145	319
01:15 PM	2	0	13	15	0	170	0	170	2	0	0	2	8	157	1	166	353
01:30 PM	3	1	8	12	3	144	5	152	2	0	1	3	8	127	3	138	305
01:45 PM	2	0	9	11	2	127	4	133	2	1	1	4	8	168	1	177	325
Total	7	1	36	44	5	603	14	622	7	1	2	10	28	593	5	626	1302
Grand Total	9	1	83	93	5	1156	17	1178	9	1	7	17	60	1238	12	1310	2598
Apprch %	9.7	1.1	89.2		0.4	98.1	1.4		52.9	5.9	41.2		4.6	94.5	0.9		
Total %	0.3	0	3.2	3.6	0.2	44.5	0.7	45.3	0.3	0	0.3	0.7	2.3	47.7	0.5	50.4	

	Elizabeth Lane Southbound				Clinton Keith Road Westbound				Elizabeth Lane Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	1	0	11	12	0	165	0	165	1	0	**3**	**4**	5	166	0	171	352
12:45 PM	1	0	**17**	**18**	0	129	0	129	0	0	0	0	**9**	**178**	**3**	**190**	337
01:00 PM	0	0	6	6	0	162	**5**	167	1	0	0	1	4	141	0	145	319
01:15 PM	**2**	0	13	15	0	**170**	0	**170**	**2**	0	0	2	8	157	1	166	**353**
Total Volume	4	0	47	51	0	626	5	631	4	0	3	7	26	642	4	672	1361
% App. Total	7.8	0	92.2		0	99.2	0.8		57.1	0	42.9		3.9	95.5	0.6		
PHF	.500	.000	.691	.708	.000	.921	.250	.928	.500	.000	.250	.438	.722	.902	.333	.884	.964

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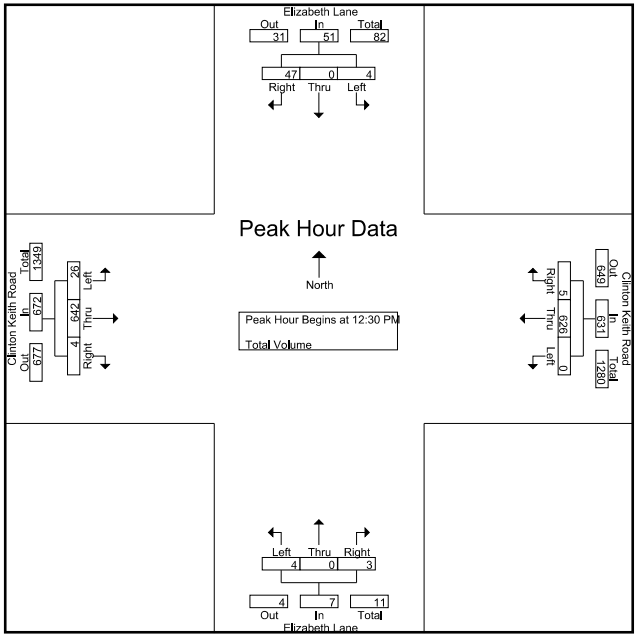
City of Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road
Weather: Clear

File Name : 20_WDM_Elizabeth_Clinton Keith SAT
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				01:00 PM				12:00 PM			
+0 mins.	1	0	11	12	0	165	0	165	1	0	0	1	**10**	133	2	145
+15 mins.	1	0	**17**	**18**	0	129	0	129	**2**	0	0	2	8	168	2	178
+30 mins.	0	0	6	6	0	162	**5**	167	2	0	**1**	3	5	166	0	171
+45 mins.	**2**	0	13	15	0	**170**	0	**170**	2	**1**	1	**4**	9	**178**	**3**	**190**
Total Volume	4	0	47	51	0	626	5	631	7	1	2	10	32	645	7	684
% App. Total	7.8	0	92.2		0	99.2	0.8		70	10	20		4.7	94.3	1	
PHF	.500	.000	.691	.708	.000	.921	.250	.928	.875	.250	.500	.625	.800	.906	.583	.900

Location: Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Elizabeth Lane Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Elizabeth Lane Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	1	0	0	0	1
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Elizabeth Lane Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Elizabeth Lane Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	2	0	3

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Wildomar
N/S: Elizabeth Lane
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Elizabeth Lane			Westbound Clinton Keith Road			Northbound Elizabeth Lane			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	5	0	7

Date: 10/23/2018
Day: Tuesday

	Southbound Elizabeth Lane			Westbound Clinton Keith Road			Northbound Elizabeth Lane			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

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City of Wildomar
N/S: Smith Ranch Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 21_WDM_Smith Ranch_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Smith Ranch Road Southbound				Clinton Keith Road Westbound				Smith Ranch Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	9	0	10	19	4	119	5	128	3	0	3	6	5	138	1	144	297
12:15 PM	3	1	8	12	3	112	3	118	4	0	3	7	13	145	4	162	299
12:30 PM	8	0	10	18	6	147	8	161	9	0	0	9	8	155	7	170	358
12:45 PM	11	0	5	16	5	119	12	136	4	0	1	5	17	165	6	188	345
Total	31	1	33	65	18	497	28	543	20	0	7	27	43	603	18	664	1299
01:00 PM	8	0	8	16	6	148	8	162	10	1	1	12	12	128	4	144	334
01:15 PM	5	0	7	12	3	157	9	169	6	1	1	8	6	139	4	149	338
01:30 PM	4	2	12	18	4	135	8	147	6	0	0	6	10	126	3	139	310
01:45 PM	7	0	10	17	0	121	9	130	3	0	1	4	9	161	1	171	322
Total	24	2	37	63	13	561	34	608	25	2	3	30	37	554	12	603	1304
Grand Total	55	3	70	128	31	1058	62	1151	45	2	10	57	80	1157	30	1267	2603
Apprch %	43	2.3	54.7		2.7	91.9	5.4		78.9	3.5	17.5		6.3	91.3	2.4		
Total %	2.1	0.1	2.7	4.9	1.2	40.6	2.4	44.2	1.7	0.1	0.4	2.2	3.1	44.4	1.2	48.7	

	Smith Ranch Road Southbound				Clinton Keith Road Westbound				Smith Ranch Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	8	0	**10**	**18**	**6**	147	8	161	9	0	0	9	8	155	**7**	170	**358**
12:45 PM	**11**	0	5	16	5	119	**12**	136	4	0	**1**	5	**17**	**165**	6	**188**	345
01:00 PM	8	0	8	16	6	148	8	162	**10**	**1**	1	**12**	12	128	4	144	334
01:15 PM	5	0	7	12	3	**157**	9	**169**	6	1	1	8	6	139	4	149	338
Total Volume	32	0	30	62	20	571	37	628	29	2	3	34	43	587	21	651	1375
% App. Total	51.6	0	48.4		3.2	90.9	5.9		85.3	5.9	8.8		6.6	90.2	3.2		
PHF	.727	.000	.750	.861	.833	.909	.771	.929	.725	.500	.750	.708	.632	.889	.750	.866	.960

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City of Wildomar
N/S: Smith Ranch Road
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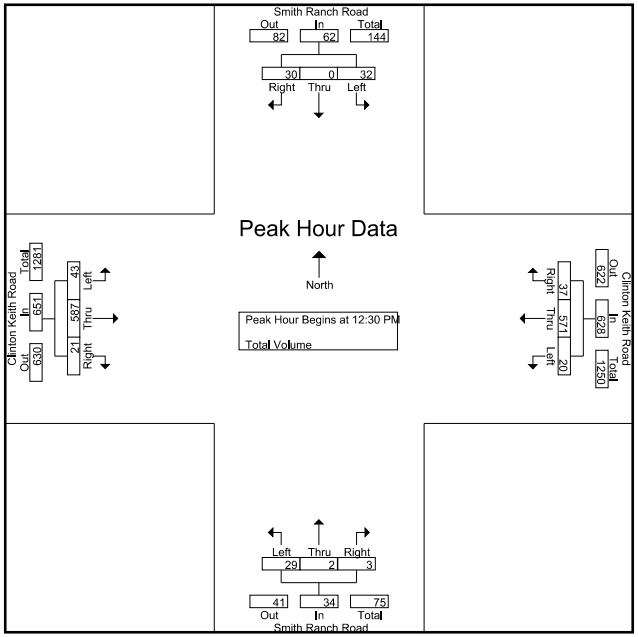
Weather: Clear

File Name : 21_WDM_Smith Ranch_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:00 PM				12:30 PM				12:30 PM				12:00 PM			
+0 mins.	9	0	**10**	**19**	**6**	147	8	161	9	0	0	9	5	138	1	144
+15 mins.	3	**1**	8	12	5	119	**12**	136	4	0	**1**	5	13	145	4	162
+30 mins.	8	0	10	18	6	148	8	162	**10**	**1**	1	**12**	8	155	**7**	170
+45 mins.	**11**	0	5	16	3	**157**	9	**169**	6	1	1	8	**17**	**165**	6	**188**
Total Volume	31	1	33	65	20	571	37	628	29	2	3	34	43	603	18	664
% App. Total	47.7	1.5	50.8		3.2	90.9	5.9		85.3	5.9	8.8		6.5	90.8	2.7	
PHF	.705	.250	.825	.855	.833	.909	.771	.929	.725	.500	.750	.708	.632	.914	.643	.883

Location: Wildomar
N/S: Smith Ranch Road
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Smith Ranch Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Smith Ranch Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	2	0	0	0	2
12:15 PM	1	0	0	0	1
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	0	0	0	3

Date: 10/23/2018
Day: Tuesday

	North Leg Smith Ranch Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Smith Ranch Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	2	2
TOTAL VOLUMES:	0	0	1	3	4

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Location: Wildomar
N/S: Smith Ranch Road
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Smith Ranch Road			Westbound Clinton Keith Road			Northbound Smith Ranch Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	5	1	8

Date: 10/23/2018
Day: Tuesday

	Southbound Smith Ranch Road			Westbound Clinton Keith Road			Northbound Smith Ranch Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	1	0	0	0	0	1	0	3

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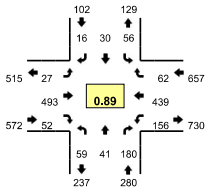
Type of peak hour being reported: Intersection Peak

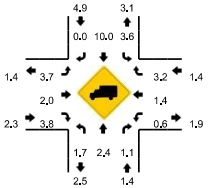
Method for determining peak hour: Total Entering Volume

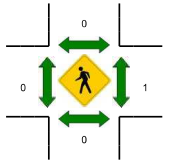
LOCATION: 1 Nutmeg St – Clinton Keith Rd
CITY/STATE: Murrieta, CA

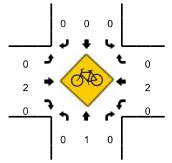
QC JOB #: 14565402
DATE: Sat, Dec 02 2017

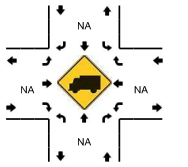
Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:30 PM – 12:45 PM

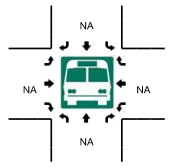












5-Min Count Period Beginning At	1 Nutmeg St (Northbound)				1 Nutmeg St (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	3	3	9	0	2	1	3	0	5	34	5	1	5	38	9	1	119	
12:05 PM	5	2	17	0	3	0	0	0	2	48	4	0	13	37	1	0	132	
12:10 PM	6	5	23	0	5	2	1	0	2	38	4	0	13	34	8	0	141	
12:15 PM	3	1	13	0	8	1	1	0	2	45	0	0	6	41	3	0	124	
12:20 PM	5	7	17	0	5	5	0	0	1	40	4	0	12	42	5	0	143	
12:25 PM	6	8	12	0	6	1	1	0	5	44	1	0	17	24	7	0	132	
12:30 PM	8	1	19	0	4	3	3	0	2	46	5	0	15	43	5	0	154	
12:35 PM	3	3	20	0	7	2	1	0	3	40	5	0	11	45	4	0	144	
12:40 PM	6	4	17	0	5	4	0	0	0	47	5	0	20	40	8	0	156	
12:45 PM	6	4	8	0	4	4	0	0	1	28	3	0	11	27	2	0	98	
12:50 PM	2	1	16	0	5	4	4	0	2	39	11	0	19	35	8	0	146	
12:55 PM	6	2	9	0	2	3	2	0	1	44	5	0	13	33	2	0	122	1611
1:00 PM	7	4	11	0	0	2	2	0	3	30	6	0	7	37	5	0	114	1606
1:05 PM	10	1	13	0	2	0	4	0	2	37	2	0	10	30	5	0	116	1590
1:10 PM	2	0	8	0	4	3	0	0	2	39	3	0	19	37	4	0	121	1570
1:15 PM	5	4	10	0	1	0	4	0	1	34	6	0	10	36	12	0	123	1569
1:20 PM	5	5	11	0	1	2	1	0	1	41	2	0	11	25	5	0	110	1536
1:25 PM	3	6	14	0	7	4	3	0	3	42	4	0	17	28	3	0	134	1538
1:30 PM	7	2	13	0	7	0	2	0	1	36	3	0	12	49	3	0	135	1519
1:35 PM	3	2	16	0	3	3	2	0	5	45	3	0	14	34	2	0	132	1507
1:40 PM	5	3	18	0	0	2	1	0	0	50	7	2	13	40	7	0	148	1499
1:45 PM	4	3	14	0	7	1	1	0	4	40	3	0	15	48	7	0	147	1548
1:50 PM	1	1	12	0	2	2	3	0	5	33	4	0	12	49	3	0	127	1529
1:55 PM	2	1	10	0	5	2	1	0	5	30	6	0	17	37	2	0	118	1525

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	32	224	0	64	36	16	0	20	532	60	0	184	512	68	0	1816
Heavy Trucks	0	4	4		4	0	0		0	12	0		0	0	0		24
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

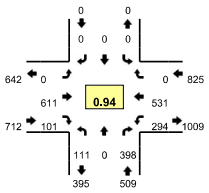
Comments:

Report generated on 12/11/2017 3:34 PM

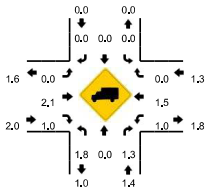
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

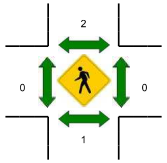
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

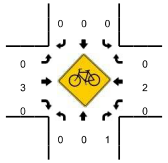
LOCATION: 2 California Oaks Rd – Clinton Keith Rd | **QC JOB #:** 14565404
CITY/STATE: Murrieta, CA | **DATE:** Sat, Dec 02 2017

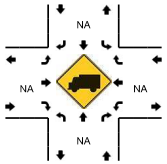


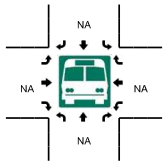
Peak-Hour: 12:10 PM – 1:10 PM
Peak 15-Min: 12:30 PM – 12:45 PM











5-Min Count Period	2 California Oaks Rd (Northbound)				2 California Oaks Rd (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	14	0	28	0	0	0	0	0	0	44	4	0	25	35	0	0	150	
12:05 PM	11	0	30	0	0	0	0	0	0	56	11	0	25	38	0	0	171	
12:10 PM	8	0	40	0	0	0	0	0	0	64	9	0	15	40	0	0	176	
12:15 PM	9	0	32	0	0	0	0	0	0	50	6	0	38	52	0	0	187	
12:20 PM	14	0	25	0	0	0	0	0	0	59	6	0	27	52	0	0	183	
12:25 PM	13	0	31	0	0	0	0	0	0	57	4	0	22	35	0	0	162	
12:30 PM	4	0	34	0	0	0	0	0	0	58	13	0	25	58	0	0	192	
12:35 PM	14	0	29	0	0	0	0	0	0	58	10	0	25	38	0	0	174	
12:40 PM	6	0	29	0	0	0	0	0	0	57	13	0	26	50	0	0	181	
12:45 PM	4	0	33	0	0	0	0	0	0	37	8	0	21	42	0	0	145	
12:50 PM	12	0	42	0	0	0	0	0	0	43	10	0	14	44	0	0	165	
12:55 PM	7	0	37	0	0	0	0	0	0	43	6	0	31	30	0	0	154	2040
1:00 PM	12	0	28	0	0	0	0	0	0	39	6	0	18	50	0	0	153	2043
1:05 PM	8	0	38	0	0	0	0	0	0	46	10	0	32	40	0	0	174	2046
1:10 PM	9	0	22	0	0	0	0	0	0	36	11	0	29	42	0	0	149	2019
1:15 PM	7	0	32	0	0	0	0	0	0	45	5	0	30	50	0	0	169	2001
1:20 PM	9	0	29	0	0	0	0	0	0	44	10	0	33	28	0	0	153	1971
1:25 PM	5	0	33	0	0	0	0	0	0	51	6	0	23	41	0	0	159	1968
1:30 PM	9	0	37	0	0	0	0	0	0	45	9	0	27	48	0	0	175	1951
1:35 PM	9	0	38	0	0	0	0	0	0	54	7	0	23	40	0	0	171	1948
1:40 PM	13	0	29	0	0	0	0	0	0	61	7	0	30	53	0	0	193	1960
1:45 PM	11	0	34	0	0	0	0	0	0	46	12	0	28	63	0	0	194	2009
1:50 PM	9	0	40	0	0	0	0	0	0	47	7	0	30	52	0	0	185	2029
1:55 PM	6	0	28	0	0	0	0	0	0	38	6	0	25	35	0	0	138	2013

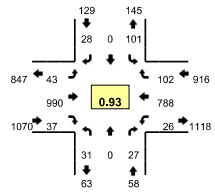
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	96	0	368	0	0	0	0	0	0	692	144	0	304	584	0	0	2188
Heavy Trucks	4	0	8		0	0	0		0	16	4		4	0	0		36
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

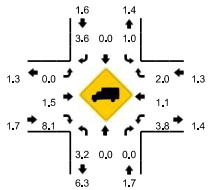
Report generated on 12/11/2017 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

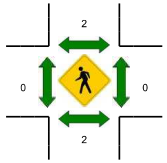
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

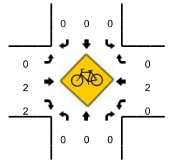
LOCATION: 3 Greer Rd/Murrieta Ave – Clinton Keith Rd | **QC JOB #:** 14565406
CITY/STATE: Murrieta, CA | **DATE:** Sat, Dec 02 2017

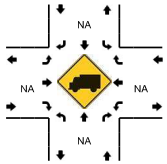


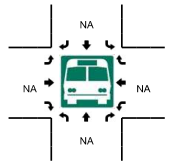
Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:30 PM – 12:45 PM











5-Min Count Period	3 Greer Rd/Murrieta Ave (Northbound)				3 Greer Rd/Murrieta Ave (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	6	0	2	0	7	0	3	0	4	85	7	0	4	57	9	0	184	
12:05 PM	4	0	1	0	9	0	1	0	2	74	4	0	2	57	12	0	166	
12:10 PM	5	0	1	0	17	0	1	0	2	81	2	0	2	61	6	0	178	
12:15 PM	3	0	6	0	7	0	4	0	7	82	0	0	1	78	8	0	196	
12:20 PM	2	0	4	0	5	0	4	0	3	94	3	0	2	74	16	0	207	
12:25 PM	1	0	3	0	9	0	1	0	3	80	3	0	1	61	4	0	166	
12:30 PM	2	0	3	0	10	0	1	0	6	90	6	0	3	70	7	0	198	
12:35 PM	3	0	1	0	6	0	4	0	1	87	1	0	2	72	13	0	190	
12:40 PM	2	0	0	0	9	0	3	0	2	96	4	0	2	73	6	0	197	
12:45 PM	2	0	2	0	4	0	3	0	6	70	5	0	3	47	11	0	153	
12:50 PM	1	0	3	0	13	0	3	0	4	66	2	0	4	60	9	0	165	
12:55 PM	0	0	1	0	5	0	0	0	3	85	0	0	0	78	1	0	173	2173
1:00 PM	3	0	5	0	7	0	2	0	7	64	4	0	4	61	9	0	166	2155
1:05 PM	4	0	5	0	13	0	3	0	6	59	6	0	0	53	14	0	163	2152
1:10 PM	1	0	4	0	6	0	3	0	4	73	3	0	2	68	4	0	168	2142
1:15 PM	3	0	0	0	6	0	8	0	1	72	3	0	3	84	9	0	189	2135
1:20 PM	7	0	3	0	12	0	4	0	0	63	1	0	3	53	2	0	148	2076
1:25 PM	2	0	2	0	6	0	4	0	3	82	5	0	4	69	13	0	190	2100
1:30 PM	3	0	0	0	4	0	3	0	4	74	4	0	3	75	13	0	183	2085
1:35 PM	0	0	2	0	10	0	3	0	4	75	4	0	2	67	4	1	172	2067
1:40 PM	5	0	4	0	10	0	4	0	3	84	6	0	3	76	6	0	201	2071
1:45 PM	2	0	2	0	7	0	5	0	4	83	1	0	4	73	7	0	188	2106
1:50 PM	3	0	4	0	12	0	6	0	4	81	7	0	2	69	5	0	193	2134
1:55 PM	3	0	2	0	5	0	2	0	2	79	2	0	2	67	14	0	178	2139

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	0	16	0	100	0	32	0	36	1092	44	0	28	860	104	0	2340
Heavy Trucks	0	0	0		0	0	0		0	20	4		0	4	0		28
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	1		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

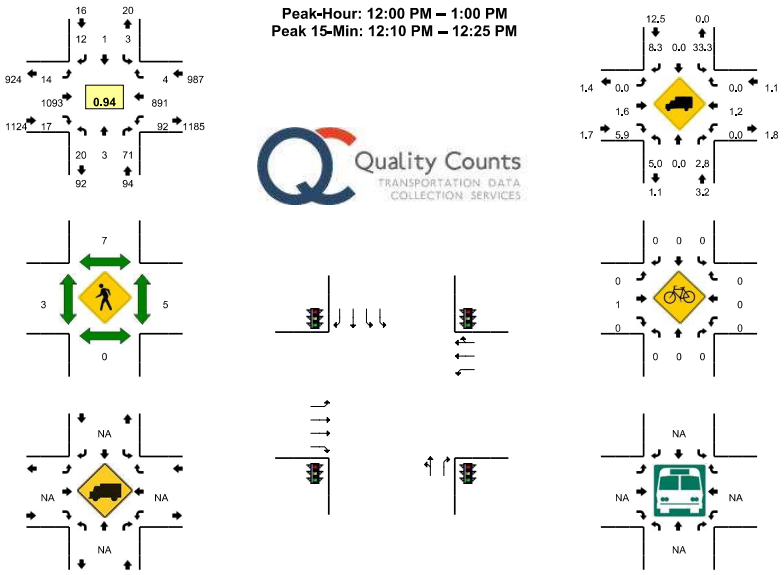
Report generated on 12/11/2017 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 4 Murrieta Oaks Ave – Clinton Keith Rd | **QC JOB #:** 14565408

CITY/STATE: Murrieta, CA | **DATE:** Sat, Dec 02 2017

Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:10 PM – 12:25 PM



Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

5-Min Count Period	4 Murrieta Oaks Ave (Northbound)				4 Murrieta Oaks Ave (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	0	0	7	0	0	0	0	0	2	89	1	1	6	75	0	1	182	
12:05 PM	1	1	3	0	0	0	0	0	0	80	2	0	11	73	1	3	175	
12:10 PM	2	0	6	0	0	0	4	0	1	103	0	0	3	65	0	0	184	
12:15 PM	2	0	4	0	1	0	0	0	1	104	1	0	1	91	0	1	206	
12:20 PM	0	0	6	0	0	0	0	0	1	104	0	0	5	82	1	2	201	
12:25 PM	1	0	4	0	0	0	3	0	1	81	2	0	6	70	0	2	170	
12:30 PM	4	0	3	0	0	1	0	0	2	92	4	0	5	71	0	3	185	
12:35 PM	4	0	5	0	0	0	2	0	1	83	3	0	9	81	0	1	189	
12:40 PM	1	0	9	0	0	0	0	0	0	110	0	0	8	74	0	2	204	
12:45 PM	2	1	9	0	0	0	1	0	2	75	1	0	4	66	0	0	161	
12:50 PM	1	0	12	0	2	0	1	0	1	78	2	0	10	73	2	1	183	
12:55 PM	2	1	3	0	0	0	1	0	1	94	1	0	6	70	0	2	181	2221
1:00 PM	0	0	6	0	0	0	0	0	1	68	2	0	5	61	0	3	146	2185
1:05 PM	1	0	15	0	1	0	0	0	0	69	1	0	6	66	1	2	162	2172
1:10 PM	1	0	8	0	1	0	0	0	2	83	0	0	3	79	0	2	179	2167
1:15 PM	1	0	7	0	0	0	1	0	0	76	0	0	7	83	0	3	178	2139
1:20 PM	1	0	3	0	1	0	2	0	7	79	0	0	4	67	0	2	166	2104
1:25 PM	1	0	2	0	2	1	1	0	1	76	3	0	4	79	2	1	173	2107
1:30 PM	1	0	8	0	0	0	2	0	0	91	0	0	5	82	0	4	193	2115
1:35 PM	0	0	8	0	0	0	0	0	1	75	1	0	8	93	0	2	188	2114
1:40 PM	0	0	5	0	0	0	0	0	1	104	0	1	4	81	2	2	200	2110
1:45 PM	3	0	8	0	0	0	3	0	1	81	2	0	6	81	0	1	186	2135
1:50 PM	3	0	5	0	0	0	0	0	2	98	1	0	11	82	0	0	202	2154
1:55 PM	1	0	8	0	0	0	0	0	1	84	4	0	4	76	0	1	179	2152

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	64	0	4	0	16	0	12	1244	4	0	36	952	4	12	2364
Heavy Trucks	0	0	4		4	0	0		0	28	0		0	12	0		48
Pedestrians		0				12				4				0			16
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

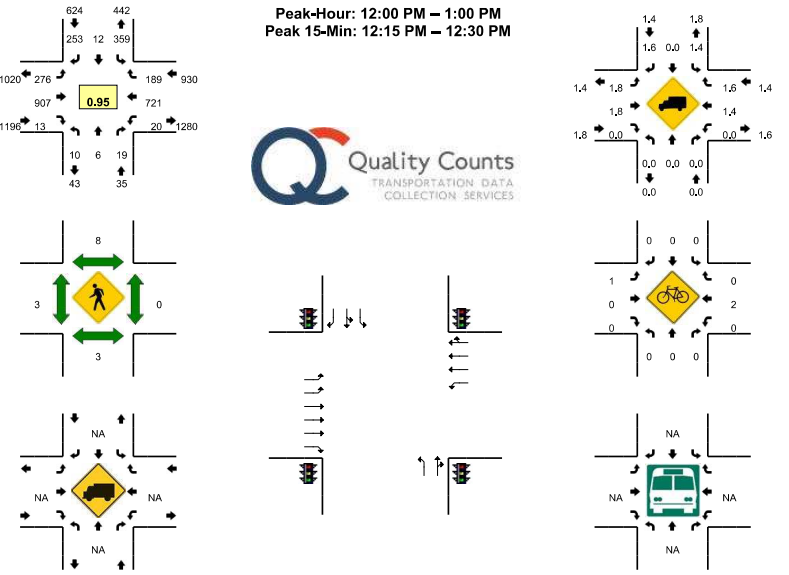
Report generated on 12/11/2017 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 5 McElwain Rd – Clinton Keith Rd | **QC JOB #:** 14565410

CITY/STATE: Murrieta, CA | **DATE:** Sat, Dec 02 2017

Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:15 PM – 12:30 PM



Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

5-Min Count Period	5 McElwain Rd (Northbound)				5 McElwain Rd (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	1	0	1	0	22	1	19	1	20	76	1	3	1	49	17	0	212	
12:05 PM	0	0	1	0	28	0	22	0	20	70	0	1	3	64	11	0	220	
12:10 PM	2	1	1	0	29	0	23	0	13	62	1	3	2	53	15	0	205	
12:15 PM	1	0	2	0	20	2	20	0	35	86	0	5	2	61	16	0	250	
12:20 PM	3	0	2	0	28	0	22	0	20	85	0	2	2	68	15	0	247	
12:25 PM	0	0	1	0	35	1	23	1	22	64	0	5	1	61	22	0	236	
12:30 PM	0	0	1	0	20	2	20	2	18	85	2	3	2	60	14	0	229	
12:35 PM	2	1	1	0	43	0	19	0	17	75	2	1	3	68	11	0	243	
12:40 PM	0	0	0	0	36	3	19	1	19	95	1	1	0	69	11	1	256	
12:45 PM	1	3	4	0	25	1	21	1	12	67	1	5	0	51	23	1	216	
12:50 PM	0	1	2	0	24	2	24	0	26	61	3	3	2	54	21	0	223	
12:55 PM	0	0	3	0	42	0	21	1	18	81	2	4	0	63	13	0	248	2785
1:00 PM	3	0	2	0	30	1	19	0	17	49	3	4	0	45	16	0	189	2762
1:05 PM	2	0	2	0	23	0	18	0	24	49	3	4	0	57	16	1	199	2741
1:10 PM	0	2	2	0	26	1	21	0	21	67	1	2	3	42	16	0	204	2740
1:15 PM	2	0	1	0	17	0	22	0	16	77	1	4	1	72	19	0	232	2722
1:20 PM	1	0	1	0	26	1	25	1	27	50	1	3	2	43	19	0	200	2675
1:25 PM	1	0	3	0	33	2	22	1	18	65	1	4	0	54	11	0	215	2654
1:30 PM	1	0	3	0	36	1	21	0	23	70	0	3	3	79	15	0	255	2680
1:35 PM	1	2	1	0	31	2	25	0	20	67	2	2	3	61	17	0	234	2671
1:40 PM	1	1	2	0	44	0	36	0	28	57	2	1	0	58	19	0	249	2664
1:45 PM	1	2	1	0	28	1	18	0	23	84	3	2	1	66	14	0	244	2692
1:50 PM	0	0	4	0	18	1	20	0	19	76	3	2	1	80	16	1	241	2710
1:55 PM	1	0	2	0	31	1	16	0	17	53	1	3	1	55	20	0	201	2663

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	20	0	332	12	260	4	308	940	0	48	20	760	212	0	2932
Heavy Trucks	0	0	0		4	0	4		12	16	0		0	12	8		56
Pedestrians		0				12				0				0			12
Bicycles	0	0	0		0	0	0		1	0	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 06_MUR_215S_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

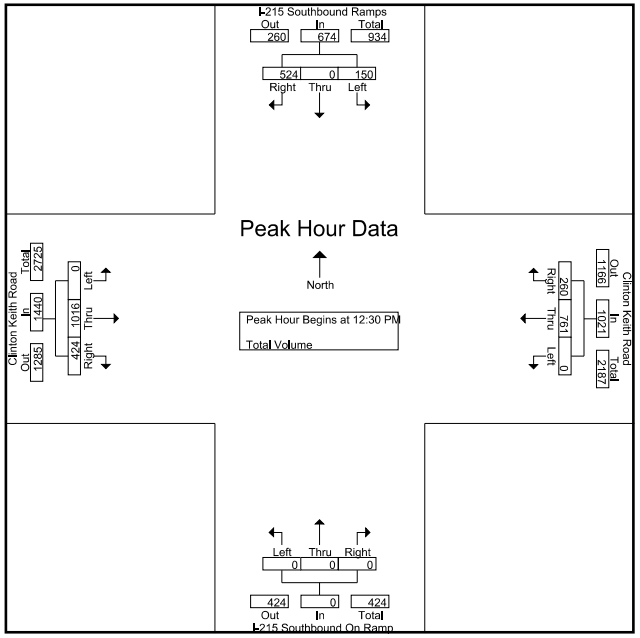
	I-215 Southbound Ramps Southbound				Clinton Keith Road Westbound				I-215 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	32	0	129	161	0	208	65	273	0	0	0	0	0	234	95	329	763
12:15 PM	29	0	113	142	0	190	53	243	0	0	0	0	0	260	130	390	775
12:30 PM	49	0	123	172	0	200	50	250	0	0	0	0	0	245	111	356	778
12:45 PM	36	0	134	170	0	191	63	254	0	0	0	0	0	251	113	364	788
Total	146	0	499	645	0	789	231	1020	0	0	0	0	0	990	449	1439	3104
01:00 PM	31	0	121	152	0	186	75	261	0	0	0	0	0	268	98	366	779
01:15 PM	34	0	146	180	0	184	72	256	0	0	0	0	0	252	102	354	790
01:30 PM	39	0	133	172	0	170	55	225	0	0	0	0	0	253	97	350	747
01:45 PM	31	0	162	193	0	209	54	263	0	0	0	0	0	222	78	300	756
Total	135	0	562	697	0	749	256	1005	0	0	0	0	0	995	375	1370	3072
Grand Total	281	0	1061	1342	0	1538	487	2025	0	0	0	0	0	1985	824	2809	6176
Apprch %	20.9	0	79.1		0	76	24		0	0	0		0	70.7	29.3		
Total %	4.5	0	17.2	21.7	0	24.9	7.9	32.8	0	0	0	0	0	32.1	13.3	45.5	

	I-215 Southbound Ramps Southbound				Clinton Keith Road Westbound				I-215 Southbound On Ramp Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	**49**	0	123	172	0	**200**	50	250	0	0	0	0	0	245	111	356	778
12:45 PM	36	0	134	170	0	191	63	254	0	0	0	0	0	251	**113**	364	788
01:00 PM	31	0	121	152	0	186	**75**	**261**	0	0	0	0	0	**268**	98	**366**	779
01:15 PM	34	0	**146**	**180**	0	184	72	256	0	0	0	0	0	252	102	354	**790**
Total Volume	150	0	524	674	0	761	260	1021	0	0	0	0	0	1016	424	1440	3135
% App. Total	22.3	0	77.7		0	74.5	25.5		0	0	0		0	70.6	29.4		
PHF	.765	.000	.897	.936	.000	.951	.867	.978	.000	.000	.000	.000	.000	.948	.938	.984	.992

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 06_MUR_215S_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	01:00 PM				12:30 PM				12:00 PM				12:15 PM			
+0 mins.	31	0	121	152	0	**200**	50	250	0	0	0	0	0	260	**130**	**390**
+15 mins.	34	0	146	180	0	191	63	254	0	0	0	0	0	245	111	356
+30 mins.	**39**	0	133	172	0	186	**75**	**261**	0	0	0	0	0	251	113	364
+45 mins.	31	0	**162**	**193**	0	184	72	256	0	0	0	0	0	**268**	98	366
Total Volume	135	0	562	697	0	761	260	1021	0	0	0	0	0	1024	452	1476
% App. Total	19.4	0	80.6		0	74.5	25.5		0	0	0		0	69.4	30.6	
PHF	.865	.000	.867	.903	.000	.951	.867	.978	.000	.000	.000	.000	.000	.955	.869	.946

Location: Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-215 Southbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Southbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	1	0	1
12:15 PM	0	0	3	0	3
12:30 PM	0	0	1	0	1
12:45 PM	0	0	0	0	0
1:00 PM	0	0	2	0	2
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	7	0	7

Date: 10/23/2018
Day: Tuesday

	North Leg I-215 Southbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Southbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	6	0	6
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	9	0	9
5:00 PM	0	0	0	0	0
5:15 PM	0	0	2	0	2
5:30 PM	0	0	3	0	3
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	23	0	23

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Murrieta
N/S: I-215 Southbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-215 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	2	0	3

Date: 10/23/2018
Day: Tuesday

	Southbound I-215 Southbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Southbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	5	0	0	0	0	0	2	0	7

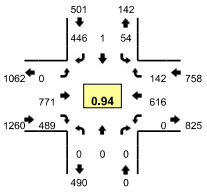
Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Type of peak hour being reported: Intersection Peak

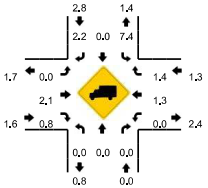
Method for determining peak hour: Total Entering Volume

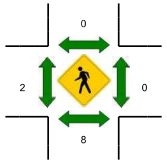
LOCATION: 6 I-215 SB Ramps – Clinton Keith Rd
CITY/STATE: Murrieta, CA

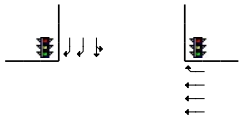
QC JOB #: 14565412
DATE: Sat, Dec 02 2017

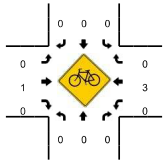


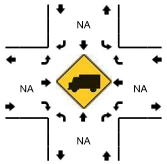
Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:30 PM – 12:45 PM

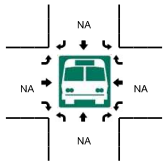












5-Min Count Period	6 I-215 SB Ramps (Northbound)				6 I-215 SB Ramps (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	0	0	0	0	8	0	33	0	0	61	31	0	0	54	18	0	205	
12:05 PM	0	0	0	0	5	0	31	0	0	51	45	0	0	54	13	0	199	
12:10 PM	0	0	0	0	4	0	40	0	0	65	35	0	0	49	10	0	203	
12:15 PM	0	0	0	0	6	1	36	0	0	81	35	0	0	60	17	0	236	
12:20 PM	0	0	0	0	5	0	37	0	0	74	42	0	0	50	7	0	215	
12:25 PM	0	0	0	0	3	0	42	0	0	51	37	0	0	48	19	0	200	
12:30 PM	0	0	0	0	2	0	40	0	0	70	39	0	0	53	10	0	214	
12:35 PM	0	0	0	0	1	0	37	0	0	65	46	0	0	53	14	0	216	
12:40 PM	0	0	0	0	3	0	37	0	0	83	57	0	0	49	9	0	238	
12:45 PM	0	0	0	0	8	0	52	0	0	41	36	0	0	39	9	0	185	
12:50 PM	0	0	0	0	4	0	28	0	0	63	43	0	0	59	4	0	201	
12:55 PM	0	0	0	0	5	0	33	0	0	66	43	0	0	48	12	0	207	2519
1:00 PM	0	0	0	0	3	1	26	0	0	43	28	0	0	53	12	0	166	2480
1:05 PM	0	0	0	0	2	0	38	0	0	48	42	0	0	52	16	0	198	2479
1:10 PM	0	0	0	0	8	0	41	0	0	59	41	0	0	53	5	0	207	2483
1:15 PM	0	0	0	0	3	1	28	0	0	47	27	0	0	49	20	0	175	2422
1:20 PM	0	0	0	0	2	0	38	0	0	60	38	0	0	39	11	0	188	2395
1:25 PM	0	0	0	0	3	0	42	0	0	69	34	0	0	58	9	0	215	2410
1:30 PM	0	0	0	0	6	0	48	0	0	68	45	0	0	55	10	0	232	2428
1:35 PM	0	0	0	0	7	1	42	0	0	57	44	0	0	47	7	0	205	2417
1:40 PM	0	0	0	0	6	1	45	0	0	59	42	0	0	45	15	0	213	2392
1:45 PM	0	0	0	0	7	1	50	0	0	61	33	0	0	58	10	0	220	2427
1:50 PM	0	0	0	0	2	1	37	0	0	72	36	0	0	48	9	0	205	2431
1:55 PM	0	0	0	0	6	0	39	0	0	59	39	0	0	56	12	0	211	2435

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	24	0	456	0	0	872	568	0	0	620	132	0	2672
Heavy Trucks	0	0	0		4	0	4		0	12	4		0	4	0		28
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 07_MUR_215N_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	I-215 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-215 Northbound Ramps Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	0	0	0	0	0	192	26	218	81	0	80	161	0	164	101	265	644
12:15 PM	0	0	0	0	0	156	21	177	92	0	50	142	0	140	149	289	608
12:30 PM	0	0	0	0	0	157	15	172	88	0	68	156	0	171	124	295	623
12:45 PM	0	0	0	0	0	164	36	200	97	0	84	181	0	157	131	288	669
Total	0	0	0	0	0	669	98	767	358	0	282	640	0	632	505	1137	2544
01:00 PM	0	0	0	0	0	178	28	206	91	0	84	175	0	152	136	288	669
01:15 PM	0	0	0	0	0	170	31	201	91	0	74	165	0	170	121	291	657
01:30 PM	0	0	0	0	0	135	27	162	83	0	74	157	0	178	124	302	621
01:45 PM	0	0	0	0	0	161	26	187	99	0	58	157	0	133	111	244	588
Total	0	0	0	0	0	644	112	756	364	0	290	654	0	633	492	1125	2535
Grand Total	0	0	0	0	0	1313	210	1523	722	0	572	1294	0	1265	997	2262	5079
Apprch %	0	0	0		0	86.2	13.8		55.8	0	44.2		0	55.9	44.1		
Total %	0	0	0	0	0	25.9	4.1	30	14.2	0	11.3	25.5	0	24.9	19.6	44.5	

	I-215 Northbound On Ramp Southbound				Clinton Keith Road Westbound				I-215 Northbound Ramps Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	0	0	0	0	157	15	172	88	0	68	156	0	**171**	124	**295**	623
12:45 PM	0	0	0	0	0	164	**36**	200	**97**	0	**84**	**181**	0	157	131	288	**669**
01:00 PM	0	0	0	0	0	**178**	28	**206**	91	0	84	175	0	152	**136**	288	669
01:15 PM	0	0	0	0	0	170	31	201	91	0	74	165	0	170	121	291	657
Total Volume	0	0	0	0	0	669	110	779	367	0	310	677	0	650	512	1162	2618
% App. Total	0	0	0		0	85.9	14.1		54.2	0	45.8		0	55.9	44.1		
PHF	.000	.000	.000	.000	.000	.940	.764	.945	.946	.000	.923	.935	.000	.950	.941	.985	.978

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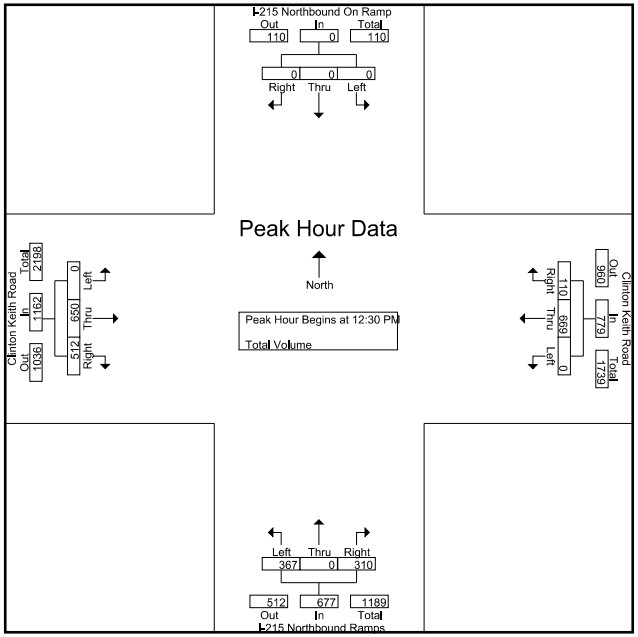
City of Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road
Weather: Clear

File Name : 07_MUR_215N_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:00 PM				12:30 PM				12:45 PM				12:45 PM			
+0 mins.	0	0	0	0	0	157	15	172	**97**	0	**84**	**181**	0	157	131	288
+15 mins.	0	0	0	0	0	164	**36**	200	91	0	84	175	0	152	**136**	288
+30 mins.	0	0	0	0	0	**178**	28	**206**	91	0	74	165	0	170	121	291
+45 mins.	0	0	0	0	0	170	31	201	83	0	74	157	0	**178**	124	**302**
Total Volume	0	0	0	0	0	669	110	779	362	0	316	678	0	657	512	1169
% App. Total	0	0	0		0	85.9	14.1		53.4	0	46.6		0	56.2	43.8	
PHF	.000	.000	.000	.000	.000	.940	.764	.945	.933	.000	.940	.936	.000	.923	.941	.968

Location: Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg I-215 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	4	0	4
12:30 PM	0	0	1	0	1
12:45 PM	0	0	1	0	1
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	7	0	7

Date: 10/23/2018
Day: Tuesday

	North Leg I-215 Northbound Ramps	East Leg Clinton Keith Road	South Leg I-215 Northbound Ramps	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	6	0	6
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	3	0	3
5:00 PM	0	0	6	0	6
5:15 PM	0	0	2	0	2
5:30 PM	0	0	3	0	3
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	23	0	23

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Murrieta
N/S: I-215 Northbound Ramps
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound I-215 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	2	0	3

Date: 10/23/2018
Day: Tuesday

	Southbound I-215 Northbound Ramps			Westbound Clinton Keith Road			Northbound I-215 Northbound Ramps			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	208	16	92	0	89	0	180	160	745
4:15 PM	0	0	0	0	198	27	117	0	114	0	213	152	821
4:30 PM	0	0	0	0	188	20	79	0	99	0	233	138	757
4:45 PM	0	0	0	0	191	33	104	0	120	0	281	150	879
5:00 PM	0	0	0	0	219	23	96	0	116	0	214	167	835
5:15 PM	0	0	0	0	246	30	102	0	142	0	293	157	970
5:30 PM	0	0	0	0	216	25	113	0	134	0	290	146	924
5:45 PM	0	0	0	0	194	14	100	0	144	0	258	159	869
TOTAL VOLUMES:	0	0	0	0	1660	188	803	0	958	0	1962	1229	6800

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

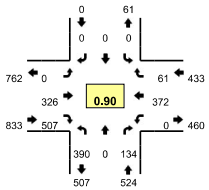
Type of peak hour being reported: Intersection Peak

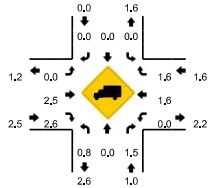
Method for determining peak hour: Total Entering Volume

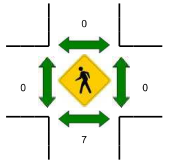
LOCATION: 7 I-215 NB Ramps – Clinton Keith Rd
CITY/STATE: Riverside, CA

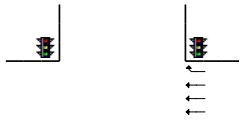
QC JOB #: 14565414
DATE: Sat, Dec 02 2017

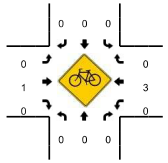
Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:15 PM – 12:30 PM

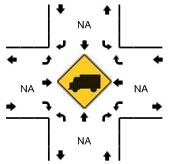


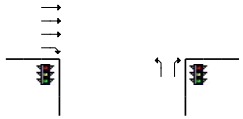


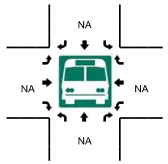












5-Min Count Period Beginning At	7 I-215 NB Ramps (Northbound)				7 I-215 NB Ramps (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	38	0	9	0	0	0	0	0	0	34	38	0	0	33	2	0	154	
12:05 PM	31	0	11	0	0	0	0	0	0	29	35	0	0	41	6	0	153	
12:10 PM	30	0	7	0	0	0	0	0	0	19	37	0	0	32	2	0	127	
12:15 PM	34	0	14	0	0	0	0	0	0	22	57	0	0	28	10	0	165	
12:20 PM	29	0	8	0	0	0	0	0	0	39	48	0	0	40	11	0	175	
12:25 PM	37	0	16	0	0	0	0	0	0	27	33	0	0	33	10	0	156	
12:30 PM	25	0	10	0	0	0	0	0	0	29	48	0	0	35	3	0	150	
12:35 PM	38	0	12	0	0	0	0	0	0	18	50	0	0	34	3	0	155	
12:40 PM	33	0	15	0	0	0	0	0	0	26	54	0	0	24	3	0	155	
12:45 PM	25	0	5	0	0	0	0	0	0	21	35	0	0	25	3	0	114	
12:50 PM	35	0	14	0	0	0	0	0	0	30	26	0	0	26	1	0	132	
12:55 PM	35	0	13	0	0	0	0	0	0	32	46	0	0	21	7	0	154	1790
1:00 PM	33	0	9	0	0	0	0	0	0	22	38	0	0	29	6	0	137	1773
1:05 PM	39	0	11	0	0	0	0	0	0	12	34	0	0	37	1	0	134	1754
1:10 PM	23	0	13	0	0	0	0	0	0	25	39	0	0	30	3	0	133	1760
1:15 PM	31	0	8	0	0	0	0	0	0	20	29	0	0	35	3	0	126	1721
1:20 PM	24	0	12	0	0	0	0	0	0	16	42	0	0	29	3	0	126	1672
1:25 PM	37	0	15	0	0	0	0	0	0	33	34	0	0	38	3	0	160	1676
1:30 PM	31	0	14	0	0	0	0	0	0	25	51	0	0	31	3	0	155	1681
1:35 PM	31	0	9	0	0	0	0	0	0	20	41	0	0	19	5	0	125	1651
1:40 PM	27	0	12	0	0	0	0	0	0	23	41	0	0	33	3	0	139	1635
1:45 PM	46	0	14	0	0	0	0	0	0	29	46	0	0	25	4	0	164	1685
1:50 PM	19	0	7	0	0	0	0	0	0	23	54	0	0	34	4	0	141	1694
1:55 PM	43	0	13	0	0	0	0	0	0	22	33	0	0	25	2	0	138	1678

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	400	0	152	0	0	0	0	0	0	352	552	0	0	404	124	0	1984
Heavy Trucks	4	0	4		0	0	0		0	4	12		0	8	0		32
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: Creighton Avenue
E/W: Clinton Keith Road
Weather: Clear

File Name : 08_MUR_Creighton_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Clinton Keith Road Westbound			Creighton Avenue Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
12:00 PM	3	215	218	13	8	21	230	14	244	483
12:15 PM	7	159	166	19	4	23	181	18	199	388
12:30 PM	2	156	158	15	5	20	212	17	229	407
12:45 PM	0	189	189	14	1	15	230	11	241	445
Total	12	719	731	61	18	79	853	60	913	1723
01:00 PM	2	195	197	13	2	15	216	12	228	440
01:15 PM	3	202	205	8	3	11	238	11	249	465
01:30 PM	1	143	144	14	2	16	217	22	239	399
01:45 PM	4	178	182	10	3	13	164	18	182	377
Total	10	718	728	45	10	55	835	63	898	1681
Grand Total	22	1437	1459	106	28	134	1688	123	1811	3404
Apprch %	1.5	98.5		79.1	20.9		93.2	6.8		
Total %	0.6	42.2	42.9	3.1	0.8	3.9	49.6	3.6	53.2	

	Clinton Keith Road Westbound			Creighton Avenue Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:30 PM										
12:30 PM	2	156	158	**15**	**5**	**20**	212	**17**	229	407
12:45 PM	0	189	189	14	1	15	230	11	241	445
01:00 PM	2	195	197	13	2	15	216	12	228	440
01:15 PM	**3**	**202**	**205**	8	3	11	**238**	11	**249**	**465**
Total Volume	7	742	749	50	11	61	896	51	947	1757
% App. Total	0.9	99.1		82	18		94.6	5.4		
PHF	.583	.918	.913	.833	.550	.763	.941	.750	.951	.945

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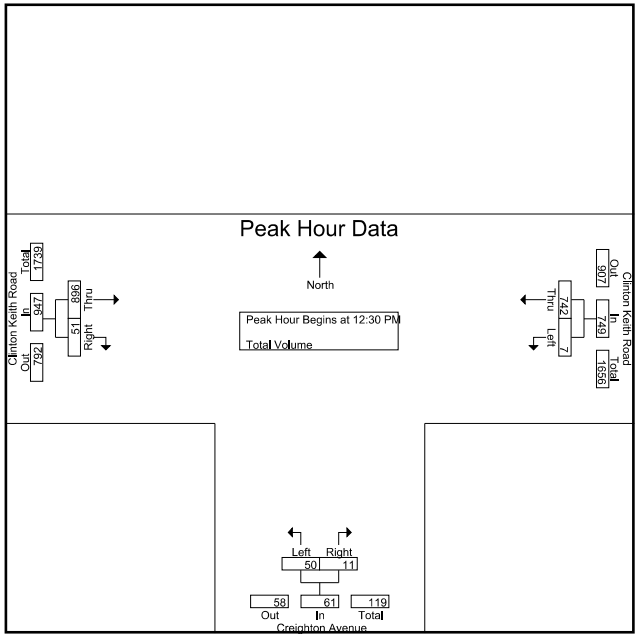
City of Murrieta
N/S: Creighton Avenue
E/W: Clinton Keith Road
Weather: Clear

File Name : 08_MUR_Creighton_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:30 PM			12:00 PM			12:45 PM		
+0 mins.	2	156	158	13	**8**	21	230	11	241
+15 mins.	0	189	189	**19**	4	**23**	216	12	228
+30 mins.	2	195	197	15	5	20	**238**	11	**249**
+45 mins.	**3**	**202**	**205**	14	1	15	217	**22**	239
Total Volume	7	742	749	61	18	79	901	56	957
% App. Total	0.9	99.1		77.2	22.8		94.1	5.9	
PHF	.583	.918	.913	.803	.563	.859	.946	.636	.961

Location: Murrieta
N/S: Creighton Avenue
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Creighton Avenue	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	1	0	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Date: 10/23/2018
Day: Tuesday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Creighton Avenue	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	7	0	7
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	3	0	3
5:00 PM	0	0	6	0	6
5:15 PM	0	0	1	0	1
5:30 PM	0	0	1	0	1
5:45 PM	0	0	1	0	1
TOTAL VOLUMES:	0	0	20	0	20

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951-268-6268

Location: Murrieta
N/S: Creighton Avenue
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Creighton Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

Date: 10/23/2018
Day: Tuesday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Creighton Avenue			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	4	0	0	0	0	0	2	0	6

Counts Unlimited, Inc.
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Corona, CA 92878
951-268-6268

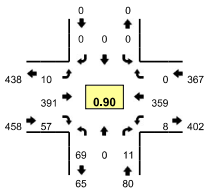
Type of peak hour being reported: Intersection Peak

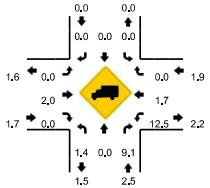
Method for determining peak hour: Total Entering Volume

LOCATION: 8 Creighton Ave – Clinton Keith Rd
CITY/STATE: Riverside, CA

QC JOB #: 14565416
DATE: Sat, Dec 02 2017

Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:15 PM – 12:30 PM





5-Min Count Period Beginning At	8 Creighton Ave (Northbound)				8 Creighton Ave (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	10	0	2	0	0	0	0	0	0	39	1	0	0	21	0	0	73	
12:05 PM	17	0	0	0	0	0	0	0	0	34	6	2	0	27	0	0	86	
12:10 PM	5	0	0	0	0	0	0	0	0	24	6	0	2	30	0	0	67	
12:15 PM	2	0	0	0	0	0	0	0	0	25	6	0	1	34	0	0	68	
12:20 PM	1	0	0	0	0	0	0	0	0	42	5	2	0	51	0	0	101	
12:25 PM	5	0	1	0	0	0	0	0	0	37	5	2	2	31	0	0	83	
12:30 PM	8	0	1	0	0	0	0	0	0	21	3	0	0	32	0	0	65	
12:35 PM	2	0	2	0	0	0	0	0	0	44	3	0	0	42	0	0	93	
12:40 PM	5	0	0	0	0	0	0	0	0	31	6	1	0	21	0	0	64	
12:45 PM	3	0	2	0	0	0	0	0	0	23	3	2	0	23	0	0	56	
12:50 PM	6	0	1	0	0	0	0	0	0	27	6	0	0	22	0	0	62	
12:55 PM	5	0	2	0	0	0	0	0	0	44	7	1	3	25	0	0	87	905
1:00 PM	6	0	0	0	0	0	0	0	0	30	4	0	0	29	0	0	69	901
1:05 PM	1	0	1	0	0	0	0	0	0	18	5	0	2	30	0	0	57	872
1:10 PM	5	0	0	0	0	0	0	0	0	24	5	0	0	31	0	0	65	870
1:15 PM	1	0	0	0	0	0	0	0	0	33	4	2	2	37	0	0	79	881
1:20 PM	3	0	2	0	0	0	0	0	0	19	6	1	0	29	0	0	60	840
1:25 PM	6	0	2	0	0	0	0	0	0	33	3	0	0	35	0	0	79	836
1:30 PM	2	0	0	0	0	0	0	0	0	40	7	2	3	29	0	0	83	854
1:35 PM	9	0	0	0	0	0	0	0	0	29	1	1	0	17	0	0	57	818
1:40 PM	2	0	0	0	0	0	0	0	0	29	8	0	2	29	0	0	70	824
1:45 PM	6	0	2	0	0	0	0	0	0	32	4	0	1	27	0	0	72	840
1:50 PM	5	0	2	0	0	0	0	0	0	25	7	3	0	29	0	0	71	849
1:55 PM	2	0	0	0	0	0	0	0	0	32	1	0	1	23	0	0	59	821

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	0	4	0	0	0	0	0	0	416	64	16	12	464	0	0	1008
Heavy Trucks	0	0	0		0	0	0		0	12	0		4	8	0		24
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

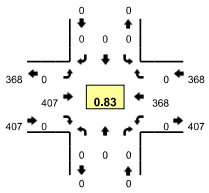
Type of peak hour being reported: Intersection Peak

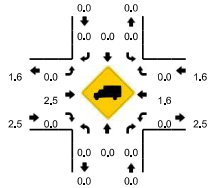
Method for determining peak hour: Total Entering Volume

LOCATION: 9 High School West Dwy – Clinton Keith Rd
CITY/STATE: Riverside, CA

QC JOB #: 14565418
DATE: Sat, Dec 02 2017

Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:15 PM – 12:30 PM





5-Min Count Period Beginning At	9 High School West Dwy (Northbound)				9 High School West Dwy (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	0	0	0	0	0	0	0	0	0	45	0	0	0	26	0	0	71	
12:05 PM	0	0	0	0	0	0	0	0	0	33	0	0	0	28	0	0	61	
12:10 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	30	0	0	49	
12:15 PM	0	0	0	0	0	0	0	0	0	31	0	0	0	46	0	0	77	
12:20 PM	0	0	0	0	0	0	0	0	0	37	0	0	0	39	0	0	76	
12:25 PM	0	0	0	0	0	0	0	0	0	40	0	0	0	41	0	0	81	
12:30 PM	0	0	0	0	0	0	0	0	0	35	0	0	0	29	0	0	64	
12:35 PM	0	0	0	0	0	0	0	0	0	30	0	0	0	36	0	0	66	
12:40 PM	0	0	0	0	0	0	0	0	0	35	0	0	0	22	0	0	57	
12:45 PM	0	0	0	0	0	0	0	0	0	22	0	0	0	20	0	0	42	
12:50 PM	0	0	0	0	0	0	0	0	0	38	0	0	0	26	0	0	64	
12:55 PM	0	0	0	0	0	0	0	0	0	42	0	0	0	25	0	0	67	775
1:00 PM	0	0	0	0	0	0	0	0	0	25	0	0	0	34	0	0	59	763
1:05 PM	0	0	0	0	0	0	0	0	0	20	0	0	0	35	0	0	55	757
1:10 PM	0	0	0	0	0	0	0	0	0	31	0	0	0	29	0	0	60	768
1:15 PM	0	0	0	0	0	0	0	0	0	25	0	0	0	43	0	0	68	759
1:20 PM	0	0	0	0	0	0	0	0	0	27	0	0	0	25	0	0	52	735
1:25 PM	0	0	0	0	0	0	0	0	0	41	0	0	0	34	0	0	75	729
1:30 PM	0	0	0	0	0	0	0	0	0	35	0	0	0	28	0	0	63	728
1:35 PM	0	0	0	0	0	0	0	0	0	25	0	0	0	25	0	0	50	712
1:40 PM	0	0	0	0	0	0	0	0	0	26	0	0	0	33	0	0	59	714
1:45 PM	0	0	0	0	0	0	0	0	0	39	0	0	0	25	0	0	64	736
1:50 PM	0	0	0	0	0	0	0	0	0	26	0	0	0	29	0	0	55	727
1:55 PM	0	0	0	0	0	0	0	0	0	33	0	0	0	25	0	0	58	718

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	432	0	0	0	504	0	0	936
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	12	0		24
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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Corona, CA 92878
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City of Murrieta
N/S: Bronco Way
E/W: Clinton Keith Road
Weather: Clear

File Name : 10_MUR_Bronco_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 1

Groups Printed- Total Volume

	Clinton Keith Road Westbound			Bronco Way Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	16	195	211	23	13	36	250	13	263	510
04:15 PM	22	182	204	21	13	34	293	7	300	538
04:30 PM	25	181	206	30	19	49	307	20	327	582
04:45 PM	43	193	236	27	28	55	339	22	361	652
Total	106	751	857	101	73	174	1189	62	1251	2282
05:00 PM	26	215	241	37	17	54	309	22	331	626
05:15 PM	38	256	294	20	12	32	378	24	402	728
05:30 PM	30	197	227	30	18	48	361	25	386	661
05:45 PM	51	173	224	29	15	44	319	31	350	618
Total	145	841	986	116	62	178	1367	102	1469	2633
Grand Total	251	1592	1843	217	135	352	2556	164	2720	4915
Apprch %	13.6	86.4		61.6	38.4		94	6		
Total %	5.1	32.4	37.5	4.4	2.7	7.2	52	3.3	55.3	

	Clinton Keith Road Westbound			Bronco Way Northbound			Clinton Keith Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**43**	193	236	27	**28**	**55**	339	22	361	652
05:00 PM	26	215	241	**37**	17	54	309	22	331	626
05:15 PM	38	**256**	**294**	20	12	32	**378**	24	**402**	**728**
05:30 PM	30	197	227	30	18	48	361	**25**	386	661
Total Volume	137	861	998	114	75	189	1387	93	1480	2667
% App. Total	13.7	86.3		60.3	39.7		93.7	6.3		
PHF	.797	.841	.849	.770	.670	.859	.917	.930	.920	.916

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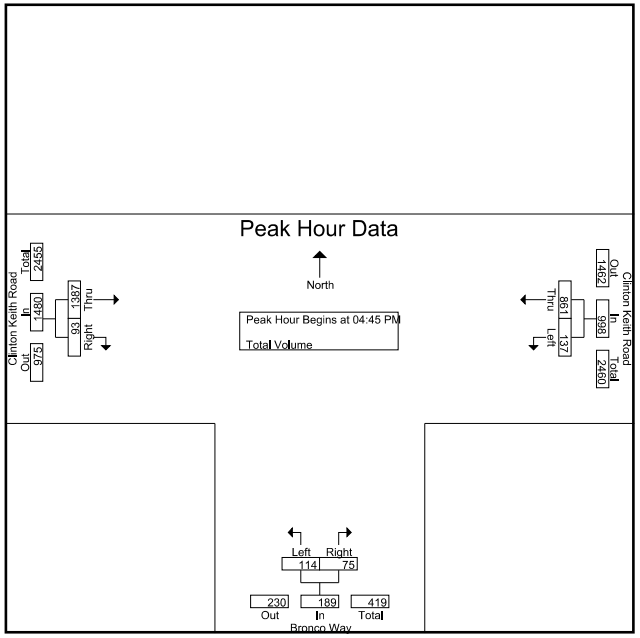
City of Murrieta
N/S: Bronco Way
E/W: Clinton Keith Road
Weather: Clear

File Name : 10_MUR_Bronco_Clinton Keith Tues
Site Code : 99918787
Start Date : 10/23/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:15 PM			04:45 PM		
+0 mins.	**43**	193	236	21	13	34	339	22	361
+15 mins.	26	215	241	30	19	49	309	22	331
+30 mins.	38	**256**	**294**	27	**28**	**55**	**378**	24	**402**
+45 mins.	30	197	227	**37**	17	54	361	**25**	386
Total Volume	137	861	998	115	77	192	1387	93	1480
% App. Total	13.7	86.3		59.9	40.1		93.7	6.3	
PHF	.797	.841	.849	.777	.688	.873	.917	.930	.920

Location: Murrieta
N/S: Bronco Way
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Bronco Way	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	1	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	2	0	2
12:45 PM	0	0	0	0	0
1:00 PM	0	1	1	0	2
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	4	0	5

Date: 10/23/2018
Day: Tuesday

	North Leg Dead End	East Leg Clinton Keith Road	South Leg Bronco Way	West Leg Clinton Keith Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	2	0	2
5:30 PM	0	1	1	0	2
5:45 PM	0	4	4	0	8
TOTAL VOLUMES:	0	7	7	0	14

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Corona, CA 92878
951-268-6268

Location: Murrieta
N/S: Bronco Way
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Bronco Way			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	2	0	3

Date: 10/23/2018
Day: Tuesday

	Southbound Dead End			Westbound Clinton Keith Road			Northbound Bronco Way			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	4	0	0	0	0	0	2	0	6

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Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: 10 Vista Murrieta HS Dwy – Clinton Keith Rd

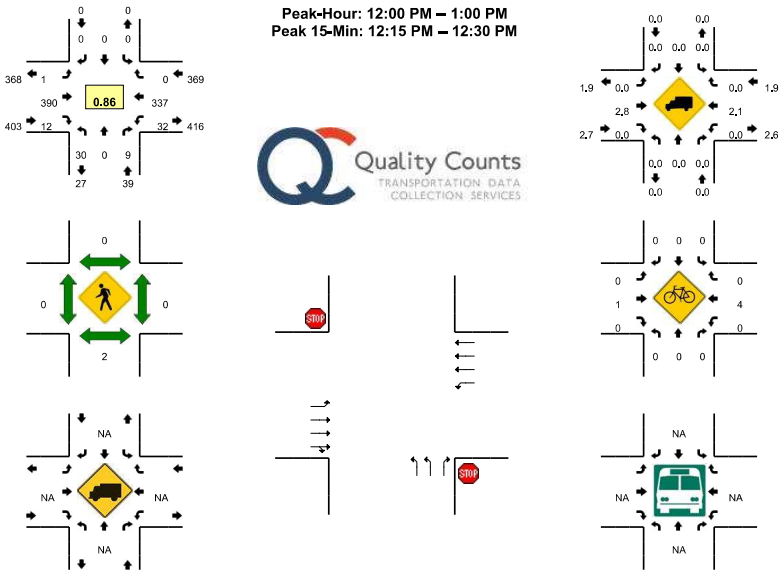
QC JOB #: 14565420

CITY/STATE: Riverside, CA

DATE: Sat, Dec 02 2017

Peak-Hour: 12:00 PM – 1:00 PM

Peak 15-Min: 12:15 PM – 12:30 PM



5-Min Count Period	10 Vista Murrieta HS Dwy (Northbound)				10 Vista Murrieta HS Dwy (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	3	0	0	0	0	0	0	0	0	38	3	0	1	21	0	4	70	
12:05 PM	4	0	0	0	0	0	0	0	0	32	0	0	1	25	0	1	63	
12:10 PM	4	0	1	0	0	0	0	0	0	23	0	0	2	28	0	0	58	
12:15 PM	5	0	0	0	0	0	0	0	0	28	0	0	1	38	0	2	74	
12:20 PM	2	0	0	0	0	0	0	0	0	36	2	0	1	40	0	1	82	
12:25 PM	5	0	1	0	0	0	0	0	0	36	1	0	0	36	0	0	79	
12:30 PM	2	0	1	0	0	0	0	0	0	33	0	0	1	28	0	0	65	
12:35 PM	0	0	0	0	0	0	0	0	0	37	0	0	0	36	0	1	74	
12:40 PM	1	0	2	0	0	0	0	0	0	31	1	0	2	24	0	1	62	
12:45 PM	0	0	2	0	0	0	0	0	0	21	1	0	1	16	0	3	44	
12:50 PM	2	0	1	0	0	0	0	0	0	29	1	0	4	26	0	1	64	
12:55 PM	2	0	1	0	0	0	0	0	0	46	3	1	1	19	0	3	76	811
1:00 PM	3	0	1	0	0	0	0	0	0	23	1	1	0	27	0	3	59	800
1:05 PM	4	0	1	0	0	0	0	0	0	21	0	1	1	35	0	0	63	800
1:10 PM	4	0	0	0	0	0	0	0	0	27	2	0	0	24	0	2	59	801
1:15 PM	6	0	1	0	0	0	0	0	0	28	0	0	2	36	0	0	73	800
1:20 PM	1	0	0	0	0	0	0	0	0	26	0	0	0	27	0	0	54	772
1:25 PM	4	0	0	0	0	0	0	0	0	35	2	0	1	28	0	0	70	763
1:30 PM	4	0	1	0	0	0	0	0	0	39	0	0	1	26	0	0	71	769
1:35 PM	1	0	0	0	0	0	0	0	0	24	0	0	1	23	0	0	49	744
1:40 PM	1	0	0	0	0	0	0	0	0	26	0	0	0	29	0	0	56	738
1:45 PM	1	0	0	0	0	0	0	0	0	43	0	0	0	30	0	0	74	768
1:50 PM	0	0	0	0	0	0	0	0	0	23	0	0	0	28	0	2	53	757
1:55 PM	0	0	0	0	0	0	0	0	0	30	0	0	0	25	0	0	55	736

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	0	4	0	0	0	0	0	0	400	12	0	8	456	0	12	940
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	16	0		24
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
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City of Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 11_MUR_Whitewood_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Whitewood Road Southbound				Clinton Keith Road Westbound				Whitewood Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	11	55	46	112	25	78	7	110	54	40	27	121	78	113	54	245	588
12:15 PM	14	50	33	97	23	90	10	123	33	43	23	99	50	79	47	176	495
12:30 PM	14	60	47	121	20	73	7	100	25	41	21	87	63	104	43	210	518
12:45 PM	16	47	63	126	8	83	8	99	25	27	30	82	95	111	34	240	547
Total	55	212	189	456	76	324	32	432	137	151	101	389	286	407	178	871	2148
01:00 PM	13	48	55	116	52	88	7	147	32	38	19	89	71	103	38	212	564
01:15 PM	10	58	48	116	29	81	7	117	29	35	18	82	63	102	50	215	530
01:30 PM	10	57	59	126	26	79	6	111	12	34	17	63	67	90	50	207	507
01:45 PM	13	50	42	105	17	78	11	106	50	51	25	126	44	97	32	173	510
Total	46	213	204	463	124	326	31	481	123	158	79	360	245	392	170	807	2111
Grand Total	101	425	393	919	200	650	63	913	260	309	180	749	531	799	348	1678	4259
Apprch %	11	46.2	42.8		21.9	71.2	6.9		34.7	41.3	24		31.6	47.6	20.7		
Total %	2.4	10	9.2	21.6	4.7	15.3	1.5	21.4	6.1	7.3	4.2	17.6	12.5	18.8	8.2	39.4	

	Whitewood Road Southbound				Clinton Keith Road Westbound				Whitewood Road Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	14	**60**	47	121	20	73	7	100	25	**41**	21	87	63	104	43	210	518
12:45 PM	**16**	47	**63**	**126**	8	83	**8**	99	25	27	**30**	82	**95**	**111**	34	**240**	547
01:00 PM	13	48	55	116	**52**	**88**	7	**147**	**32**	38	19	**89**	71	103	38	212	**564**
01:15 PM	10	58	48	116	29	81	7	117	29	35	18	82	63	102	**50**	215	530
Total Volume	53	213	213	479	109	325	29	463	111	141	88	340	292	420	165	877	2159
% App. Total	11.1	44.5	44.5		23.5	70.2	6.3		32.6	41.5	25.9		33.3	47.9	18.8		
PHF	.828	.888	.845	.950	.524	.923	.906	.787	.867	.860	.733	.955	.768	.946	.825	.914	.957

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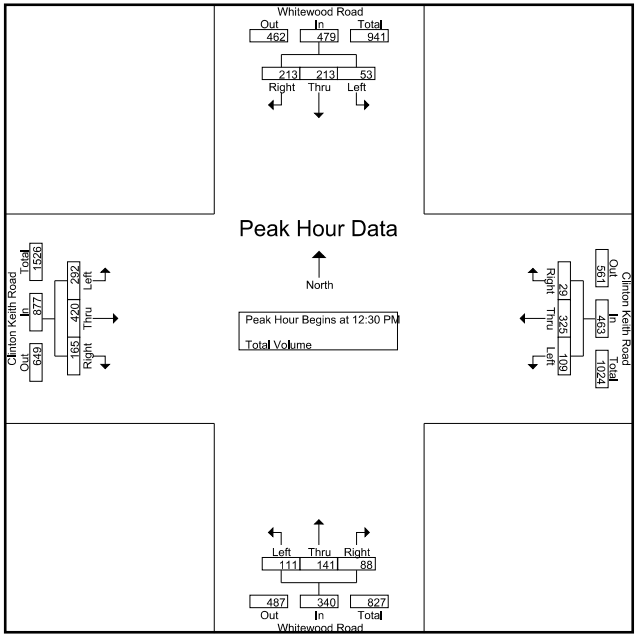
City of Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 11_MUR_Whitewood_Clinton Keith Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:45 PM				01:00 PM				12:00 PM				12:30 PM			
+0 mins.	**16**	47	**63**	**126**	**52**	**88**	7	**147**	**54**	40	27	**121**	63	104	43	210
+15 mins.	13	48	55	116	29	81	7	117	33	**43**	23	99	**95**	**111**	34	**240**
+30 mins.	10	**58**	48	116	26	79	6	111	25	41	21	87	71	103	38	212
+45 mins.	10	57	59	126	17	78	**11**	106	25	27	**30**	82	63	102	**50**	215
Total Volume	49	210	225	484	124	326	31	481	137	151	101	389	292	420	165	877
% App. Total	10.1	43.4	46.5		25.8	67.8	6.4		35.2	38.8	26		33.3	47.9	18.8	
PHF	.766	.905	.893	.960	.596	.926	.705	.818	.634	.878	.842	.804	.768	.946	.825	.914

Location: Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Whitewood Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Whitewood Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	1	0	0	0	1
1:30 PM	1	0	0	3	4
1:45 PM	1	0	0	0	1
TOTAL VOLUMES:	3	0	0	3	6

Date: 10/23/2018
Day: Tuesday

	North Leg Whitewood Road Pedestrians	East Leg Clinton Keith Road Pedestrians	South Leg Whitewood Road Pedestrians	West Leg Clinton Keith Road Pedestrians	
4:00 PM	0	0	0	3	3
4:15 PM	0	0	0	2	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	6	7

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Location: Murrieta
N/S: Whitewood Road
E/W: Clinton Keith Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Whitewood Road			Westbound Clinton Keith Road			Northbound Whitewood Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	1	0	0	0	0	0	1	0	0	1	0	3
12:15 PM	0	2	0	0	0	0	0	4	0	0	0	0	6
12:30 PM	0	1	0	0	1	0	0	1	1	0	0	1	5
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
1:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
1:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	0	1	0	0	11	2	0	1	1	20

Date: 10/23/2018
Day: Tuesday

	Southbound Whitewood Road			Westbound Clinton Keith Road			Northbound Whitewood Road			Eastbound Clinton Keith Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	2
4:15 PM	0	0	2	0	0	1	0	0	0	0	0	1	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	2	1	0	1	1	1	2	0	0	2	10

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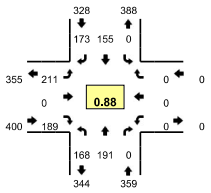
951-268-6268

Type of peak hour being reported: Intersection Peak

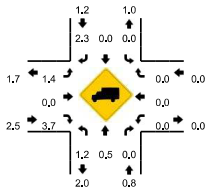
Method for determining peak hour: Total Entering Volume

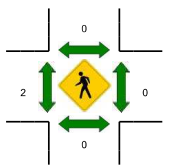
LOCATION: 11 Whitewood Rd – Clinton Keith Rd
CITY/STATE: Riverside, CA

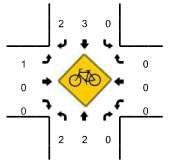
QC JOB #: 14565422
DATE: Sat, Dec 02 2017

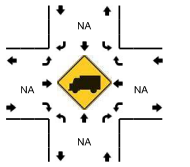


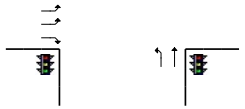
Peak-Hour: 12:05 PM – 1:05 PM
Peak 15-Min: 12:15 PM – 12:30 PM

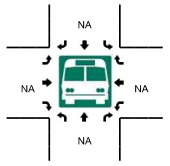












5-Min Count Period Beginning At	11 Whitewood Rd (Northbound)				11 Whitewood Rd (Southbound)				Clinton Keith Rd (Eastbound)				Clinton Keith Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	13	13	0	0	0	15	14	0	11	0	15	0	0	0	0	0	81	
12:05 PM	12	23	0	0	0	10	14	0	21	0	17	0	0	0	0	0	97	
12:10 PM	16	12	0	0	0	17	8	0	15	0	10	1	0	0	0	0	79	
12:15 PM	18	16	0	0	0	13	20	0	13	0	15	0	0	0	0	0	95	
12:20 PM	29	17	0	0	0	8	14	0	18	0	19	2	0	0	0	0	107	
12:25 PM	18	16	0	0	0	16	15	0	19	0	22	0	0	0	0	0	106	
12:30 PM	9	16	0	0	0	8	14	0	9	0	17	0	0	0	0	0	73	
12:35 PM	11	16	0	0	0	20	22	0	28	0	13	2	0	0	0	0	112	
12:40 PM	11	11	0	0	0	17	13	0	16	0	18	2	0	0	0	0	88	
12:45 PM	10	11	0	0	0	9	14	0	10	0	13	3	0	0	0	0	70	
12:50 PM	12	11	0	0	0	14	8	0	14	0	11	2	0	0	0	0	72	
12:55 PM	13	28	0	0	0	10	14	0	16	0	16	2	0	0	0	0	99	1079
1:00 PM	9	14	0	0	0	13	17	0	18	0	18	0	0	0	0	0	89	1087
1:05 PM	16	15	0	0	0	9	18	0	9	0	8	3	0	0	0	0	78	1068
1:10 PM	13	15	0	0	0	7	12	0	17	0	6	2	0	0	0	0	72	1061
1:15 PM	14	18	0	0	0	13	20	0	13	0	20	0	0	0	0	0	98	1064
1:20 PM	12	10	0	0	0	12	13	0	11	0	10	1	0	0	0	0	69	1026
1:25 PM	22	9	0	0	0	21	12	0	19	0	7	1	0	0	0	0	91	1011
1:30 PM	10	16	0	0	0	11	13	0	21	0	21	2	0	0	0	0	94	1032
1:35 PM	7	8	0	0	0	16	7	0	20	0	11	3	0	0	0	0	72	992
1:40 PM	17	28	0	0	0	15	17	0	15	0	12	0	0	0	0	0	104	1008
1:45 PM	6	10	0	0	0	10	17	0	19	0	16	1	0	0	0	0	79	1017
1:50 PM	13	13	0	0	0	8	17	0	13	0	12	0	0	0	0	0	76	1021
1:55 PM	10	18	0	0	0	14	13	0	17	0	7	2	0	0	0	0	81	1003
Peak 15-Min Flowrates	**Northbound**				**Southbound**				**Eastbound**				**Westbound**					
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Total	
All Vehicles	260	196	0	0	0	148	196	0	200	0	224	8	0	0	0	0	1232	
Heavy Trucks	4	0	0		0	0	8		0	0	8		0	0	0		20	
Pedestrians		0				0				4				0			4	
Bicycles	1	0	0		0	2	0		0	0	0		0	0	0		3	
Railroad																		
Stopped Buses																		

Comments:

Report generated on 12/11/2017 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: Whitewood Road
E/W: Linnell Lane/Lee Lane
Weather: Clear

File Name : 12_MUR_Whitewood_Linnel_Lee Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Whitewood Road Southbound				Lee Road Westbound				Whitewood Road Northbound				Linnell Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	0	106	8	114	2	0	0	2	8	72	1	81	18	0	18	36	233
12:15 PM	0	97	8	105	2	1	0	3	12	81	2	95	9	0	5	14	217
12:30 PM	1	79	10	90	0	1	0	1	9	69	0	78	9	1	12	22	191
12:45 PM	0	100	15	115	0	1	1	2	14	64	2	80	14	0	23	37	234
Total	1	382	41	424	4	3	1	8	43	286	5	334	50	1	58	109	875
01:00 PM	0	78	7	85	1	1	0	2	10	90	1	101	12	0	19	31	219
01:15 PM	0	101	6	107	1	0	0	1	4	66	1	71	12	0	22	34	213
01:30 PM	1	116	11	128	0	0	0	0	13	80	0	93	12	1	18	31	252
01:45 PM	1	95	8	104	1	1	0	2	7	92	0	99	18	1	16	35	240
Total	2	390	32	424	3	2	0	5	34	328	2	364	54	2	75	131	924
Grand Total	3	772	73	848	7	5	1	13	77	614	7	698	104	3	133	240	1799
Apprch %	0.4	91	8.6		53.8	38.5	7.7		11	88	1		43.3	1.2	55.4		
Total %	0.2	42.9	4.1	47.1	0.4	0.3	0.1	0.7	4.3	34.1	0.4	38.8	5.8	0.2	7.4	13.3	

	Whitewood Road Southbound				Lee Road Westbound				Whitewood Road Northbound				Linnell Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 01:00 PM																	
01:00 PM	0	78	7	85	**1**	**1**	0	**2**	10	90	**1**	**101**	12	0	19	31	219
01:15 PM	0	101	6	107	1	0	0	1	4	66	1	71	12	0	**22**	34	213
01:30 PM	**1**	**116**	**11**	**128**	0	0	0	0	**13**	80	0	93	12	**1**	18	31	**252**
01:45 PM	1	95	8	104	1	1	0	2	7	**92**	0	99	**18**	1	16	**35**	240
Total Volume	2	390	32	424	3	2	0	5	34	328	2	364	54	2	75	131	924
% App. Total	0.5	92	7.5		60	40	0		9.3	90.1	0.5		41.2	1.5	57.3		
PHF	.500	.841	.727	.828	.750	.500	.000	.625	.654	.891	.500	.901	.750	.500	.852	.936	.917

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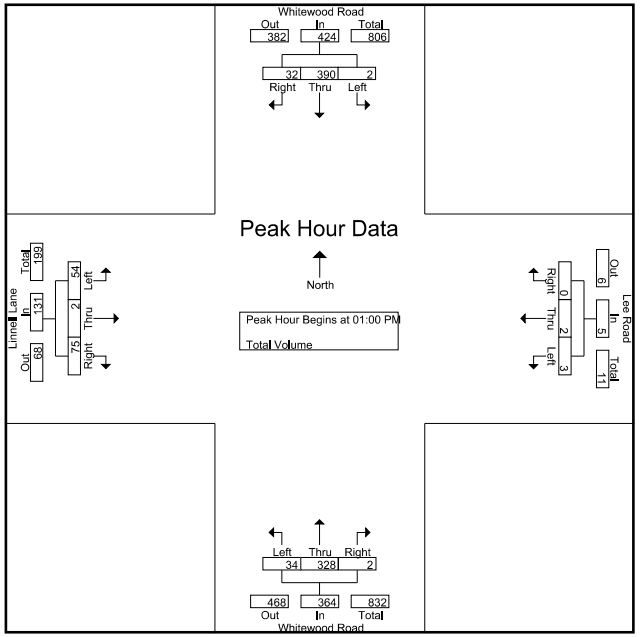
City of Murrieta
N/S: Whitewood Road
E/W: Linnell Lane/Lee Lane
Weather: Clear

File Name : 12_MUR_Whitewood_Linnel_Lee Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:45 PM				12:00 PM				01:00 PM				12:45 PM			
+0 mins.	0	100	**15**	115	**2**	0	0	2	10	90	**1**	**101**	**14**	0	**23**	**37**
+15 mins.	0	78	7	85	2	**1**	0	**3**	4	66	1	71	12	0	19	31
+30 mins.	0	101	6	107	0	1	0	1	**13**	80	0	93	12	0	22	34
+45 mins.	**1**	**116**	11	**128**	0	1	**1**	2	7	**92**	0	99	12	**1**	18	31
Total Volume	1	395	39	435	4	3	1	8	34	328	2	364	50	1	82	133
% App. Total	0.2	90.8	9		50	37.5	12.5		9.3	90.1	0.5		37.6	0.8	61.7	
PHF	.250	.851	.650	.850	.500	.750	.250	.667	.654	.891	.500	.901	.893	.250	.891	.899

Location: Murrieta
N/S: Whitewood Road
E/W: Linnel Lane/Lee Lane

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Whitewood Road	East Leg Lee Road	South Leg Whitewood Road	West Leg Linnell Lane	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Date: 10/23/2018
Day: Tuesday

	North Leg Whitewood Road	East Leg Lee Road	South Leg Whitewood Road	West Leg Linnell Lane	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	1	0	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	1	3

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Location: Murrieta
N/S: Whitewood Road
E/W: Linnel Lane/Lee Lane

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Whitewood Road			Westbound Lee Road			Northbound Whitewood Road			Eastbound Linnell Lane			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	12	1	0	0	0	0	3	0	0	0	0	16
12:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	5	0	0	0	0	0	0	0	0	0	0	5
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	22	1	0	0	0	0	4	0	0	0	0	27

Date: 10/23/2018
Day: Tuesday

	Southbound Whitewood Road			Westbound Lee Road			Northbound Whitewood Road			Eastbound Linnell Lane			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	2	0	0	0	0	0	1	0	0	0	0	3
4:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	2	0	0	0	0	3	0	0	0	0	8

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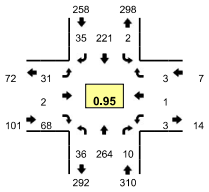
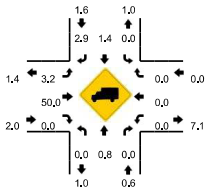
951-268-6268

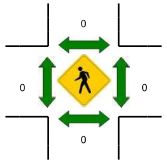
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

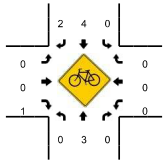
LOCATION: 17 Whitewood Rd – Linnel Ln/Lee Ln | **QC JOB #:** 14565438
CITY/STATE: Riverside, CA | **DATE:** Sat, Dec 02 2017

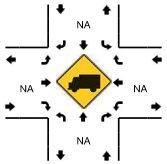


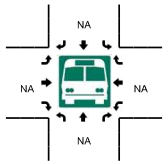
Peak-Hour: 12:00 PM – 1:00 PM
Peak 15-Min: 12:15 PM – 12:30 PM











5-Min Count Period Beginning At	17 Whitewood Rd (Northbound)				17 Whitewood Rd (Southbound)				Linnel Ln/Lee Ln (Eastbound)				Linnel Ln/Lee Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	2	20	0	0	0	22	7	0	4	0	6	0	0	0	0	0	61	
12:05 PM	3	33	1	0	0	16	3	0	1	0	5	0	0	1	0	0	63	
12:10 PM	1	20	3	0	1	14	4	0	3	1	3	0	0	0	0	0	50	
12:15 PM	5	15	1	0	0	27	2	0	3	0	6	0	0	0	0	0	59	
12:20 PM	6	23	1	0	0	16	2	0	3	0	9	0	0	0	0	0	60	
12:25 PM	6	23	1	0	0	19	3	0	1	0	3	0	2	0	0	0	58	
12:30 PM	3	20	1	0	0	15	3	0	2	0	5	0	0	0	0	0	49	
12:35 PM	1	27	0	0	0	26	0	0	2	0	6	0	0	0	1	0	63	
12:40 PM	2	16	0	0	0	19	3	0	4	1	13	0	0	0	0	0	58	
12:45 PM	3	22	1	0	0	16	3	0	3	0	5	0	0	0	0	0	53	
12:50 PM	1	17	0	0	1	17	4	0	3	0	2	0	1	0	2	0	48	
12:55 PM	3	28	1	0	0	14	1	0	2	0	5	0	0	0	0	0	54	676
1:00 PM	3	28	0	0	0	11	4	0	2	0	6	0	0	0	0	0	54	669
1:05 PM	3	15	0	0	0	22	3	0	7	0	2	0	0	1	0	0	53	659
1:10 PM	0	21	0	0	0	18	2	0	2	0	3	0	0	0	0	0	46	655
1:15 PM	7	19	0	0	0	23	2	0	3	0	6	0	2	0	0	0	62	658
1:20 PM	1	15	0	0	0	12	1	0	3	0	3	0	0	0	0	0	35	633
1:25 PM	6	22	2	0	0	18	0	0	3	0	9	0	0	0	0	0	60	635
1:30 PM	1	23	0	0	0	17	7	0	4	0	4	0	0	0	0	0	56	642
1:35 PM	7	20	0	0	0	16	3	0	4	0	5	0	1	0	0	0	56	635
1:40 PM	5	27	0	0	1	22	3	0	4	0	3	0	0	0	0	0	65	642
1:45 PM	2	25	0	0	0	19	3	0	4	1	1	0	0	1	0	0	56	645
1:50 PM	4	16	0	0	0	17	1	0	4	0	3	0	0	0	0	0	45	642
1:55 PM	3	27	0	0	0	17	1	0	4	0	5	0	1	0	0	0	58	646

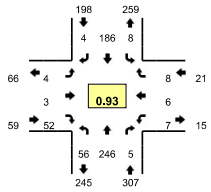
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	244	12	0	0	248	28	0	28	0	72	0	8	0	0	0	708
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	0		4
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	2	2		0	0	1		0	0	0		5
Railroad																	
Stopped Buses																	

Comments:

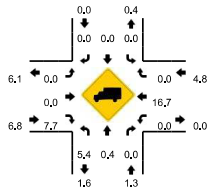
Report generated on 12/11/2017 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

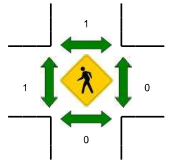
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

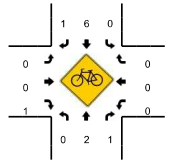
LOCATION: 18 Whitewood Rd – Baxter Rd | **QC JOB #:** 14565440
CITY/STATE: Riverside, CA | **DATE:** Sat, Dec 02 2017

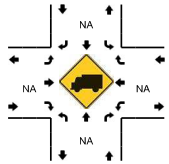


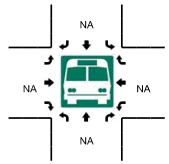
Peak-Hour: 12:05 PM – 1:05 PM
Peak 15-Min: 12:35 PM – 12:50 PM











5-Min Count Period Beginning At	18 Whitewood Rd (Northbound)				18 Whitewood Rd (Southbound)				Baxter Rd (Eastbound)				Baxter Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	4	16	0	0	0	12	0	0	1	0	4	0	1	0	2	0	40	
12:05 PM	7	32	0	0	0	19	0	1	0	0	2	0	0	0	0	0	61	
12:10 PM	2	13	0	0	0	15	0	0	0	0	4	0	2	0	0	0	36	
12:15 PM	7	16	0	0	1	18	0	0	0	1	7	0	1	1	0	0	52	
12:20 PM	4	21	2	0	2	13	1	0	0	0	4	0	1	0	1	0	49	
12:25 PM	2	18	0	0	0	16	2	0	3	1	5	0	1	0	0	0	48	
12:30 PM	5	16	0	0	1	15	0	0	0	0	5	0	1	0	0	0	43	
12:35 PM	8	21	1	0	2	19	0	0	0	0	6	0	0	3	3	0	63	
12:40 PM	7	20	1	0	0	20	0	0	0	0	0	0	0	0	2	0	50	
12:45 PM	3	16	1	0	0	15	1	0	1	0	4	0	1	1	1	0	44	
12:50 PM	3	24	0	0	1	15	0	0	0	0	8	0	0	0	0	0	51	
12:55 PM	3	28	0	0	0	10	0	0	0	1	3	0	0	0	1	0	46	583
1:00 PM	5	21	0	0	0	11	0	0	0	0	4	0	0	1	0	0	42	585
1:05 PM	4	15	0	0	0	15	1	0	1	0	8	0	0	0	0	0	44	568
1:10 PM	4	17	0	1	1	17	2	0	0	0	7	0	1	0	0	0	50	582
1:15 PM	5	15	0	0	0	11	0	0	1	0	2	0	0	0	0	0	34	564
1:20 PM	7	19	0	0	1	12	0	0	0	0	7	0	0	0	1	0	47	562
1:25 PM	5	15	1	0	1	16	0	0	0	0	3	0	2	0	0	0	43	557
1:30 PM	6	22	0	0	0	19	1	0	0	0	1	0	1	0	0	0	50	564
1:35 PM	5	18	1	0	0	18	0	0	0	0	5	0	0	1	0	0	48	549
1:40 PM	2	30	1	0	0	18	1	0	0	2	2	0	1	0	2	0	59	558
1:45 PM	8	13	1	0	1	12	0	0	1	0	2	0	1	1	0	0	40	554
1:50 PM	7	18	0	0	0	15	0	0	0	0	3	0	0	0	0	0	43	546
1:55 PM	5	22	1	0	0	13	1	0	2	0	6	0	1	1	0	0	52	552

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	72	228	12	0	8	216	4	0	4	0	40	0	4	16	24	0	628
Heavy Trucks	4	0	0		0	0	0		0	0	4		0	0	0		8
Pedestrians		0				4				0				0			4
Bicycles	0	2	1		0	1	0		0	0	1		0	0	0		5
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

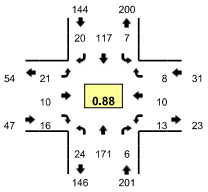
Method for determining peak hour: Total Entering Volume

LOCATION: 19 Whitewood Rd – Keller Rd

QC JOB #: 14565442

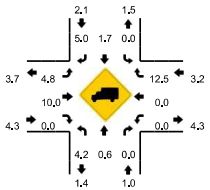
CITY/STATE: Riverside, CA

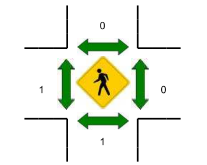
DATE: Sat, Dec 02 2017

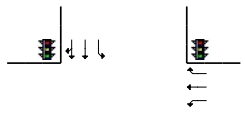


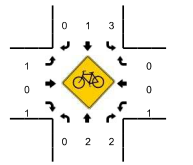
Peak-Hour: 12:00 PM – 1:00 PM

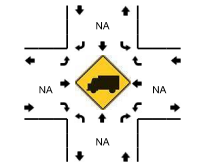
Peak 15-Min: 12:00 PM – 12:15 PM

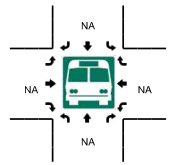












5-Min Count Period Beginning At	19 Whitewood Rd (Northbound)				19 Whitewood Rd (Southbound)				Keller Rd (Eastbound)				Keller Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	3	16	1	0	0	17	2	0	2	1	0	0	1	2	0	0	45	
12:05 PM	1	23	1	0	1	9	0	0	0	0	2	0	0	0	0	0	37	
12:10 PM	1	11	1	0	0	14	3	0	2	2	0	0	0	3	1	0	38	
12:15 PM	0	10	0	0	1	10	3	0	2	1	0	0	1	1	1	0	30	
12:20 PM	5	8	0	0	0	5	1	0	1	2	3	0	4	0	0	0	29	
12:25 PM	4	14	1	0	2	7	1	0	2	1	1	0	0	0	1	0	34	
12:30 PM	2	12	0	0	1	12	3	0	2	2	3	0	0	0	0	0	37	
12:35 PM	0	17	0	0	0	10	1	0	5	1	0	0	2	2	0	0	38	
12:40 PM	2	13	0	0	1	12	1	0	1	0	1	0	2	1	3	0	37	
12:45 PM	2	13	0	0	0	8	1	0	2	0	2	0	3	1	1	0	33	
12:50 PM	3	12	1	0	0	8	1	0	1	0	2	0	0	0	1	0	29	
12:55 PM	1	22	1	0	1	5	3	0	1	0	2	0	0	0	0	0	36	423
1:00 PM	1	20	0	0	0	12	1	0	0	0	1	0	0	1	1	0	37	415
1:05 PM	3	12	0	0	0	6	1	0	2	0	0	0	1	1	0	0	26	404
1:10 PM	1	10	2	0	2	15	1	0	1	1	2	0	0	1	1	1	38	404
1:15 PM	1	11	0	0	0	5	3	0	2	1	1	0	1	2	0	0	27	401
1:20 PM	2	7	1	0	1	12	1	1	1	2	1	0	0	2	1	0	32	404
1:25 PM	2	13	0	0	0	13	4	0	1	0	0	0	0	1	0	0	34	404
1:30 PM	1	11	0	0	0	11	2	0	0	0	2	1	1	0	0	0	29	396
1:35 PM	1	14	0	0	2	13	5	0	2	0	1	0	1	0	1	0	40	398
1:40 PM	2	19	1	0	0	9	2	0	1	3	4	0	2	2	0	0	45	406
1:45 PM	0	15	3	0	0	10	2	1	2	0	0	0	1	2	1	0	37	410
1:50 PM	1	10	0	0	0	6	4	0	3	1	0	0	1	0	1	0	27	408
1:55 PM	4	15	3	0	2	8	2	0	1	0	0	0	0	3	0	0	38	410

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	200	12	0	4	160	20	0	16	12	8	0	4	20	4	0	480
Heavy Trucks	4	4	0		0	4	0		0	0	0		0	0	0		12
Pedestrians		4				0				0				0			4
Bicycles	0	1	0		0	1	0		1	0	1		0	0	0		4
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/11/2017 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road
Weather: Clear

File Name : 22_Briggs_Max Gilliss_Leon Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Briggs Road Southbound				Leon Road Westbound				Max Gilliss Boulevard Northbound				Leon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	2	61	13	76	19	30	1	50	94	54	31	179	17	37	103	157	462
12:15 PM	1	83	20	104	28	46	4	78	79	55	26	160	15	40	102	157	499
12:30 PM	2	60	10	72	34	20	0	54	60	46	26	132	9	43	112	164	422
12:45 PM	2	68	13	83	25	23	1	49	75	57	33	165	19	36	123	178	475
Total	7	272	56	335	106	119	6	231	308	212	116	636	60	156	440	656	1858
01:00 PM	2	76	29	107	24	26	1	51	100	54	23	177	18	40	101	159	494
01:15 PM	2	56	8	66	27	28	1	56	86	68	17	171	18	39	105	162	455
01:30 PM	1	63	9	73	25	20	2	47	84	74	20	178	13	31	94	138	436
01:45 PM	1	64	16	81	28	29	0	57	70	60	27	157	11	43	91	145	440
Total	6	259	62	327	104	103	4	211	340	256	87	683	60	153	391	604	1825
Grand Total	13	531	118	662	210	222	10	442	648	468	203	1319	120	309	831	1260	3683
Apprch %	2	80.2	17.8		47.5	50.2	2.3		49.1	35.5	15.4		9.5	24.5	66		
Total %	0.4	14.4	3.2	18	5.7	6	0.3	12	17.6	12.7	5.5	35.8	3.3	8.4	22.6	34.2	

	Briggs Road Southbound				Leon Road Westbound				Max Gilliss Boulevard Northbound				Leon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15 PM																	
12:15 PM	1	**83**	20	104	28	**46**	**4**	**78**	79	55	26	160	15	40	102	157	**499**
12:30 PM	**2**	60	10	72	**34**	20	0	54	60	46	26	132	9	**43**	112	164	422
12:45 PM	2	68	13	83	25	23	1	49	75	**57**	**33**	165	**19**	36	**123**	**178**	475
01:00 PM	2	76	**29**	**107**	24	26	1	51	**100**	54	23	**177**	18	40	101	159	494
Total Volume	7	287	72	366	111	115	6	232	314	212	108	634	61	159	438	658	1890
% App. Total	1.9	78.4	19.7		47.8	49.6	2.6		49.5	33.4	17		9.3	24.2	66.6		
PHF	.875	.864	.621	.855	.816	.625	.375	.744	.785	.930	.818	.895	.803	.924	.890	.924	.947

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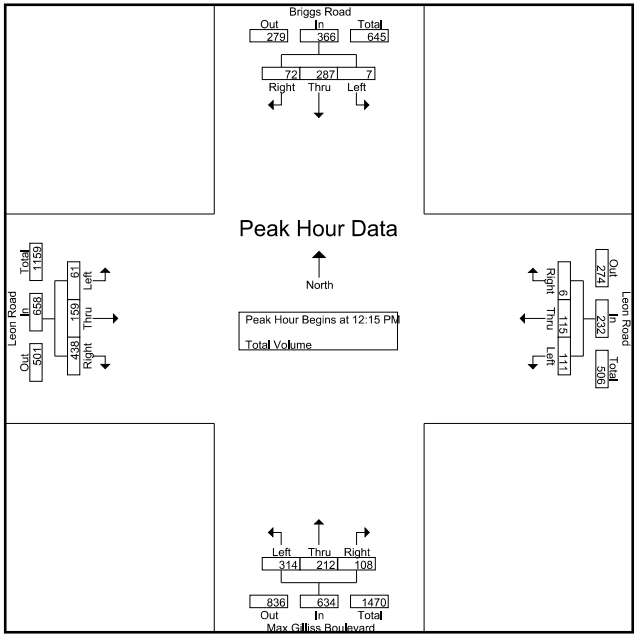
County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road
Weather: Clear

File Name : 22_Briggs_Max Gilliss_Leon Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				12:15 PM				12:45 PM				12:30 PM			
+0 mins.	1	**83**	20	104	28	**46**	**4**	**78**	75	57	**33**	165	9	**43**	112	164
+15 mins.	**2**	60	10	72	**34**	20	0	54	**100**	54	23	177	**19**	36	**123**	**178**
+30 mins.	2	68	13	83	25	23	1	49	86	68	17	171	18	40	101	159
+45 mins.	2	76	**29**	**107**	24	26	1	51	84	**74**	20	**178**	18	39	105	162
Total Volume	7	287	72	366	111	115	6	232	345	253	93	691	64	158	441	663
% App. Total	1.9	78.4	19.7		47.8	49.6	2.6		49.9	36.6	13.5		9.7	23.8	66.5	
PHF	.875	.864	.621	.855	.816	.625	.375	.744	.863	.855	.705	.971	.842	.919	.896	.931

Location: County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Briggs Road Pedestrians	East Leg Leon Road Pedestrians	South Leg Max Gilliss Boulevard Pedestrians	West Leg Leon Road Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Date: 10/23/2018
Day: Tuesday

	North Leg Briggs Road Pedestrians	East Leg Leon Road Pedestrians	South Leg Max Gilliss Boulevard Pedestrians	West Leg Leon Road Pedestrians	
4:00 PM	0	0	0	2	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	2	2
5:15 PM	0	0	0	0	0
5:30 PM	0	0	1	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	4	6

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Corona, CA 92878
951-268-6268

Location: County of Riverside
N/S: Briggs Road/Max Gillis Boulevard
E/W: Leon Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Briggs Road			Westbound Leon Road			Northbound Max Gilliss Boulevard			Eastbound Leon Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	1	0	1	0	0	0	2	4
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
12:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	2	1	0	1	0	0	0	3	9

Date: 10/23/2018
Day: Tuesday

	Southbound Briggs Road			Westbound Leon Road			Northbound Max Gilliss Boulevard			Eastbound Leon Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	2	2	6

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Corona, CA 92878
(951) 268-6268

County of Riverside
N/S: Winchester Road (SR-79)
E/W: Max Gillis Boulevard/Thompson Road
Weather: Clear

File Name : 23_CRV_79_Max Gilliss_Thompson Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 1

Groups Printed- Total Volume

	Winchester Road Southbound				Thompson Road Westbound				Winchester Road Northbound				Max Gilliss Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	7	253	23	283	33	38	5	76	109	201	40	350	22	52	120	194	903
12:15 PM	13	258	19	290	37	31	4	72	113	188	33	334	16	56	128	200	896
12:30 PM	13	257	16	286	38	58	2	98	101	218	28	347	10	48	122	180	911
12:45 PM	8	179	12	199	39	42	2	83	100	189	36	325	14	62	101	177	784
Total	41	947	70	1058	147	169	13	329	423	796	137	1356	62	218	471	751	3494
01:00 PM	9	249	11	269	27	37	4	68	85	207	37	329	20	48	110	178	844
01:15 PM	11	262	24	297	33	55	4	92	97	230	36	363	18	67	129	214	966
01:30 PM	5	260	23	288	40	46	5	91	101	242	34	377	20	51	106	177	933
01:45 PM	3	226	20	249	32	51	7	90	102	226	36	364	18	66	136	220	923
Total	28	997	78	1103	132	189	20	341	385	905	143	1433	76	232	481	789	3666
Grand Total	69	1944	148	2161	279	358	33	670	808	1701	280	2789	138	450	952	1540	7160
Apprch %	3.2	90	6.8		41.6	53.4	4.9		29	61	10		9	29.2	61.8		
Total %	1	27.2	2.1	30.2	3.9	5	0.5	9.4	11.3	23.8	3.9	39	1.9	6.3	13.3	21.5	

	Winchester Road Southbound				Thompson Road Westbound				Winchester Road Northbound				Max Gilliss Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 01:00 PM																	
01:00 PM	9	249	11	269	27	37	4	68	85	207	**37**	329	**20**	48	110	178	844
01:15 PM	**11**	**262**	**24**	**297**	33	**55**	4	**92**	97	230	36	363	18	**67**	129	214	**966**
01:30 PM	5	260	23	288	**40**	46	5	91	101	**242**	34	**377**	20	51	106	177	933
01:45 PM	3	226	20	249	32	51	**7**	90	**102**	226	36	364	18	66	**136**	**220**	923
Total Volume	28	997	78	1103	132	189	20	341	385	905	143	1433	76	232	481	789	3666
% App. Total	2.5	90.4	7.1		38.7	55.4	5.9		26.9	63.2	10		9.6	29.4	61		
PHF	.636	.951	.813	.928	.825	.859	.714	.927	.944	.935	.966	.950	.950	.866	.884	.897	.949

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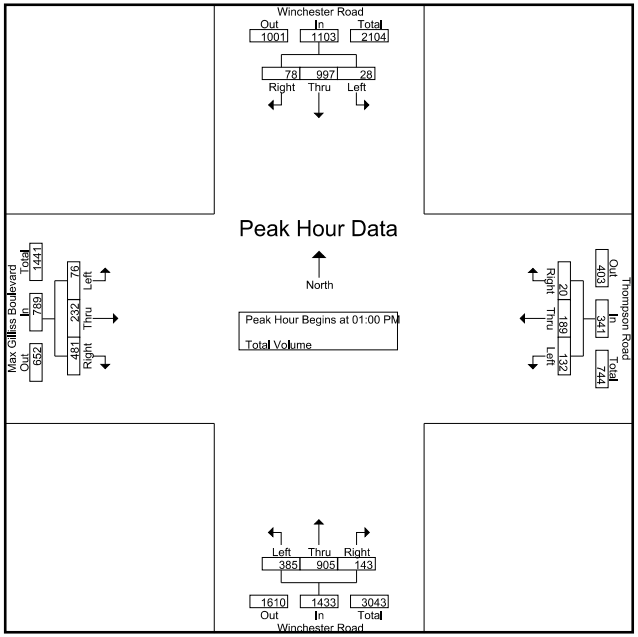
County of Riverside
N/S: Winchester Road (SR-79)
E/W: Max Gillis Boulevard/Thompson Road
Weather: Clear

File Name : 23_CRV_79_Max Gilliss_Thompson Sat
Site Code : 99918787
Start Date : 10/20/2018
Page No : 2



Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	01:00 PM				12:30 PM				01:00 PM				01:00 PM			
+0 mins.	9	249	11	269	38	**58**	2	**98**	85	207	**37**	329	**20**	48	110	178
+15 mins.	**11**	**262**	**24**	**297**	**39**	42	2	83	97	230	36	363	18	**67**	129	214
+30 mins.	5	260	23	288	27	37	**4**	68	101	**242**	34	**377**	20	51	106	177
+45 mins.	3	226	20	249	33	55	4	92	**102**	226	36	364	18	66	**136**	**220**
Total Volume	28	997	78	1103	137	192	12	341	385	905	143	1433	76	232	481	789
% App. Total	2.5	90.4	7.1		40.2	56.3	3.5		26.9	63.2	10		9.6	29.4	61	
PHF	.636	.951	.813	.928	.878	.828	.750	.870	.944	.935	.966	.950	.950	.866	.884	.897

Location: County of Riverside
N/S: Winchester Road
E/W: Max Gilliss Blvd/Thompson Road

PEDESTRIANS

Date: 10/20/2018
Day: Saturday

	North Leg Winchester Road Pedestrians	East Leg Thompson Road Pedestrians	South Leg Winchester Road Pedestrians	West Leg Max Gilliss Boulevard Pedestrians	
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	1	1
1:00 PM	0	0	0	0	0
1:15 PM	0	0	4	1	5
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	4	2	6

Date: 10/23/2018
Day: Tuesday

	North Leg Winchester Road Pedestrians	East Leg Thompson Road Pedestrians	South Leg Winchester Road Pedestrians	West Leg Max Gilliss Boulevard Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	4	0	4

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: County of Riverside
N/S: Winchester Road
E/W: Max Gilliss Blvd/Thompson Road

BICYCLES

Date: 10/20/2018
Day: Saturday

	Southbound Winchester Road			Westbound Thompson Road			Northbound Winchester Road			Eastbound Max Gilliss Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	1	0	0	1	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	5	5
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	1	1	0	2	0	5	10

Date: 10/23/2018
Day: Tuesday

	Southbound Winchester Road			Westbound Thompson Road			Northbound Winchester Road			Eastbound Max Gilliss Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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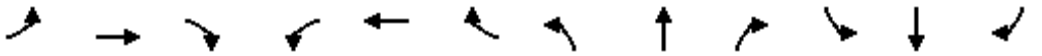
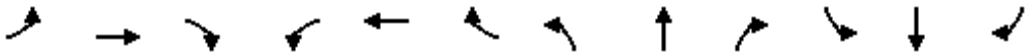
Appendix D Level-of-Service Worksheets (Synchro)

Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	898	423	246	1165	0	0	0	0	622	0	420
Future Volume (vph)	0	898	423	246	1165	0	0	0	0	622	0	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8	4.6	5.8					5.8	5.8	5.8
Lane Util. Factor		0.91	1.00	0.97	0.91					0.95	0.95	0.88
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5085	1583	3433	5085					1681	1681	2787
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5085	1583	3433	5085					1681	1681	2787
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	955	450	262	1239	0	0	0	0	662	0	447
RTOR Reduction (vph)	0	0	258	0	0	0	0	0	0	0	0	66
Lane Group Flow (vph)	0	955	192	262	1239	0	0	0	0	331	331	381
Confl. Peds. (#/hr)	2					2						
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		38.3	38.3	11.1	54.0					24.0	24.0	24.0
Effective Green, g (s)		38.3	38.3	11.1	54.0					24.0	24.0	24.0
Actuated g/C Ratio		0.43	0.43	0.12	0.60					0.27	0.27	0.27
Clearance Time (s)		5.8	5.8	4.6	5.8					5.8	5.8	5.8
Vehicle Extension (s)		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Lane Grp Cap (vph)		2173	676	425	3064					450	450	746
v/s Ratio Prot		c0.19		c0.08	0.24							
v/s Ratio Perm			0.12							c0.20	0.20	0.14
v/c Ratio		0.44	0.28	0.62	0.40					0.74	0.74	0.51
Uniform Delay, d1		18.1	16.7	37.2	9.4					29.9	29.9	27.8
Progression Factor		1.00	1.00	0.99	1.21					1.00	1.00	1.00
Incremental Delay, d2		0.6	1.1	1.6	0.3					5.3	5.3	0.2
Delay (s)		18.7	17.8	38.6	11.7					35.2	35.2	28.1
Level of Service		B	B	D	B					D	D	C
Approach Delay (s)		18.4			16.4			0.0			32.3	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.2
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	1186	0	0	818	536	609	0	421	0	0	0
Future Volume (vph)	322	1186	0	0	818	536	609	0	421	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.8			5.8	5.8	5.8	5.8	5.8			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.99	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.96	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.97	1.00			
Satd. Flow (prot)	3433	5085			5085	1563	1681	1566	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.97	1.00			
Satd. Flow (perm)	3433	5085			5085	1563	1681	1566	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	350	1289	0	0	889	583	662	0	458	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	357	0	68	68	0	0	0
Lane Group Flow (vph)	350	1289	0	0	889	226	391	313	280	0	0	0
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	12.5	52.3			34.7	34.7	25.7	25.7	25.7			
Effective Green, g (s)	12.5	52.3			34.7	34.7	25.7	25.7	25.7			
Actuated g/C Ratio	0.14	0.58			0.39	0.39	0.29	0.29	0.29			
Clearance Time (s)	5.1	5.8			5.8	5.8	5.8	5.8	5.8			
Vehicle Extension (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	478	2968			1969	605	482	449	431			
v/s Ratio Prot	c0.10	c0.25			0.17							
v/s Ratio Perm						0.14	c0.23	0.20	0.19			
v/c Ratio	0.73	0.43			0.45	0.37	0.81	0.70	0.65			
Uniform Delay, d1	36.9	10.4			20.4	19.7	29.7	28.5	28.0			
Progression Factor	0.88	0.66			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	4.4	0.4			0.8	1.8	9.5	3.8	2.5			
Delay (s)	37.1	7.3			21.1	21.4	39.2	32.2	30.5			
Level of Service	D	A			C	C	D	C	C			
Approach Delay (s)		13.6			21.2			34.1			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.7
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	1167	36	125	923	51	70	28	97	46	21	93
Future Volume (veh/h)	162	1167	36	125	923	51	70	28	97	46	21	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	165	1191	37	128	942	52	71	29	99	47	21	95
Adj No. of Lanes	1	3	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	610	3137	97	171	1251	547	248	55	189	168	278	236
Arrive On Green	0.34	0.62	0.62	0.10	0.35	0.35	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	5068	157	1774	3539	1548	1269	371	1266	1256	1863	1580
Grp Volume(v), veh/h	165	797	431	128	942	52	71	0	128	47	21	95
Grp Sat Flow(s),veh/h/ln	1774	1695	1835	1774	1770	1548	1269	0	1636	1256	1863	1580
Q Serve(g_s), s	6.8	11.8	11.8	7.1	23.7	2.3	5.2	0.0	7.3	3.6	1.0	5.5
Cycle Q Clear(g_c), s	6.8	11.8	11.8	7.1	23.7	2.3	6.1	0.0	7.3	10.9	1.0	5.5
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	610	2099	1136	171	1251	547	248	0	244	168	278	236
V/C Ratio(X)	0.27	0.38	0.38	0.75	0.75	0.10	0.29	0.00	0.52	0.28	0.08	0.40
Avail Cap(c_a), veh/h	610	2099	1136	255	1251	547	513	0	585	417	647	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.52	0.52	0.52	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	9.6	9.6	44.5	28.8	21.8	39.6	0.0	39.7	44.7	37.0	38.9
Incr Delay (d2), s/veh	0.1	0.5	0.8	1.4	2.3	0.2	0.6	0.0	1.7	0.9	0.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	5.7	6.3	3.6	11.9	1.0	1.9	0.0	3.4	1.3	0.5	2.5
LnGrp Delay(d),s/veh	24.0	10.0	10.4	45.8	31.0	22.0	40.3	0.0	41.4	45.6	37.1	40.0
LnGrp LOS	C	B	B	D	C	C	D		D	D	D	D
Approach Vol, veh/h		1393			1122			199			163	
Approach Delay, s/veh		11.8			32.3			41.0			41.3	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.2	67.8		20.0	40.0	41.0		20.0
Change Period (Y+Rc), s	3.5	5.3		4.9	5.3	* 5.3		4.9
Max Green Setting (Gmax), s	14.5	36.7		35.1	15.5	* 36		36.1
Max Q Clear Time (g_c+I1), s	9.1	13.8		12.9	8.8	25.7		9.3
Green Ext Time (p_c), s	0.1	12.2		1.6	0.8	5.8		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Notes

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	5	937	332	45	701	450	96
Future Volume (vph)	5	937	332	45	701	450	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	1863	1770	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1583	1770	1863	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	5	1008	357	48	754	484	103
RTOR Reduction (vph)	0	0	195	0	0	0	18
Lane Group Flow (vph)	5	1008	162	48	754	484	85
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Actuated Green, G (s)	0.9	40.6	40.6	4.4	44.1	30.1	30.1
Effective Green, g (s)	0.9	40.6	40.6	4.4	44.1	30.1	30.1
Actuated g/C Ratio	0.01	0.45	0.45	0.05	0.49	0.33	0.33
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.0	5.0
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5	3.5	3.5
Lane Grp Cap (vph)	17	1585	709	85	906	588	525
v/s Ratio Prot	0.00	0.28		c0.03	c0.40	c0.27	
v/s Ratio Perm			0.10				0.05
v/c Ratio	0.29	0.64	0.23	0.56	0.83	0.82	0.16
Uniform Delay, d1	44.5	19.3	15.4	42.2	20.1	27.8	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	0.7	0.1	5.0	6.5	9.3	0.2
Delay (s)	48.0	20.0	15.5	47.2	26.5	37.1	21.5
Level of Service	D	C	B	D	C	D	C
Approach Delay (s)		19.0			27.8	34.4	
Approach LOS		B			C	C	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	15.5
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	1050	712	23	15	6
Future Vol, veh/h	9	1050	712	23	15	6
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	1154	782	25	16	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	809	0	-	0	1970	796
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	1174	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	817	-	-	-	69	387
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	294	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	817	-	-	-	68	387
Mov Cap-2 Maneuver	-	-	-	-	68	-
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	290	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	59.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	817	-	-	-	89
HCM Lane V/C Ratio	0.012	-	-	-	0.259
HCM Control Delay (s)	9.5	-	-	-	59.1
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.9

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	1015	2	4	698	7	4	0	1	5	0	39
Future Vol, veh/h	58	1015	2	4	698	7	4	0	1	5	0	39
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	1080	2	4	743	7	4	0	1	5	0	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	751	0	0	1082	0	0	1980	1964	1081	1961	1961	747
Stage 1	-	-	-	-	-	-	1204	1204	-	756	756	-
Stage 2	-	-	-	-	-	-	776	760	-	1205	1205	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	858	-	-	645	-	-	46	63	265	48	63	413
Stage 1	-	-	-	-	-	-	225	257	-	400	416	-
Stage 2	-	-	-	-	-	-	390	414	-	225	257	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	858	-	-	645	-	-	39	58	265	45	58	413
Mov Cap-2 Maneuver	-	-	-	-	-	-	39	58	-	45	58	-
Stage 1	-	-	-	-	-	-	209	238	-	371	413	-
Stage 2	-	-	-	-	-	-	349	411	-	208	238	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	91.1	26.5
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	47	858	-	-	645	-	-	214
HCM Lane V/C Ratio	0.113	0.072	-	-	0.007	-	-	0.219
HCM Control Delay (s)	91.1	9.5	-	-	10.6	-	-	26.5
HCM Lane LOS	F	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0	-	-	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	939	24	14	631	58	27	1	3	47	1	46
Future Volume (veh/h)	55	939	24	14	631	58	27	1	3	47	1	46
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	59	1010	26	15	678	62	29	1	3	51	1	49
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1869	48	32	1635	149	55	29	88	82	3	133
Arrive On Green	0.05	0.53	0.53	0.02	0.50	0.50	0.03	0.07	0.07	0.05	0.09	0.09
Sat Flow, veh/h	1774	3523	91	1774	3280	300	1774	410	1231	1774	32	1548
Grp Volume(v), veh/h	59	507	529	15	366	374	29	0	4	51	0	50
Grp Sat Flow(s),veh/h/ln	1774	1770	1844	1774	1770	1810	1774	0	1641	1774	0	1580
Q Serve(g_s), s	2.2	12.4	12.4	0.6	8.6	8.6	1.1	0.0	0.1	1.9	0.0	2.0
Cycle Q Clear(g_c), s	2.2	12.4	12.4	0.6	8.6	8.6	1.1	0.0	0.1	1.9	0.0	2.0
Prop In Lane	1.00		0.05	1.00		0.17	1.00		0.75	1.00		0.98
Lane Grp Cap(c), veh/h	89	939	978	32	882	902	55	0	117	82	0	136
V/C Ratio(X)	0.66	0.54	0.54	0.46	0.41	0.41	0.52	0.00	0.03	0.62	0.00	0.37
Avail Cap(c_a), veh/h	808	1478	1540	808	1478	1512	808	0	997	808	0	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.7	10.2	10.2	32.0	10.4	10.4	31.4	0.0	28.5	30.9	0.0	28.4
Incr Delay (d2), s/veh	3.1	0.6	0.6	3.8	0.4	0.4	2.8	0.0	0.1	2.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.2	6.5	0.3	4.3	4.4	0.6	0.0	0.1	1.0	0.0	0.9
LnGrp Delay(d),s/veh	33.9	10.8	10.7	35.8	10.8	10.8	34.2	0.0	28.6	33.7	0.0	29.6
LnGrp LOS	C	B	B	D	B	B	C		C	C		C
Approach Vol, veh/h		1095			755			33			101	
Approach Delay, s/veh		12.0			11.3			33.5			31.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	41.9	7.1	10.7	8.3	39.8	8.0	9.7
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	55.0	30.0	40.0	30.0	55.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	2.6	14.4	3.1	4.0	4.2	10.6	3.9	2.1
Green Ext Time (p_c), s	0.0	20.5	0.0	0.2	0.0	21.4	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	719	68	332	661	120	60	45	313	98	44	20
Future Volume (veh/h)	40	719	68	332	661	120	60	45	313	98	44	20
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1848	1900	1845	1866	1900	1900	1900	1863	1863	1900	1900
Adj Flow Rate, veh/h	44	790	75	365	726	132	66	49	344	108	48	22
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	3	3	3	2	2	0	0	2	2	0	0
Cap, veh/h	77	1203	114	360	1591	289	381	491	408	309	318	146
Arrive On Green	0.04	0.37	0.37	0.20	0.53	0.53	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	3239	307	1757	2984	542	1349	1900	1580	986	1233	565
Grp Volume(v), veh/h	44	428	437	365	431	427	66	49	344	108	0	70
Grp Sat Flow(s),veh/h/ln	1810	1755	1792	1757	1772	1754	1349	1900	1580	986	0	1799
Q Serve(g_s), s	2.3	19.8	19.8	20.0	14.7	14.7	3.9	1.9	20.2	9.2	0.0	2.9
Cycle Q Clear(g_c), s	2.3	19.8	19.8	20.0	14.7	14.7	6.8	1.9	20.2	11.1	0.0	2.9
Prop In Lane	1.00		0.17	1.00		0.31	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	77	652	665	360	945	935	381	491	408	309	0	464
V/C Ratio(X)	0.57	0.66	0.66	1.01	0.46	0.46	0.17	0.10	0.84	0.35	0.00	0.15
Avail Cap(c_a), veh/h	556	898	917	360	945	935	544	720	598	357	0	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	25.5	25.5	38.9	14.1	14.1	30.6	27.6	34.4	31.8	0.0	28.0
Incr Delay (d2), s/veh	2.4	1.6	1.5	51.3	0.5	0.5	0.2	0.1	7.2	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.9	10.1	14.7	7.3	7.2	1.5	1.0	9.6	2.5	0.0	1.5
LnGrp Delay(d),s/veh	48.3	27.1	27.1	90.2	14.5	14.5	30.8	27.7	41.6	32.5	0.0	28.1
LnGrp LOS	D	C	C	F	B	B	C	C	D	C		C
Approach Vol, veh/h		909			1223			459			178	
Approach Delay, s/veh		28.1			37.1			38.5			30.8	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.8	57.9		31.0	24.6	42.1		31.0
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8
Max Green Setting (Gmax), s	30.0	50.0		30.0	20.0	50.0		37.0
Max Q Clear Time (g_c+I1), s	4.3	16.7		13.1	22.0	21.8		22.2
Green Ext Time (p_c), s	0.0	18.2		2.5	0.0	14.5		2.4

Intersection Summary		
HCM 2010 Ctrl Delay		34.0
HCM 2010 LOS		C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	997	125	414	906	162	736
Future Volume (vph)	997	125	414	906	162	736
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.95		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	0.98	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.90	0.85
Flt Protected	1.00		0.95	1.00	0.98	1.00
Satd. Flow (prot)	3439		1787	3539	3168	1435
Flt Permitted	1.00		0.95	1.00	0.98	1.00
Satd. Flow (perm)	3439		1787	3539	3168	1435
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1096	137	455	996	178	809
RTOR Reduction (vph)	5	0	0	0	257	346
Lane Group Flow (vph)	1228	0	455	996	326	58
Confl. Peds. (#/hr)		3	3		2	1
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	3%	2%	1%	2%	1%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Actuated Green, G (s)	51.0		40.7	96.3	19.4	19.4
Effective Green, g (s)	51.0		40.7	96.3	19.4	19.4
Actuated g/C Ratio	0.37		0.30	0.71	0.14	0.14
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1286		533	2500	450	204
v/s Ratio Prot	c0.36		c0.25	0.28	c0.10	
v/s Ratio Perm						0.04
v/c Ratio	0.95		0.85	0.40	0.72	0.28
Uniform Delay, d1	41.5		45.0	8.2	55.9	52.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	15.6		12.6	0.1	6.0	1.0
Delay (s)	57.1		57.6	8.3	61.9	53.2
Level of Service	E		E	A	E	D
Approach Delay (s)	57.1			23.8	58.3	
Approach LOS	E			C	E	

Intersection Summary			
HCM 2000 Control Delay	44.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	136.3	Sum of lost time (s)	20.8
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1610	58	40	1294	111	37	1	27	124	0	38
Future Volume (veh/h)	69	1610	58	40	1294	111	37	1	27	124	0	38
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1900	1900	1881	1881	1845	1900	1900	1881	1810	1900
Adj Flow Rate, veh/h	75	1750	63	43	1407	121	40	1	29	135	0	41
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	1	3	0	0	1	0	0
Cap, veh/h	109	2194	79	84	2199	983	230	242	206	266	0	196
Arrive On Green	0.06	0.63	0.63	0.05	0.62	0.62	0.13	0.13	0.13	0.13	0.00	0.13
Sat Flow, veh/h	1792	3482	125	1810	3574	1598	1347	1900	1615	1388	0	1538
Grp Volume(v), veh/h	75	885	928	43	1407	121	40	1	29	135	0	41
Grp Sat Flow(s),veh/h/ln	1792	1770	1837	1810	1787	1598	1347	1900	1615	1388	0	1538
Q Serve(g_s), s	3.3	29.6	30.2	1.9	20.0	2.5	2.2	0.0	1.3	7.5	0.0	1.9
Cycle Q Clear(g_c), s	3.3	29.6	30.2	1.9	20.0	2.5	4.1	0.0	1.3	7.6	0.0	1.9
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	1115	1157	84	2199	983	230	242	206	266	0	196
V/C Ratio(X)	0.69	0.79	0.80	0.51	0.64	0.12	0.17	0.00	0.14	0.51	0.00	0.21
Avail Cap(c_a), veh/h	448	1115	1157	453	2235	999	664	855	727	523	0	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	11.0	11.1	37.3	9.8	6.4	33.1	30.5	31.0	33.7	0.0	31.3
Incr Delay (d2), s/veh	2.9	4.7	4.8	1.8	0.9	0.1	0.4	0.0	0.3	1.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	15.7	16.5	1.0	10.1	1.1	0.8	0.0	0.6	3.0	0.0	0.8
LnGrp Delay(d),s/veh	39.7	15.7	15.9	39.1	10.7	6.5	33.5	30.5	31.3	35.2	0.0	31.8
LnGrp LOS	D	B	B	D	B	A	C	C	C	D		C
Approach Vol, veh/h		1888			1571			70			176	
Approach Delay, s/veh		16.7			11.1			32.5			34.4	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	56.2		15.5	9.5	55.0		15.5
Change Period (Y+Rc), s	4.6	5.8		5.3	4.6	5.8		5.3
Max Green Setting (Gmax), s	20.0	50.0		25.0	20.0	50.0		36.0
Max Q Clear Time (g_c+I1), s	3.3	32.2		9.6	5.3	22.0		6.1
Green Ext Time (p_c), s	0.0	17.7		0.7	0.1	27.2		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1742	32	135	1442	3	21	2	108	6	1	7
Future Volume (veh/h)	13	1742	32	135	1442	3	21	2	108	6	1	7
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1881	1881	1900	1900	1882	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	1873	34	145	1551	3	23	2	116	6	1	8
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	1	1	0	0	0	0	0	0	0
Cap, veh/h	36	1930	35	180	3201	1005	53	3	188	33	190	161
Arrive On Green	0.02	0.54	0.54	0.10	0.62	0.62	0.03	0.12	0.12	0.01	0.10	0.10
Sat Flow, veh/h	1810	3556	64	1792	5136	1612	1810	27	1568	3510	1900	1605
Grp Volume(v), veh/h	14	929	978	145	1551	3	23	0	118	6	1	8
Grp Sat Flow(s),veh/h/ln	1810	1770	1850	1792	1712	1612	1810	0	1595	1755	1900	1605
Q Serve(g_s), s	0.7	46.1	46.8	7.2	14.9	0.1	1.1	0.0	6.4	0.2	0.0	0.4
Cycle Q Clear(g_c), s	0.7	46.1	46.8	7.2	14.9	0.1	1.1	0.0	6.4	0.2	0.0	0.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	36	961	1004	180	3201	1005	53	0	191	33	190	161
V/C Ratio(X)	0.39	0.97	0.97	0.81	0.48	0.00	0.44	0.00	0.62	0.18	0.01	0.05
Avail Cap(c_a), veh/h	397	970	1014	589	3201	1005	397	0	630	1347	833	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	20.1	20.2	40.2	9.3	6.5	43.6	0.0	38.2	44.8	37.0	37.1
Incr Delay (d2), s/veh	2.6	21.6	22.3	3.2	0.3	0.0	2.1	0.0	7.4	2.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	28.0	29.8	3.7	7.0	0.0	0.6	0.0	3.2	0.1	0.0	0.2
LnGrp Delay(d),s/veh	46.8	41.7	42.5	43.4	9.5	6.5	45.7	0.0	45.6	47.5	37.0	37.3
LnGrp LOS	D	D	D	D	A	A	D		D	D	D	D
Approach Vol, veh/h		1921			1699			141			15	
Approach Delay, s/veh		42.1			12.4			45.6			41.4	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	55.3	5.4	16.7	6.4	62.7	7.3	14.9
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	30.0	50.0	35.0	36.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	9.2	48.8	2.2	8.4	2.7	16.9	3.1	2.4
Green Ext Time (p_c), s	0.2	0.7	0.0	1.4	0.0	32.8	0.0	1.6

Intersection Summary		
HCM 2010 Ctrl Delay		28.9
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	1504	27	24	1238	217	15	10	39	352	17	317
Future Volume (veh/h)	348	1504	27	24	1238	217	15	10	39	352	17	317
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1827	1900	1863	1881	1900	1862	1900	1863	1900	1900
Adj Flow Rate, veh/h	387	1671	30	27	1376	241	17	11	43	391	19	352
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	2	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	2	4	0	2	1	0	10	10	2	0	0
Cap, veh/h	453	2512	740	55	2004	836	40	53	207	457	22	416
Arrive On Green	0.13	0.49	0.49	0.03	0.39	0.39	0.02	0.16	0.16	0.13	0.27	0.27
Sat Flow, veh/h	3476	5085	1498	1810	5085	1583	1810	324	1268	3442	82	1518
Grp Volume(v), veh/h	387	1671	30	27	1376	241	17	0	54	391	0	371
Grp Sat Flow(s),veh/h/ln	1738	1695	1498	1810	1695	1583	1810	0	1593	1721	0	1600
Q Serve(g_s), s	12.2	27.7	1.2	1.6	25.1	9.5	1.0	0.0	3.3	12.4	0.0	24.5
Cycle Q Clear(g_c), s	12.2	27.7	1.2	1.6	25.1	9.5	1.0	0.0	3.3	12.4	0.0	24.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.80	1.00		0.95
Lane Grp Cap(c), veh/h	453	2512	740	55	2004	836	40	0	260	457	0	438
V/C Ratio(X)	0.85	0.67	0.04	0.49	0.69	0.29	0.43	0.00	0.21	0.86	0.00	0.85
Avail Cap(c_a), veh/h	622	2512	740	324	2274	920	324	0	285	616	0	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.6	21.3	14.6	53.4	28.2	14.8	54.0	0.0	40.5	47.4	0.0	38.4
Incr Delay (d2), s/veh	6.4	1.0	0.1	2.5	1.2	0.4	7.1	0.0	0.4	6.9	0.0	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	13.1	0.5	0.9	11.9	4.2	0.6	0.0	1.5	6.4	0.0	12.3
LnGrp Delay(d),s/veh	54.0	22.3	14.7	55.8	29.3	15.2	61.1	0.0	40.9	54.4	0.0	50.9
LnGrp LOS	D	C	B	E	C	B	E		D	D		D
Approach Vol, veh/h		2088			1644			71			762	
Approach Delay, s/veh		28.0			27.7			45.8			52.7	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	61.0	7.1	35.7	19.2	49.9	19.4	23.3
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	20.0	50.0	20.0	34.0	20.0	50.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	3.6	29.7	3.0	26.5	14.2	27.1	14.4	5.3
Green Ext Time (p_c), s	0.0	20.1	0.0	1.9	0.4	16.9	0.4	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1462	438	0	975	301	0	0	0	246	1	652
Future Volume (veh/h)	0	1462	438	0	975	301	0	0	0	246	1	652
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1863	0	1863	1900				1900	1881	1881
Adj Flow Rate, veh/h	0	1523	456	0	1016	0				256	1	679
Adj No. of Lanes	0	3	1	0	3	1				0	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	2	0	2	0				1	0	1
Cap, veh/h	0	3113	975	0	3144	998				464	2	731
Arrive On Green	0.00	0.62	0.62	0.00	1.00	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	5202	1578	0	5253	1615				1785	7	2814
Grp Volume(v), veh/h	0	1523	456	0	1016	0				257	0	679
Grp Sat Flow(s),veh/h/ln	0	1679	1578	0	1695	1615				1792	0	1407
Q Serve(g_s), s	0.0	15.7	14.7	0.0	0.0	0.0				11.8	0.0	22.4
Cycle Q Clear(g_c), s	0.0	15.7	14.7	0.0	0.0	0.0				11.8	0.0	22.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3113	975	0	3144	998				465	0	731
V/C Ratio(X)	0.00	0.49	0.47	0.00	0.32	0.00				0.55	0.00	0.93
Avail Cap(c_a), veh/h	0	3113	975	0	3144	998				475	0	747
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.72	0.72	0.00	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.9	9.7	0.0	0.0	0.0				30.4	0.0	34.3
Incr Delay (d2), s/veh	0.0	0.4	1.2	0.0	0.3	0.0				0.7	0.0	17.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.3	6.6	0.0	0.1	0.0				5.9	0.0	10.4
LnGrp Delay(d),s/veh	0.0	10.3	10.9	0.0	0.3	0.0				31.1	0.0	51.7
LnGrp LOS		B	B		A					C		D
Approach Vol, veh/h		1979			1016						936	
Approach Delay, s/veh		10.5			0.3						46.1	
Approach LOS		B			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		64.5		30.5		64.5		
Change Period (Y+Rc), s		5.8		5.8		5.8		
Max Green Setting (Gmax), s		58.2		25.2		58.2		
Max Q Clear Time (g_c+I1), s		17.7		24.4		2.0		
Green Ext Time (p_c), s		19.7		0.3		22.2		

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1058	610	0	872	111	415	0	512	0	0	0
Future Volume (vph)	0	1058	610	0	872	111	415	0	512	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		5.8			5.8	5.8			
Lane Util. Factor		0.91	1.00		0.91			0.95	0.95			
Frpb, ped/bikes		1.00	0.98		1.00			1.00	1.00			
Flpb, ped/bikes		1.00	1.00		1.00			1.00	1.00			
Frt		1.00	0.85		0.98			0.98	0.85			
Flt Protected		1.00	1.00		1.00			0.96	1.00			
Satd. Flow (prot)		5136	1531		5026			1676	1519			
Flt Permitted		1.00	1.00		1.00			0.96	1.00			
Satd. Flow (perm)		5136	1531		5026			1676	1519			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1150	663	0	948	121	451	0	557	0	0	0
RTOR Reduction (vph)	0	0	308	0	16	0	0	21	32	0	0	0
Lane Group Flow (vph)	0	1150	355	0	1053	0	0	508	447	0	0	0
Confl. Peds. (#/hr)			14	14								
Confl. Bikes (#/hr)			3									
Heavy Vehicles (%)	0%	1%	3%	0%	1%	5%	1%	0%	1%	0%	0%	0%
Turn Type		NA	Perm		NA		Split	NA	Perm			
Protected Phases		2			6		8	8				
Permitted Phases			2						8			
Actuated Green, G (s)		50.9	50.9		50.9			32.5	32.5			
Effective Green, g (s)		50.9	50.9		50.9			32.5	32.5			
Actuated g/C Ratio		0.54	0.54		0.54			0.34	0.34			
Clearance Time (s)		5.8	5.8		5.8			5.8	5.8			
Vehicle Extension (s)		2.0	2.0		2.0			2.5	2.5			
Lane Grp Cap (vph)		2751	820		2692			573	519			
v/s Ratio Prot		0.22			0.21			c0.30				
v/s Ratio Perm			c0.23						0.29			
v/c Ratio		0.42	0.43		0.39			0.89	0.86			
Uniform Delay, d1		13.2	13.3		13.0			29.5	29.2			
Progression Factor		0.63	0.92		1.00			1.00	1.00			
Incremental Delay, d2		0.4	1.5		0.4			15.2	13.6			
Delay (s)		8.7	13.7		13.4			44.7	42.8			
Level of Service		A	B		B			D	D			
Approach Delay (s)		10.6			13.4			43.8			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	8	1501	79	37	942	52	24
Future Volume (veh/h)	8	1501	79	37	942	52	24
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.97	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1881	1881	1900	1881	1863	1827
Adj Flow Rate, veh/h		1668	88	41	1047	58	27
Adj No. of Lanes		3	1	1	3	1	1
Peak Hour Factor		0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %		1	1	0	1	2	4
Cap, veh/h		3065	925	90	3727	183	160
Arrive On Green		0.60	0.60	0.05	0.73	0.10	0.10
Sat Flow, veh/h		5305	1551	1810	5305	1774	1553
Grp Volume(v), veh/h		1668	88	41	1047	58	27
Grp Sat Flow(s),veh/h/ln		1712	1551	1810	1712	1774	1553
Q Serve(g_s), s		11.3	1.4	1.3	4.1	1.8	0.9
Cycle Q Clear(g_c), s		11.3	1.4	1.3	4.1	1.8	0.9
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		3065	925	90	3727	183	160
V/C Ratio(X)		0.54	0.10	0.45	0.28	0.32	0.17
Avail Cap(c_a), veh/h		3523	1064	621	3727	761	666
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		7.0	5.0	26.9	2.8	24.3	23.9
Incr Delay (d2), s/veh		0.2	0.0	1.3	0.1	0.7	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		5.3	0.6	0.7	1.9	0.9	0.4
LnGrp Delay(d),s/veh		7.2	5.1	28.2	2.8	25.0	24.2
LnGrp LOS		A	A	C	A	C	C
Approach Vol, veh/h		1756			1088	85	
Approach Delay, s/veh		7.1			3.8	24.8	
Approach LOS		A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.5	40.2				47.7		10.6
Change Period (Y+Rc), s	4.6	5.4				5.4		4.6
Max Green Setting (Gmax), s	20.0	40.0				40.0		25.0
Max Q Clear Time (g_c+I1), s	3.3	13.3				6.1		3.8
Green Ext Time (p_c), s	0.0	21.5				28.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1478	47	0	975	0	20
Future Vol, veh/h	1478	47	0	975	0	20
Conflicting Peds, #/hr	0	12	12	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	1680	53	0	1108	0	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	878
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	253
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	250
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	250	-	-	-
HCM Lane V/C Ratio	0.091	-	-	-
HCM Control Delay (s)	20.8	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	15	1387	93	173	861	114	75
Future Volume (veh/h)	15	1387	93	173	861	114	75
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.98	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1881	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h		1508	101	188	936	124	82
Adj No. of Lanes		3	0	1	3	2	1
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %		1	1	0	0	1	0
Cap, veh/h		2902	194	232	4053	293	136
Arrive On Green		0.59	0.59	0.13	0.78	0.08	0.08
Sat Flow, veh/h		5078	329	1810	5358	3476	1615
Grp Volume(v), veh/h		1052	557	188	936	124	82
Grp Sat Flow(s),veh/h/ln		1712	1814	1810	1729	1738	1615
Q Serve(g_s), s		13.5	13.5	7.5	3.6	2.5	3.6
Cycle Q Clear(g_c), s		13.5	13.5	7.5	3.6	2.5	3.6
Prop In Lane			0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2024	1073	232	4053	293	136
V/C Ratio(X)		0.52	0.52	0.81	0.23	0.42	0.60
Avail Cap(c_a), veh/h		2301	1219	851	4053	1915	890
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		9.0	9.0	31.5	2.2	32.3	32.9
Incr Delay (d2), s/veh		1.0	1.8	2.6	0.0	1.0	4.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		6.5	7.2	3.9	1.7	1.2	1.8
LnGrp Delay(d),s/veh		9.9	10.8	34.1	2.2	33.3	37.1
LnGrp LOS		A	B	C	A	C	D
Approach Vol, veh/h		1609			1124	206	
Approach Delay, s/veh		10.2			7.5	34.8	
Approach LOS		B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.1	49.4				63.5		10.9
Change Period (Y+Rc), s	4.6	5.4				5.4		4.6
Max Green Setting (Gmax), s	35.0	50.0				50.0		41.0
Max Q Clear Time (g_c+I1), s	9.5	15.5				5.6		5.6
Green Ext Time (p_c), s	0.2	28.5				41.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	467	704	250	110	460	49	192	333	112	80	233	346
Future Volume (veh/h)	467	704	250	110	460	49	192	333	112	80	233	346
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1881	1900	1900	1900	1881	1900	1900	1900	1892	1900
Adj Flow Rate, veh/h	513	774	275	121	505	54	211	366	123	88	256	380
Adj No. of Lanes	2	2	1	2	3	1	1	1	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	0	1	0	0	0	1	0	0	0	1	1
Cap, veh/h	562	1227	543	175	1215	378	238	526	177	111	560	501
Arrive On Green	0.16	0.34	0.34	0.05	0.23	0.23	0.13	0.39	0.39	0.06	0.31	0.31
Sat Flow, veh/h	3476	3610	1598	3510	5187	1613	1792	1356	456	1810	1798	1607
Grp Volume(v), veh/h	513	774	275	121	505	54	211	0	489	88	256	380
Grp Sat Flow(s),veh/h/ln	1738	1805	1598	1755	1729	1613	1792	0	1812	1810	1798	1607
Q Serve(g_s), s	18.5	23.0	17.5	4.3	10.5	3.4	14.8	0.0	28.8	6.1	14.6	27.2
Cycle Q Clear(g_c), s	18.5	23.0	17.5	4.3	10.5	3.4	14.8	0.0	28.8	6.1	14.6	27.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	562	1227	543	175	1215	378	238	0	703	111	560	501
V/C Ratio(X)	0.91	0.63	0.51	0.69	0.42	0.14	0.89	0.00	0.70	0.80	0.46	0.76
Avail Cap(c_a), veh/h	665	1433	634	292	1562	486	343	0	785	184	609	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	35.4	33.6	59.6	41.4	38.7	54.4	0.0	32.7	59.1	35.2	39.6
Incr Delay (d2), s/veh	14.3	2.5	3.4	4.8	0.1	0.1	13.7	0.0	4.9	4.8	2.2	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	11.8	8.2	2.2	5.1	1.5	8.2	0.0	15.4	3.2	7.6	13.3
LnGrp Delay(d),s/veh	66.9	37.8	36.9	64.5	41.5	38.7	68.1	0.0	37.7	63.9	37.5	49.0
LnGrp LOS	E	D	D	E	D	D	E		D	E	D	D
Approach Vol, veh/h		1562			680			700			724	
Approach Delay, s/veh		47.2			45.4			46.8			46.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	55.2	11.7	48.7	21.5	45.5	25.2	35.3
Change Period (Y+Rc), s	4.0	5.8	5.4	5.4	4.6	5.8	4.6	* 5.4
Max Green Setting (Gmax), s	13.0	55.2	10.6	50.6	24.4	43.2	24.4	* 38
Max Q Clear Time (g_c+I1), s	8.1	30.8	6.3	25.0	16.8	29.2	20.5	12.5
Green Ext Time (p_c), s	0.0	16.0	0.1	17.1	0.2	10.4	0.1	17.2

Intersection Summary	
HCM 2010 Ctrl Delay	46.7
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	0	71	2	1	2	35	688	5	2	521	48
Future Volume (veh/h)	68	0	71	2	1	2	35	688	5	2	521	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1900	1498	1900	1900	1896	1900	1900	1890	1900
Adj Flow Rate, veh/h	73	0	76	2	1	2	38	740	5	2	560	52
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	2	0	0	0	0	0	0	0	0	0
Cap, veh/h	167	179	149	4	2	4	156	2182	15	6	1698	157
Arrive On Green	0.09	0.00	0.09	0.01	0.01	0.01	0.09	0.59	0.59	0.00	0.51	0.51
Sat Flow, veh/h	1774	1900	1583	550	275	550	1810	3668	25	1810	3317	307
Grp Volume(v), veh/h	73	0	76	5	0	0	38	363	382	2	303	309
Grp Sat Flow(s),veh/h/ln	1774	1900	1583	1374	0	0	1810	1801	1891	1810	1796	1828
Q Serve(g_s), s	2.7	0.0	3.2	0.3	0.0	0.0	1.4	7.1	7.1	0.1	6.9	6.9
Cycle Q Clear(g_c), s	2.7	0.0	3.2	0.3	0.0	0.0	1.4	7.1	7.1	0.1	6.9	6.9
Prop In Lane	1.00		1.00	0.40		0.40	1.00		0.01	1.00		0.17
Lane Grp Cap(c), veh/h	167	179	149	11	0	0	156	1072	1125	6	919	936
V/C Ratio(X)	0.44	0.00	0.51	0.46	0.00	0.00	0.24	0.34	0.34	0.34	0.33	0.33
Avail Cap(c_a), veh/h	894	958	798	693	0	0	521	1298	1362	521	1293	1317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	0.0	29.9	34.3	0.0	0.0	29.6	7.1	7.1	34.5	9.9	10.0
Incr Delay (d2), s/veh	8.1	0.0	11.9	10.7	0.0	0.0	0.3	0.7	0.7	30.4	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.9	0.1	0.0	0.0	0.7	3.7	3.9	0.1	3.6	3.6
LnGrp Delay(d),s/veh	37.8	0.0	41.8	45.0	0.0	0.0	29.9	7.8	7.8	65.0	10.7	10.7
LnGrp LOS	D		D	D			C	A	A	E	B	B
Approach Vol, veh/h		149			5			783			614	
Approach Delay, s/veh		39.9			45.0			8.9			10.9	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	47.1		12.3	10.6	41.3		5.2
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		4.6
Max Green Setting (Gmax), s	20.0	50.0		35.0	20.0	50.0		35.0
Max Q Clear Time (g_c+I1), s	2.1	9.1		5.2	3.4	8.9		2.3
Green Ext Time (p_c), s	0.0	26.5		1.8	0.0	26.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	3	157	7	10	6	191	512	10	1	412	16
Future Volume (veh/h)	16	3	157	7	10	6	191	512	10	1	412	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1900	1785	1900	1881	1900	1900	1900	1896	1900
Adj Flow Rate, veh/h	17	3	169	8	11	6	205	551	11	1	443	17
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	0	10	10	1	0	0	0	0	0
Cap, veh/h	44	368	305	23	397	198	254	887	736	3	1156	44
Arrive On Green	0.02	0.19	0.19	0.01	0.18	0.18	0.14	0.47	0.47	0.00	0.33	0.33
Sat Flow, veh/h	1810	1900	1574	1810	2185	1089	1792	1900	1576	1810	3535	135
Grp Volume(v), veh/h	17	3	169	8	8	9	205	551	11	1	225	235
Grp Sat Flow(s),veh/h/ln	1810	1900	1574	1810	1695	1578	1792	1900	1576	1810	1801	1869
Q Serve(g_s), s	0.6	0.1	6.1	0.3	0.3	0.3	7.0	13.7	0.2	0.0	6.0	6.1
Cycle Q Clear(g_c), s	0.6	0.1	6.1	0.3	0.3	0.3	7.0	13.7	0.2	0.0	6.0	6.1
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	44	368	305	23	308	287	254	887	736	3	589	611
V/C Ratio(X)	0.38	0.01	0.55	0.36	0.03	0.03	0.81	0.62	0.01	0.33	0.38	0.38
Avail Cap(c_a), veh/h	576	1211	1003	576	1080	1005	571	1513	1255	576	1434	1489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	20.4	22.9	30.8	21.1	21.1	26.1	12.6	9.0	31.3	16.3	16.3
Incr Delay (d2), s/veh	2.0	0.0	2.2	3.5	0.0	0.1	2.3	1.1	0.0	22.6	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.8	0.2	0.1	0.1	3.6	7.3	0.1	0.0	3.1	3.2
LnGrp Delay(d),s/veh	32.2	20.4	25.0	34.2	21.2	21.2	28.4	13.7	9.0	53.9	16.9	16.9
LnGrp LOS	C	C	C	C	C	C	C	B	A	D	B	B
Approach Vol, veh/h		189			25			767			461	
Approach Delay, s/veh		25.6			25.4			17.6			17.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	35.1	5.4	17.6	13.5	26.3	6.1	16.8
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.6	15.7	2.3	8.1	9.0	8.1	2.6	2.3
Green Ext Time (p_c), s	0.0	11.2	0.0	1.0	0.2	11.8	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	15	44	9	9	9	41	459	26	11	336	42
Future Volume (veh/h)	50	15	44	9	9	9	41	459	26	11	336	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	16	48	10	10	10	45	504	29	12	369	46
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	113	382	324	28	283	243	99	1311	75	33	1104	137
Arrive On Green	0.06	0.20	0.20	0.02	0.15	0.15	0.05	0.38	0.38	0.02	0.34	0.34
Sat Flow, veh/h	1810	1900	1610	1810	1840	1580	1810	3470	199	1810	3233	400
Grp Volume(v), veh/h	55	16	48	10	10	10	45	262	271	12	205	210
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1615	1810	1805	1864	1810	1805	1828
Q Serve(g_s), s	1.6	0.4	1.3	0.3	0.2	0.3	1.3	5.7	5.7	0.4	4.5	4.6
Cycle Q Clear(g_c), s	1.6	0.4	1.3	0.3	0.2	0.3	1.3	5.7	5.7	0.4	4.5	4.6
Prop In Lane	1.00		1.00	1.00		0.98	1.00		0.11	1.00		0.22
Lane Grp Cap(c), veh/h	113	382	324	28	278	249	99	682	704	33	616	624
V/C Ratio(X)	0.49	0.04	0.15	0.36	0.04	0.04	0.46	0.38	0.39	0.36	0.33	0.34
Avail Cap(c_a), veh/h	674	1415	1199	674	1344	1203	674	1681	1735	674	1681	1702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	17.3	17.7	26.2	19.3	19.3	24.6	12.2	12.2	26.0	13.1	13.2
Incr Delay (d2), s/veh	1.2	0.1	0.3	2.8	0.1	0.1	1.2	0.6	0.5	2.5	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.6	0.2	0.1	0.1	0.7	2.9	3.0	0.2	2.3	2.4
LnGrp Delay(d),s/veh	25.5	17.3	18.0	29.0	19.4	19.4	25.8	12.7	12.7	28.5	13.6	13.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		119			30			578			427	
Approach Delay, s/veh		21.4			22.6			13.7			14.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	26.1	5.4	16.6	7.5	24.1	8.0	14.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.4	7.7	2.3	3.3	3.3	6.6	3.6	2.3
Green Ext Time (p_c), s	0.0	10.7	0.0	0.5	0.0	10.8	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	314	535	110	148	9	424	362	120	10	267	86
Future Volume (veh/h)	107	314	535	110	148	9	424	362	120	10	267	86
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	118	345	588	121	163	10	466	398	132	11	293	95
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1446	638	185	1387	84	541	877	288	45	504	160
Arrive On Green	0.05	0.41	0.41	0.05	0.41	0.41	0.16	0.33	0.33	0.01	0.19	0.19
Sat Flow, veh/h	3442	3539	1562	3442	3387	206	3442	2620	859	3442	2641	840
Grp Volume(v), veh/h	118	345	588	121	85	88	466	267	263	11	194	194
Grp Sat Flow(s),veh/h/ln	1721	1770	1562	1721	1770	1823	1721	1770	1709	1721	1770	1711
Q Serve(g_s), s	3.4	6.5	36.1	3.5	3.0	3.0	13.4	12.0	12.2	0.3	10.1	10.4
Cycle Q Clear(g_c), s	3.4	6.5	36.1	3.5	3.0	3.0	13.4	12.0	12.2	0.3	10.1	10.4
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.50	1.00		0.49
Lane Grp Cap(c), veh/h	181	1446	638	185	725	747	541	592	572	45	337	326
V/C Ratio(X)	0.65	0.24	0.92	0.65	0.12	0.12	0.86	0.45	0.46	0.24	0.58	0.59
Avail Cap(c_a), veh/h	1021	1575	695	1021	787	811	1021	787	760	1021	787	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	19.6	28.4	46.9	18.5	18.5	41.6	26.4	26.4	49.4	37.2	37.3
Incr Delay (d2), s/veh	1.5	0.1	16.9	1.5	0.1	0.1	1.6	0.5	0.6	1.0	1.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.2	18.5	1.7	1.5	1.5	6.5	6.0	5.9	0.2	5.1	5.1
LnGrp Delay(d),s/veh	48.5	19.7	45.3	48.4	18.6	18.6	43.2	26.9	27.0	50.4	38.8	39.1
LnGrp LOS	D	B	D	D	B	B	D	C	C	D	D	D
Approach Vol, veh/h		1051			294			996			399	
Approach Delay, s/veh		37.2			30.9			34.5			39.2	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	47.2	19.6	25.2	9.0	47.3	5.0	39.8
Change Period (Y+Rc), s	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9
Max Green Setting (Gmax), s	30.0	* 45	30.0	* 45	30.0	* 45	30.0	* 45
Max Q Clear Time (g_c+I1), s	5.5	38.1	15.4	12.4	5.4	5.0	2.3	14.2
Green Ext Time (p_c), s	0.1	3.2	0.5	6.5	0.1	6.7	0.0	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D

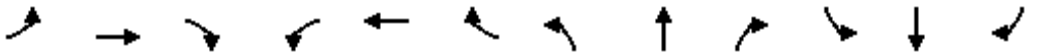
Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	319	582	99	292	19	574	1327	118	43	779	123
Future Volume (veh/h)	151	319	582	99	292	19	574	1327	118	43	779	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	157	332	606	103	304	20	598	1382	123	45	811	128
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	543	790	125	450	30	369	1476	131	58	967	433
Arrive On Green	0.10	0.29	0.29	0.07	0.26	0.26	0.21	0.45	0.45	0.03	0.27	0.27
Sat Flow, veh/h	1774	1863	1578	1774	1728	114	1774	3289	291	1774	3539	1583
Grp Volume(v), veh/h	157	332	606	103	0	324	598	741	764	45	811	128
Grp Sat Flow(s),veh/h/ln	1774	1863	1578	1774	0	1842	1774	1770	1811	1774	1770	1583
Q Serve(g_s), s	12.6	22.1	42.0	8.3	0.0	22.7	30.0	57.2	58.0	3.6	31.1	9.2
Cycle Q Clear(g_c), s	12.6	22.1	42.0	8.3	0.0	22.7	30.0	57.2	58.0	3.6	31.1	9.2
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	181	543	790	125	0	480	369	794	813	58	967	433
V/C Ratio(X)	0.87	0.61	0.77	0.82	0.00	0.68	1.62	0.93	0.94	0.77	0.84	0.30
Avail Cap(c_a), veh/h	308	543	790	308	0	480	369	794	813	308	1474	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	44.0	29.2	66.0	0.0	47.8	57.0	37.6	37.9	69.1	49.3	41.4
Incr Delay (d2), s/veh	5.9	1.5	4.1	5.0	0.0	3.1	290.5	17.5	18.5	7.8	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	11.7	20.4	4.2	0.0	12.0	44.5	31.6	33.0	1.9	15.4	4.1
LnGrp Delay(d),s/veh	69.6	45.5	33.4	71.0	0.0	50.9	347.5	55.1	56.3	77.0	51.0	41.5
LnGrp LOS	E	D	C	E		D	F	E	E	E	D	D
Approach Vol, veh/h		1095			427			2103			984	
Approach Delay, s/veh		42.2			55.7			138.7			50.9	
Approach LOS		D			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	71.1	15.3	47.8	35.1	45.9	19.8	43.3
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	25.0	60.0	25.0	42.0	30.0	60.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	5.6	60.0	10.3	44.0	32.0	33.1	14.6	24.7
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	6.2	0.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	89.4
HCM 2010 LOS	F

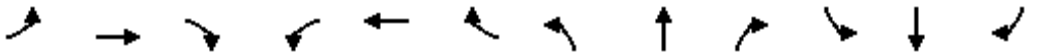
Existing Saturday Midday



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	800	512	251	967	0	0	0	0	342	1	351
Future Volume (vph)	0	800	512	251	967	0	0	0	0	342	1	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8	4.6	5.8					5.8	5.8	5.8
Lane Util. Factor		0.91	1.00	0.97	0.91					0.95	0.95	0.88
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5085	1583	3433	5085					1681	1686	2787
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5085	1583	3433	5085					1681	1686	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	833	533	261	1007	0	0	0	0	356	1	366
RTOR Reduction (vph)	0	0	251	0	0	0	0	0	0	0	0	206
Lane Group Flow (vph)	0	833	282	261	1007	0	0	0	0	178	179	160
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		47.4	47.4	11.2	63.2					14.8	14.8	14.8
Effective Green, g (s)		47.4	47.4	11.2	63.2					14.8	14.8	14.8
Actuated g/C Ratio		0.53	0.53	0.12	0.71					0.17	0.17	0.17
Clearance Time (s)		5.8	5.8	4.6	5.8					5.8	5.8	5.8
Vehicle Extension (s)		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Lane Grp Cap (vph)		2690	837	429	3586					277	278	460
v/s Ratio Prot		0.16		c0.08	0.20							
v/s Ratio Perm			c0.18							0.11	0.11	0.06
v/c Ratio		0.31	0.34	0.61	0.28					0.64	0.64	0.35
Uniform Delay, d1		11.9	12.1	37.1	4.8					34.9	34.9	33.1
Progression Factor		1.00	1.00	1.00	1.67					1.00	1.00	1.00
Incremental Delay, d2		0.3	1.1	1.6	0.2					3.8	3.8	0.2
Delay (s)		12.2	13.2	38.8	8.3					38.7	38.7	33.3
Level of Service		B	B	D	A					D	D	C
Approach Delay (s)		12.6			14.6			0.0			36.0	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.2
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	327	881	0	0	681	441	429	5	315	0	0	0
Future Volume (vph)	327	881	0	0	681	441	429	5	315	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.8			5.8	5.8	5.8	5.8	5.8			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.99	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.97	1.00			
Satd. Flow (prot)	3433	5085			5085	1562	1681	1564	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.97	1.00			
Satd. Flow (perm)	3433	5085			5085	1562	1681	1564	1504			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	337	908	0	0	702	455	442	5	325	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	252	0	20	97	0	0	0
Lane Group Flow (vph)	337	908	0	0	702	203	265	243	147	0	0	0
Confl. Peds. (#/hr)	1		4	4		1						
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	13.1	58.2			40.0	40.0	19.8	19.8	19.8			
Effective Green, g (s)	13.1	58.2			40.0	40.0	19.8	19.8	19.8			
Actuated g/C Ratio	0.15	0.65			0.45	0.45	0.22	0.22	0.22			
Clearance Time (s)	5.1	5.8			5.8	5.8	5.8	5.8	5.8			
Vehicle Extension (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	501	3302			2270	697	371	345	332			
v/s Ratio Prot	c0.10	0.18			c0.14							
v/s Ratio Perm						0.13	c0.16	0.16	0.10			
v/c Ratio	0.67	0.27			0.31	0.29	0.71	0.70	0.44			
Uniform Delay, d1	36.2	6.7			15.9	15.8	32.3	32.2	30.1			
Progression Factor	0.78	0.53			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.7	0.2			0.4	1.1	5.4	5.2	0.3			
Delay (s)	31.0	3.7			16.3	16.8	37.6	37.4	30.5			
Level of Service	C	A			B	B	D	D	C			
Approach Delay (s)		11.1			16.5			35.3			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.7
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	772	29	105	681	29	71	18	79	38	26	90
Future Volume (veh/h)	110	772	29	105	681	29	71	18	79	38	26	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	116	813	31	111	717	31	75	19	83	40	27	95
Adj No. of Lanes	1	3	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	564	3151	120	169	1370	598	233	42	185	178	261	221
Arrive On Green	0.32	0.63	0.63	0.10	0.39	0.39	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	5023	191	1774	3539	1544	1258	302	1318	1282	1863	1573
Grp Volume(v), veh/h	116	548	296	111	717	31	75	0	102	40	27	95
Grp Sat Flow(s),veh/h/ln	1774	1695	1824	1774	1770	1544	1258	0	1620	1282	1863	1573
Q Serve(g_s), s	4.8	7.2	7.2	6.0	15.6	1.3	5.5	0.0	5.8	3.0	1.3	5.5
Cycle Q Clear(g_c), s	4.8	7.2	7.2	6.0	15.6	1.3	6.8	0.0	5.8	8.7	1.3	5.5
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.81	1.00		1.00
Lane Grp Cap(c), veh/h	564	2126	1144	169	1370	598	233	0	227	178	261	221
V/C Ratio(X)	0.21	0.26	0.26	0.66	0.52	0.05	0.32	0.00	0.45	0.22	0.10	0.43
Avail Cap(c_a), veh/h	564	2126	1144	222	1370	598	504	0	577	447	652	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.77	0.77	0.77	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	8.3	8.3	43.6	23.6	19.2	40.5	0.0	39.4	43.4	37.5	39.3
Incr Delay (d2), s/veh	0.1	0.3	0.5	1.3	1.1	0.1	0.8	0.0	1.4	0.6	0.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.4	3.8	3.0	7.8	0.6	2.0	0.0	2.7	1.1	0.7	2.5
LnGrp Delay(d),s/veh	25.0	8.6	8.8	44.9	24.7	19.3	41.3	0.0	40.8	44.1	37.7	40.6
LnGrp LOS	C	A	A	D	C	B	D		D	D	D	D
Approach Vol, veh/h		960			859			177			162	
Approach Delay, s/veh		10.6			27.1			41.0			41.0	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	68.0		18.9	37.1	44.0		18.9
Change Period (Y+Rc), s	3.5	5.3		4.9	5.3	* 5.3		4.9
Max Green Setting (Gmax), s	12.5	38.7		35.0	12.5	* 39		35.6
Max Q Clear Time (g_c+I1), s	8.8	9.2		10.7	6.8	17.6		8.8
Green Ext Time (p_c), s	0.0	8.9		1.4	1.6	7.0		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	0	677	212	18	593	208	18
Future Volume (vph)	0	677	212	18	593	208	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	5.0	5.5	5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		3539	1543	1770	1863	1770	1583
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		3539	1543	1770	1863	1770	1583
Peak-hour factor, PHF	0.92	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	698	219	19	611	214	19
RTOR Reduction (vph)	0	0	115	0	0	0	8
Lane Group Flow (vph)	0	698	104	19	611	214	11
Confl. Peds. (#/hr)			1	1			
Confl. Bikes (#/hr)			5				
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Actuated Green, G (s)		27.0	27.0	1.0	33.0	13.6	13.6
Effective Green, g (s)		27.0	27.0	1.0	33.0	13.6	13.6
Actuated g/C Ratio		0.47	0.47	0.02	0.58	0.24	0.24
Clearance Time (s)		5.5	5.5	5.0	5.5	5.0	5.0
Vehicle Extension (s)		2.5	2.5	1.5	2.5	3.5	3.5
Lane Grp Cap (vph)		1673	729	30	1076	421	377
v/s Ratio Prot		0.20		0.01	c0.33	c0.12	
v/s Ratio Perm			0.07				0.01
v/c Ratio		0.42	0.14	0.63	0.57	0.51	0.03
Uniform Delay, d1		9.9	8.5	27.9	7.6	18.9	16.7
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.1	0.1	27.8	0.6	1.1	0.0
Delay (s)		10.0	8.6	55.7	8.1	20.0	16.7
Level of Service		B	A	E	A	B	B
Approach Delay (s)		9.7			9.6	19.7	
Approach LOS		A			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	57.1	Sum of lost time (s)	15.5
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	648	661	7	10	5
Future Vol, veh/h	9	648	661	7	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	675	689	7	10	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	696	0	-	0	1386	692
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	694	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	900	-	-	-	158	444
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	496	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	900	-	-	-	156	444
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	491	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	24.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	900	-	-	-	199
HCM Lane V/C Ratio	0.01	-	-	-	0.079
HCM Control Delay (s)	9	-	-	-	24.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	642	4	0	626	5	4	0	3	4	0	47
Future Vol, veh/h	26	642	4	0	626	5	4	0	3	4	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	669	4	0	652	5	4	0	3	4	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	657	0	0	673	0	0	1404	1382	671	1382	1382	655
Stage 1	-	-	-	-	-	-	725	725	-	655	655	-
Stage 2	-	-	-	-	-	-	679	657	-	727	727	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	931	-	-	918	-	-	117	144	456	121	144	466
Stage 1	-	-	-	-	-	-	416	430	-	455	463	-
Stage 2	-	-	-	-	-	-	441	462	-	415	429	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	931	-	-	918	-	-	102	140	456	118	140	466
Mov Cap-2 Maneuver	-	-	-	-	-	-	102	140	-	118	140	-
Stage 1	-	-	-	-	-	-	404	418	-	442	463	-
Stage 2	-	-	-	-	-	-	395	462	-	400	417	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	29.7	16.1
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	153	931	-	-	918	-	-	378
HCM Lane V/C Ratio	0.048	0.029	-	-	-	-	-	0.141
HCM Control Delay (s)	29.7	9	-	-	0	-	-	16.1
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	587	21	20	571	37	29	2	3	32	0	30
Future Volume (veh/h)	43	587	21	20	571	37	29	2	3	32	0	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	45	611	22	21	595	39	30	2	3	33	0	31
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1524	55	45	1404	92	60	48	72	65	0	117
Arrive On Green	0.05	0.44	0.44	0.03	0.42	0.42	0.03	0.07	0.07	0.04	0.00	0.07
Sat Flow, veh/h	1774	3481	125	1774	3368	220	1774	674	1011	1774	0	1583
Grp Volume(v), veh/h	45	310	323	21	312	322	30	0	5	33	0	31
Grp Sat Flow(s),veh/h/ln	1774	1770	1837	1774	1770	1818	1774	0	1684	1774	0	1583
Q Serve(g_s), s	1.3	6.1	6.1	0.6	6.4	6.4	0.9	0.0	0.1	0.9	0.0	0.9
Cycle Q Clear(g_c), s	1.3	6.1	6.1	0.6	6.4	6.4	0.9	0.0	0.1	0.9	0.0	0.9
Prop In Lane	1.00		0.07	1.00		0.12	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	82	775	804	45	738	758	60	0	120	65	0	117
V/C Ratio(X)	0.55	0.40	0.40	0.47	0.42	0.42	0.50	0.00	0.04	0.51	0.00	0.26
Avail Cap(c_a), veh/h	1038	1898	1971	1038	1898	1950	1038	0	1314	1038	0	1235
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.9	9.8	9.8	24.7	10.6	10.6	24.3	0.0	22.2	24.2	0.0	22.4
Incr Delay (d2), s/veh	2.1	0.4	0.4	2.8	0.5	0.5	2.4	0.0	0.1	2.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.0	3.1	0.3	3.2	3.3	0.5	0.0	0.1	0.5	0.0	0.4
LnGrp Delay(d),s/veh	26.1	10.2	10.2	27.5	11.0	11.0	26.7	0.0	22.3	26.5	0.0	23.3
LnGrp LOS	C	B	B	C	B	B	C		C	C		C
Approach Vol, veh/h		678			655			35			64	
Approach Delay, s/veh		11.3			11.6			26.1			25.0	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	29.5	6.7	8.8	7.4	28.4	6.9	8.7
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	55.0	30.0	40.0	30.0	55.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	2.6	8.1	2.9	2.9	3.3	8.4	2.9	2.1
Green Ext Time (p_c), s	0.0	13.0	0.0	0.1	0.0	12.9	0.0	0.1

Intersection Summary		
HCM 2010 Ctrl Delay		12.4
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	536	52	177	497	70	59	41	196	61	30	16
Future Volume (veh/h)	27	536	52	177	497	70	59	41	196	61	30	16
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1860	1900	1881	1877	1900	1863	1863	1881	1827	1783	1900
Adj Flow Rate, veh/h	30	602	58	199	558	79	66	46	220	69	34	18
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	2	2	1	1	1	2	2	1	4	10	10
Cap, veh/h	68	1275	123	249	1538	217	355	373	316	315	220	117
Arrive On Green	0.04	0.39	0.39	0.14	0.49	0.49	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1740	3250	313	1792	3129	441	1345	1863	1576	1086	1098	581
Grp Volume(v), veh/h	30	327	333	199	317	320	66	46	220	69	0	52
Grp Sat Flow(s),veh/h/ln	1740	1767	1796	1792	1783	1787	1345	1863	1576	1086	0	1680
Q Serve(g_s), s	1.0	8.3	8.4	6.5	6.6	6.7	2.6	1.2	7.8	3.4	0.0	1.5
Cycle Q Clear(g_c), s	1.0	8.3	8.4	6.5	6.6	6.7	4.1	1.2	7.8	4.6	0.0	1.5
Prop In Lane	1.00		0.17	1.00		0.25	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	68	693	704	249	877	879	355	373	316	315	0	337
V/C Ratio(X)	0.44	0.47	0.47	0.80	0.36	0.36	0.19	0.12	0.70	0.22	0.00	0.15
Avail Cap(c_a), veh/h	865	1464	1489	594	1478	1481	910	1143	966	638	0	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	13.7	13.7	25.2	9.5	9.5	21.6	19.8	22.4	21.6	0.0	19.9
Incr Delay (d2), s/veh	1.6	0.7	0.7	2.3	0.3	0.3	0.3	0.1	2.8	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.1	4.2	3.4	3.3	3.4	1.0	0.6	3.6	1.0	0.0	0.7
LnGrp Delay(d),s/veh	30.0	14.4	14.4	27.4	9.8	9.8	21.8	19.9	25.2	22.0	0.0	20.1
LnGrp LOS	C	B	B	C	A	A	C	B	C	C		C
Approach Vol, veh/h		690			836			332			121	
Approach Delay, s/veh		15.0			14.0			23.8			21.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	35.5		17.9	13.0	29.5		17.9
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8
Max Green Setting (Gmax), s	30.0	50.0		30.0	20.0	50.0		37.0
Max Q Clear Time (g_c+I1), s	3.0	8.7		6.6	8.5	10.4		9.8
Green Ext Time (p_c), s	0.0	13.5		1.8	0.2	13.3		1.8

Intersection Summary		
HCM 2010 Ctrl Delay		16.5
HCM 2010 LOS		B

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	675	101	342	617	111	440
Future Volume (vph)	675	101	342	617	111	440
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.95		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.90	0.85
Flt Protected	1.00		0.95	1.00	0.98	1.00
Satd. Flow (prot)	3464		1787	3539	3221	1455
Flt Permitted	1.00		0.95	1.00	0.98	1.00
Satd. Flow (perm)	3464		1787	3539	3221	1455
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	718	107	364	656	118	468
RTOR Reduction (vph)	7	0	0	0	204	204
Lane Group Flow (vph)	818	0	364	656	148	30
Confl. Peds. (#/hr)		1	1			
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	2%	1%	1%	2%	2%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Actuated Green, G (s)	28.9		27.3	60.8	10.5	10.5
Effective Green, g (s)	28.9		27.3	60.8	10.5	10.5
Actuated g/C Ratio	0.35		0.33	0.73	0.13	0.13
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1207		588	2595	407	184
v/s Ratio Prot	c0.24		c0.20	0.19	c0.05	
v/s Ratio Perm						0.02
v/c Ratio	0.68		0.62	0.25	0.36	0.16
Uniform Delay, d1	23.0		23.4	3.6	33.1	32.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6		1.9	0.1	0.7	0.5
Delay (s)	24.7		25.4	3.7	33.9	32.8
Level of Service	C		C	A	C	C
Approach Delay (s)	24.7			11.4	33.4	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	82.9	Sum of lost time (s)	20.8
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1095	37	30	922	119	31	0	30	112	0	28
Future Volume (veh/h)	43	1095	37	30	922	119	31	0	30	112	0	28
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1859	1900	1827	1881	1863	1845	1900	1900	1881	1827	1900
Adj Flow Rate, veh/h	46	1177	40	32	991	128	33	0	32	120	0	30
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	4	1	2	3	0	0	1	0	0
Cap, veh/h	90	2198	75	68	2218	960	234	223	190	260	0	182
Arrive On Green	0.05	0.63	0.63	0.04	0.62	0.62	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1810	3483	118	1740	3574	1547	1361	1900	1615	1385	0	1553
Grp Volume(v), veh/h	46	597	620	32	991	128	33	0	32	120	0	30
Grp Sat Flow(s),veh/h/ln	1810	1766	1835	1740	1787	1547	1361	1900	1615	1385	0	1553
Q Serve(g_s), s	1.8	13.9	13.9	1.3	10.8	2.5	1.7	0.0	1.3	6.2	0.0	1.3
Cycle Q Clear(g_c), s	1.8	13.9	13.9	1.3	10.8	2.5	2.9	0.0	1.3	6.2	0.0	1.3
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	1114	1158	68	2218	960	234	223	190	260	0	182
V/C Ratio(X)	0.51	0.54	0.54	0.47	0.45	0.13	0.14	0.00	0.17	0.46	0.00	0.16
Avail Cap(c_a), veh/h	490	1196	1242	471	2420	1047	737	926	787	566	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	7.6	7.6	34.7	7.4	5.8	30.7	0.0	29.4	31.5	0.0	29.3
Incr Delay (d2), s/veh	1.7	0.9	0.9	1.9	0.3	0.1	0.3	0.0	0.4	1.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.9	7.2	0.7	5.3	1.1	0.6	0.0	0.6	2.5	0.0	0.6
LnGrp Delay(d),s/veh	35.9	8.5	8.5	36.6	7.7	5.9	30.9	0.0	29.8	32.8	0.0	29.8
LnGrp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1263			1151			65			150	
Approach Delay, s/veh		9.5			8.3			30.4			32.2	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	52.4		14.0	8.3	51.6		14.0
Change Period (Y+Rc), s	4.6	5.8		5.3	4.6	5.8		5.3
Max Green Setting (Gmax), s	20.0	50.0		25.0	20.0	50.0		36.0
Max Q Clear Time (g_c+I1), s	3.3	15.9		8.2	3.8	12.8		4.9
Green Ext Time (p_c), s	0.0	30.5		0.6	0.0	33.1		0.7

Intersection Summary		
HCM 2010 Ctrl Delay	10.8	
HCM 2010 LOS	B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1212	17	108	1047	5	20	3	79	3	1	12
Future Volume (veh/h)	14	1212	17	108	1047	5	20	3	79	3	1	12
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1862	1900	1900	1881	1900	1810	1847	1900	1429	1900	1759
Adj Flow Rate, veh/h	15	1289	18	115	1114	5	21	3	84	3	1	13
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	1	0	5	0	0	33	0	8
Cap, veh/h	38	1931	27	147	3088	965	47	7	199	13	208	162
Arrive On Green	0.02	0.54	0.54	0.08	0.60	0.60	0.03	0.13	0.13	0.00	0.11	0.11
Sat Flow, veh/h	1810	3570	50	1810	5136	1606	1723	54	1507	2639	1900	1475
Grp Volume(v), veh/h	15	638	669	115	1114	5	21	0	87	3	1	13
Grp Sat Flow(s),veh/h/ln	1810	1769	1851	1810	1712	1606	1723	0	1560	1320	1900	1475
Q Serve(g_s), s	0.7	22.4	22.4	5.4	9.5	0.1	1.0	0.0	4.4	0.1	0.0	0.7
Cycle Q Clear(g_c), s	0.7	22.4	22.4	5.4	9.5	0.1	1.0	0.0	4.4	0.1	0.0	0.7
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.97	1.00		1.00
Lane Grp Cap(c), veh/h	38	957	1001	147	3088	965	47	0	207	13	208	162
V/C Ratio(X)	0.39	0.67	0.67	0.78	0.36	0.01	0.44	0.00	0.42	0.24	0.00	0.08
Avail Cap(c_a), veh/h	419	1023	1071	628	3088	965	399	0	650	1069	879	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	14.3	14.3	39.0	8.8	6.9	41.4	0.0	34.5	42.9	34.3	34.6
Incr Delay (d2), s/veh	2.5	2.3	2.3	3.4	0.2	0.0	2.4	0.0	3.2	9.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	11.4	12.0	2.8	4.5	0.0	0.5	0.0	2.1	0.1	0.0	0.3
LnGrp Delay(d),s/veh	44.2	16.6	16.5	42.3	8.9	6.9	43.8	0.0	37.7	52.0	34.3	34.8
LnGrp LOS	D	B	B	D	A	A	D		D	D	C	C
Approach Vol, veh/h		1322			1234			108			17	
Approach Delay, s/veh		16.9			12.0			38.9			37.8	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	52.6	5.0	17.2	6.4	57.8	7.0	15.3
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	30.0	50.0	35.0	36.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	7.4	24.4	2.1	6.4	2.7	11.5	3.0	2.7
Green Ext Time (p_c), s	0.1	22.3	0.0	1.0	0.0	34.8	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	1034	13	25	894	234	10	6	22	409	12	253
Future Volume (veh/h)	276	1034	13	25	894	234	10	6	22	409	12	253
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1881	1863	1900	1900	1900	1881	1864	1900
Adj Flow Rate, veh/h	291	1088	14	26	941	246	11	6	23	431	13	266
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	1	2	0	0	0	1	0	0
Cap, veh/h	366	2641	832	56	2280	921	29	35	132	508	17	350
Arrive On Green	0.11	0.52	0.52	0.03	0.44	0.44	0.02	0.10	0.10	0.15	0.23	0.23
Sat Flow, veh/h	3442	5085	1603	1810	5136	1554	1810	342	1312	3476	74	1516
Grp Volume(v), veh/h	291	1088	14	26	941	246	11	0	29	431	0	279
Grp Sat Flow(s),veh/h/ln	1721	1695	1603	1810	1712	1554	1810	0	1655	1738	0	1590
Q Serve(g_s), s	8.2	13.0	0.4	1.4	12.4	7.6	0.6	0.0	1.6	12.0	0.0	16.2
Cycle Q Clear(g_c), s	8.2	13.0	0.4	1.4	12.4	7.6	0.6	0.0	1.6	12.0	0.0	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.95
Lane Grp Cap(c), veh/h	366	2641	832	56	2280	921	29	0	167	508	0	367
V/C Ratio(X)	0.79	0.41	0.02	0.46	0.41	0.27	0.38	0.00	0.17	0.85	0.00	0.76
Avail Cap(c_a), veh/h	694	2641	832	365	2590	1015	365	0	334	701	0	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	14.6	11.6	47.2	18.8	9.9	48.3	0.0	40.8	41.3	0.0	35.5
Incr Delay (d2), s/veh	1.5	0.2	0.0	2.2	0.3	0.4	8.2	0.0	0.5	5.4	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.1	0.2	0.7	5.9	3.3	0.4	0.0	0.7	6.1	0.0	7.6
LnGrp Delay(d),s/veh	44.7	14.8	11.6	49.4	19.1	10.3	56.5	0.0	41.3	46.6	0.0	39.8
LnGrp LOS	D	B	B	D	B	B	E		D	D		D
Approach Vol, veh/h		1393			1213			40			710	
Approach Delay, s/veh		21.0			17.9			45.5			43.9	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	57.3	6.2	28.0	15.2	49.8	19.1	15.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	20.0	50.0	20.0	34.0	20.0	50.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	3.4	15.0	2.6	18.2	10.2	14.4	14.0	3.6
Green Ext Time (p_c), s	0.0	30.6	0.0	2.0	0.4	29.6	0.5	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1016	424	0	761	260	0	0	0	150	0	524
Future Volume (veh/h)	0	1016	424	0	761	260	0	0	0	150	0	524
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1881	0	1881	1881				1900	1776	1863
Adj Flow Rate, veh/h	0	1026	428	0	769	0				152	0	529
Adj No. of Lanes	0	3	1	0	3	1				0	1	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	2	1	0	1	1				2	0	2
Cap, veh/h	0	3368	1045	0	3402	1059				364	0	601
Arrive On Green	0.00	0.66	0.66	0.00	1.00	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	5253	1577	0	5305	1599				1691	0	2787
Grp Volume(v), veh/h	0	1026	428	0	769	0				152	0	529
Grp Sat Flow(s),veh/h/ln	0	1695	1577	0	1712	1599				1691	0	1393
Q Serve(g_s), s	0.0	8.1	11.9	0.0	0.0	0.0				7.4	0.0	17.5
Cycle Q Clear(g_c), s	0.0	8.1	11.9	0.0	0.0	0.0				7.4	0.0	17.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3368	1045	0	3402	1059				364	0	601
V/C Ratio(X)	0.00	0.30	0.41	0.00	0.23	0.00				0.42	0.00	0.88
Avail Cap(c_a), veh/h	0	3368	1045	0	3402	1059				449	0	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.87	0.87	0.00	0.90	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.8	7.4	0.0	0.0	0.0				32.1	0.0	36.1
Incr Delay (d2), s/veh	0.0	0.2	1.0	0.0	0.1	0.0				0.3	0.0	9.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	5.4	0.0	0.0	0.0				3.4	0.0	7.4
LnGrp Delay(d),s/veh	0.0	7.0	8.5	0.0	0.1	0.0				32.4	0.0	45.1
LnGrp LOS		A	A		A					C		D
Approach Vol, veh/h		1454			769						681	
Approach Delay, s/veh		7.4			0.1						42.3	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		68.7		26.3		68.7		
Change Period (Y+Rc), s		5.8		5.8		5.8		
Max Green Setting (Gmax), s		58.2		25.2		58.2		
Max Q Clear Time (g_c+I1), s		13.9		19.5		2.0		
Green Ext Time (p_c), s		11.7		1.0		12.1		

Intersection Summary		
HCM 2010 Ctrl Delay		13.7
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	650	512	0	669	110	367	0	310	0	0	0
Future Volume (veh/h)	0	650	512	0	669	110	367	0	310	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1845	0	1863	1900	1881	0	1881			
Adj Flow Rate, veh/h	0	663	0	0	683	0	374	0	316			
Adj No. of Lanes	0	3	1	0	3	0	1	0	1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	2	3	0	2	2	1	0	1			
Cap, veh/h	0	3258	1004	0	3258	0	425	0	379			
Arrive On Green	0.00	1.00	0.00	0.00	0.64	0.00	0.24	0.00	0.24			
Sat Flow, veh/h	0	5253	1568	0	5421	0	1792	0	1599			
Grp Volume(v), veh/h	0	663	0	0	683	0	374	0	316			
Grp Sat Flow(s),veh/h/ln	0	1695	1568	0	1695	0	1792	0	1599			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	5.3	0.0	19.1	0.0	17.8			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	5.3	0.0	19.1	0.0	17.8			
Prop In Lane	0.00		1.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3258	1004	0	3258	0	425	0	379			
V/C Ratio(X)	0.00	0.20	0.00	0.00	0.21	0.00	0.88	0.00	0.83			
Avail Cap(c_a), veh/h	0	3258	1004	0	3258	0	664	0	592			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.97	0.00	0.00	0.90	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	7.1	0.0	34.9	0.0	34.4			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.0	7.3	0.0	4.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	2.5	0.0	10.3	0.0	8.4			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	7.2	0.0	42.2	0.0	39.2			
LnGrp LOS		A			A		D		D			
Approach Vol, veh/h		663			683			690				
Approach Delay, s/veh		0.1			7.2			40.8				
Approach LOS		A			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		66.7				66.7		28.3
Change Period (Y+Rc), s		5.8				5.8		5.8
Max Green Setting (Gmax), s		48.2				48.2		35.2
Max Q Clear Time (g_c+I1), s		2.0				7.3		21.1
Green Ext Time (p_c), s		6.6				6.6		1.4

Intersection Summary		
HCM 2010 Ctrl Delay		16.3
HCM 2010 LOS		B

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	8	896	51	7	742	50	11
Future Volume (veh/h)	8	896	51	7	742	50	11
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.98	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1863	1900	1696	1863	1881	1743
Adj Flow Rate, veh/h		953	54	7	789	53	12
Adj No. of Lanes		3	1	1	3	1	1
Peak Hour Factor		0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		2	0	12	2	1	9
Cap, veh/h		2757	857	18	3321	233	193
Arrive On Green		0.54	0.54	0.01	0.65	0.13	0.13
Sat Flow, veh/h		5253	1580	1616	5253	1792	1482
Grp Volume(v), veh/h		953	54	7	789	53	12
Grp Sat Flow(s),veh/h/ln		1695	1580	1616	1695	1792	1482
Q Serve(g_s), s		4.9	0.7	0.2	2.9	1.2	0.3
Cycle Q Clear(g_c), s		4.9	0.7	0.2	2.9	1.2	0.3
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2757	857	18	3321	233	193
V/C Ratio(X)		0.35	0.06	0.39	0.24	0.23	0.06
Avail Cap(c_a), veh/h		4410	1370	701	4410	971	803
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		5.9	5.0	22.6	3.3	18.0	17.6
Incr Delay (d2), s/veh		0.1	0.0	5.0	0.1	0.4	0.1
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.2	0.3	0.1	1.3	0.6	0.1
LnGrp Delay(d),s/veh		6.0	5.0	27.6	3.3	18.3	17.7
LnGrp LOS		A	A	C	A	B	B
Approach Vol, veh/h		1007			796	65	
Approach Delay, s/veh		6.0			3.6	18.2	
Approach LOS		A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.1	30.4				35.5		10.6
Change Period (Y+Rc), s	4.6	5.4				5.4		4.6
Max Green Setting (Gmax), s	20.0	40.0				40.0		25.0
Max Q Clear Time (g_c+I1), s	2.2	6.9				4.9		3.2
Green Ext Time (p_c), s	0.0	18.1				18.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.4
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	907	0	0	725	0	0
Future Vol, veh/h	907	0	0	725	0	0
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1093	0	0	873	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	549
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	415
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	414
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	1	864	22	35	667	58	9
Future Volume (veh/h)	1	864	22	35	667	58	9
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.98	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1846	1900	1900	1863	1900	1900
Adj Flow Rate, veh/h		929	24	38	717	62	10
Adj No. of Lanes		3	0	1	3	2	1
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %		3	3	0	2	0	0
Cap, veh/h		3121	81	84	3761	343	158
Arrive On Green		0.62	0.62	0.05	0.74	0.10	0.10
Sat Flow, veh/h		5215	130	1810	5253	3510	1615
Grp Volume(v), veh/h		618	335	38	717	62	10
Grp Sat Flow(s),veh/h/ln		1680	1819	1810	1695	1755	1615
Q Serve(g_s), s		5.3	5.3	1.3	2.6	1.0	0.3
Cycle Q Clear(g_c), s		5.3	5.3	1.3	2.6	1.0	0.3
Prop In Lane			0.07	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2077	1125	84	3761	343	158
V/C Ratio(X)		0.30	0.30	0.45	0.19	0.18	0.06
Avail Cap(c_a), veh/h		2734	1480	1031	4137	2342	1077
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		5.5	5.5	28.5	2.4	25.5	25.2
Incr Delay (d2), s/veh		0.4	0.7	1.4	0.0	0.3	0.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.5	2.8	0.7	1.2	0.5	0.2
LnGrp Delay(d),s/veh		5.9	6.2	29.9	2.5	25.7	25.3
LnGrp LOS		A	A	C	A	C	C
Approach Vol, veh/h		953			755	72	
Approach Delay, s/veh		6.0			3.8	25.7	
Approach LOS		A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.5	43.4				50.9		10.6
Change Period (Y+Rc), s	4.6	5.4				5.4		4.6
Max Green Setting (Gmax), s	35.0	50.0				50.0		41.0
Max Q Clear Time (g_c+I1), s	3.3	7.3				4.6		3.0
Green Ext Time (p_c), s	0.0	30.7				32.1		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	420	165	109	325	29	111	141	88	53	213	213
Future Volume (veh/h)	292	420	165	109	325	29	111	141	88	53	213	213
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1827	1900	1863	1900	1881	1888	1900	1900	1881	1900
Adj Flow Rate, veh/h	304	438	172	114	339	30	116	147	92	55	222	222
Adj No. of Lanes	2	2	1	2	3	1	1	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	0	4	0	2	0	1	1	1	0	0	0
Cap, veh/h	390	1000	430	252	1256	393	149	352	220	98	516	456
Arrive On Green	0.11	0.28	0.28	0.07	0.25	0.25	0.08	0.33	0.33	0.05	0.29	0.29
Sat Flow, veh/h	3476	3610	1551	3510	5085	1592	1792	1080	676	1810	1787	1579
Grp Volume(v), veh/h	304	438	172	114	339	30	116	0	239	55	222	222
Grp Sat Flow(s),veh/h/ln	1738	1805	1551	1755	1695	1592	1792	0	1757	1810	1787	1579
Q Serve(g_s), s	6.5	7.6	6.9	2.4	4.1	1.1	4.8	0.0	8.1	2.3	7.7	8.8
Cycle Q Clear(g_c), s	6.5	7.6	6.9	2.4	4.1	1.1	4.8	0.0	8.1	2.3	7.7	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	390	1000	430	252	1256	393	149	0	573	98	516	456
V/C Ratio(X)	0.78	0.44	0.40	0.45	0.27	0.08	0.78	0.00	0.42	0.56	0.43	0.49
Avail Cap(c_a), veh/h	1116	2403	1033	490	2569	804	575	0	1276	310	1016	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	22.6	22.3	33.8	23.1	22.0	34.1	0.0	20.0	35.1	21.9	22.4
Incr Delay (d2), s/veh	1.3	1.4	2.8	1.3	0.0	0.0	3.3	0.0	1.9	1.9	2.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.0	3.2	1.2	1.9	0.5	2.5	0.0	4.2	1.2	4.1	4.2
LnGrp Delay(d),s/veh	34.1	24.0	25.1	35.1	23.1	22.0	37.4	0.0	21.8	36.9	24.1	25.4
LnGrp LOS	C	C	C	D	C	C	D		C	D	C	C
Approach Vol, veh/h		914			483			355			499	
Approach Delay, s/veh		27.6			25.9			26.9			26.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	30.6	10.9	26.4	10.9	27.8	13.1	24.2
Change Period (Y+Rc), s	4.0	5.8	5.4	5.4	4.6	5.8	4.6	* 5.4
Max Green Setting (Gmax), s	13.0	55.2	10.6	50.6	24.4	43.2	24.4	* 38
Max Q Clear Time (g_c+I1), s	4.3	10.1	4.4	9.6	6.8	10.8	8.5	6.1
Green Ext Time (p_c), s	0.0	12.5	0.1	11.4	0.1	11.1	0.1	10.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.8
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	2	75	3	2	0	34	328	2	2	390	32
Future Volume (veh/h)	54	2	75	3	2	0	34	328	2	2	390	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1267	1900	1900	1900	1900	1900	1881	1900	1900	1878	1900
Adj Flow Rate, veh/h	59	2	82	3	2	0	37	357	2	2	424	35
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	50	0	0	0	0	0	1	1	0	1	1
Cap, veh/h	180	130	165	9	6	0	197	1849	10	6	1338	110
Arrive On Green	0.10	0.10	0.10	0.01	0.01	0.00	0.11	0.51	0.51	0.00	0.40	0.40
Sat Flow, veh/h	1757	1267	1615	1107	738	0	1810	3644	20	1810	3333	274
Grp Volume(v), veh/h	59	2	82	5	0	0	37	175	184	2	226	233
Grp Sat Flow(s),veh/h/ln	1757	1267	1615	1845	0	0	1810	1787	1877	1810	1784	1823
Q Serve(g_s), s	1.7	0.1	2.6	0.1	0.0	0.0	1.0	2.9	2.9	0.1	4.8	4.8
Cycle Q Clear(g_c), s	1.7	0.1	2.6	0.1	0.0	0.0	1.0	2.9	2.9	0.1	4.8	4.8
Prop In Lane	1.00		1.00	0.60		0.00	1.00		0.01	1.00		0.15
Lane Grp Cap(c), veh/h	180	130	165	15	0	0	197	907	952	6	716	732
V/C Ratio(X)	0.33	0.02	0.50	0.34	0.00	0.00	0.19	0.19	0.19	0.34	0.32	0.32
Avail Cap(c_a), veh/h	1120	808	1030	1176	0	0	659	1628	1710	659	1626	1661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	22.1	23.3	27.1	0.0	0.0	22.2	7.4	7.4	27.3	11.3	11.3
Incr Delay (d2), s/veh	4.8	0.2	10.2	4.9	0.0	0.0	0.2	0.4	0.4	30.2	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.6	0.1	0.0	0.0	0.5	1.5	1.6	0.1	2.5	2.6
LnGrp Delay(d),s/veh	27.7	22.4	33.5	32.0	0.0	0.0	22.4	7.8	7.8	57.5	12.2	12.2
LnGrp LOS	C	C	C	C			C	A	A	E	B	B
Approach Vol, veh/h		143			5			396			461	
Approach Delay, s/veh		31.0			32.0			9.1			12.4	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	33.6		11.4	10.6	27.8		5.0
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		4.6
Max Green Setting (Gmax), s	20.0	50.0		35.0	20.0	50.0		35.0
Max Q Clear Time (g_c+I1), s	2.1	4.9		4.6	3.0	6.8		2.1
Green Ext Time (p_c), s	0.0	15.5		1.7	0.0	15.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	3	52	7	6	8	56	310	5	8	355	4
Future Volume (veh/h)	4	3	52	7	6	8	56	310	5	8	355	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1759	1900	1779	1900	1810	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	3	56	8	6	9	60	333	5	9	382	4
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	8	0	17	17	5	0	0	0	0	0
Cap, veh/h	12	282	221	23	261	233	122	681	565	26	1103	12
Arrive On Green	0.01	0.15	0.15	0.01	0.15	0.15	0.07	0.36	0.36	0.01	0.30	0.30
Sat Flow, veh/h	1810	1900	1493	1810	1690	1510	1723	1900	1577	1810	3659	38
Grp Volume(v), veh/h	4	3	56	8	6	9	60	333	5	9	188	198
Grp Sat Flow(s),veh/h/ln	1810	1900	1493	1810	1690	1510	1723	1900	1577	1810	1805	1892
Q Serve(g_s), s	0.1	0.1	1.5	0.2	0.1	0.2	1.5	6.0	0.1	0.2	3.6	3.6
Cycle Q Clear(g_c), s	0.1	0.1	1.5	0.2	0.1	0.2	1.5	6.0	0.1	0.2	3.6	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	12	282	221	23	261	233	122	681	565	26	544	570
V/C Ratio(X)	0.34	0.01	0.25	0.35	0.02	0.04	0.49	0.49	0.01	0.35	0.35	0.35
Avail Cap(c_a), veh/h	828	1739	1367	828	1547	1382	789	2173	1804	828	2065	2165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	15.9	16.5	21.4	15.7	15.7	19.5	10.9	9.0	21.3	11.9	11.9
Incr Delay (d2), s/veh	6.2	0.0	0.8	3.3	0.0	0.1	1.1	0.9	0.0	3.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.6	0.1	0.1	0.1	0.7	3.2	0.0	0.1	1.9	2.0
LnGrp Delay(d),s/veh	27.8	15.9	17.3	24.7	15.7	15.8	20.7	11.8	9.0	24.3	12.5	12.5
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		63			23			398			395	
Approach Delay, s/veh		17.9			18.9			13.1			12.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	21.5	5.2	11.9	7.7	19.0	4.9	12.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.2	8.0	2.2	3.5	3.5	5.6	2.1	2.2
Green Ext Time (p_c), s	0.0	7.3	0.0	0.4	0.0	7.4	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	10	16	13	10	8	24	235	6	7	286	20
Future Volume (veh/h)	21	10	16	13	10	8	24	235	6	7	286	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1727	1900	1900	1803	1900	1827	1882	1900	1900	1859	1900
Adj Flow Rate, veh/h	24	11	18	15	11	9	27	267	7	8	325	23
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	10	0	0	0	0	4	1	1	0	2	2
Cap, veh/h	60	251	235	42	253	183	67	1122	29	23	968	68
Arrive On Green	0.03	0.15	0.15	0.02	0.13	0.13	0.04	0.32	0.32	0.01	0.29	0.29
Sat Flow, veh/h	1723	1727	1613	1810	1899	1372	1740	3557	93	1810	3344	235
Grp Volume(v), veh/h	24	11	18	15	10	10	27	134	140	8	171	177
Grp Sat Flow(s),veh/h/ln	1723	1727	1613	1810	1713	1559	1740	1788	1863	1810	1766	1814
Q Serve(g_s), s	0.6	0.2	0.4	0.3	0.2	0.2	0.6	2.3	2.3	0.2	3.1	3.2
Cycle Q Clear(g_c), s	0.6	0.2	0.4	0.3	0.2	0.2	0.6	2.3	2.3	0.2	3.1	3.2
Prop In Lane	1.00		1.00	1.00		0.88	1.00		0.05	1.00		0.13
Lane Grp Cap(c), veh/h	60	251	235	42	229	208	67	564	587	23	511	525
V/C Ratio(X)	0.40	0.04	0.08	0.36	0.04	0.05	0.40	0.24	0.24	0.35	0.33	0.34
Avail Cap(c_a), veh/h	834	1672	1562	876	1658	1509	842	2163	2254	876	2137	2195
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	15.2	15.3	19.9	15.6	15.6	19.4	10.5	10.5	20.2	11.5	11.6
Incr Delay (d2), s/veh	1.6	0.1	0.2	1.9	0.1	0.1	1.4	0.3	0.3	3.3	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.2	0.2	0.1	0.1	0.3	1.2	1.2	0.1	1.6	1.7
LnGrp Delay(d),s/veh	21.1	15.3	15.4	21.8	15.7	15.7	20.8	10.8	10.8	23.5	12.2	12.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		53			35			301			356	
Approach Delay, s/veh		18.0			18.3			11.7			12.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	18.8	5.5	11.8	6.2	17.8	6.0	11.3
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.2	4.3	2.3	2.4	2.6	5.2	2.6	2.2
Green Ext Time (p_c), s	0.0	6.5	0.0	0.3	0.0	6.5	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	159	438	111	115	0	314	212	108	7	287	72
Future Volume (veh/h)	61	159	438	111	115	0	314	212	108	7	287	72
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	167	461	117	121	0	331	223	114	7	302	76
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	1230	550	217	1275	0	435	717	354	31	548	136
Arrive On Green	0.05	0.35	0.35	0.06	0.36	0.00	0.13	0.31	0.31	0.01	0.19	0.19
Sat Flow, veh/h	3442	3539	1583	3442	3632	0	3442	2299	1134	3442	2813	697
Grp Volume(v), veh/h	64	167	461	117	121	0	331	170	167	7	188	190
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	0	1721	1770	1663	1721	1770	1740
Q Serve(g_s), s	1.3	2.3	19.2	2.4	1.6	0.0	6.7	5.2	5.5	0.1	6.9	7.1
Cycle Q Clear(g_c), s	1.3	2.3	19.2	2.4	1.6	0.0	6.7	5.2	5.5	0.1	6.9	7.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.68	1.00		0.40
Lane Grp Cap(c), veh/h	173	1230	550	217	1275	0	435	552	519	31	345	339
V/C Ratio(X)	0.37	0.14	0.84	0.54	0.09	0.00	0.76	0.31	0.32	0.22	0.55	0.56
Avail Cap(c_a), veh/h	1443	2226	996	1443	2226	0	1443	1113	1046	1443	1113	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	16.0	21.5	32.5	15.2	0.0	30.2	18.7	18.8	35.2	25.9	26.0
Incr Delay (d2), s/veh	0.5	0.0	3.5	0.8	0.0	0.0	1.0	0.3	0.4	1.3	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.1	8.8	1.1	0.8	0.0	3.2	2.6	2.6	0.1	3.5	3.5
LnGrp Delay(d),s/veh	33.4	16.0	25.0	33.3	15.2	0.0	31.3	19.0	19.2	36.5	27.3	27.5
LnGrp LOS	C	B	C	C	B		C	B	B	D	C	C
Approach Vol, veh/h		692			238			668			385	
Approach Delay, s/veh		23.6			24.1			25.1			27.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	30.8	12.7	19.8	7.3	31.7	4.3	28.2
Change Period (Y+Rc), s	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9
Max Green Setting (Gmax), s	30.0	* 45	30.0	* 45	30.0	* 45	30.0	* 45
Max Q Clear Time (g_c+I1), s	4.4	21.2	8.7	9.1	3.3	3.6	2.1	7.5
Green Ext Time (p_c), s	0.1	3.7	0.4	4.9	0.1	3.9	0.0	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	232	481	132	189	20	385	905	143	28	997	78
Future Volume (veh/h)	76	232	481	132	189	20	385	905	143	28	997	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	80	244	506	139	199	21	405	953	151	29	1049	82
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	486	706	160	489	52	331	1489	236	40	1141	510
Arrive On Green	0.06	0.26	0.26	0.09	0.30	0.30	0.19	0.49	0.49	0.02	0.32	0.32
Sat Flow, veh/h	1774	1863	1576	1774	1656	175	1774	3061	485	1774	3539	1582
Grp Volume(v), veh/h	80	244	506	139	0	220	405	551	553	29	1049	82
Grp Sat Flow(s),veh/h/ln	1774	1863	1576	1774	0	1831	1774	1770	1777	1774	1770	1582
Q Serve(g_s), s	7.2	17.9	42.0	12.4	0.0	15.5	30.0	37.3	37.4	2.6	45.9	6.0
Cycle Q Clear(g_c), s	7.2	17.9	42.0	12.4	0.0	15.5	30.0	37.3	37.4	2.6	45.9	6.0
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	99	486	706	160	0	541	331	861	864	40	1141	510
V/C Ratio(X)	0.81	0.50	0.72	0.87	0.00	0.41	1.22	0.64	0.64	0.72	0.92	0.16
Avail Cap(c_a), veh/h	276	486	706	276	0	541	331	861	864	276	1319	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.1	50.6	36.2	72.3	0.0	45.4	65.5	30.8	30.8	78.2	52.5	39.0
Incr Delay (d2), s/veh	5.7	0.3	3.0	5.9	0.0	0.2	125.1	1.2	1.2	8.8	9.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	9.3	18.9	6.4	0.0	7.8	26.2	18.5	18.6	1.4	23.9	2.6
LnGrp Delay(d),s/veh	80.9	50.9	39.2	78.2	0.0	45.6	190.6	32.1	32.1	87.0	61.5	39.0
LnGrp LOS	F	D	D	E		D	F	C	C	F	E	D
Approach Vol, veh/h		830			359			1509			1160	
Approach Delay, s/veh		46.7			58.2			74.6			60.5	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	84.8	19.6	47.8	35.1	58.4	14.1	53.4
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	25.6	60.0	25.0	42.0	30.0	60.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	4.6	39.4	14.4	44.0	32.0	47.9	9.2	17.5
Green Ext Time (p_c), s	0.0	11.4	0.1	0.0	0.0	4.0	0.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	62.8
HCM 2010 LOS	E

2021 Project Completion PM with Creighton Avenue Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	805	72	381	748	141	64	48	359	116	47	21
Future Volume (veh/h)	42	805	72	381	748	141	64	48	359	116	47	21
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1848	1900	1845	1866	1900	1900	1900	1863	1863	1900	1900
Adj Flow Rate, veh/h	46	885	79	419	822	155	70	53	395	127	52	23
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	3	3	3	2	2	0	0	2	2	0	0
Cap, veh/h	71	1089	97	446	1627	307	389	524	436	299	344	152
Arrive On Green	0.04	0.33	0.33	0.25	0.55	0.55	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1810	3259	291	1757	2964	559	1343	1900	1580	937	1249	552
Grp Volume(v), veh/h	46	477	487	419	492	485	70	53	395	127	0	75
Grp Sat Flow(s),veh/h/ln	1810	1755	1794	1757	1772	1751	1343	1900	1580	937	0	1801
Q Serve(g_s), s	3.0	29.6	29.6	27.8	20.6	20.6	4.9	2.5	28.7	13.9	0.0	3.7
Cycle Q Clear(g_c), s	3.0	29.6	29.6	27.8	20.6	20.6	8.7	2.5	28.7	16.4	0.0	3.7
Prop In Lane	1.00		0.16	1.00		0.32	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	71	586	599	446	973	961	389	524	436	299	0	497
V/C Ratio(X)	0.65	0.81	0.81	0.94	0.51	0.51	0.18	0.10	0.91	0.42	0.00	0.15
Avail Cap(c_a), veh/h	137	612	626	567	1056	1043	437	592	492	333	0	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	36.2	36.2	43.5	16.8	16.8	35.9	32.1	41.6	38.2	0.0	32.6
Incr Delay (d2), s/veh	3.6	8.4	8.2	19.0	0.6	0.6	0.2	0.1	19.1	1.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	15.7	16.0	15.9	10.3	10.1	1.9	1.3	14.8	3.7	0.0	1.9
LnGrp Delay(d),s/veh	59.9	44.6	44.4	62.5	17.3	17.3	36.1	32.2	60.7	39.2	0.0	32.7
LnGrp LOS	E	D	D	E	B	B	D	C	E	D		C
Approach Vol, veh/h		1010			1396			518			202	
Approach Delay, s/veh		45.2			30.9			54.5			36.8	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	71.1		38.6	34.8	45.6		38.6
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8
Max Green Setting (Gmax), s	9.0	70.9		37.1	38.4	41.5		37.1
Max Q Clear Time (g_c+I1), s	5.0	22.6		18.4	29.8	31.6		30.7
Green Ext Time (p_c), s	0.0	26.1		3.0	0.4	8.2		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1138	133	458	1051	172	798
Future Volume (vph)	1138	133	458	1051	172	798
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.95		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	0.98	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.90	0.85
Flt Protected	1.00		0.95	1.00	0.99	1.00
Satd. Flow (prot)	3443		1787	3539	3166	1435
Flt Permitted	1.00		0.95	1.00	0.99	1.00
Satd. Flow (perm)	3443		1787	3539	3166	1435
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1251	146	503	1155	189	877
RTOR Reduction (vph)	5	0	0	0	249	373
Lane Group Flow (vph)	1392	0	503	1155	379	65
Confl. Peds. (#/hr)		3	3		2	1
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	3%	2%	1%	2%	1%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Actuated Green, G (s)	59.3		38.9	102.8	21.7	21.7
Effective Green, g (s)	59.3		38.9	102.8	21.7	21.7
Actuated g/C Ratio	0.41		0.27	0.71	0.15	0.15
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1405		478	2503	472	214
v/s Ratio Prot	c0.40		c0.28	0.33	c0.12	
v/s Ratio Perm						0.05
v/c Ratio	0.99		1.05	0.46	0.90dr	0.31
Uniform Delay, d1	42.7		53.2	9.2	59.7	55.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	21.8		55.6	0.2	9.9	1.0
Delay (s)	64.5		108.8	9.4	69.7	56.1
Level of Service	E		F	A	E	E
Approach Delay (s)	64.5			39.6	64.1	
Approach LOS	E			D	E	

Intersection Summary			
HCM 2000 Control Delay	54.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	145.3	Sum of lost time (s)	20.8
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1806	61	57	1481	131	39	1	41	145	0	40
Future Volume (veh/h)	73	1806	61	57	1481	131	39	1	41	145	0	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1900	1900	1881	1881	1845	1900	1900	1881	1810	1900
Adj Flow Rate, veh/h	79	1963	66	62	1610	142	42	1	45	158	0	43
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	1	3	0	0	1	0	0
Cap, veh/h	101	2250	75	79	2257	1009	230	270	229	266	0	218
Arrive On Green	0.06	0.64	0.64	0.04	0.63	0.63	0.14	0.14	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1792	3492	117	1810	3574	1598	1345	1900	1615	1368	0	1538
Grp Volume(v), veh/h	79	988	1041	62	1610	142	42	1	45	158	0	43
Grp Sat Flow(s),veh/h/ln	1792	1770	1839	1810	1787	1598	1345	1900	1615	1368	0	1538
Q Serve(g_s), s	4.3	44.7	46.1	3.4	30.0	3.6	2.8	0.0	2.4	11.1	0.0	2.5
Cycle Q Clear(g_c), s	4.3	44.7	46.1	3.4	30.0	3.6	5.3	0.0	2.4	11.2	0.0	2.5
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	1140	1185	79	2257	1009	230	270	229	266	0	218
V/C Ratio(X)	0.78	0.87	0.88	0.79	0.71	0.14	0.18	0.00	0.20	0.59	0.00	0.20
Avail Cap(c_a), veh/h	130	1140	1185	109	2257	1009	527	689	585	568	0	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	14.2	14.5	47.0	12.3	7.4	39.9	36.6	37.6	41.4	0.0	37.6
Incr Delay (d2), s/veh	15.3	9.0	9.4	14.8	2.0	0.3	0.4	0.0	0.4	2.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	24.3	26.2	2.0	15.1	1.7	1.1	0.0	1.1	4.4	0.0	1.1
LnGrp Delay(d),s/veh	61.5	23.2	23.8	61.9	14.2	7.7	40.3	36.6	38.0	43.5	0.0	38.0
LnGrp LOS	E	C	C	E	B	A	D	D	D	D		D
Approach Vol, veh/h		2108			1814			88			201	
Approach Delay, s/veh		24.9			15.4			39.1			42.3	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.1	69.8		19.4	11.4	68.5		19.4
Change Period (Y+Rc), s	5.8	* 5.8		5.3	5.8	5.8		5.3
Max Green Setting (Gmax), s	6.0	* 64		36.0	7.2	61.6		36.0
Max Q Clear Time (g_c+I1), s	5.4	48.1		13.2	6.3	32.0		7.3
Green Ext Time (p_c), s	0.0	15.2		0.9	0.0	24.1		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1972	34	167	1666	3	22	2	136	7	1	7
Future Volume (veh/h)	14	1972	34	167	1666	3	22	2	136	7	1	7
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1881	1881	1900	1900	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	15	2120	37	180	1791	3	24	2	146	8	1	8
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	1	1	0	0	0	0	0	0	0
Cap, veh/h	60	2163	38	187	3488	1095	46	3	198	40	212	179
Arrive On Green	0.03	0.61	0.61	0.10	0.68	0.68	0.03	0.13	0.13	0.01	0.11	0.11
Sat Flow, veh/h	1810	3559	62	1792	5136	1613	1810	22	1573	3510	1900	1606
Grp Volume(v), veh/h	15	1051	1106	180	1791	3	24	0	148	8	1	8
Grp Sat Flow(s),veh/h/ln	1810	1770	1851	1792	1712	1613	1810	0	1595	1755	1900	1606
Q Serve(g_s), s	1.2	83.5	84.9	14.6	25.0	0.1	1.9	0.0	13.0	0.3	0.1	0.5
Cycle Q Clear(g_c), s	1.2	83.5	84.9	14.6	25.0	0.1	1.9	0.0	13.0	0.3	0.1	0.5
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.99	1.00		1.00
Lane Grp Cap(c), veh/h	60	1076	1125	187	3488	1095	46	0	200	40	212	179
V/C Ratio(X)	0.25	0.98	0.98	0.96	0.51	0.00	0.52	0.00	0.74	0.20	0.00	0.04
Avail Cap(c_a), veh/h	74	1076	1125	187	3488	1095	74	0	438	144	521	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.7	27.6	27.9	65.0	11.5	3.7	70.1	0.0	61.4	71.4	57.6	36.4
Incr Delay (d2), s/veh	0.8	22.4	23.1	54.8	0.5	0.0	3.3	0.0	11.8	2.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	47.3	50.2	10.0	11.9	0.0	1.0	0.0	6.4	0.2	0.0	0.3
LnGrp Delay(d),s/veh	69.5	50.0	51.0	119.8	12.1	3.7	73.4	0.0	73.2	73.8	57.6	36.5
LnGrp LOS	E	D	D	F	B	A	E		E	E	E	D
Approach Vol, veh/h		2172			1974			172			17	
Approach Delay, s/veh		50.6			21.9			73.2			55.3	
Approach LOS		D			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	94.4	6.3	24.1	10.6	104.8	8.3	22.0
Change Period (Y+Rc), s	5.8	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8
Max Green Setting (Gmax), s	15.2	88.6	6.0	40.0	6.0	* 99	6.0	40.0
Max Q Clear Time (g_c+I1), s	16.6	86.9	2.3	15.0	3.2	27.0	3.9	2.5
Green Ext Time (p_c), s	0.0	1.6	0.0	1.8	0.1	47.4	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	1741	29	25	1474	255	16	11	41	395	18	336
Future Volume (veh/h)	369	1741	29	25	1474	255	16	11	41	395	18	336
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.94	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1827	1900	1863	1881	1900	1861	1900	1863	1900	1900
Adj Flow Rate, veh/h	410	1934	32	28	1638	283	18	12	46	439	20	373
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	2	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	2	4	0	2	1	0	10	10	2	0	0
Cap, veh/h	632	2720	802	53	1897	911	40	25	94	690	21	393
Arrive On Green	0.18	0.53	0.53	0.06	0.75	0.75	0.02	0.08	0.08	0.20	0.26	0.26
Sat Flow, veh/h	3476	5085	1500	1810	5085	1582	1810	320	1228	3442	81	1517
Grp Volume(v), veh/h	410	1934	32	28	1638	283	18	0	58	439	0	393
Grp Sat Flow(s),veh/h/ln	1738	1695	1500	1810	1695	1582	1810	0	1549	1721	0	1599
Q Serve(g_s), s	14.2	37.1	1.3	2.0	29.9	0.0	1.3	0.0	4.7	15.2	0.0	31.4
Cycle Q Clear(g_c), s	14.2	37.1	1.3	2.0	29.9	0.0	1.3	0.0	4.7	15.2	0.0	31.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.95
Lane Grp Cap(c), veh/h	632	2720	802	53	1897	911	40	0	119	690	0	414
V/C Ratio(X)	0.65	0.71	0.04	0.53	0.86	0.31	0.45	0.00	0.49	0.64	0.00	0.95
Avail Cap(c_a), veh/h	632	2720	802	86	1897	911	84	0	187	690	0	418
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.22	0.22	0.22	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.3	22.7	14.4	60.3	14.1	5.2	62.8	0.0	57.5	47.6	0.0	47.3
Incr Delay (d2), s/veh	0.4	0.4	0.0	2.4	4.5	0.7	7.8	0.0	3.1	1.5	0.0	31.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	17.5	0.6	1.0	14.1	2.1	0.7	0.0	2.1	7.4	0.0	17.5
LnGrp Delay(d),s/veh	49.7	23.0	14.4	62.7	18.7	5.9	70.5	0.0	60.6	49.1	0.0	78.6
LnGrp LOS	D	C	B	E	B	A	E		E	D		E
Approach Vol, veh/h		2376			1949			76			832	
Approach Delay, s/veh		27.5			17.4			63.0			63.0	
Approach LOS		C			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	75.3	7.5	38.8	29.5	54.3	31.1	15.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	5.8	5.8	5.1	* 5.1
Max Green Setting (Gmax), s	6.8	63.7	6.0	34.0	20.2	48.5	24.3	* 16
Max Q Clear Time (g_c+I1), s	4.0	39.1	3.3	33.4	16.2	31.9	17.2	6.7
Green Ext Time (p_c), s	0.0	22.0	0.0	0.1	2.0	14.7	2.3	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1718	464	0	1219	392	0	0	0	394	1	691
Future Volume (veh/h)	0	1718	464	0	1219	392	0	0	0	394	1	691
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1863	0	1863	1900				1900	1881	1881
Adj Flow Rate, veh/h	0	1790	483	0	1270	0				410	1	720
Adj No. of Lanes	0	3	1	0	3	1				0	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	2	0	2	0				1	0	1
Cap, veh/h	0	3153	988	0	3184	1011				509	1	801
Arrive On Green	0.00	1.00	1.00	0.00	0.83	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	5202	1578	0	5253	1615				1787	4	2814
Grp Volume(v), veh/h	0	1790	483	0	1270	0				411	0	720
Grp Sat Flow(s),veh/h/ln	0	1679	1578	0	1695	1615				1792	0	1407
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.1	0.0				27.7	0.0	32.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.1	0.0				27.7	0.0	32.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3153	988	0	3184	1011				510	0	801
V/C Ratio(X)	0.00	0.57	0.49	0.00	0.40	0.00				0.81	0.00	0.90
Avail Cap(c_a), veh/h	0	3153	988	0	3184	1011				706	0	1108
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.71	0.00	0.77	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	4.7	0.0				43.2	0.0	44.7
Incr Delay (d2), s/veh	0.0	0.5	1.2	0.0	0.3	0.0				3.3	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.3	0.0	3.8	0.0				14.2	0.0	13.1
LnGrp Delay(d),s/veh	0.0	0.5	1.2	0.0	5.0	0.0				46.4	0.0	50.9
LnGrp LOS		A	A		A					D		D
Approach Vol, veh/h		2273			1270						1131	
Approach Delay, s/veh		0.7			5.0						49.3	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		87.2		42.8		87.2		
Change Period (Y+Rc), s		5.8		5.8		5.8		
Max Green Setting (Gmax), s		67.2		51.2		67.2		
Max Q Clear Time (g_c+I1), s		2.0		34.0		10.1		
Green Ext Time (p_c), s		33.0		3.0		31.0		

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1423	647	0	1183	440	609
Future Volume (veh/h)	1423	647	0	1183	440	609
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1845	0	1881	1881	1881
Adj Flow Rate, veh/h	1547	0	0	1286	564	570
Adj No. of Lanes	3	1	0	3	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	3	0	1	1	1
Cap, veh/h	2729	833	0	2729	680	607
Arrive On Green	1.00	0.00	0.00	1.00	0.38	0.38
Sat Flow, veh/h	5305	1568	0	5474	1792	1599
Grp Volume(v), veh/h	1547	0	0	1286	564	570
Grp Sat Flow(s),veh/h/ln	1712	1568	0	1712	1792	1599
Q Serve(g_s), s	0.0	0.0	0.0	0.0	37.1	44.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	37.1	44.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2729	833	0	2729	680	607
V/C Ratio(X)	0.57	0.00	0.00	0.47	0.83	0.94
Avail Cap(c_a), veh/h	2729	833	0	2729	830	740
HCM Platoon Ratio	2.00	2.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	0.79	0.00	0.00	0.90	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	36.5	38.9
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.5	5.6	17.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	19.4	22.6
LnGrp Delay(d),s/veh	0.7	0.0	0.0	0.5	42.1	56.2
LnGrp LOS	A			A	D	E
Approach Vol, veh/h	1547			1286	1134	
Approach Delay, s/veh	0.7			0.5	49.2	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		74.9				74.9		55.1
Change Period (Y+Rc), s		5.8				5.8		5.8
Max Green Setting (Gmax), s		58.2				58.2		60.2
Max Q Clear Time (g_c+I1), s		2.0				2.0		46.7
Green Ext Time (p_c), s		23.5				23.5		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1924	84	39	1365	0	55	0	25	0	0	39
Future Volume (veh/h)	43	1924	84	39	1365	0	55	0	25	0	0	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1863	1827	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	2138	93	43	1517	0	61	0	28	0	0	43
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	1	1	0	1	0	2	0	0	0	0	0
Cap, veh/h	602	2216	666	535	2027	637	131	0	230	1	0	64
Arrive On Green	0.66	0.86	0.86	0.59	0.79	0.00	0.07	0.00	0.15	0.00	0.00	0.04
Sat Flow, veh/h	1810	5136	1544	1810	5136	1615	1774	0	1553	1810	0	1615
Grp Volume(v), veh/h	48	2138	93	43	1517	0	61	0	28	0	0	43
Grp Sat Flow(s),veh/h/ln	1810	1712	1544	1810	1712	1615	1774	0	1553	1810	0	1615
Q Serve(g_s), s	1.2	44.3	1.2	1.3	19.8	0.0	4.3	0.0	2.0	0.0	0.0	3.4
Cycle Q Clear(g_c), s	1.2	44.3	1.2	1.3	19.8	0.0	4.3	0.0	2.0	0.0	0.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	602	2216	666	535	2027	637	131	0	230	1	0	64
V/C Ratio(X)	0.08	0.96	0.14	0.08	0.75	0.00	0.47	0.00	0.12	0.00	0.00	0.67
Avail Cap(c_a), veh/h	602	2216	666	535	2027	637	136	0	523	70	0	472
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.91	0.91	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.7	8.1	5.1	19.0	10.4	0.0	57.7	0.0	48.0	0.0	0.0	61.6
Incr Delay (d2), s/veh	0.0	9.6	0.3	0.0	2.4	0.0	2.6	0.0	0.2	0.0	0.0	11.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	21.0	0.6	0.6	9.4	0.0	2.2	0.0	0.9	0.0	0.0	1.7
LnGrp Delay(d),s/veh	14.8	17.7	5.4	19.0	12.7	0.0	60.3	0.0	48.2	0.0	0.0	72.9
LnGrp LOS	B	B	A	B	B		E		D			E
Approach Vol, veh/h		2279			1560			89			43	
Approach Delay, s/veh		17.1			12.9			56.5			72.9	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.8	61.5	15.0	9.7	48.6	56.7	0.0	24.7
Change Period (Y+Rc), s	5.4	* 5.4	5.4	4.5	5.4	5.4	4.5	* 5.4
Max Green Setting (Gmax), s	6.0	* 56	10.0	38.0	10.0	51.3	5.0	* 44
Max Q Clear Time (g_c+I1), s	3.3	46.3	6.3	5.4	3.2	21.8	0.0	4.0
Green Ext Time (p_c), s	0.0	8.2	0.1	0.2	0.1	18.1	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	485	1415	50	0	967	227	0	0	21	326	0	434
Future Volume (veh/h)	485	1415	50	0	967	227	0	0	21	326	0	434
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1882	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	551	1608	57	0	1099	258	0	0	24	370	0	493
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	1	0	0	0	0	0	0	0
Cap, veh/h	1259	3724	132	1	1738	541	3	73	62	443	378	566
Arrive On Green	0.36	0.73	0.73	0.00	0.68	0.68	0.00	0.00	0.04	0.13	0.00	0.20
Sat Flow, veh/h	3510	5091	180	1810	5136	1598	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	551	1082	583	0	1099	258	0	0	24	370	0	493
Grp Sat Flow(s),veh/h/ln	1755	1712	1846	1810	1712	1598	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	15.5	16.1	16.1	0.0	15.7	10.0	0.0	0.0	1.8	13.4	0.0	21.8
Cycle Q Clear(g_c), s	15.5	16.1	16.1	0.0	15.7	10.0	0.0	0.0	1.8	13.4	0.0	21.8
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1259	2506	1351	1	1738	541	3	73	62	443	378	566
V/C Ratio(X)	0.44	0.43	0.43	0.00	0.63	0.48	0.00	0.00	0.39	0.84	0.00	0.87
Avail Cap(c_a), veh/h	1259	2506	1351	70	1738	541	135	628	534	443	709	1060
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.00	0.94	0.94	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.7	6.8	6.8	0.0	16.4	15.5	0.0	0.0	56.7	55.5	0.0	50.4
Incr Delay (d2), s/veh	0.2	0.4	0.8	0.0	1.7	2.8	0.0	0.0	3.9	13.1	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	7.7	8.4	0.0	7.4	4.7	0.0	0.0	0.9	7.3	0.0	8.9
LnGrp Delay(d),s/veh	31.9	7.3	7.6	0.0	18.1	18.3	0.0	0.0	60.6	68.6	0.0	54.7
LnGrp LOS	C	A	A		B	B			E	E		D
Approach Vol, veh/h		2216			1357			24			863	
Approach Delay, s/veh		13.5			18.1			60.6			60.7	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	99.6	0.0	30.4	51.1	48.5	20.9	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	53.5	5.0	48.5	14.5	44.0	10.5	43.0
Max Q Clear Time (g_c+I1), s	10.0	18.1	0.0	23.8	17.5	17.7	15.4	3.8
Green Ext Time (p_c), s	0.0	18.1	0.0	2.0	0.0	9.1	0.0	0.1

Intersection Summary		
HCM 2010 Ctrl Delay		24.3
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1631	99	181	1056	25	121	0	80	24	0	17
Future Volume (veh/h)	27	1631	99	181	1056	25	121	0	80	24	0	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1900	1900	1881	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1773	108	197	1148	27	132	0	87	26	0	18
Adj No. of Lanes	1	3	0	1	3	1	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	1	0	0	0	1	0	0	0	0	0
Cap, veh/h	595	1777	108	714	2206	685	166	0	113	51	0	82
Arrive On Green	0.44	0.48	0.48	0.39	0.43	0.43	0.05	0.00	0.07	0.03	0.00	0.05
Sat Flow, veh/h	1810	4946	301	1810	5187	1611	3476	0	1615	1810	0	1615
Grp Volume(v), veh/h	29	1226	655	197	1148	27	132	0	87	26	0	18
Grp Sat Flow(s),veh/h/ln	1810	1712	1823	1810	1729	1611	1738	0	1615	1810	0	1615
Q Serve(g_s), s	1.2	46.4	46.7	9.6	21.2	1.0	4.9	0.0	6.9	1.8	0.0	1.4
Cycle Q Clear(g_c), s	1.2	46.4	46.7	9.6	21.2	1.0	4.9	0.0	6.9	1.8	0.0	1.4
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	595	1230	655	714	2206	685	166	0	113	51	0	82
V/C Ratio(X)	0.05	1.00	1.00	0.28	0.52	0.04	0.80	0.00	0.77	0.51	0.00	0.22
Avail Cap(c_a), veh/h	595	1230	655	714	2206	685	166	0	535	84	0	534
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.9	33.9	33.9	26.7	27.6	14.6	61.3	0.0	59.4	62.3	0.0	59.2
Incr Delay (d2), s/veh	0.0	22.8	32.0	0.1	0.9	0.1	21.5	0.0	10.3	2.9	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	25.6	29.2	4.8	10.3	0.5	2.8	0.0	3.4	1.0	0.0	0.7
LnGrp Delay(d),s/veh	24.9	56.6	66.0	26.8	28.4	14.7	82.8	0.0	69.7	65.2	0.0	60.6
LnGrp LOS	C	E	E	C	C	B	F		E	E		E
Approach Vol, veh/h		1910			1372			219			44	
Approach Delay, s/veh		59.4			27.9			77.6			63.3	
Approach LOS		E			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	55.9	52.1	10.8	11.2	47.3	60.7	8.3	13.7
Change Period (Y+Rc), s	4.6	5.4	4.6	* 4.6	4.6	5.4	4.6	4.6
Max Green Setting (Gmax), s	51.3	46.7	6.2	* 43	6.4	55.3	6.0	43.1
Max Q Clear Time (g_c+I1), s	11.6	48.7	6.9	3.4	3.2	23.2	3.8	8.9
Green Ext Time (p_c), s	0.1	0.0	0.0	0.7	0.1	12.4	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	48.4
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	545	823	324	117	557	52	257	353	119	85	247	411
Future Volume (veh/h)	545	823	324	117	557	52	257	353	119	85	247	411
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1881	1900	1900	1900	1881	1900	1900	1900	1893	1900
Adj Flow Rate, veh/h	599	904	356	129	612	57	282	388	131	93	271	452
Adj No. of Lanes	2	2	1	2	3	1	1	1	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	0	1	0	0	0	1	0	0	0	1	1
Cap, veh/h	835	1163	515	179	720	224	304	561	189	115	546	488
Arrive On Green	0.24	0.32	0.32	0.05	0.14	0.14	0.17	0.41	0.41	0.06	0.30	0.30
Sat Flow, veh/h	3476	3610	1598	3510	5187	1612	1792	1355	457	1810	1798	1607
Grp Volume(v), veh/h	599	904	356	129	612	57	282	0	519	93	271	452
Grp Sat Flow(s),veh/h/ln	1738	1805	1598	1755	1729	1612	1792	0	1812	1810	1798	1607
Q Serve(g_s), s	21.8	31.2	26.8	5.0	15.9	3.7	21.4	0.0	32.5	7.0	17.1	37.6
Cycle Q Clear(g_c), s	21.8	31.2	26.8	5.0	15.9	3.7	21.4	0.0	32.5	7.0	17.1	37.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	835	1163	515	179	720	224	304	0	750	115	546	488
V/C Ratio(X)	0.72	0.78	0.69	0.72	0.85	0.25	0.93	0.00	0.69	0.81	0.50	0.93
Avail Cap(c_a), veh/h	835	1366	604	257	1440	447	305	0	750	144	560	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	42.3	40.8	64.5	58.0	38.7	56.5	0.0	33.2	63.8	39.4	46.6
Incr Delay (d2), s/veh	2.6	5.1	7.4	5.4	1.1	0.2	32.7	0.0	4.7	18.9	2.7	25.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	16.4	12.9	2.6	7.7	1.7	13.3	0.0	17.1	4.1	8.9	20.2
LnGrp Delay(d),s/veh	50.7	47.4	48.2	69.9	59.1	38.9	89.1	0.0	37.9	82.7	42.1	72.1
LnGrp LOS	D	D	D	E	E	D	F		D	F	D	E
Approach Vol, veh/h		1859			798			801			816	
Approach Delay, s/veh		48.6			59.4			55.9			63.3	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	62.9	12.4	49.9	28.0	47.7	38.6	23.8
Change Period (Y+Rc), s	4.0	5.8	5.4	5.4	4.6	5.8	5.4	* 4.6
Max Green Setting (Gmax), s	11.0	56.1	10.1	52.2	23.5	43.0	25.6	* 38
Max Q Clear Time (g_c+I1), s	9.0	34.5	7.0	33.2	23.4	39.6	23.8	17.9
Green Ext Time (p_c), s	0.0	15.9	0.1	11.2	0.0	2.2	1.6	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	54.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	0	81	2	1	2	43	772	5	2	592	51
Future Volume (veh/h)	72	0	81	2	1	2	43	772	5	2	592	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1900	1498	1900	1900	1897	1900	1900	1891	1900
Adj Flow Rate, veh/h	77	0	87	2	1	2	46	830	5	2	637	55
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	2	0	0	0	0	0	0	0	0	0
Cap, veh/h	170	182	152	4	2	4	124	2405	14	6	1970	170
Arrive On Green	0.10	0.00	0.10	0.01	0.01	0.01	0.07	0.65	0.65	0.00	0.59	0.59
Sat Flow, veh/h	1774	1900	1583	550	275	550	1810	3672	22	1810	3341	288
Grp Volume(v), veh/h	77	0	87	5	0	0	46	407	428	2	342	350
Grp Sat Flow(s),veh/h/ln	1774	1900	1583	1374	0	0	1810	1802	1892	1810	1796	1833
Q Serve(g_s), s	3.6	0.0	4.6	0.3	0.0	0.0	2.1	8.8	8.8	0.1	8.4	8.5
Cycle Q Clear(g_c), s	3.6	0.0	4.6	0.3	0.0	0.0	2.1	8.8	8.8	0.1	8.4	8.5
Prop In Lane	1.00		1.00	0.40		0.40	1.00		0.01	1.00		0.16
Lane Grp Cap(c), veh/h	170	182	152	11	0	0	124	1180	1239	6	1059	1080
V/C Ratio(X)	0.45	0.00	0.57	0.46	0.00	0.00	0.37	0.35	0.35	0.34	0.32	0.32
Avail Cap(c_a), veh/h	715	766	638	164	0	0	381	1753	1841	195	1563	1595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	37.8	43.2	0.0	0.0	38.9	6.7	6.7	43.4	9.1	9.1
Incr Delay (d2), s/veh	8.5	0.0	14.8	11.1	0.0	0.0	0.7	0.7	0.6	30.8	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	2.6	0.2	0.0	0.0	1.1	4.5	4.7	0.1	4.4	4.5
LnGrp Delay(d),s/veh	45.8	0.0	52.6	54.2	0.0	0.0	39.6	7.4	7.4	74.2	9.8	9.8
LnGrp LOS	D		D	D			D	A	A	E	A	A
Approach Vol, veh/h		164			5			881			694	
Approach Delay, s/veh		49.4			54.2			9.1			9.9	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	63.0		14.2	10.6	57.3		5.3
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		4.6
Max Green Setting (Gmax), s	9.4	85.0		35.2	18.4	76.0		10.4
Max Q Clear Time (g_c+I1), s	2.1	10.8		6.6	4.1	10.5		2.3
Green Ext Time (p_c), s	0.0	44.2		1.9	0.0	41.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	3	172	7	11	6	208	580	11	1	471	17
Future Volume (veh/h)	17	3	172	7	11	6	208	580	11	1	471	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1900	1781	1900	1881	1900	1900	1900	1896	1900
Adj Flow Rate, veh/h	18	3	185	8	12	6	224	624	12	1	506	18
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	0	10	10	1	0	0	0	0	0
Cap, veh/h	46	350	290	22	385	177	273	956	794	3	1251	44
Arrive On Green	0.03	0.18	0.18	0.01	0.17	0.17	0.15	0.50	0.50	0.00	0.35	0.35
Sat Flow, veh/h	1810	1900	1573	1810	2246	1036	1792	1900	1577	1810	3547	126
Grp Volume(v), veh/h	18	3	185	8	9	9	224	624	12	1	257	267
Grp Sat Flow(s),veh/h/ln	1810	1900	1573	1810	1692	1590	1792	1900	1577	1810	1801	1871
Q Serve(g_s), s	0.7	0.1	7.4	0.3	0.3	0.3	8.3	16.6	0.3	0.0	7.4	7.4
Cycle Q Clear(g_c), s	0.7	0.1	7.4	0.3	0.3	0.3	8.3	16.6	0.3	0.0	7.4	7.4
Prop In Lane	1.00		1.00	1.00		0.65	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	46	350	290	22	290	272	273	956	794	3	635	660
V/C Ratio(X)	0.39	0.01	0.64	0.36	0.03	0.03	0.82	0.65	0.02	0.33	0.40	0.41
Avail Cap(c_a), veh/h	196	1045	865	169	906	851	902	2212	1836	169	1360	1413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	22.8	25.8	33.5	23.6	23.6	28.1	12.6	8.5	34.1	16.7	16.7
Incr Delay (d2), s/veh	2.0	0.0	3.2	3.5	0.1	0.1	2.4	1.2	0.0	22.6	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	3.5	0.2	0.1	0.2	4.3	9.0	0.1	0.0	3.8	3.9
LnGrp Delay(d),s/veh	34.8	22.8	29.0	37.0	23.7	23.7	30.4	13.8	8.5	56.7	17.4	17.3
LnGrp LOS	C	C	C	D	C	C	C	B	A	E	B	B
Approach Vol, veh/h		206			26			860			525	
Approach Delay, s/veh		29.4			27.8			18.0			17.4	
Approach LOS		C			C			B			B	

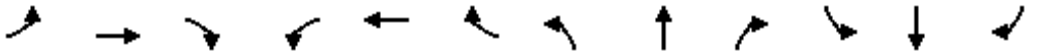
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	40.2	5.4	18.0	15.0	29.9	6.3	17.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4
Max Green Setting (Gmax), s	6.4	79.6	6.4	37.6	34.4	51.6	7.4	36.6
Max Q Clear Time (g_c+I1), s	2.3	18.6	2.3	9.4	10.3	9.4	2.7	2.3
Green Ext Time (p_c), s	0.0	15.5	0.0	1.1	0.3	14.3	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	16	50	11	10	10	47	510	30	12	377	45
Future Volume (veh/h)	53	16	50	11	10	10	47	510	30	12	377	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	58	18	55	12	11	11	52	560	33	13	414	49
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	378	321	33	284	244	106	1405	83	35	1192	140
Arrive On Green	0.06	0.20	0.20	0.02	0.15	0.15	0.06	0.41	0.41	0.02	0.37	0.37
Sat Flow, veh/h	1810	1900	1610	1810	1839	1580	1810	3464	204	1810	3253	383
Grp Volume(v), veh/h	58	18	55	12	11	11	52	291	302	13	229	234
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1615	1810	1805	1863	1810	1805	1831
Q Serve(g_s), s	1.8	0.4	1.6	0.4	0.3	0.3	1.6	6.7	6.7	0.4	5.3	5.4
Cycle Q Clear(g_c), s	1.8	0.4	1.6	0.4	0.3	0.3	1.6	6.7	6.7	0.4	5.3	5.4
Prop In Lane	1.00		1.00	1.00		0.98	1.00		0.11	1.00		0.21
Lane Grp Cap(c), veh/h	114	378	321	33	279	250	106	732	756	35	662	671
V/C Ratio(X)	0.51	0.05	0.17	0.36	0.04	0.05	0.49	0.40	0.40	0.37	0.35	0.35
Avail Cap(c_a), veh/h	572	1274	1079	355	993	888	572	2116	2184	355	1899	1926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	18.8	19.3	28.2	20.9	20.9	26.5	12.3	12.3	28.2	13.4	13.4
Incr Delay (d2), s/veh	1.3	0.1	0.3	2.5	0.1	0.1	1.3	0.6	0.5	2.4	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.2	0.8	0.2	0.2	0.2	0.8	3.4	3.5	0.2	2.8	2.8
LnGrp Delay(d),s/veh	27.7	18.9	19.7	30.7	21.0	21.0	27.8	12.8	12.8	30.5	13.9	13.9
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		131			34			645			476	
Approach Delay, s/veh		23.1			24.4			14.0			14.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	29.4	5.7	17.4	8.0	27.1	8.2	14.8
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	11.4	68.2	11.4	39.0	18.4	61.2	18.4	32.0
Max Q Clear Time (g_c+I1), s	2.4	8.7	2.4	3.6	3.6	7.4	3.8	2.3
Green Ext Time (p_c), s	0.0	13.2	0.0	0.5	0.0	13.0	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	425	215	0	0	351	162	135	0	119	0
Future Volume (veh/h)	0	0	425	215	0	0	351	162	135	0	119	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	500	253	0	0	413	191	159	0	140	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	707	885	490	707	601	643	814	641	8	517	236
Arrive On Green	0.00	0.00	0.37	0.37	0.00	0.00	0.19	0.43	0.43	0.00	0.15	0.00
Sat Flow, veh/h	0	1900	1583	894	1900	1615	3442	1886	1485	3510	3539	1615
Grp Volume(v), veh/h	0	0	500	253	0	0	413	179	171	0	140	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	894	1900	1615	1721	1770	1601	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	9.3	11.3	0.0	0.0	5.1	2.9	3.1	0.0	1.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	9.3	11.3	0.0	0.0	5.1	2.9	3.1	0.0	1.6	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		0.93	1.00		1.00
Lane Grp Cap(c), veh/h	0	707	885	490	707	601	643	763	691	8	517	236
V/C Ratio(X)	0.00	0.00	0.57	0.52	0.00	0.00	0.64	0.23	0.25	0.00	0.27	0.00
Avail Cap(c_a), veh/h	0	2014	1974	1105	2014	1712	2369	2050	1854	384	2050	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	6.5	12.6	0.0	0.0	17.2	8.2	8.3	0.0	17.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.8	0.0	0.0	1.1	0.2	0.2	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.1	2.9	0.0	0.0	2.5	1.4	1.4	0.0	0.8	0.0
LnGrp Delay(d),s/veh	0.0	0.0	7.1	13.4	0.0	0.0	18.3	8.4	8.5	0.0	17.6	0.0
LnGrp LOS			A	B			B	A	A		B	
Approach Vol, veh/h		500			253			763			140	
Approach Delay, s/veh		7.1			13.4			13.7			17.6	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	24.2		21.5	13.1	11.2		21.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	53.0		48.5	31.5	26.5		48.5
Max Q Clear Time (g_c+I1), s	0.0	5.1		11.3	7.1	3.6		13.3
Green Ext Time (p_c), s	0.0	3.4		3.7	1.5	3.1		3.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

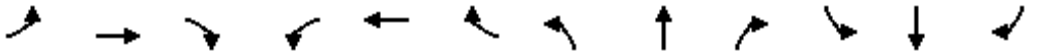
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	106	13	0	0	151	0	12	0	0	0
Future Vol, veh/h	0	0	106	13	0	0	151	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	125	15	0	0	178	0	14	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	356	356	1	356	356	0	1	0	0	0	0	0
Stage 1	1	1	-	355	355	-	-	-	-	-	-	-
Stage 2	355	355	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	580	573	1089	580	573	-	1635	-	-	-	-	-
Stage 1	1027	899	-	641	633	-	-	-	-	-	-	-
Stage 2	641	633	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	510	1089	470	510	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	510	-	470	510	-	-	-	-	-	-	-
Stage 1	914	899	-	570	563	-	-	-	-	-	-	-
Stage 2	570	563	-	909	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			6.9	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.109	-	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	962	448	261	1246	0	0	0	0	666	0	445
Future Volume (veh/h)	0	962	448	261	1246	0	0	0	0	666	0	445
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1023	477	278	1326	0				709	0	473
Adj No. of Lanes	0	3	1	2	3	0				2	0	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2424	755	361	3218	0				846	0	755
Arrive On Green	0.00	0.48	0.48	0.03	0.21	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	5253	1583	3442	5253	0				3548	0	3167
Grp Volume(v), veh/h	0	1023	477	278	1326	0				709	0	473
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1695	0				1774	0	1583
Q Serve(g_s), s	0.0	11.9	20.3	7.2	20.3	0.0				17.1	0.0	12.0
Cycle Q Clear(g_c), s	0.0	11.9	20.3	7.2	20.3	0.0				17.1	0.0	12.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2424	755	361	3218	0				846	0	755
V/C Ratio(X)	0.00	0.42	0.63	0.77	0.41	0.00				0.84	0.00	0.63
Avail Cap(c_a), veh/h	0	2424	755	535	3218	0				1222	0	1091
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.4	17.6	42.4	21.1	0.0				32.6	0.0	30.7
Incr Delay (d2), s/veh	0.0	0.5	4.0	1.5	0.3	0.0				2.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.6	9.6	3.5	9.7	0.0				8.7	0.0	5.3
LnGrp Delay(d),s/veh	0.0	16.0	21.6	43.8	21.4	0.0				35.1	0.0	31.0
LnGrp LOS		B	C	D	C					D		C
Approach Vol, veh/h		1500			1604						1182	
Approach Delay, s/veh		17.8			25.3						33.4	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.0	48.7		27.3		62.7		
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		
Max Green Setting (Gmax), s	14.0	28.0		31.0		47.0		
Max Q Clear Time (g_c+I1), s	9.2	22.3		19.1		22.3		
Green Ext Time (p_c), s	0.2	4.9		2.3		15.7		

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	1275	0	0	879	576	646	0	446	0	0	0
Future Volume (veh/h)	341	1275	0	0	879	576	646	0	446	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	371	1386	0	0	955	626	853	0	323			
Adj No. of Lanes	2	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	447	3044	0	0	2096	644	967	0	431			
Arrive On Green	0.13	0.60	0.00	0.00	0.41	0.41	0.27	0.00	0.27			
Sat Flow, veh/h	3442	5253	0	0	5253	1563	3548	0	1583			
Grp Volume(v), veh/h	371	1386	0	0	955	626	853	0	323			
Grp Sat Flow(s),veh/h/ln	1721	1695	0	0	1695	1563	1774	0	1583			
Q Serve(g_s), s	9.5	13.5	0.0	0.0	12.2	35.3	20.7	0.0	16.8			
Cycle Q Clear(g_c), s	9.5	13.5	0.0	0.0	12.2	35.3	20.7	0.0	16.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	447	3044	0	0	2096	644	967	0	431			
V/C Ratio(X)	0.83	0.46	0.00	0.00	0.46	0.97	0.88	0.00	0.75			
Avail Cap(c_a), veh/h	535	3044	0	0	2096	644	1183	0	528			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	0.87	0.87	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.2	10.0	0.0	0.0	19.1	25.9	31.4	0.0	29.9			
Incr Delay (d2), s/veh	6.4	0.4	0.0	0.0	0.6	26.8	6.1	0.0	3.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.9	6.4	0.0	0.0	5.9	19.9	10.9	0.0	7.8			
LnGrp Delay(d),s/veh	44.6	10.4	0.0	0.0	19.8	52.7	37.5	0.0	33.4			
LnGrp LOS	D	B			B	D	D		C			
Approach Vol, veh/h		1757			1581			1176				
Approach Delay, s/veh		17.6			32.8			36.3				
Approach LOS		B			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		59.7			16.8	42.9		30.3
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8
Max Green Setting (Gmax), s		48.0			14.0	28.0		30.0
Max Q Clear Time (g_c+I1), s		15.5			11.5	37.3		22.7
Green Ext Time (p_c), s		19.3			0.2	0.0		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	1255	38	133	998	62	74	30	103	56	22	99
Future Volume (veh/h)	172	1255	38	133	998	62	74	30	103	56	22	99
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	176	1281	39	136	1018	63	76	31	105	57	22	101
Adj No. of Lanes	1	3	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	579	3073	94	172	1269	555	262	60	204	178	301	255
Arrive On Green	0.33	0.61	0.61	0.10	0.36	0.36	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	5071	154	1774	3539	1548	1261	373	1264	1247	1863	1580
Grp Volume(v), veh/h	176	856	464	136	1018	63	76	0	136	57	22	101
Grp Sat Flow(s),veh/h/ln	1774	1695	1835	1774	1770	1548	1261	0	1637	1247	1863	1580
Q Serve(g_s), s	7.5	13.5	13.5	7.6	26.2	2.7	5.5	0.0	7.7	4.4	1.0	5.8
Cycle Q Clear(g_c), s	7.5	13.5	13.5	7.6	26.2	2.7	6.5	0.0	7.7	12.1	1.0	5.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	579	2054	1112	172	1269	555	262	0	265	178	301	255
V/C Ratio(X)	0.30	0.42	0.42	0.79	0.80	0.11	0.29	0.00	0.51	0.32	0.07	0.40
Avail Cap(c_a), veh/h	579	2054	1112	269	1269	555	503	0	577	416	657	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.76	0.76	0.76	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	10.5	10.5	44.6	29.2	21.7	38.7	0.0	38.7	44.2	35.9	37.9
Incr Delay (d2), s/veh	0.1	0.5	1.0	2.7	4.2	0.3	0.6	0.0	1.5	1.0	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.5	7.1	3.8	13.5	1.2	2.0	0.0	3.6	1.6	0.5	2.6
LnGrp Delay(d),s/veh	25.5	11.0	11.5	47.3	33.4	22.0	39.3	0.0	40.3	45.3	36.0	38.9
LnGrp LOS	C	B	B	D	C	C	D		D	D	D	D
Approach Vol, veh/h		1496			1217			212			180	
Approach Delay, s/veh		12.9			34.4			39.9			40.6	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.3	66.5		21.2	38.3	41.5		21.2
Change Period (Y+Rc), s	3.5	5.3		4.9	5.3	* 5.3		4.9
Max Green Setting (Gmax), s	15.3	36.4		35.6	15.5	* 36		35.6
Max Q Clear Time (g_c+I1), s	9.6	15.5		14.1	9.5	28.2		9.7
Green Ext Time (p_c), s	0.1	12.5		1.7	0.5	5.2		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Notes

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	5	1018	352	52	770	477	105
Future Volume (veh/h)	5	1018	352	52	770	477	105
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h		1095	378	56	828	513	113
Adj No. of Lanes		2	1	1	2	1	1
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1467	685	80	1920	572	510
Arrive On Green		0.43	0.43	0.05	0.54	0.32	0.32
Sat Flow, veh/h		3558	1583	1774	3632	1774	1583
Grp Volume(v), veh/h		1095	378	56	828	513	113
Grp Sat Flow(s),veh/h/ln		1695	1583	1774	1770	1774	1583
Q Serve(g_s), s		21.0	13.8	2.4	10.8	21.4	4.0
Cycle Q Clear(g_c), s		21.0	13.8	2.4	10.8	21.4	4.0
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1467	685	80	1920	572	510
V/C Ratio(X)		0.75	0.55	0.70	0.43	0.90	0.22
Avail Cap(c_a), veh/h		1748	817	686	1920	686	612
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		18.4	16.4	36.5	10.6	25.1	19.2
Incr Delay (d2), s/veh		1.3	0.5	4.0	0.1	13.4	0.3
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		10.0	6.1	1.3	5.3	12.5	1.8
LnGrp Delay(d),s/veh		19.8	16.9	40.6	10.7	38.4	19.4
LnGrp LOS		B	B	D	B	D	B
Approach Vol, veh/h		1473			884	626	
Approach Delay, s/veh		19.0			12.6	35.0	
Approach LOS		B			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.5	39.1				47.6		30.0
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	30.0	40.0				40.0		30.0
Max Q Clear Time (g_c+I1), s	4.4	23.0				12.8		23.4
Green Ext Time (p_c), s	0.0	10.6				16.0		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1141	786	24	16	6
Future Vol, veh/h	10	1141	786	24	16	6
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	1254	864	26	18	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	891	0	-	0	1527	446
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	649	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	757	-	-	-	108	560
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	482	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	757	-	-	-	106	559
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	475	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	37.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	757	-	-	-	136
HCM Lane V/C Ratio	0.015	-	-	-	0.178
HCM Control Delay (s)	9.8	-	-	-	37.1
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	1104	2	4	771	7	4	0	1	5	0	41
Future Vol, veh/h	61	1104	2	4	771	7	4	0	1	5	0	41
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	1174	2	4	820	7	4	0	1	5	0	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	829	0	0	1177	0	0	1724	2142	588	1550	2139	415
Stage 1	-	-	-	-	-	-	1305	1305	-	833	833	-
Stage 2	-	-	-	-	-	-	419	837	-	717	1306	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	798	-	-	589	-	-	57	48	452	77	48	586
Stage 1	-	-	-	-	-	-	169	228	-	329	382	-
Stage 2	-	-	-	-	-	-	582	380	-	387	228	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	798	-	-	589	-	-	49	44	452	72	44	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	44	-	72	44	-
Stage 1	-	-	-	-	-	-	155	209	-	302	379	-
Stage 2	-	-	-	-	-	-	535	377	-	355	209	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	70.8	17.8
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	60	798	-	-	589	-	-	330
HCM Lane V/C Ratio	0.089	0.081	-	-	0.007	-	-	0.148
HCM Control Delay (s)	70.8	9.9	-	-	11.2	-	-	17.8
HCM Lane LOS	F	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	1024	25	15	700	69	29	1	3	57	1	49
Future Volume (veh/h)	58	1024	25	15	700	69	29	1	3	57	1	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	1101	27	16	753	74	31	1	3	61	1	53
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	2117	52	33	1864	183	55	26	79	82	2	123
Arrive On Green	0.05	0.60	0.60	0.02	0.57	0.57	0.03	0.06	0.06	0.05	0.08	0.08
Sat Flow, veh/h	1774	3528	87	1774	3256	320	1774	410	1230	1774	29	1553
Grp Volume(v), veh/h	62	552	576	16	409	418	31	0	4	61	0	54
Grp Sat Flow(s),veh/h/ln	1774	1770	1845	1774	1770	1806	1774	0	1640	1774	0	1582
Q Serve(g_s), s	2.8	14.7	14.7	0.7	10.4	10.4	1.4	0.0	0.2	2.8	0.0	2.6
Cycle Q Clear(g_c), s	2.8	14.7	14.7	0.7	10.4	10.4	1.4	0.0	0.2	2.8	0.0	2.6
Prop In Lane	1.00		0.05	1.00		0.18	1.00		0.75	1.00		0.98
Lane Grp Cap(c), veh/h	82	1062	1107	33	1013	1034	55	0	105	82	0	125
V/C Ratio(X)	0.75	0.52	0.52	0.48	0.40	0.40	0.56	0.00	0.04	0.75	0.00	0.43
Avail Cap(c_a), veh/h	394	2203	2298	219	2029	2071	262	0	526	394	0	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	9.4	9.4	39.4	9.6	9.7	38.8	0.0	35.6	38.2	0.0	35.6
Incr Delay (d2), s/veh	5.1	0.5	0.5	4.0	0.3	0.3	3.3	0.0	0.1	5.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.2	7.5	0.4	5.1	5.2	0.7	0.0	0.1	1.5	0.0	1.2
LnGrp Delay(d),s/veh	43.3	9.9	9.9	43.4	10.0	10.0	42.1	0.0	35.7	43.2	0.0	37.4
LnGrp LOS	D	A	A	D	A	A	D		D	D		D
Approach Vol, veh/h		1190			843			35			115	
Approach Delay, s/veh		11.6			10.6			41.4			40.5	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	55.7	7.5	11.4	8.8	53.4	8.7	10.2
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0
Max Green Setting (Gmax), s	10.0	101.0	12.0	32.0	18.0	93.0	18.0	26.0
Max Q Clear Time (g_c+I1), s	2.7	16.7	3.4	4.6	4.8	12.4	4.8	2.2
Green Ext Time (p_c), s	0.0	32.0	0.0	0.2	0.0	31.5	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	345	620	117	168	10	498	384	127	11	283	102
Future Volume (veh/h)	125	345	620	117	168	10	498	384	127	11	283	102
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	379	681	129	185	11	547	422	140	12	311	112
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1647	727	177	1571	93	603	866	284	46	433	153
Arrive On Green	0.05	0.47	0.47	0.05	0.46	0.46	0.18	0.33	0.33	0.01	0.17	0.17
Sat Flow, veh/h	3442	3539	1563	3442	3393	200	3442	2619	860	3442	2563	905
Grp Volume(v), veh/h	137	379	681	129	96	100	547	284	278	12	213	210
Grp Sat Flow(s),veh/h/ln	1721	1770	1563	1721	1770	1824	1721	1770	1709	1721	1770	1699
Q Serve(g_s), s	5.4	8.8	57.0	5.1	4.2	4.3	21.5	17.6	18.0	0.5	15.7	16.2
Cycle Q Clear(g_c), s	5.4	8.8	57.0	5.1	4.2	4.3	21.5	17.6	18.0	0.5	15.7	16.2
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.50	1.00		0.53
Lane Grp Cap(c), veh/h	185	1647	727	177	819	845	603	585	565	46	299	287
V/C Ratio(X)	0.74	0.23	0.94	0.73	0.12	0.12	0.91	0.49	0.49	0.26	0.71	0.73
Avail Cap(c_a), veh/h	307	1819	803	287	899	927	930	791	764	147	389	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.3	22.1	34.9	64.5	21.0	21.1	55.8	36.8	36.9	67.4	54.2	54.4
Incr Delay (d2), s/veh	2.2	0.1	17.3	2.1	0.1	0.1	6.2	0.6	0.7	1.1	4.2	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.3	28.0	2.5	2.1	2.2	10.8	8.7	8.6	0.2	8.0	8.0
LnGrp Delay(d),s/veh	66.5	22.2	52.3	66.6	21.1	21.1	62.0	37.4	37.6	68.5	58.4	59.6
LnGrp LOS	E	C	D	E	C	C	E	D	D	E	E	E
Approach Vol, veh/h		1197			325			1109			435	
Approach Delay, s/veh		44.4			39.2			49.6			59.2	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	70.1	27.9	29.2	11.1	69.8	5.5	51.5
Change Period (Y+Rc), s	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9
Max Green Setting (Gmax), s	7.1	* 71	37.3	* 30	12.3	* 70	5.9	* 62
Max Q Clear Time (g_c+I1), s	7.1	59.0	23.5	18.2	7.4	6.3	2.5	20.0
Green Ext Time (p_c), s	0.1	5.2	0.7	4.8	0.1	8.2	0.0	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	47.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	358	631	105	327	20	621	1407	125	46	826	148
Future Volume (veh/h)	180	358	631	105	327	20	621	1407	125	46	826	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	188	373	657	109	341	21	647	1466	130	48	860	154
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	436	915	108	333	20	612	1795	158	61	832	372
Arrive On Green	0.10	0.23	0.23	0.06	0.19	0.19	0.34	0.55	0.55	0.03	0.24	0.24
Sat Flow, veh/h	1774	1863	1577	1774	1736	107	1774	3291	290	1774	3539	1583
Grp Volume(v), veh/h	188	373	657	109	0	362	647	784	812	48	860	154
Grp Sat Flow(s),veh/h/ln	1774	1863	1577	1774	0	1843	1774	1770	1812	1774	1770	1583
Q Serve(g_s), s	18.5	34.4	42.0	10.9	0.0	34.4	61.9	64.9	66.3	4.8	42.2	14.8
Cycle Q Clear(g_c), s	18.5	34.4	42.0	10.9	0.0	34.4	61.9	64.9	66.3	4.8	42.2	14.8
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	183	436	915	108	0	353	612	965	988	61	832	372
V/C Ratio(X)	1.03	0.86	0.72	1.01	0.00	1.02	1.06	0.81	0.82	0.78	1.03	0.41
Avail Cap(c_a), veh/h	183	436	915	108	0	353	612	965	988	76	832	372
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.5	65.8	27.3	84.3	0.0	72.6	58.8	33.3	33.6	86.0	68.7	58.2
Incr Delay (d2), s/veh	74.1	14.7	2.4	89.9	0.0	54.4	52.6	5.0	5.3	26.8	40.2	0.3
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	19.5	24.1	8.0	0.0	22.8	39.2	32.9	34.6	2.8	25.2	6.5
LnGrp Delay(d),s/veh	154.9	80.5	29.6	174.3	0.0	126.9	111.4	38.3	38.9	112.7	108.8	58.4
LnGrp LOS	F	F	C	F		F	F	D	D	F	F	E
Approach Vol, veh/h		1218			471			2243			1062	
Approach Delay, s/veh		64.6			137.9			59.6			101.7	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	104.4	16.0	47.8	67.0	48.7	23.6	40.2
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	7.3	96.4	10.9	42.0	61.9	42.2	18.5	34.4
Max Q Clear Time (g_c+I1), s	6.8	68.3	12.9	44.0	63.9	44.2	20.5	36.4
Green Ext Time (p_c), s	0.0	16.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.1
HCM 2010 LOS	E

2021 Project Completion Saturday Midday with Creighton Avenue Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	635	55	227	590	93	63	43	250	85	32	17
Future Volume (veh/h)	29	635	55	227	590	93	63	43	250	85	32	17
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1860	1900	1881	1876	1900	1863	1863	1881	1827	1783	1900
Adj Flow Rate, veh/h	33	713	62	255	663	104	71	48	281	96	36	19
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	2	2	1	1	1	2	2	1	4	10	10
Cap, veh/h	69	1288	112	300	1602	251	366	426	361	308	252	133
Arrive On Green	0.04	0.39	0.39	0.17	0.52	0.52	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1740	3283	285	1792	3079	482	1342	1863	1576	1026	1100	580
Grp Volume(v), veh/h	33	383	392	255	383	384	71	48	281	96	0	55
Grp Sat Flow(s),veh/h/ln	1740	1767	1802	1792	1782	1779	1342	1863	1576	1026	0	1680
Q Serve(g_s), s	1.4	12.9	12.9	10.6	10.1	10.1	3.4	1.6	12.8	6.3	0.0	2.0
Cycle Q Clear(g_c), s	1.4	12.9	12.9	10.6	10.1	10.1	5.4	1.6	12.8	7.8	0.0	2.0
Prop In Lane	1.00		0.16	1.00		0.27	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	69	693	707	300	927	925	366	426	361	308	0	384
V/C Ratio(X)	0.48	0.55	0.55	0.85	0.41	0.41	0.19	0.11	0.78	0.31	0.00	0.14
Avail Cap(c_a), veh/h	168	1048	1068	758	1639	1635	746	954	807	598	0	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	18.1	18.1	30.9	11.2	11.2	25.7	23.4	27.7	26.5	0.0	23.5
Incr Delay (d2), s/veh	1.9	1.0	0.9	2.6	0.4	0.4	0.3	0.1	3.7	0.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.5	6.6	5.5	5.0	5.0	1.3	0.8	5.9	1.8	0.0	0.9
LnGrp Delay(d),s/veh	37.9	19.0	19.0	33.5	11.6	11.6	26.0	23.5	31.4	27.0	0.0	23.7
LnGrp LOS	D	B	B	C	B	B	C	C	C	C		C
Approach Vol, veh/h		808			1022			400			151	
Approach Delay, s/veh		19.8			17.1			29.5			25.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	45.6		23.3	17.4	35.8		23.3
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8
Max Green Setting (Gmax), s	7.4	70.4		39.2	32.4	45.4		39.2
Max Q Clear Time (g_c+I1), s	3.4	12.1		9.8	12.6	14.9		14.8
Green Ext Time (p_c), s	0.0	19.3		2.3	0.3	15.1		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	845	107	389	776	118	494
Future Volume (vph)	845	107	389	776	118	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.95		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.90	0.85
Flt Protected	1.00		0.95	1.00	0.98	1.00
Satd. Flow (prot)	3474		1787	3539	3217	1455
Flt Permitted	1.00		0.95	1.00	0.98	1.00
Satd. Flow (perm)	3474		1787	3539	3217	1455
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	899	114	414	826	126	526
RTOR Reduction (vph)	5	0	0	0	232	234
Lane Group Flow (vph)	1008	0	414	826	157	29
Confl. Peds. (#/hr)		1	1			
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	2%	1%	1%	2%	2%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases						4
Actuated Green, G (s)	40.9		34.7	80.2	11.3	11.3
Effective Green, g (s)	40.9		34.7	80.2	11.3	11.3
Actuated g/C Ratio	0.40		0.34	0.78	0.11	0.11
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1378		601	2752	352	159
v/s Ratio Prot	c0.29		c0.23	0.23	c0.05	
v/s Ratio Perm						0.02
v/c Ratio	0.73		0.69	0.30	0.45	0.18
Uniform Delay, d1	26.4		29.5	3.3	43.0	41.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1		3.3	0.1	1.2	0.7
Delay (s)	28.6		32.8	3.4	44.1	42.4
Level of Service	C		C	A	D	D
Approach Delay (s)	28.6			13.2	43.4	
Approach LOS	C			B	D	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	103.1	Sum of lost time (s)	20.7
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1318	39	51	1125	145	33	0	53	139	0	30
Future Volume (veh/h)	46	1318	39	51	1125	145	33	0	53	139	0	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1860	1900	1827	1881	1863	1845	1900	1900	1881	1827	1900
Adj Flow Rate, veh/h	49	1417	42	55	1210	156	35	0	57	149	0	32
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	4	1	2	3	0	0	1	0	0
Cap, veh/h	66	1946	58	340	2586	1120	200	243	207	225	0	199
Arrive On Green	0.04	0.56	0.56	0.39	1.00	1.00	0.13	0.00	0.13	0.13	0.00	0.13
Sat Flow, veh/h	1810	3501	104	1740	3574	1548	1358	1900	1615	1354	0	1553
Grp Volume(v), veh/h	49	714	745	55	1210	156	35	0	57	149	0	32
Grp Sat Flow(s),veh/h/ln	1810	1767	1838	1740	1787	1548	1358	1900	1615	1354	0	1553
Q Serve(g_s), s	3.8	42.2	42.4	2.9	0.0	0.0	3.3	0.0	4.5	15.1	0.0	2.6
Cycle Q Clear(g_c), s	3.8	42.2	42.4	2.9	0.0	0.0	5.9	0.0	4.5	15.1	0.0	2.6
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	982	1022	340	2586	1120	200	243	207	225	0	199
V/C Ratio(X)	0.74	0.73	0.73	0.16	0.47	0.14	0.17	0.00	0.28	0.66	0.00	0.16
Avail Cap(c_a), veh/h	121	982	1022	340	2586	1120	377	490	416	401	0	400
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.8	23.2	23.2	35.2	0.0	0.0	57.0	0.0	55.2	59.8	0.0	54.4
Incr Delay (d2), s/veh	3.8	3.0	2.9	0.1	0.6	0.2	0.4	0.0	0.7	3.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	21.2	22.1	1.4	0.2	0.1	1.3	0.0	2.0	5.9	0.0	1.1
LnGrp Delay(d),s/veh	70.6	26.1	26.1	35.2	0.6	0.2	57.4	0.0	55.9	63.1	0.0	54.7
LnGrp LOS	E	C	C	D	A	A	E		E	E		D
Approach Vol, veh/h		1508			1421			92			181	
Approach Delay, s/veh		27.6			1.9			56.5			61.7	
Approach LOS		C			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.2	83.6		23.2	9.7	107.1		23.2
Change Period (Y+Rc), s	5.8	* 5.8		5.3	4.6	5.8		5.3
Max Green Setting (Gmax), s	10.4	* 78		36.1	9.4	78.8		36.1
Max Q Clear Time (g_c+I1), s	4.9	44.4		17.1	5.8	2.0		7.9
Green Ext Time (p_c), s	1.3	23.1		0.8	0.0	31.6		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1483	18	147	1295	5	21	3	119	4	1	13
Future Volume (veh/h)	15	1483	18	147	1295	5	21	3	119	4	1	13
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1862	1900	1900	1881	1900	1810	1846	1900	1429	1900	1759
Adj Flow Rate, veh/h	16	1578	19	156	1378	5	22	3	127	4	1	14
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	1	0	5	0	0	33	0	8
Cap, veh/h	423	1549	19	508	2465	770	74	5	200	16	164	127
Arrive On Green	0.47	0.87	0.87	0.56	0.96	0.96	0.04	0.13	0.13	0.01	0.09	0.09
Sat Flow, veh/h	1810	3579	43	1810	5136	1603	1723	36	1521	2639	1900	1469
Grp Volume(v), veh/h	16	779	818	156	1378	5	22	0	130	4	1	14
Grp Sat Flow(s),veh/h/ln	1810	1769	1853	1810	1712	1603	1723	0	1557	1320	1900	1469
Q Serve(g_s), s	0.7	60.6	60.6	6.4	3.2	0.0	1.7	0.0	11.1	0.2	0.1	1.2
Cycle Q Clear(g_c), s	0.7	60.6	60.6	6.4	3.2	0.0	1.7	0.0	11.1	0.2	0.1	1.2
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	423	766	802	508	2465	770	74	0	205	16	164	127
V/C Ratio(X)	0.04	1.02	1.02	0.31	0.56	0.01	0.30	0.00	0.63	0.25	0.01	0.11
Avail Cap(c_a), veh/h	423	766	802	508	2465	770	74	0	445	113	543	420
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.87	0.87	0.87	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	9.4	9.4	23.5	1.5	1.5	65.0	0.0	57.6	69.2	58.5	59.0
Incr Delay (d2), s/veh	0.0	33.1	33.0	0.1	0.8	0.0	0.8	0.0	7.4	7.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	33.8	35.4	3.1	1.2	0.0	0.8	0.0	5.2	0.1	0.0	0.5
LnGrp Delay(d),s/veh	28.8	42.5	42.4	23.6	2.3	1.5	65.8	0.0	65.0	76.8	58.5	59.4
LnGrp LOS	C	F	F	C	A	A	E		E	E	E	E
Approach Vol, veh/h		1613			1539			152			19	
Approach Delay, s/veh		42.3			4.5			65.1			63.0	
Approach LOS		D			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	66.4	5.5	24.2	37.3	73.0	11.8	17.9
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	12.6	60.6	6.0	40.0	6.0	67.2	6.0	* 40
Max Q Clear Time (g_c+I1), s	9.4	62.6	2.2	13.1	2.7	5.2	3.7	3.2
Green Ext Time (p_c), s	0.1	0.0	0.0	1.5	0.1	30.1	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	1330	14	26	1165	281	11	6	23	469	13	268
Future Volume (veh/h)	293	1330	14	26	1165	281	11	6	23	469	13	268
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1881	1863	1900	1900	1900	1881	1864	1900
Adj Flow Rate, veh/h	308	1400	15	27	1226	296	12	6	24	494	14	282
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	1	2	0	0	0	1	0	0
Cap, veh/h	793	2970	937	50	1915	847	29	24	94	589	17	346
Arrive On Green	0.46	1.00	1.00	0.06	0.75	0.75	0.02	0.07	0.07	0.17	0.23	0.23
Sat Flow, veh/h	3442	5085	1604	1810	5136	1552	1810	330	1318	3476	75	1515
Grp Volume(v), veh/h	308	1400	15	27	1226	296	12	0	30	494	0	296
Grp Sat Flow(s),veh/h/ln	1721	1695	1604	1810	1712	1552	1810	0	1648	1738	0	1590
Q Serve(g_s), s	8.2	0.0	0.0	2.0	16.3	0.0	0.9	0.0	2.4	19.3	0.0	24.7
Cycle Q Clear(g_c), s	8.2	0.0	0.0	2.0	16.3	0.0	0.9	0.0	2.4	19.3	0.0	24.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.80	1.00		0.95
Lane Grp Cap(c), veh/h	793	2970	937	50	1915	847	29	0	118	589	0	364
V/C Ratio(X)	0.39	0.47	0.02	0.54	0.64	0.35	0.41	0.00	0.25	0.84	0.00	0.81
Avail Cap(c_a), veh/h	793	2970	937	96	1915	847	83	0	152	804	0	442
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	0.0	65.2	13.2	6.4	68.2	0.0	61.5	56.3	0.0	51.2
Incr Delay (d2), s/veh	0.1	0.4	0.0	2.9	1.5	1.0	9.2	0.0	1.1	4.3	0.0	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.1	0.0	1.1	7.8	2.5	0.5	0.0	1.1	9.6	0.0	11.9
LnGrp Delay(d),s/veh	31.3	0.4	0.0	68.1	14.7	7.4	77.4	0.0	62.6	60.6	0.0	61.2
LnGrp LOS	C	A	A	E	B	A	E		E	E		E
Approach Vol, veh/h		1723			1549			42			790	
Approach Delay, s/veh		5.9			14.2			66.8			60.8	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	87.6	6.8	37.1	38.1	58.0	28.8	15.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	5.8	* 5.8	5.1	* 5.1
Max Green Setting (Gmax), s	7.4	67.2	6.4	38.9	22.4	* 52	32.4	* 13
Max Q Clear Time (g_c+I1), s	4.0	2.0	2.9	26.7	10.2	18.3	21.3	4.4
Green Ext Time (p_c), s	0.0	32.7	0.0	2.6	7.9	22.1	2.5	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1346	449	0	1056	374	0	0	0	369	0	555
Future Volume (veh/h)	0	1346	449	0	1056	374	0	0	0	369	0	555
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1881	0	1881	1881				1900	1776	1863
Adj Flow Rate, veh/h	0	1360	454	0	1067	0				373	0	561
Adj No. of Lanes	0	3	1	0	3	1				0	1	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	2	1	0	1	1				2	0	2
Cap, veh/h	0	2896	898	0	2925	911				448	0	738
Arrive On Green	0.00	0.57	0.57	0.00	1.00	0.00				0.26	0.00	0.26
Sat Flow, veh/h	0	5253	1577	0	5305	1599				1691	0	2787
Grp Volume(v), veh/h	0	1360	454	0	1067	0				373	0	561
Grp Sat Flow(s),veh/h/ln	0	1695	1577	0	1712	1599				1691	0	1393
Q Serve(g_s), s	0.0	11.0	12.2	0.0	0.0	0.0				14.6	0.0	13.0
Cycle Q Clear(g_c), s	0.0	11.0	12.2	0.0	0.0	0.0				14.6	0.0	13.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2896	898	0	2925	911				448	0	738
V/C Ratio(X)	0.00	0.47	0.51	0.00	0.36	0.00				0.83	0.00	0.76
Avail Cap(c_a), veh/h	0	2896	898	0	2925	911				614	0	1011
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.83	0.83	0.00	0.87	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.9	9.1	0.0	0.0	0.0				24.3	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.5	1.7	0.0	0.3	0.0				5.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	5.7	0.0	0.1	0.0				7.4	0.0	5.1
LnGrp Delay(d),s/veh	0.0	9.3	10.8	0.0	0.3	0.0				29.5	0.0	25.1
LnGrp LOS		A	B		A					C		C
Approach Vol, veh/h		1814			1067						934	
Approach Delay, s/veh		9.7			0.3						26.8	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		45.7		24.3		45.7		
Change Period (Y+Rc), s		5.8		5.8		5.8		
Max Green Setting (Gmax), s		33.0		25.4		33.0		
Max Q Clear Time (g_c+I1), s		14.2		16.6		2.0		
Green Ext Time (p_c), s		12.2		2.0		16.3		

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1169	543	0	1057	389	434
Future Volume (veh/h)	1169	543	0	1057	389	434
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1845	0	1863	1881	1881
Adj Flow Rate, veh/h	1193	0	0	1079	418	420
Adj No. of Lanes	3	1	0	3	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	3	0	2	1	1
Cap, veh/h	3222	993	0	3222	508	453
Arrive On Green	1.00	0.00	0.00	1.00	0.28	0.28
Sat Flow, veh/h	5253	1568	0	5421	1792	1599
Grp Volume(v), veh/h	1193	0	0	1079	418	420
Grp Sat Flow(s),veh/h/ln	1695	1568	0	1695	1792	1599
Q Serve(g_s), s	0.0	0.0	0.0	0.0	30.5	35.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	30.5	35.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	3222	993	0	3222	508	453
V/C Ratio(X)	0.37	0.00	0.00	0.33	0.82	0.93
Avail Cap(c_a), veh/h	3222	993	0	3222	796	710
HCM Platoon Ratio	2.00	2.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	0.87	0.00	0.00	0.90	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	46.9	48.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.3	3.2	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	15.5	17.2
LnGrp Delay(d),s/veh	0.3	0.0	0.0	0.3	50.1	60.3
LnGrp LOS	A			A	D	E
Approach Vol, veh/h	1193			1079	838	
Approach Delay, s/veh	0.3			0.3	55.2	
Approach LOS	A			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		94.5				94.5		45.5
Change Period (Y+Rc), s		5.8				5.8		5.8
Max Green Setting (Gmax), s		66.2				66.2		62.2
Max Q Clear Time (g_c+I1), s		2.0				2.0		37.7
Green Ext Time (p_c), s		15.8				15.8		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	1480	54	7	1279	1	53	0	12	0	0	53
Future Volume (veh/h)	64	1480	54	7	1279	1	53	0	12	0	0	53
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1696	1863	1900	1881	1743	1900	1900	1900	1900
Adj Flow Rate, veh/h	68	1574	57	7	1361	1	56	0	13	0	0	56
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	0	12	2	0	1	0	0	0	0	0
Cap, veh/h	129	3702	1151	17	3361	1067	128	0	233	1	0	77
Arrive On Green	0.14	1.00	1.00	0.01	0.66	0.66	0.07	0.00	0.16	0.00	0.00	0.05
Sat Flow, veh/h	1810	5085	1581	1616	5085	1614	1792	0	1482	1810	0	1615
Grp Volume(v), veh/h	68	1574	57	7	1361	1	56	0	13	0	0	56
Grp Sat Flow(s),veh/h/ln	1810	1695	1581	1616	1695	1614	1792	0	1482	1810	0	1615
Q Serve(g_s), s	4.9	0.0	0.0	0.6	17.3	0.0	4.2	0.0	1.0	0.0	0.0	4.8
Cycle Q Clear(g_c), s	4.9	0.0	0.0	0.6	17.3	0.0	4.2	0.0	1.0	0.0	0.0	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	3702	1151	17	3361	1067	128	0	233	1	0	77
V/C Ratio(X)	0.53	0.43	0.05	0.42	0.40	0.00	0.44	0.00	0.06	0.00	0.00	0.73
Avail Cap(c_a), veh/h	310	3702	1151	69	3361	1067	307	0	612	65	0	438
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.80	0.80	0.80	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	0.0	0.0	68.9	11.0	8.0	62.3	0.0	50.1	0.0	0.0	65.8
Incr Delay (d2), s/veh	2.8	0.3	0.1	5.1	0.3	0.0	2.3	0.0	0.1	0.0	0.0	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	0.0	0.3	8.2	0.0	2.2	0.0	0.4	0.0	0.0	2.4
LnGrp Delay(d),s/veh	60.6	0.3	0.1	74.0	11.3	8.0	64.6	0.0	50.2	0.0	0.0	78.2
LnGrp LOS	E	A	A	E	B	A	E		D			E
Approach Vol, veh/h		1699			1369			69			56	
Approach Delay, s/veh		2.7			11.6			61.9			78.2	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	107.3	15.4	11.3	15.4	97.9	0.0	26.7
Change Period (Y+Rc), s	4.6	5.4	5.4	* 4.6	5.4	5.4	4.5	4.6
Max Green Setting (Gmax), s	6.0	52.1	24.0	* 38	24.0	33.3	5.0	57.8
Max Q Clear Time (g_c+I1), s	2.6	2.0	6.2	6.8	6.9	19.3	0.0	3.0
Green Ext Time (p_c), s	0.0	41.4	0.1	0.4	0.1	13.1	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	719	772	0	0	686	333	0	0	0	426	0	575
Future Volume (veh/h)	719	772	0	0	686	333	0	0	0	426	0	575
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	866	930	0	0	827	401	0	0	0	513	0	693
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	2	2	0	2	0	0	0	0	0	0	0
Cap, veh/h	1153	3599	0	2	1668	521	4	2	2	666	361	539
Arrive On Green	0.33	0.71	0.00	0.00	0.33	0.33	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	3510	5253	0	1810	5085	1587	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	866	930	0	0	827	401	0	0	0	513	0	693
Grp Sat Flow(s),veh/h/ln	1755	1695	0	1810	1695	1587	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	19.3	5.7	0.0	0.0	11.5	20.0	0.0	0.0	0.0	12.2	0.0	7.8
Cycle Q Clear(g_c), s	19.3	5.7	0.0	0.0	11.5	20.0	0.0	0.0	0.0	12.2	0.0	7.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1153	3599	0	2	1668	521	4	2	2	666	361	539
V/C Ratio(X)	0.75	0.26	0.00	0.00	0.50	0.77	0.00	0.00	0.00	0.77	0.00	1.28
Avail Cap(c_a), veh/h	1379	3907	0	103	2200	686	200	865	735	779	1179	1763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	4.6	0.0	0.0	23.7	26.5	0.0	0.0	0.0	33.8	0.0	7.8
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.0	0.2	3.9	0.0	0.0	0.0	4.0	0.0	131.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	2.7	0.0	0.0	5.4	9.3	0.0	0.0	0.0	6.3	0.0	12.9
LnGrp Delay(d),s/veh	28.2	4.6	0.0	0.0	23.9	30.4	0.0	0.0	0.0	37.8	0.0	139.1
LnGrp LOS	C	A			C	C				D		F
Approach Vol, veh/h		1796			1228			0			1206	
Approach Delay, s/veh		16.0			26.0			0.0			96.0	
Approach LOS		B			C						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	66.7	0.0	21.2	33.4	33.3	21.2	0.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	67.5	5.0	54.5	34.5	38.0	19.5	40.0
Max Q Clear Time (g_c+I1), s	0.0	7.7	0.0	9.8	21.3	22.0	14.2	0.0
Green Ext Time (p_c), s	0.0	13.3	0.0	5.7	7.5	6.1	2.5	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		41.7
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	1133	23	36	934	39	61	0	10	32	0	23
Future Volume (veh/h)	21	1133	23	36	934	39	61	0	10	32	0	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1846	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	1218	25	39	1004	42	66	0	11	34	0	25
Adj No. of Lanes	1	3	0	1	3	1	2	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	3	0	2	0	0	0	0	0	0	0
Cap, veh/h	57	2547	52	86	2694	834	230	0	154	65	0	106
Arrive On Green	0.03	0.50	0.50	0.05	0.53	0.53	0.07	0.00	0.10	0.04	0.00	0.07
Sat Flow, veh/h	1810	5081	104	1810	5085	1574	3510	0	1610	1810	0	1609
Grp Volume(v), veh/h	23	805	438	39	1004	42	66	0	11	34	0	25
Grp Sat Flow(s),veh/h/ln	1810	1680	1826	1810	1695	1574	1755	0	1610	1810	0	1609
Q Serve(g_s), s	0.8	9.8	9.8	1.3	7.2	0.8	1.1	0.0	0.4	1.1	0.0	0.9
Cycle Q Clear(g_c), s	0.8	9.8	9.8	1.3	7.2	0.8	1.1	0.0	0.4	1.1	0.0	0.9
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	1684	915	86	2694	834	230	0	154	65	0	106
V/C Ratio(X)	0.40	0.48	0.48	0.46	0.37	0.05	0.29	0.00	0.07	0.53	0.00	0.24
Avail Cap(c_a), veh/h	175	1982	1077	180	3017	934	2314	0	1843	198	0	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	10.2	10.2	28.8	8.6	7.1	27.7	0.0	25.6	29.5	0.0	27.6
Incr Delay (d2), s/veh	1.7	1.0	1.8	1.4	0.1	0.0	0.7	0.0	0.2	6.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.7	5.3	0.7	3.4	0.3	0.6	0.0	0.2	0.7	0.0	0.4
LnGrp Delay(d),s/veh	31.2	11.1	12.0	30.3	8.7	7.1	28.3	0.0	25.8	36.0	0.0	28.7
LnGrp LOS	C	B	B	C	A	A	C		C	D		C
Approach Vol, veh/h		1266			1085			77			59	
Approach Delay, s/veh		11.8			9.4			28.0			32.9	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	36.6	8.7	8.6	6.6	38.3	6.7	10.6
Change Period (Y+Rc), s	5.4	* 5.4	4.6	4.5	4.6	5.4	4.5	4.6
Max Green Setting (Gmax), s	6.8	* 37	41.0	37.0	6.0	36.9	6.8	71.2
Max Q Clear Time (g_c+I1), s	3.3	11.8	3.1	2.9	2.8	9.2	3.1	2.4
Green Ext Time (p_c), s	2.0	19.3	0.3	0.1	0.0	10.1	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	376	549	254	116	455	31	203	149	93	56	226	296
Future Volume (veh/h)	376	549	254	116	455	31	203	149	93	56	226	296
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1827	1900	1863	1900	1881	1888	1900	1900	1879	1900
Adj Flow Rate, veh/h	392	572	265	121	474	32	211	155	97	58	235	308
Adj No. of Lanes	2	2	1	2	3	1	1	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	0	4	0	2	0	1	1	1	0	0	0
Cap, veh/h	762	974	419	206	597	186	290	448	280	88	504	445
Arrive On Green	0.22	0.27	0.27	0.06	0.12	0.12	0.16	0.41	0.41	0.05	0.28	0.28
Sat Flow, veh/h	3476	3610	1551	3510	5085	1589	1792	1081	676	1810	1785	1576
Grp Volume(v), veh/h	392	572	265	121	474	32	211	0	252	58	235	308
Grp Sat Flow(s),veh/h/ln	1738	1805	1551	1755	1695	1589	1792	0	1757	1810	1785	1576
Q Serve(g_s), s	9.8	13.6	9.2	3.3	8.9	1.5	11.0	0.0	9.7	3.1	10.7	17.2
Cycle Q Clear(g_c), s	9.8	13.6	9.2	3.3	8.9	1.5	11.0	0.0	9.7	3.1	10.7	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	762	974	419	206	597	186	290	0	728	88	504	445
V/C Ratio(X)	0.51	0.59	0.63	0.59	0.79	0.17	0.73	0.00	0.35	0.66	0.47	0.69
Avail Cap(c_a), veh/h	965	1339	576	413	1155	361	570	0	1268	183	890	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	31.2	12.3	45.3	42.4	28.1	39.2	0.0	19.8	46.1	29.3	31.6
Incr Delay (d2), s/veh	0.2	2.6	7.1	2.7	0.9	0.2	1.3	0.0	1.1	3.2	2.6	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	7.1	6.1	1.7	4.2	0.8	5.6	0.0	4.9	1.6	5.6	8.3
LnGrp Delay(d),s/veh	34.1	33.8	19.4	47.9	43.3	28.3	40.6	0.0	20.8	49.3	31.8	38.8
LnGrp LOS	C	C	B	D	D	C	D		C	D	C	D
Approach Vol, veh/h		1229			627			463			601	
Approach Delay, s/veh		30.8			43.4			29.8			37.1	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	46.7	11.2	32.0	21.8	33.6	27.0	16.2
Change Period (Y+Rc), s	4.0	5.8	5.4	5.4	5.8	* 5.8	5.4	* 4.6
Max Green Setting (Gmax), s	10.8	71.2	11.6	36.6	31.4	* 49	27.4	* 22
Max Q Clear Time (g_c+I1), s	5.1	11.7	5.3	15.6	13.0	19.2	11.8	10.9
Green Ext Time (p_c), s	0.0	3.7	0.2	11.1	3.0	8.7	9.1	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	34.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	2	88	3	2	0	44	406	2	2	475	34
Future Volume (veh/h)	57	2	88	3	2	0	44	406	2	2	475	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1267	1900	1900	1900	1900	1900	1881	1900	1900	1879	1900
Adj Flow Rate, veh/h	62	2	96	3	2	0	48	441	2	2	516	37
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	50	0	0	0	0	0	1	1	0	1	1
Cap, veh/h	200	144	184	9	6	0	208	1734	8	6	1226	88
Arrive On Green	0.11	0.11	0.11	0.01	0.01	0.00	0.12	0.48	0.48	0.00	0.36	0.36
Sat Flow, veh/h	1757	1267	1615	1107	738	0	1810	3649	17	1810	3373	241
Grp Volume(v), veh/h	62	2	96	5	0	0	48	216	227	2	272	281
Grp Sat Flow(s),veh/h/ln	1757	1267	1615	1845	0	0	1810	1787	1878	1810	1785	1830
Q Serve(g_s), s	1.7	0.1	2.9	0.1	0.0	0.0	1.3	3.8	3.8	0.1	6.0	6.0
Cycle Q Clear(g_c), s	1.7	0.1	2.9	0.1	0.0	0.0	1.3	3.8	3.8	0.1	6.0	6.0
Prop In Lane	1.00		1.00	0.60		0.00	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	200	144	184	15	0	0	208	849	893	6	649	665
V/C Ratio(X)	0.31	0.01	0.52	0.34	0.00	0.00	0.23	0.25	0.25	0.34	0.42	0.42
Avail Cap(c_a), veh/h	884	637	813	227	0	0	229	865	909	222	857	879
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	20.5	21.7	25.7	0.0	0.0	20.9	8.2	8.2	25.9	12.4	12.5
Incr Delay (d2), s/veh	4.0	0.2	10.2	4.9	0.0	0.0	0.2	0.6	0.6	30.1	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.8	0.1	0.0	0.0	0.6	2.0	2.1	0.1	3.2	3.3
LnGrp Delay(d),s/veh	25.2	20.6	32.0	30.6	0.0	0.0	21.1	8.8	8.7	56.0	14.1	14.1
LnGrp LOS	C	C	C	C			C	A	A	E	B	B
Approach Vol, veh/h		160			5			491			555	
Approach Delay, s/veh		29.2			30.6			9.9			14.3	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	30.5		11.7	10.6	24.7		5.0
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		4.6
Max Green Setting (Gmax), s	6.4	25.2		26.2	6.6	25.0		6.4
Max Q Clear Time (g_c+I1), s	2.1	5.8		4.9	3.3	8.0		2.1
Green Ext Time (p_c), s	0.0	12.0		1.7	0.0	10.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	3	64	7	6	8	67	379	5	8	430	4
Future Volume (veh/h)	4	3	64	7	6	8	67	379	5	8	430	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1759	1900	1779	1900	1810	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	3	69	8	6	9	72	408	5	9	462	4
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	8	0	17	17	5	0	0	0	0	0
Cap, veh/h	12	296	233	23	274	245	134	729	605	26	1173	10
Arrive On Green	0.01	0.16	0.16	0.01	0.16	0.16	0.08	0.38	0.38	0.01	0.32	0.32
Sat Flow, veh/h	1810	1900	1493	1810	1690	1510	1723	1900	1578	1810	3667	32
Grp Volume(v), veh/h	4	3	69	8	6	9	72	408	5	9	227	239
Grp Sat Flow(s),veh/h/ln	1810	1900	1493	1810	1690	1510	1723	1900	1578	1810	1805	1894
Q Serve(g_s), s	0.1	0.1	1.9	0.2	0.1	0.2	1.9	7.9	0.1	0.2	4.6	4.6
Cycle Q Clear(g_c), s	0.1	0.1	1.9	0.2	0.1	0.2	1.9	7.9	0.1	0.2	4.6	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	12	296	233	23	274	245	134	729	605	26	577	606
V/C Ratio(X)	0.34	0.01	0.30	0.35	0.02	0.04	0.54	0.56	0.01	0.35	0.39	0.39
Avail Cap(c_a), veh/h	231	1414	1112	231	1258	1124	235	1317	1094	231	1236	1297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	16.8	17.6	23.0	16.6	16.6	20.9	11.4	9.0	23.0	12.4	12.4
Incr Delay (d2), s/veh	6.2	0.0	1.0	3.3	0.0	0.1	1.2	1.1	0.0	3.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.8	0.1	0.1	0.1	0.9	4.3	0.0	0.1	2.4	2.5
LnGrp Delay(d),s/veh	29.5	16.8	18.5	26.4	16.6	16.7	22.1	12.4	9.0	26.0	13.1	13.1
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		76			23			485			475	
Approach Delay, s/veh		19.0			20.0			13.8			13.4	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	23.8	5.2	12.7	8.3	20.8	4.9	13.0
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4
Max Green Setting (Gmax), s	6.6	32.6	6.0	35.0	6.4	32.2	6.0	35.0
Max Q Clear Time (g_c+I1), s	2.2	9.9	2.2	3.9	3.9	6.6	2.1	2.2
Green Ext Time (p_c), s	0.0	7.8	0.0	0.4	0.0	8.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	11	22	17	11	8	31	281	9	7	337	21
Future Volume (veh/h)	22	11	22	17	11	8	31	281	9	7	337	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1727	1900	1900	1811	1900	1827	1882	1900	1900	1860	1900
Adj Flow Rate, veh/h	25	12	25	19	12	9	35	319	10	8	383	24
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	10	0	0	0	0	4	1	1	0	2	2
Cap, veh/h	62	263	246	51	286	191	82	1213	38	23	1041	65
Arrive On Green	0.04	0.15	0.15	0.03	0.14	0.14	0.05	0.34	0.34	0.01	0.31	0.31
Sat Flow, veh/h	1723	1727	1613	1810	1975	1321	1740	3536	111	1810	3375	211
Grp Volume(v), veh/h	25	12	25	19	10	11	35	161	168	8	200	207
Grp Sat Flow(s),veh/h/ln	1723	1727	1613	1810	1721	1576	1740	1788	1859	1810	1767	1819
Q Serve(g_s), s	0.6	0.3	0.6	0.5	0.2	0.3	0.9	2.9	2.9	0.2	4.0	4.0
Cycle Q Clear(g_c), s	0.6	0.3	0.6	0.5	0.2	0.3	0.9	2.9	2.9	0.2	4.0	4.0
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.06	1.00		0.12
Lane Grp Cap(c), veh/h	62	263	246	51	249	228	82	613	638	23	545	561
V/C Ratio(X)	0.41	0.05	0.10	0.37	0.04	0.05	0.43	0.26	0.26	0.35	0.37	0.37
Avail Cap(c_a), veh/h	231	1232	1151	242	1228	1124	248	1602	1666	242	1568	1614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	16.2	16.4	21.4	16.5	16.5	20.8	10.6	10.6	22.0	12.1	12.1
Incr Delay (d2), s/veh	1.6	0.1	0.2	1.7	0.1	0.1	1.3	0.4	0.3	3.3	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.3	0.3	0.1	0.1	0.4	1.5	1.6	0.1	2.0	2.1
LnGrp Delay(d),s/veh	22.7	16.3	16.6	23.1	16.6	16.6	22.1	11.0	11.0	25.3	12.8	12.8
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		62			40			364			415	
Approach Delay, s/veh		19.0			19.7			12.1			13.0	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	21.2	5.9	12.6	6.7	19.6	6.2	12.3
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	6.6	40.2	6.0	32.0	6.4	39.8	6.0	32.0
Max Q Clear Time (g_c+I1), s	2.2	4.9	2.5	2.6	2.9	6.0	2.6	2.3
Green Ext Time (p_c), s	0.0	7.6	0.0	0.3	0.0	7.5	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	554	291	0	0	502	234	215	0	156	0
Future Volume (veh/h)	0	0	554	291	0	0	502	234	215	0	156	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	652	342	0	0	591	275	253	0	184	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	922	1173	469	922	784	880	710	633	4	309	141
Arrive On Green	0.00	0.00	0.49	0.49	0.00	0.00	0.26	0.40	0.40	0.00	0.09	0.00
Sat Flow, veh/h	0	1900	1583	777	1900	1615	3442	1773	1580	3510	3539	1615
Grp Volume(v), veh/h	0	0	652	342	0	0	591	274	254	0	184	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	777	1900	1615	1721	1770	1584	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	0.0	31.8	0.0	0.0	12.1	8.7	9.0	0.0	3.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	31.8	0.0	0.0	12.1	8.7	9.0	0.0	3.9	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	922	1173	469	922	784	880	708	634	4	309	141
V/C Ratio(X)	0.00	0.00	0.56	0.73	0.00	0.00	0.67	0.39	0.40	0.00	0.59	0.00
Avail Cap(c_a), veh/h	0	1123	1341	551	1123	955	1640	1237	1107	223	1012	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.5	18.6	0.0	0.0	26.3	16.7	16.8	0.0	34.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	4.1	0.0	0.0	0.9	0.3	0.4	0.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.1	7.3	0.0	0.0	5.9	4.3	4.0	0.0	2.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	4.9	22.7	0.0	0.0	27.2	17.1	17.3	0.0	36.4	0.0
LnGrp LOS			A	C			C	B	B		D	
Approach Vol, veh/h		652			342			1119			184	
Approach Delay, s/veh		4.9			22.7			22.5			36.4	
Approach LOS		A			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	36.0		42.7	24.6	11.4		42.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	55.0		46.5	37.5	22.5		46.5
Max Q Clear Time (g_c+I1), s	0.0	11.0		2.0	14.1	5.9		33.8
Green Ext Time (p_c), s	0.0	6.6		6.1	6.0	0.9		4.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	139	17	0	0	215	0	19	0	0	0
Future Vol, veh/h	0	0	139	17	0	0	215	0	19	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	164	20	0	0	253	0	22	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	507	507	1	507	507	0	1	0	0	0	0	0
Stage 1	1	1	-	506	506	-	-	-	-	-	-	-
Stage 2	506	506	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	453	471	1089	453	471	-	1635	-	-	-	-	-
Stage 1	1027	899	-	522	543	-	-	-	-	-	-	-
Stage 2	522	543	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	397	1089	339	397	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	397	-	339	397	-	-	-	-	-	-	-
Stage 1	866	899	-	440	458	-	-	-	-	-	-	-
Stage 2	440	458	-	873	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			7	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.155	-	-	-	-	-	-	-
HCM Control Delay (s)	7.6	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	865	543	266	1041	0	0	0	0	374	1	372
Future Volume (veh/h)	0	865	543	266	1041	0	0	0	0	374	1	372
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	901	566	277	1084	0				391	0	388
Adj No. of Lanes	0	3	1	2	3	0				2	0	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2856	889	360	3647	0				546	0	487
Arrive On Green	0.00	0.56	0.56	0.10	0.72	0.00				0.15	0.00	0.15
Sat Flow, veh/h	0	5253	1583	3442	5253	0				3548	0	3167
Grp Volume(v), veh/h	0	901	566	277	1084	0				391	0	388
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1695	0				1774	0	1583
Q Serve(g_s), s	0.0	8.5	22.0	7.1	6.9	0.0				9.4	0.0	10.6
Cycle Q Clear(g_c), s	0.0	8.5	22.0	7.1	6.9	0.0				9.4	0.0	10.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2856	889	360	3647	0				546	0	487
V/C Ratio(X)	0.00	0.32	0.64	0.77	0.30	0.00				0.72	0.00	0.80
Avail Cap(c_a), veh/h	0	2856	889	688	3647	0				788	0	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.89	0.89	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.5	13.5	39.2	4.6	0.0				36.2	0.0	36.7
Incr Delay (d2), s/veh	0.0	0.3	3.5	1.2	0.2	0.0				0.7	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	10.3	3.4	3.3	0.0				4.7	0.0	4.8
LnGrp Delay(d),s/veh	0.0	10.8	16.9	40.4	4.8	0.0				36.9	0.0	39.2
LnGrp LOS		B	B	D	A					D		D
Approach Vol, veh/h		1467			1361						779	
Approach Delay, s/veh		13.2			12.0						38.0	
Approach LOS		B			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.0	56.3		19.6		70.4		
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		
Max Green Setting (Gmax), s	18.0	35.0		20.0		58.0		
Max Q Clear Time (g_c+I1), s	9.1	24.0		12.6		8.9		
Green Ext Time (p_c), s	0.4	7.9		1.2		17.9		

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	962	0	0	738	478	455	5	334	0	0	0
Future Volume (veh/h)	347	962	0	0	738	478	455	5	334	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	358	992	0	0	761	493	578	0	231			
Adj No. of Lanes	2	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	438	3440	0	0	2504	770	690	0	308			
Arrive On Green	0.13	0.68	0.00	0.00	0.49	0.49	0.19	0.00	0.19			
Sat Flow, veh/h	3442	5253	0	0	5253	1563	3548	0	1583			
Grp Volume(v), veh/h	358	992	0	0	761	493	578	0	231			
Grp Sat Flow(s),veh/h/ln	1721	1695	0	0	1695	1563	1774	0	1583			
Q Serve(g_s), s	9.1	7.1	0.0	0.0	8.0	21.1	14.1	0.0	12.4			
Cycle Q Clear(g_c), s	9.1	7.1	0.0	0.0	8.0	21.1	14.1	0.0	12.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	438	3440	0	0	2504	770	690	0	308			
V/C Ratio(X)	0.82	0.29	0.00	0.00	0.30	0.64	0.84	0.00	0.75			
Avail Cap(c_a), veh/h	612	3440	0	0	2504	770	1104	0	493			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.94	0.94	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.2	5.8	0.0	0.0	13.6	16.9	34.9	0.0	34.2			
Incr Delay (d2), s/veh	3.8	0.2	0.0	0.0	0.3	3.8	1.6	0.0	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.6	3.4	0.0	0.0	3.8	9.9	7.1	0.0	5.5			
LnGrp Delay(d),s/veh	42.1	6.0	0.0	0.0	13.9	20.8	36.5	0.0	35.6			
LnGrp LOS	D	A			B	C	D		D			
Approach Vol, veh/h		1350			1254			809				
Approach Delay, s/veh		15.6			16.6			36.2				
Approach LOS		B			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		66.7			16.6	50.1		23.3
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8
Max Green Setting (Gmax), s		50.0			16.0	28.0		28.0
Max Q Clear Time (g_c+I1), s		9.1			11.1	23.1		16.1
Green Ext Time (p_c), s		13.8			0.4	3.8		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	846	31	111	748	41	75	19	84	51	28	95
Future Volume (veh/h)	117	846	31	111	748	41	75	19	84	51	28	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	123	891	33	117	787	43	79	20	88	54	29	100
Adj No. of Lanes	1	3	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	3073	114	172	2199	961	249	46	204	192	287	243
Arrive On Green	0.09	0.61	0.61	0.10	0.62	0.62	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	5029	186	1774	3539	1547	1250	300	1320	1275	1863	1574
Grp Volume(v), veh/h	123	600	324	117	787	43	79	0	108	54	29	100
Grp Sat Flow(s),veh/h/ln	1774	1695	1825	1774	1770	1547	1250	0	1621	1275	1863	1574
Q Serve(g_s), s	6.8	8.3	8.3	6.3	10.8	1.1	5.8	0.0	6.0	4.0	1.3	5.7
Cycle Q Clear(g_c), s	6.8	8.3	8.3	6.3	10.8	1.1	7.1	0.0	6.0	10.0	1.3	5.7
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.81	1.00		1.00
Lane Grp Cap(c), veh/h	153	2072	1115	172	2199	961	249	0	250	192	287	243
V/C Ratio(X)	0.80	0.29	0.29	0.68	0.36	0.04	0.32	0.00	0.43	0.28	0.10	0.41
Avail Cap(c_a), veh/h	455	2072	1115	455	2199	961	560	0	654	510	752	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	9.1	9.1	43.4	9.2	7.3	39.1	0.0	38.1	42.6	36.1	37.9
Incr Delay (d2), s/veh	3.6	0.4	0.7	1.8	0.5	0.1	0.7	0.0	1.2	0.8	0.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	3.9	4.3	3.2	5.4	0.5	2.0	0.0	2.8	1.5	0.7	2.5
LnGrp Delay(d),s/veh	48.2	9.5	9.8	45.2	9.6	7.4	39.9	0.0	39.2	43.4	36.2	39.0
LnGrp LOS	D	A	A	D	A	A	D		D	D	D	D
Approach Vol, veh/h		1047			947			187			183	
Approach Delay, s/veh		14.1			13.9			39.5			39.9	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	66.0		20.2	12.1	67.0		20.2
Change Period (Y+Rc), s	3.5	5.3		4.9	3.5	5.3		4.9
Max Green Setting (Gmax), s	25.5	60.7		40.1	25.5	60.7		40.1
Max Q Clear Time (g_c+I1), s	8.3	10.3		12.0	8.8	12.8		9.1
Green Ext Time (p_c), s	0.1	27.0		1.6	0.1	26.3		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	756	225	24	665	220	25
Future Volume (veh/h)	0	756	225	24	665	220	25
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.97	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h		779	232	25	686	227	26
Adj No. of Lanes		2	1	1	2	1	1
Peak Hour Factor		0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1604	700	53	2097	315	281
Arrive On Green		0.45	0.45	0.03	0.59	0.18	0.18
Sat Flow, veh/h		3632	1543	1774	3632	1774	1583
Grp Volume(v), veh/h		779	232	25	686	227	26
Grp Sat Flow(s),veh/h/ln		1770	1543	1774	1770	1774	1583
Q Serve(g_s), s		7.0	4.4	0.6	4.5	5.5	0.6
Cycle Q Clear(g_c), s		7.0	4.4	0.6	4.5	5.5	0.6
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1604	700	53	2097	315	281
V/C Ratio(X)		0.49	0.33	0.47	0.33	0.72	0.09
Avail Cap(c_a), veh/h		3101	1352	1166	3101	1166	1040
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		8.8	8.0	21.8	4.7	17.7	15.7
Incr Delay (d2), s/veh		0.2	0.2	2.4	0.1	3.7	0.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.4	1.9	0.3	2.1	3.0	0.3
LnGrp Delay(d),s/veh		8.9	8.2	24.2	4.8	21.4	15.9
LnGrp LOS		A	A	C	A	C	B
Approach Vol, veh/h		1011			711	253	
Approach Delay, s/veh		8.8			5.5	20.9	
Approach LOS		A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.4	26.2				32.6		13.1
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	30.0	40.0				40.0		30.0
Max Q Clear Time (g_c+I1), s	2.6	9.0				6.5		7.5
Green Ext Time (p_c), s	0.0	11.6				12.0		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	731	743	7	11	5
Future Vol, veh/h	10	731	743	7	11	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	761	774	7	11	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	781	0	-	0	1180	391
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	402	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	832	-	-	-	183	608
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	832	-	-	-	181	608
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	21.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	232
HCM Lane V/C Ratio	0.013	-	-	-	0.072
HCM Control Delay (s)	9.4	-	-	-	21.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	725	4	0	706	5	4	0	3	4	0	50
Future Vol, veh/h	28	725	4	0	706	5	4	0	3	4	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	755	4	0	735	5	4	0	3	4	0	52

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	741	0	0	759	0	0	1184	1557	380	1174	1556	370
Stage 1	-	-	-	-	-	-	816	816	-	738	738	-
Stage 2	-	-	-	-	-	-	368	741	-	436	818	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	862	-	-	848	-	-	145	112	618	147	112	627
Stage 1	-	-	-	-	-	-	337	389	-	376	422	-
Stage 2	-	-	-	-	-	-	624	421	-	569	388	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	862	-	-	848	-	-	130	108	618	143	108	627
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	108	-	143	108	-
Stage 1	-	-	-	-	-	-	326	376	-	363	422	-
Stage 2	-	-	-	-	-	-	572	421	-	547	375	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	24.1	13.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	196	862	-	-	848	-	-	501
HCM Lane V/C Ratio	0.037	0.034	-	-	-	-	-	0.112
HCM Control Delay (s)	24.1	9.3	-	-	0	-	-	13.1
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	666	22	21	647	50	31	2	3	45	0	32
Future Volume (veh/h)	46	666	22	21	647	50	31	2	3	45	0	32
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	48	694	23	22	674	52	32	2	3	47	0	33
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	1316	44	47	1176	91	65	52	77	87	0	141
Arrive On Green	0.05	0.38	0.38	0.03	0.35	0.35	0.04	0.08	0.08	0.05	0.00	0.09
Sat Flow, veh/h	1774	3493	116	1774	3324	256	1774	674	1011	1774	0	1583
Grp Volume(v), veh/h	48	351	366	22	358	368	32	0	5	47	0	33
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1774	1770	1811	1774	0	1684	1774	0	1583
Q Serve(g_s), s	1.2	7.2	7.2	0.6	7.7	7.7	0.8	0.0	0.1	1.2	0.0	0.9
Cycle Q Clear(g_c), s	1.2	7.2	7.2	0.6	7.7	7.7	0.8	0.0	0.1	1.2	0.0	0.9
Prop In Lane	1.00		0.06	1.00		0.14	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	88	667	693	47	626	641	65	0	129	87	0	141
V/C Ratio(X)	0.55	0.53	0.53	0.47	0.57	0.57	0.50	0.00	0.04	0.54	0.00	0.23
Avail Cap(c_a), veh/h	190	758	787	190	758	776	190	0	974	228	0	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	11.3	11.3	22.4	12.2	12.2	22.1	0.0	20.0	21.7	0.0	19.8
Incr Delay (d2), s/veh	1.9	0.8	0.8	2.6	1.0	1.0	2.2	0.0	0.1	1.9	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.7	3.8	0.3	3.9	4.0	0.4	0.0	0.1	0.6	0.0	0.4
LnGrp Delay(d),s/veh	23.6	12.1	12.1	25.0	13.2	13.2	24.3	0.0	20.1	23.6	0.0	20.4
LnGrp LOS	C	B	B	C	B	B	C		C	C		C
Approach Vol, veh/h		765			748			37			80	
Approach Delay, s/veh		12.8			13.6			23.7			22.3	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	24.6	6.7	9.2	7.3	23.5	7.3	8.6
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	20.0	5.0	28.0	5.0	20.0	6.0	27.0
Max Q Clear Time (g_c+I1), s	2.6	9.2	2.8	2.9	3.2	9.7	3.2	2.1
Green Ext Time (p_c), s	0.0	7.1	0.0	0.1	0.0	6.8	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	184	536	118	139	0	410	225	114	7	304	93
Future Volume (veh/h)	81	184	536	118	139	0	410	225	114	7	304	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	85	194	564	124	146	0	432	237	120	7	320	98
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1345	602	205	1365	0	409	705	345	31	526	159
Arrive On Green	0.05	0.38	0.38	0.06	0.39	0.00	0.12	0.31	0.31	0.01	0.20	0.20
Sat Flow, veh/h	3442	3539	1583	3442	3632	0	3442	2305	1129	3442	2682	808
Grp Volume(v), veh/h	85	194	564	124	146	0	432	180	177	7	209	209
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	0	1721	1770	1664	1721	1770	1720
Q Serve(g_s), s	1.9	2.8	26.8	2.8	2.1	0.0	9.3	6.2	6.5	0.2	8.4	8.7
Cycle Q Clear(g_c), s	1.9	2.8	26.8	2.8	2.1	0.0	9.3	6.2	6.5	0.2	8.4	8.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.68	1.00		0.47
Lane Grp Cap(c), veh/h	185	1345	602	205	1365	0	409	542	509	31	347	338
V/C Ratio(X)	0.46	0.14	0.94	0.60	0.11	0.00	1.06	0.33	0.35	0.23	0.60	0.62
Avail Cap(c_a), veh/h	255	1389	621	255	1389	0	409	758	712	255	678	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	15.9	23.4	35.9	15.4	0.0	34.5	21.0	21.1	38.5	28.7	28.8
Incr Delay (d2), s/veh	0.7	0.0	21.7	1.1	0.0	0.0	60.1	0.4	0.4	1.3	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.4	15.3	1.3	1.0	0.0	7.8	3.1	3.0	0.1	4.3	4.3
LnGrp Delay(d),s/veh	36.6	16.0	45.0	37.0	15.4	0.0	94.6	21.3	21.5	39.8	30.4	30.6
LnGrp LOS	D	B	D	D	B		F	C	C	D	C	C
Approach Vol, veh/h		843			270			789			425	
Approach Delay, s/veh		37.5			25.3			61.5			30.6	
Approach LOS		D			C			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	35.6	13.0	21.3	7.9	36.1	4.4	29.8
Change Period (Y+Rc), s	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9
Max Green Setting (Gmax), s	5.8	* 31	9.3	* 30	5.8	* 31	5.8	* 34
Max Q Clear Time (g_c+I1), s	4.8	28.8	11.3	10.7	3.9	4.1	2.2	8.5
Green Ext Time (p_c), s	0.0	0.9	0.0	4.7	0.0	4.7	0.0	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	43.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	272	528	140	229	21	428	959	152	30	1057	111
Future Volume (veh/h)	107	272	528	140	229	21	428	959	152	30	1057	111
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	113	286	556	147	241	22	451	1009	160	32	1113	117
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	522	768	129	465	42	365	1447	229	44	1031	461
Arrive On Green	0.08	0.28	0.28	0.07	0.28	0.28	0.21	0.47	0.47	0.02	0.29	0.29
Sat Flow, veh/h	1774	1863	1577	1774	1681	153	1774	3061	485	1774	3539	1582
Grp Volume(v), veh/h	113	286	556	147	0	263	451	583	586	32	1113	117
Grp Sat Flow(s),veh/h/ln	1774	1863	1577	1774	0	1835	1774	1770	1777	1774	1770	1582
Q Serve(g_s), s	9.4	19.6	42.0	10.9	0.0	18.2	30.9	38.8	38.9	2.7	43.7	8.5
Cycle Q Clear(g_c), s	9.4	19.6	42.0	10.9	0.0	18.2	30.9	38.8	38.9	2.7	43.7	8.5
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	135	522	768	129	0	508	365	837	840	44	1031	461
V/C Ratio(X)	0.84	0.55	0.72	1.14	0.00	0.52	1.23	0.70	0.70	0.73	1.08	0.25
Avail Cap(c_a), veh/h	209	522	768	129	0	508	365	837	840	82	1031	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.4	45.9	30.6	69.6	0.0	45.8	59.5	31.1	31.1	72.7	53.2	40.7
Incr Delay (d2), s/veh	9.4	0.7	3.0	121.9	0.0	0.4	126.9	2.1	2.2	8.6	52.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	10.2	18.9	9.7	0.0	9.3	28.0	19.4	19.6	1.4	28.8	3.7
LnGrp Delay(d),s/veh	77.8	46.6	33.6	191.5	0.0	46.2	186.4	33.2	33.3	81.2	105.2	40.8
LnGrp LOS	E	D	C	F		D	F	C	C	F	F	D
Approach Vol, veh/h		955			410			1620			1262	
Approach Delay, s/veh		42.7			98.3			75.9			98.6	
Approach LOS		D			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	77.4	16.0	47.8	36.0	50.2	16.5	47.3
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	6.9	67.7	10.9	42.0	30.9	43.7	17.7	35.2
Max Q Clear Time (g_c+I1), s	4.7	40.9	12.9	44.0	32.9	45.7	11.4	20.2
Green Ext Time (p_c), s	0.0	14.2	0.0	0.0	0.0	0.0	0.1	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	77.4
HCM 2010 LOS	E

2021 Project Completion PM without Creighton Avenue Access

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	8	1959	84	39	1404	55	25
Future Volume (veh/h)	8	1959	84	39	1404	55	25
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.97	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1881	1881	1900	1881	1851	1900
Adj Flow Rate, veh/h		2177	93	43	1560	61	28
Adj No. of Lanes		3	1	1	3	0	0
Peak Hour Factor		0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %		1	1	0	1	0	0
Cap, veh/h		3421	1034	245	4329	85	39
Arrive On Green		1.00	1.00	0.27	1.00	0.07	0.07
Sat Flow, veh/h		5305	1552	1810	5305	1152	529
Grp Volume(v), veh/h		2177	93	43	1560	90	0
Grp Sat Flow(s),veh/h/ln		1712	1552	1810	1712	1700	0
Q Serve(g_s), s		0.0	0.0	2.4	0.0	6.7	0.0
Cycle Q Clear(g_c), s		0.0	0.0	2.4	0.0	6.7	0.0
Prop In Lane			1.00	1.00		0.68	0.31
Lane Grp Cap(c), veh/h		3421	1034	245	4329	126	0
V/C Ratio(X)		0.64	0.09	0.18	0.36	0.72	0.00
Avail Cap(c_a), veh/h		3421	1034	245	4329	217	0
HCM Platoon Ratio		2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)		0.69	0.69	0.90	0.90	1.00	0.00
Uniform Delay (d), s/veh		0.0	0.0	41.9	0.0	58.9	0.0
Incr Delay (d2), s/veh		0.6	0.1	0.1	0.2	7.4	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.2	0.0	1.2	0.1	3.4	0.0
LnGrp Delay(d),s/veh		0.6	0.1	42.0	0.2	66.2	0.0
LnGrp LOS		A	A	D	A	E	
Approach Vol, veh/h		2270			1603	90	
Approach Delay, s/veh		0.6			1.3	66.2	
Approach LOS		A			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.0	92.0				115.0		15.0
Change Period (Y+Rc), s	5.4	* 5.4				5.4		5.4
Max Green Setting (Gmax), s	17.6	* 87				87.2		16.6
Max Q Clear Time (g_c+I1), s	4.4	2.0				2.0		8.7
Green Ext Time (p_c), s	0.1	35.2				30.9		0.1

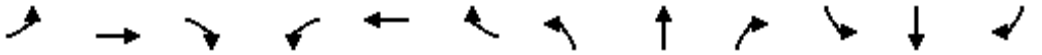
Intersection Summary	
HCM 2010 Ctrl Delay	2.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	1415	50	0	967	227	0	0	21	326	0	471
Future Volume (veh/h)	520	1415	50	0	967	227	0	0	21	326	0	471
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1882	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	591	1608	57	0	1099	258	0	0	24	370	0	535
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	1	0	0	0	0	0	0	0
Cap, veh/h	1205	3646	129	1	1738	541	3	73	62	497	408	610
Arrive On Green	0.11	0.24	0.24	0.00	0.68	0.68	0.00	0.00	0.04	0.14	0.00	0.21
Sat Flow, veh/h	3510	5091	180	1810	5136	1598	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	591	1082	583	0	1099	258	0	0	24	370	0	535
Grp Sat Flow(s),veh/h/ln	1755	1712	1846	1810	1712	1598	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	20.5	35.0	35.0	0.0	15.7	10.0	0.0	0.0	1.8	13.1	0.0	23.7
Cycle Q Clear(g_c), s	20.5	35.0	35.0	0.0	15.7	10.0	0.0	0.0	1.8	13.1	0.0	23.7
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1205	2453	1322	1	1738	541	3	73	62	497	408	610
V/C Ratio(X)	0.49	0.44	0.44	0.00	0.63	0.48	0.00	0.00	0.39	0.74	0.00	0.88
Avail Cap(c_a), veh/h	1205	2453	1322	70	1738	541	135	628	534	497	709	1060
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.00	0.94	0.94	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.0	27.5	27.5	0.0	16.4	15.5	0.0	0.0	56.7	53.6	0.0	49.4
Incr Delay (d2), s/veh	0.2	0.5	0.8	0.0	1.7	2.8	0.0	0.0	3.9	6.0	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.8	18.2	0.0	7.4	4.7	0.0	0.0	0.9	6.8	0.0	9.7
LnGrp Delay(d),s/veh	47.2	27.9	28.3	0.0	18.1	18.3	0.0	0.0	60.6	59.6	0.0	53.8
LnGrp LOS	D	C	C		B	B			E	E		D
Approach Vol, veh/h		2256			1357			24			905	
Approach Delay, s/veh		33.1			18.1			60.6			56.1	
Approach LOS		C			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	97.6	0.0	32.4	49.1	48.5	22.9	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	53.5	5.0	48.5	14.5	44.0	10.5	43.0
Max Q Clear Time (g_c+I1), s	0.0	37.0	0.0	25.7	22.5	17.7	15.1	3.8
Green Ext Time (p_c), s	0.0	11.4	0.0	2.2	0.0	9.1	0.0	0.1

Intersection Summary		
HCM 2010 Ctrl Delay		33.3
HCM 2010 LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	456	215	0	0	376	173	135	0	127	0
Future Volume (veh/h)	0	0	456	215	0	0	376	173	135	0	127	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	536	253	0	0	442	204	159	0	149	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	721	908	478	721	613	667	841	623	7	517	236
Arrive On Green	0.00	0.00	0.38	0.38	0.00	0.00	0.19	0.43	0.43	0.00	0.15	0.00
Sat Flow, veh/h	0	1900	1583	865	1900	1615	3442	1940	1438	3510	3539	1615
Grp Volume(v), veh/h	0	0	536	253	0	0	442	185	178	0	149	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	865	1900	1615	1721	1770	1609	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	10.5	12.3	0.0	0.0	5.7	3.2	3.4	0.0	1.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	10.5	12.3	0.0	0.0	5.7	3.2	3.4	0.0	1.8	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	0	721	908	478	721	613	667	767	697	7	517	236
V/C Ratio(X)	0.00	0.00	0.59	0.53	0.00	0.00	0.66	0.24	0.26	0.00	0.29	0.00
Avail Cap(c_a), veh/h	0	1835	1836	985	1835	1560	2395	2021	1838	365	1948	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	6.6	13.1	0.0	0.0	18.0	8.6	8.7	0.0	18.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.9	0.0	0.0	1.1	0.2	0.2	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.6	3.0	0.0	0.0	2.8	1.6	1.5	0.0	0.9	0.0
LnGrp Delay(d),s/veh	0.0	0.0	7.2	14.0	0.0	0.0	19.1	8.8	8.9	0.0	18.6	0.0
LnGrp LOS			A	B			B	A	A		B	
Approach Vol, veh/h		536			253			805			149	
Approach Delay, s/veh		7.2			14.0			14.5			18.6	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	25.4		22.8	13.8	11.5		22.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	55.0		46.5	33.5	26.5		46.5
Max Q Clear Time (g_c+I1), s	0.0	5.4		12.5	7.7	3.8		14.3
Green Ext Time (p_c), s	0.0	3.6		4.0	1.6	3.2		3.9

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	114	13	0	0	161	0	12	0	0	0
Future Vol, veh/h	0	0	114	13	0	0	161	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	134	15	0	0	189	0	14	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	380	380	1	380	380	0	1	0	0	0	0	0
Stage 1	1	1	-	379	379	-	-	-	-	-	-	-
Stage 2	379	379	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	557	556	1089	557	556	-	1635	-	-	-	-	-
Stage 1	1027	899	-	620	618	-	-	-	-	-	-	-
Stage 2	620	618	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	491	1089	445	491	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	491	-	445	491	-	-	-	-	-	-	-
Stage 1	907	899	-	547	546	-	-	-	-	-	-	-
Stage 2	547	546	-	901	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			7	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.116	-	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	-	-	-

2021 Project Completion Saturday Midday without Creighton Avenue Access

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	8	1535	54	7	1332	53	12
Future Volume (veh/h)	8	1535	54	7	1332	53	12
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.98	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1863	1900	1696	1863	1854	1900
Adj Flow Rate, veh/h		1633	57	7	1417	56	13
Adj No. of Lanes		3	1	1	3	0	0
Peak Hour Factor		0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		2	0	12	2	0	0
Cap, veh/h		4111	1278	17	4330	99	23
Arrive On Green		1.00	1.00	0.01	0.85	0.07	0.07
Sat Flow, veh/h		5253	1581	1616	5253	1382	321
Grp Volume(v), veh/h		1633	57	7	1417	70	0
Grp Sat Flow(s),veh/h/ln		1695	1581	1616	1695	1728	0
Q Serve(g_s), s		0.0	0.0	0.6	8.0	5.5	0.0
Cycle Q Clear(g_c), s		0.0	0.0	0.6	8.0	5.5	0.0
Prop In Lane			1.00	1.00		0.80	0.19
Lane Grp Cap(c), veh/h		4111	1278	17	4330	123	0
V/C Ratio(X)		0.40	0.04	0.42	0.33	0.57	0.00
Avail Cap(c_a), veh/h		4111	1278	108	4330	353	0
HCM Platoon Ratio		2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.86	0.86	0.79	0.79	1.00	0.00
Uniform Delay (d), s/veh		0.0	0.0	68.9	2.1	62.9	0.0
Incr Delay (d2), s/veh		0.2	0.1	5.0	0.2	4.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.1	0.0	0.3	3.7	2.8	0.0
LnGrp Delay(d),s/veh		0.2	0.1	73.9	2.3	67.0	0.0
LnGrp LOS		A	A	E	A	E	
Approach Vol, veh/h		1690			1424	70	
Approach Delay, s/veh		0.2			2.7	67.0	
Approach LOS		A			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.0	118.6				124.6		15.4
Change Period (Y+Rc), s	4.6	5.4				5.4		5.4
Max Green Setting (Gmax), s	1.4	86.6				88.6		28.6
Max Q Clear Time (g_c+I1), s	2.6	2.0				10.0		7.5
Green Ext Time (p_c), s	0.0	18.8				25.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	2.8
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	774	772	0	0	686	333	0	0	0	426	0	628
Future Volume (veh/h)	774	772	0	0	686	333	0	0	0	426	0	628
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	933	930	0	0	827	401	0	0	0	513	0	757
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	2	2	0	2	0	0	0	0	0	0	0
Cap, veh/h	1183	3620	0	2	1652	515	4	2	2	662	358	536
Arrive On Green	0.34	0.71	0.00	0.00	0.32	0.32	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	3510	5253	0	1810	5085	1587	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	933	930	0	0	827	401	0	0	0	513	0	757
Grp Sat Flow(s),veh/h/ln	1755	1695	0	1810	1695	1587	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	21.7	5.8	0.0	0.0	11.8	20.6	0.0	0.0	0.0	12.5	0.0	7.9
Cycle Q Clear(g_c), s	21.7	5.8	0.0	0.0	11.8	20.6	0.0	0.0	0.0	12.5	0.0	7.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1183	3620	0	2	1652	515	4	2	2	662	358	536
V/C Ratio(X)	0.79	0.26	0.00	0.00	0.50	0.78	0.00	0.00	0.00	0.78	0.00	1.41
Avail Cap(c_a), veh/h	1341	3802	0	100	2140	668	194	842	715	758	1147	1716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	4.6	0.0	0.0	24.6	27.5	0.0	0.0	0.0	34.8	0.0	7.8
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.0	0.2	4.4	0.0	0.0	0.0	4.4	0.0	188.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	2.7	0.0	0.0	5.5	9.6	0.0	0.0	0.0	6.5	0.0	17.0
LnGrp Delay(d),s/veh	29.9	4.6	0.0	0.0	24.8	31.9	0.0	0.0	0.0	39.2	0.0	195.9
LnGrp LOS	C	A			C	C				D		F
Approach Vol, veh/h		1863			1228			0			1270	
Approach Delay, s/veh		17.3			27.1			0.0			132.6	
Approach LOS		B			C						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	68.8	0.0	21.5	34.9	33.8	21.5	0.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	67.5	5.0	54.5	34.5	38.0	19.5	40.0
Max Q Clear Time (g_c+I1), s	10.3	7.8	0.0	9.9	23.7	22.6	14.5	0.0
Green Ext Time (p_c), s	0.0	14.0	0.0	6.1	6.8	6.0	2.5	0.0

Intersection Summary		
HCM 2010 Ctrl Delay	53.7	
HCM 2010 LOS	D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	596	291	0	0	541	251	215	0	166	0
Future Volume (veh/h)	0	0	596	291	0	0	541	251	215	0	166	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	701	342	0	0	636	295	253	0	195	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	930	1194	448	930	791	911	743	620	4	311	142
Arrive On Green	0.00	0.00	0.49	0.49	0.00	0.00	0.26	0.41	0.41	0.00	0.09	0.00
Sat Flow, veh/h	0	1900	1583	742	1900	1615	3442	1833	1530	3510	3539	1615
Grp Volume(v), veh/h	0	0	701	342	0	0	636	285	263	0	195	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	742	1900	1615	1721	1770	1593	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	0.0	37.3	0.0	0.0	14.3	9.8	10.1	0.0	4.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	37.3	0.0	0.0	14.3	9.8	10.1	0.0	4.5	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Lane Grp Cap(c), veh/h	0	930	1194	448	930	791	911	717	646	4	311	142
V/C Ratio(X)	0.00	0.00	0.59	0.76	0.00	0.00	0.70	0.40	0.41	0.00	0.63	0.00
Avail Cap(c_a), veh/h	0	988	1243	470	988	840	1605	1179	1061	205	914	417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.6	20.7	0.0	0.0	28.4	18.0	18.1	0.0	37.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.7	7.0	0.0	0.0	1.0	0.4	0.4	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	7.2	8.5	0.0	0.0	6.9	4.8	4.5	0.0	2.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	5.3	27.7	0.0	0.0	29.3	18.4	18.5	0.0	39.7	0.0
LnGrp LOS			A	C			C	B	B		D	
Approach Vol, veh/h		701			342			1184			195	
Approach Delay, s/veh		5.3			27.7			24.3			39.7	
Approach LOS		A			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	39.2		46.4	27.1	12.0		46.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	57.0		44.5	39.9	22.1		44.5
Max Q Clear Time (g_c+I1), s	0.0	12.1		2.0	16.3	6.5		39.3
Green Ext Time (p_c), s	0.0	7.1		6.7	6.4	1.0		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	149	17	0	0	232	0	19	0	0	0
Future Vol, veh/h	0	0	149	17	0	0	232	0	19	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	175	20	0	0	273	0	22	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	547	547	1	547	547	0	1	0	0	0	0	0
Stage 1	1	1	-	546	546	-	-	-	-	-	-	-
Stage 2	546	546	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	424	447	1089	424	447	-	1635	-	-	-	-	-
Stage 1	1027	899	-	495	521	-	-	-	-	-	-	-
Stage 2	495	521	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	371	1089	310	371	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	371	-	310	371	-	-	-	-	-	-	-
Stage 1	853	899	-	411	433	-	-	-	-	-	-	-
Stage 2	411	433	-	862	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			7.1	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.167	-	-	-	-	-	-	-
HCM Control Delay (s)	7.6	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-	-	-	-	-

2021 Cumulative PM with Creighton Avenue Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	890	80	416	822	154	72	48	397	130	47	25
Future Volume (veh/h)	46	890	80	416	822	154	72	48	397	130	47	25
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1848	1900	1845	1866	1900	1900	1900	1863	1863	1900	1900
Adj Flow Rate, veh/h	51	978	88	457	903	169	79	53	436	143	52	27
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	3	3	3	2	2	0	0	2	2	0	0
Cap, veh/h	70	1041	94	478	1642	307	391	539	449	293	335	174
Arrive On Green	0.04	0.32	0.32	0.27	0.55	0.55	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1810	3256	293	1757	2968	555	1338	1900	1580	903	1179	612
Grp Volume(v), veh/h	51	527	539	457	539	533	79	53	436	143	0	79
Grp Sat Flow(s),veh/h/ln	1810	1755	1794	1757	1772	1751	1338	1900	1580	903	0	1790
Q Serve(g_s), s	3.6	38.1	38.1	33.3	25.5	25.5	6.1	2.7	35.6	18.1	0.0	4.3
Cycle Q Clear(g_c), s	3.6	38.1	38.1	33.3	25.5	25.5	10.4	2.7	35.6	20.8	0.0	4.3
Prop In Lane	1.00		0.16	1.00		0.32	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	70	561	573	478	980	969	391	539	449	293	0	508
V/C Ratio(X)	0.73	0.94	0.94	0.96	0.55	0.55	0.20	0.10	0.97	0.49	0.00	0.16
Avail Cap(c_a), veh/h	131	584	597	493	980	969	391	539	449	293	0	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.0	43.1	43.1	46.7	18.7	18.7	38.9	34.4	46.2	42.0	0.0	35.0
Incr Delay (d2), s/veh	5.3	23.2	22.9	28.7	0.8	0.8	0.3	0.1	35.2	1.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	22.1	22.5	19.9	12.7	12.5	2.3	1.4	19.9	4.6	0.0	2.1
LnGrp Delay(d),s/veh	67.2	66.3	66.0	75.4	19.5	19.5	39.1	34.5	81.3	43.3	0.0	35.1
LnGrp LOS	E	E	E	E	B	B	D	C	F	D		D
Approach Vol, veh/h		1117			1529			568			222	
Approach Delay, s/veh		66.2			36.2			71.1			40.4	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.7	77.9		42.8	40.1	47.5		42.8
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8
Max Green Setting (Gmax), s	9.4	70.6		37.0	36.6	43.4		37.0
Max Q Clear Time (g_c+I1), s	5.6	27.5		22.8	35.3	40.1		37.6
Green Ext Time (p_c), s	0.0	27.9		3.1	0.1	1.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.0
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1269	137	481	1166	176	829
Future Volume (vph)	1269	137	481	1166	176	829
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.95		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	0.98	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	0.89	0.85
Flt Protected	1.00		0.95	1.00	0.99	1.00
Satd. Flow (prot)	3447		1787	3539	3165	1435
Flt Permitted	1.00		0.95	1.00	0.99	1.00
Satd. Flow (perm)	3447		1787	3539	3165	1435
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1395	151	529	1281	193	911
RTOR Reduction (vph)	4	0	0	0	250	384
Lane Group Flow (vph)	1542	0	529	1281	399	71
Confl. Peds. (#/hr)		3	3		2	1
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	3%	2%	1%	2%	1%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Actuated Green, G (s)	61.3		36.8	102.7	23.0	23.0
Effective Green, g (s)	61.3		36.8	102.7	23.0	23.0
Actuated g/C Ratio	0.42		0.25	0.70	0.16	0.16
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1442		448	2480	496	225
v/s Ratio Prot	c0.45		c0.30	0.36	c0.13	
v/s Ratio Perm						0.05
v/c Ratio	1.07		1.18	0.52	0.91dr	0.32
Uniform Delay, d1	42.6		54.9	10.3	59.6	54.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	44.6		102.2	0.2	9.6	1.1
Delay (s)	87.2		157.1	10.5	69.2	55.8
Level of Service	F		F	B	E	E
Approach Delay (s)	87.2			53.3	63.7	
Approach LOS	F			D	E	

Intersection Summary			
HCM 2000 Control Delay	67.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	146.5	Sum of lost time (s)	20.8
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1975	61	90	1628	160	39	1	79	165	0	40
Future Volume (veh/h)	73	1975	61	90	1628	160	39	1	79	165	0	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1900	1900	1881	1881	1845	1900	1900	1881	1810	1900
Adj Flow Rate, veh/h	79	2147	66	98	1770	174	42	1	86	179	0	43
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	1	3	0	0	1	0	0
Cap, veh/h	101	2148	66	112	2210	988	255	309	262	283	0	250
Arrive On Green	0.06	0.61	0.61	0.06	0.62	0.62	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1792	3503	107	1810	3574	1598	1345	1900	1615	1318	0	1538
Grp Volume(v), veh/h	79	1078	1135	98	1770	174	42	1	86	179	0	43
Grp Sat Flow(s),veh/h/ln	1792	1770	1841	1810	1787	1598	1345	1900	1615	1318	0	1538
Q Serve(g_s), s	4.5	62.6	63.6	5.6	38.8	4.8	2.9	0.0	4.9	13.7	0.0	2.5
Cycle Q Clear(g_c), s	4.5	62.6	63.6	5.6	38.8	4.8	5.4	0.0	4.9	13.7	0.0	2.5
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	1085	1128	112	2210	988	255	309	262	283	0	250
V/C Ratio(X)	0.78	0.99	1.01	0.88	0.80	0.18	0.16	0.00	0.33	0.63	0.00	0.17
Avail Cap(c_a), veh/h	107	1085	1128	112	2210	988	504	659	560	526	0	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.3	19.9	20.1	48.3	15.0	8.5	39.8	36.4	38.4	42.2	0.0	37.4
Incr Delay (d2), s/veh	26.2	25.9	28.2	48.0	3.2	0.4	0.3	0.0	0.7	2.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	38.1	40.8	4.3	19.9	2.2	1.1	0.0	2.2	5.2	0.0	1.1
LnGrp Delay(d),s/veh	74.5	45.8	48.3	96.3	18.1	8.9	40.1	36.4	39.2	44.5	0.0	37.8
LnGrp LOS	E	D	F	F	B	A	D	D	D	D		D
Approach Vol, veh/h		2292			2042			129			222	
Approach Delay, s/veh		48.0			21.1			39.4			43.2	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	69.4		22.2	11.6	70.0		22.2
Change Period (Y+Rc), s	5.8	* 5.8		5.3	5.8	5.8		5.3
Max Green Setting (Gmax), s	6.4	* 64		36.0	6.2	62.6		36.0
Max Q Clear Time (g_c+I1), s	7.6	65.6		15.7	6.5	40.8		7.4
Green Ext Time (p_c), s	0.0	0.0		1.1	0.0	19.5		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	35.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	2124	34	220	1815	99	22	5	189	96	5	67
Future Volume (veh/h)	87	2124	34	220	1815	99	22	5	189	96	5	67
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1881	1881	1900	1900	1882	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2284	37	237	1952	106	24	5	203	103	5	72
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	1	1	0	0	0	0	0	0	0
Cap, veh/h	114	1964	32	196	3107	975	239	6	246	146	127	107
Arrive On Green	0.06	0.55	0.55	0.11	0.60	0.60	0.13	0.16	0.16	0.04	0.07	0.07
Sat Flow, veh/h	1810	3564	58	1792	5136	1612	1810	38	1561	3510	1900	1601
Grp Volume(v), veh/h	94	1131	1190	237	1952	106	24	0	208	103	5	72
Grp Sat Flow(s),veh/h/ln	1810	1770	1852	1792	1712	1612	1810	0	1599	1755	1900	1601
Q Serve(g_s), s	8.1	86.6	86.6	17.2	38.1	2.2	1.8	0.0	19.8	4.6	0.4	5.5
Cycle Q Clear(g_c), s	8.1	86.6	86.6	17.2	38.1	2.2	1.8	0.0	19.8	4.6	0.4	5.5
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	114	976	1020	196	3107	975	239	0	252	146	127	107
V/C Ratio(X)	0.82	1.16	1.17	1.21	0.63	0.11	0.10	0.00	0.82	0.70	0.04	0.67
Avail Cap(c_a), veh/h	188	976	1020	196	3107	975	239	0	370	214	484	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	35.3	35.3	70.0	19.8	3.2	59.9	0.0	64.1	74.3	68.6	46.2
Incr Delay (d2), s/veh	5.5	83.2	85.7	131.7	1.0	0.2	0.1	0.0	15.9	6.1	0.1	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	64.8	68.5	15.7	18.2	1.8	0.9	0.0	9.9	2.3	0.2	3.1
LnGrp Delay(d),s/veh	78.2	118.4	121.0	201.7	20.8	3.5	60.0	0.0	80.0	80.4	68.7	53.8
LnGrp LOS	E	F	F	F	C	A	E		E	F	E	D
Approach Vol, veh/h		2415			2295			232			180	
Approach Delay, s/veh		118.1			38.6			77.9			69.5	
Approach LOS		F			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	92.4	11.1	30.6	14.5	100.9	25.4	16.3
Change Period (Y+Rc), s	5.8	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	17.2	86.6	9.6	36.4	16.3	88.7	6.0	40.0
Max Q Clear Time (g_c+I1), s	19.2	88.6	6.6	21.8	10.1	40.1	3.8	7.5
Green Ext Time (p_c), s	0.0	0.0	0.1	2.0	0.0	48.5	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	79.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	434	1959	29	25	1692	369	16	13	41	542	21	430
Future Volume (veh/h)	434	1959	29	25	1692	369	16	13	41	542	21	430
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.94	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1827	1900	1863	1881	1900	1857	1900	1863	1900	1900
Adj Flow Rate, veh/h	482	2177	32	28	1880	410	18	14	46	602	23	478
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	2	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	2	4	0	2	1	0	10	10	2	0	0
Cap, veh/h	624	2708	799	53	1897	915	40	28	92	698	19	399
Arrive On Green	0.18	0.53	0.53	0.06	0.75	0.75	0.02	0.08	0.08	0.20	0.26	0.26
Sat Flow, veh/h	3476	5085	1500	1810	5085	1582	1810	362	1191	3442	73	1524
Grp Volume(v), veh/h	482	2177	32	28	1880	410	18	0	60	602	0	501
Grp Sat Flow(s),veh/h/ln	1738	1695	1500	1810	1695	1582	1810	0	1553	1721	0	1598
Q Serve(g_s), s	17.2	45.5	1.3	2.0	46.8	0.0	1.3	0.0	4.8	22.0	0.0	34.0
Cycle Q Clear(g_c), s	17.2	45.5	1.3	2.0	46.8	0.0	1.3	0.0	4.8	22.0	0.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		0.95
Lane Grp Cap(c), veh/h	624	2708	799	53	1897	915	40	0	119	698	0	418
V/C Ratio(X)	0.77	0.80	0.04	0.53	0.99	0.45	0.45	0.00	0.50	0.86	0.00	1.20
Avail Cap(c_a), veh/h	624	2708	799	86	1897	915	84	0	188	698	0	418
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.8	24.8	14.5	60.3	16.3	5.3	62.8	0.0	57.6	50.1	0.0	48.0
Incr Delay (d2), s/veh	0.5	0.2	0.0	2.2	15.7	1.2	7.8	0.0	3.2	10.3	0.0	110.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	21.2	0.6	1.0	23.6	3.1	0.7	0.0	2.2	11.5	0.0	27.8
LnGrp Delay(d),s/veh	51.3	25.1	14.5	62.5	31.9	6.4	70.5	0.0	60.8	60.4	0.0	158.6
LnGrp LOS	D	C	B	E	C	A	E		E	E		F
Approach Vol, veh/h		2691			2318			78			1103	
Approach Delay, s/veh		29.7			27.8			63.1			105.0	
Approach LOS		C			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	75.0	7.5	39.1	29.1	54.3	31.5	15.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	5.8	5.8	5.1	* 5.1
Max Green Setting (Gmax), s	6.8	63.7	6.0	34.0	20.2	48.5	24.3	* 16
Max Q Clear Time (g_c+I1), s	4.0	47.5	3.3	36.0	19.2	48.8	24.0	6.8
Green Ext Time (p_c), s	0.0	15.5	0.0	0.0	0.2	0.0	0.2	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1965	582	0	1522	533	0	0	0	570	1	783
Future Volume (veh/h)	0	1965	582	0	1522	533	0	0	0	570	1	783
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1863	0	1863	1900				1900	1881	1881
Adj Flow Rate, veh/h	0	2026	600	0	1569	0				588	1	807
Adj No. of Lanes	0	3	1	0	3	1				0	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	3	2	0	2	0				1	0	1
Cap, veh/h	0	2801	878	0	2829	898				634	1	998
Arrive On Green	0.00	1.00	1.00	0.00	0.74	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	5202	1578	0	5253	1615				1789	3	2814
Grp Volume(v), veh/h	0	2026	600	0	1569	0				589	0	807
Grp Sat Flow(s),veh/h/ln	0	1679	1578	0	1695	1615				1792	0	1407
Q Serve(g_s), s	0.0	0.0	0.0	0.0	17.7	0.0				41.1	0.0	33.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	17.7	0.0				41.1	0.0	33.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2801	878	0	2829	898				635	0	998
V/C Ratio(X)	0.00	0.72	0.68	0.00	0.55	0.00				0.93	0.00	0.81
Avail Cap(c_a), veh/h	0	2801	878	0	2829	898				706	0	1108
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.54	0.54	0.00	0.57	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	9.8	0.0				40.3	0.0	38.0
Incr Delay (d2), s/veh	0.0	0.9	2.4	0.0	0.4	0.0				16.6	0.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.6	0.0	8.2	0.0				23.2	0.0	13.6
LnGrp Delay(d),s/veh	0.0	0.9	2.4	0.0	10.3	0.0				57.0	0.0	41.6
LnGrp LOS		A	A		B					E		D
Approach Vol, veh/h		2626			1569						1396	
Approach Delay, s/veh		1.2			10.3						48.1	
Approach LOS		A			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		78.1		51.9		78.1		
Change Period (Y+Rc), s		5.8		5.8		5.8		
Max Green Setting (Gmax), s		67.2		51.2		67.2		
Max Q Clear Time (g_c+I1), s		2.0		43.1		19.7		
Green Ext Time (p_c), s		44.0		3.0		35.3		

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1796	697	0	1527	541	700
Future Volume (veh/h)	1796	697	0	1527	541	700
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1845	0	1881	1881	1881
Adj Flow Rate, veh/h	1952	0	0	1660	669	674
Adj No. of Lanes	3	1	0	3	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	3	0	1	1	1
Cap, veh/h	2421	739	0	2421	787	702
Arrive On Green	0.94	0.00	0.00	0.94	0.44	0.44
Sat Flow, veh/h	5305	1568	0	5474	1792	1599
Grp Volume(v), veh/h	1952	0	0	1660	669	674
Grp Sat Flow(s),veh/h/ln	1712	1568	0	1712	1792	1599
Q Serve(g_s), s	11.7	0.0	0.0	6.8	43.4	53.1
Cycle Q Clear(g_c), s	11.7	0.0	0.0	6.8	43.4	53.1
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2421	739	0	2421	787	702
V/C Ratio(X)	0.81	0.00	0.00	0.69	0.85	0.96
Avail Cap(c_a), veh/h	2421	739	0	2421	830	740
HCM Platoon Ratio	2.00	2.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	0.60	0.00	0.00	0.40	1.00	1.00
Uniform Delay (d), s/veh	2.3	0.0	0.0	2.2	32.6	35.3
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.6	7.8	22.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	0.0	2.6	23.1	27.9
LnGrp Delay(d),s/veh	4.1	0.0	0.0	2.8	40.5	58.2
LnGrp LOS	A			A	D	E
Approach Vol, veh/h	1952			1660	1343	
Approach Delay, s/veh	4.1			2.8	49.4	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		67.1				67.1		62.9
Change Period (Y+Rc), s		5.8				5.8		5.8
Max Green Setting (Gmax), s		58.2				58.2		60.2
Max Q Clear Time (g_c+I1), s		13.7				8.8		55.1
Green Ext Time (p_c), s		30.9				33.2		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	2138	84	39	1603	127	55	0	25	132	0	263
Future Volume (veh/h)	292	2138	84	39	1603	127	55	0	25	132	0	263
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1863	1827	1900	1900	1900	1900
Adj Flow Rate, veh/h	321	2349	92	43	1762	140	60	0	27	145	0	289
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	1	0	1	0	2	0	0	0	0	0
Cap, veh/h	139	2216	662	237	2495	776	136	0	372	70	0	325
Arrive On Green	0.15	0.86	0.86	0.13	0.49	0.49	0.08	0.00	0.24	0.04	0.00	0.20
Sat Flow, veh/h	1810	5136	1533	1810	5136	1598	1774	0	1553	1810	0	1615
Grp Volume(v), veh/h	321	2349	92	43	1762	140	60	0	27	145	0	289
Grp Sat Flow(s),veh/h/ln	1810	1712	1533	1810	1712	1598	1774	0	1553	1810	0	1615
Q Serve(g_s), s	10.0	56.1	1.2	2.7	34.9	6.4	4.2	0.0	1.7	5.0	0.0	22.6
Cycle Q Clear(g_c), s	10.0	56.1	1.2	2.7	34.9	6.4	4.2	0.0	1.7	5.0	0.0	22.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	2216	662	237	2495	776	136	0	372	70	0	325
V/C Ratio(X)	2.31	1.06	0.14	0.18	0.71	0.18	0.44	0.00	0.07	2.08	0.00	0.89
Avail Cap(c_a), veh/h	139	2216	662	237	2495	776	136	0	523	70	0	472
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	8.9	5.1	50.3	26.2	18.8	57.3	0.0	38.3	62.5	0.0	50.5
Incr Delay (d2), s/veh	597.1	32.0	0.2	0.1	1.4	0.4	2.2	0.0	0.1	533.0	0.0	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.0	30.4	0.5	1.4	16.8	2.9	2.2	0.0	0.8	12.8	0.0	11.4
LnGrp Delay(d),s/veh	652.1	40.9	5.3	50.4	27.5	19.2	59.5	0.0	38.3	595.5	0.0	64.3
LnGrp LOS	F	F	A	D	C	B	E		D	F		E
Approach Vol, veh/h		2762			1945			87			434	
Approach Delay, s/veh		110.8			27.5			53.0			241.8	
Approach LOS		F			C			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.5	61.5	15.4	30.6	15.4	68.6	9.5	36.5
Change Period (Y+Rc), s	5.4	* 5.4	5.4	4.5	5.4	5.4	4.5	* 5.4
Max Green Setting (Gmax), s	6.6	* 56	10.0	38.0	10.0	51.3	5.0	* 44
Max Q Clear Time (g_c+I1), s	14.7	58.1	6.2	24.6	12.0	36.9	7.0	3.7
Green Ext Time (p_c), s	1.2	0.0	0.1	1.5	0.0	12.1	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	89.7
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	531	1680	50	0	1281	227	0	0	21	348	0	484
Future Volume (veh/h)	531	1680	50	0	1281	227	0	0	21	348	0	484
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1882	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	603	1909	57	0	1456	258	0	0	24	395	0	550
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	1	0	0	0	0	0	0	0
Cap, veh/h	1185	3641	109	1	1738	541	3	73	62	516	418	625
Arrive On Green	0.45	0.95	0.95	0.00	0.68	0.68	0.00	0.00	0.04	0.15	0.00	0.22
Sat Flow, veh/h	3510	5124	153	1810	5136	1598	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	603	1275	691	0	1456	258	0	0	24	395	0	550
Grp Sat Flow(s),veh/h/ln	1755	1712	1852	1810	1712	1598	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	15.9	5.2	5.3	0.0	27.5	10.0	0.0	0.0	1.8	14.1	0.0	24.3
Cycle Q Clear(g_c), s	15.9	5.2	5.3	0.0	27.5	10.0	0.0	0.0	1.8	14.1	0.0	24.3
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1185	2434	1316	1	1738	541	3	73	62	516	418	625
V/C Ratio(X)	0.51	0.52	0.52	0.00	0.84	0.48	0.00	0.00	0.39	0.77	0.00	0.88
Avail Cap(c_a), veh/h	1185	2434	1316	70	1738	541	135	628	534	516	709	1060
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	0.00	0.89	0.89	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	1.2	1.2	0.0	18.3	15.5	0.0	0.0	56.7	53.3	0.0	49.0
Incr Delay (d2), s/veh	0.2	0.5	0.9	0.0	4.5	2.7	0.0	0.0	3.9	6.8	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	2.2	2.5	0.0	13.4	4.7	0.0	0.0	0.9	7.3	0.0	10.0
LnGrp Delay(d),s/veh	28.3	1.7	2.1	0.0	22.8	18.2	0.0	0.0	60.6	60.1	0.0	53.8
LnGrp LOS	C	A	A		C	B			E	E		D
Approach Vol, veh/h		2569			1714			24			945	
Approach Delay, s/veh		8.0			22.1			60.6			56.4	
Approach LOS		A			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	96.9	0.0	33.1	48.4	48.5	23.6	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	53.5	5.0	48.5	14.5	44.0	10.5	43.0
Max Q Clear Time (g_c+I1), s	0.0	7.3	0.0	26.3	17.9	29.5	16.1	3.8
Green Ext Time (p_c), s	0.0	26.1	0.0	2.3	0.0	8.8	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1875	99	181	1307	78	121	0	80	100	0	81
Future Volume (veh/h)	105	1875	99	181	1307	78	121	0	80	100	0	81
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1900	1900	1881	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	2131	112	206	1485	89	138	0	91	114	0	92
Adj No. of Lanes	1	3	0	1	3	1	2	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	0	0	1	0	0	0	0	0
Cap, veh/h	551	1794	94	671	2206	685	166	0	123	84	0	122
Arrive On Green	0.41	0.48	0.48	0.37	0.43	0.43	0.05	0.00	0.08	0.05	0.00	0.08
Sat Flow, veh/h	1810	4993	261	1810	5187	1611	3476	0	1615	1810	0	1615
Grp Volume(v), veh/h	119	1458	785	206	1485	89	138	0	91	114	0	92
Grp Sat Flow(s),veh/h/ln	1810	1712	1830	1810	1729	1611	1738	0	1615	1810	0	1615
Q Serve(g_s), s	5.6	46.7	46.7	10.5	30.0	3.4	5.1	0.0	7.2	6.0	0.0	7.3
Cycle Q Clear(g_c), s	5.6	46.7	46.7	10.5	30.0	3.4	5.1	0.0	7.2	6.0	0.0	7.3
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	551	1230	658	671	2206	685	166	0	123	84	0	122
V/C Ratio(X)	0.22	1.19	1.19	0.31	0.67	0.13	0.83	0.00	0.74	1.36	0.00	0.76
Avail Cap(c_a), veh/h	551	1230	658	671	2206	685	166	0	535	84	0	534
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	33.9	33.9	29.0	30.1	14.0	61.4	0.0	58.8	62.0	0.0	58.9
Incr Delay (d2), s/veh	0.1	89.8	98.6	0.1	1.7	0.4	27.4	0.0	8.4	223.5	0.0	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	37.3	41.5	5.3	14.6	1.6	3.1	0.0	3.5	8.2	0.0	3.6
LnGrp Delay(d),s/veh	28.6	123.7	132.6	29.1	31.7	14.4	88.8	0.0	67.2	285.5	0.0	68.0
LnGrp LOS	C	F	F	C	C	B	F		E	F		E
Approach Vol, veh/h		2362			1780			229			206	
Approach Delay, s/veh		121.9			30.6			80.2			188.4	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	52.8	52.1	10.8	14.3	44.2	60.7	10.6	14.5
Change Period (Y+Rc), s	4.6	5.4	4.6	4.5	4.6	5.4	4.6	4.6
Max Green Setting (Gmax), s	45.6	46.7	6.2	43.0	6.4	55.3	6.0	43.1
Max Q Clear Time (g_c+I1), s	12.5	48.7	7.1	9.3	7.6	32.0	8.0	9.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.5	0.0	14.4	0.0	0.8

Intersection Summary		
HCM 2010 Ctrl Delay		87.3
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	673	962	384	117	687	75	316	389	119	112	292	527
Future Volume (veh/h)	673	962	384	117	687	75	316	389	119	112	292	527
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1881	1900	1900	1900	1881	1900	1900	1900	1893	1900
Adj Flow Rate, veh/h	740	1057	422	129	755	82	347	427	131	123	321	579
Adj No. of Lanes	2	2	1	2	3	1	1	1	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	0	1	0	0	0	1	0	0	0	1	1
Cap, veh/h	810	1233	546	176	851	265	291	537	165	146	537	480
Arrive On Green	0.23	0.34	0.34	0.05	0.16	0.16	0.16	0.38	0.38	0.08	0.30	0.30
Sat Flow, veh/h	3476	3610	1599	3510	5187	1615	1792	1396	428	1810	1799	1606
Grp Volume(v), veh/h	740	1057	422	129	755	82	347	0	558	123	321	579
Grp Sat Flow(s),veh/h/ln	1738	1805	1599	1755	1729	1615	1792	0	1824	1810	1799	1606
Q Serve(g_s), s	29.9	39.2	34.0	5.2	20.5	5.4	23.4	0.0	39.0	9.7	21.9	43.0
Cycle Q Clear(g_c), s	29.9	39.2	34.0	5.2	20.5	5.4	23.4	0.0	39.0	9.7	21.9	43.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	810	1233	546	176	851	265	291	0	702	146	537	480
V/C Ratio(X)	0.91	0.86	0.77	0.73	0.89	0.31	1.19	0.00	0.80	0.84	0.60	1.21
Avail Cap(c_a), veh/h	810	1367	605	193	1391	433	291	0	702	176	537	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	44.1	42.4	67.4	58.9	36.7	60.3	0.0	39.2	65.3	43.1	50.5
Incr Delay (d2), s/veh	14.4	7.8	10.2	12.4	2.5	0.2	115.0	0.0	8.5	22.5	4.2	111.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	20.9	16.5	2.8	10.0	2.4	20.9	0.0	21.3	5.7	11.5	33.9
LnGrp Delay(d),s/veh	68.2	52.0	52.6	79.9	61.4	36.9	175.3	0.0	47.7	87.8	47.3	161.9
LnGrp LOS	E	D	D	E	E	D	F		D	F	D	F
Approach Vol, veh/h		2219			966			905			1023	
Approach Delay, s/veh		57.5			61.8			96.6			117.0	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.6	61.2	12.6	54.6	28.0	48.8	38.9	28.2
Change Period (Y+Rc), s	4.0	5.8	5.4	5.4	4.6	5.8	5.4	* 4.6
Max Green Setting (Gmax), s	31.6	53.0	7.9	54.5	23.4	43.0	25.4	* 39
Max Q Clear Time (g_c+I1), s	11.7	41.0	7.2	41.2	25.4	45.0	31.9	22.5
Green Ext Time (p_c), s	0.0	10.5	0.0	7.9	0.0	0.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	77.2
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	0	83	2	1	5	45	958	5	6	778	80
Future Volume (veh/h)	122	0	83	2	1	5	45	958	5	6	778	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1900	1339	1900	1900	1897	1900	1900	1889	1900
Adj Flow Rate, veh/h	133	0	90	2	1	5	49	1041	5	7	846	87
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	239	200	4	2	9	129	2220	11	19	1779	183
Arrive On Green	0.13	0.00	0.13	0.01	0.01	0.01	0.07	0.60	0.60	0.01	0.54	0.54
Sat Flow, veh/h	1774	1900	1583	298	149	745	1810	3679	18	1810	3279	337
Grp Volume(v), veh/h	133	0	90	8	0	0	49	510	536	7	463	470
Grp Sat Flow(s),veh/h/ln	1774	1900	1583	1193	0	0	1810	1803	1894	1810	1795	1821
Q Serve(g_s), s	5.9	0.0	4.4	0.6	0.0	0.0	2.2	13.1	13.1	0.3	13.4	13.4
Cycle Q Clear(g_c), s	5.9	0.0	4.4	0.6	0.0	0.0	2.2	13.1	13.1	0.3	13.4	13.4
Prop In Lane	1.00		1.00	0.25		0.62	1.00		0.01	1.00		0.19
Lane Grp Cap(c), veh/h	224	239	200	15	0	0	129	1088	1143	19	974	988
V/C Ratio(X)	0.59	0.00	0.45	0.55	0.00	0.00	0.38	0.47	0.47	0.36	0.48	0.48
Avail Cap(c_a), veh/h	739	792	660	497	0	0	431	1088	1143	431	1069	1084
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	34.0	41.2	0.0	0.0	37.2	9.2	9.2	41.2	11.8	11.8
Incr Delay (d2), s/veh	11.1	0.0	7.2	11.6	0.0	0.0	0.7	1.2	1.2	10.8	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	2.3	0.2	0.0	0.0	1.1	6.9	7.2	0.2	6.9	7.0
LnGrp Delay(d),s/veh	45.8	0.0	41.2	52.8	0.0	0.0	37.9	10.4	10.4	52.0	13.2	13.2
LnGrp LOS	D		D	D			D	B	B	D	B	B
Approach Vol, veh/h		223			8			1095			940	
Approach Delay, s/veh		44.0			52.8			11.6			13.5	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	56.5		16.4	10.6	51.4		5.6
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		4.6
Max Green Setting (Gmax), s	20.0	50.0		35.0	20.0	50.0		35.0
Max Q Clear Time (g_c+I1), s	2.3	15.1		7.9	4.2	15.4		2.6
Green Ext Time (p_c), s	0.0	31.1		2.7	0.0	30.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	10	280	31	16	6	293	692	51	1	556	50
Future Volume (veh/h)	63	10	280	31	16	6	293	692	51	1	556	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1900	1769	1900	1881	1900	1900	1900	1891	1900
Adj Flow Rate, veh/h	68	11	301	33	17	6	315	744	55	1	598	54
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	0	10	10	1	0	0	0	0	0
Cap, veh/h	93	443	368	66	540	180	346	990	822	3	1097	99
Arrive On Green	0.05	0.23	0.23	0.04	0.22	0.22	0.19	0.52	0.52	0.00	0.33	0.33
Sat Flow, veh/h	1810	1900	1575	1810	2474	825	1792	1900	1577	1810	3328	300
Grp Volume(v), veh/h	68	11	301	33	11	12	315	744	55	1	322	330
Grp Sat Flow(s),veh/h/ln	1810	1900	1575	1810	1681	1618	1792	1900	1577	1810	1796	1832
Q Serve(g_s), s	3.6	0.4	17.8	1.8	0.5	0.6	16.9	30.3	1.7	0.1	14.4	14.5
Cycle Q Clear(g_c), s	3.6	0.4	17.8	1.8	0.5	0.6	16.9	30.3	1.7	0.1	14.4	14.5
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	93	443	368	66	367	353	346	990	822	3	592	604
V/C Ratio(X)	0.73	0.02	0.82	0.50	0.03	0.03	0.91	0.75	0.07	0.34	0.54	0.55
Avail Cap(c_a), veh/h	369	774	642	369	685	659	365	990	822	369	914	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	29.0	35.7	46.5	30.2	30.2	38.8	18.5	11.7	49.0	26.9	26.9
Incr Delay (d2), s/veh	4.0	0.0	6.1	2.2	0.0	0.1	24.6	3.6	0.1	22.8	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.2	8.3	0.9	0.2	0.3	10.8	16.7	0.7	0.0	7.4	7.5
LnGrp Delay(d),s/veh	49.9	29.1	41.8	48.7	30.3	30.3	63.4	22.1	11.7	71.8	28.1	28.1
LnGrp LOS	D	C	D	D	C	C	E	C	B	E	C	C
Approach Vol, veh/h		380			56			1114			653	
Approach Delay, s/veh		42.9			41.1			33.3			28.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	57.0	8.2	28.3	23.6	38.2	9.7	26.8
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	32.3	3.8	19.8	18.9	16.5	5.6	2.6
Green Ext Time (p_c), s	0.0	11.7	0.0	1.7	0.1	15.9	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	34	153	11	25	10	108	603	30	12	455	88
Future Volume (veh/h)	98	34	153	11	25	10	108	603	30	12	455	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	108	37	168	12	27	11	119	663	33	13	500	97
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	140	405	343	32	391	150	154	1590	79	35	1172	226
Arrive On Green	0.08	0.21	0.21	0.02	0.15	0.15	0.09	0.45	0.45	0.02	0.39	0.39
Sat Flow, veh/h	1810	1900	1610	1810	2552	976	1810	3500	174	1810	3018	583
Grp Volume(v), veh/h	108	37	168	12	19	19	119	342	354	13	298	299
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1723	1810	1805	1869	1810	1805	1796
Q Serve(g_s), s	4.1	1.1	6.5	0.5	0.6	0.7	4.5	9.0	9.0	0.5	8.5	8.6
Cycle Q Clear(g_c), s	4.1	1.1	6.5	0.5	0.6	0.7	4.5	9.0	9.0	0.5	8.5	8.6
Prop In Lane	1.00		1.00	1.00		0.57	1.00		0.09	1.00		0.32
Lane Grp Cap(c), veh/h	140	405	343	32	277	264	154	820	849	35	701	697
V/C Ratio(X)	0.77	0.09	0.49	0.37	0.07	0.07	0.77	0.42	0.42	0.38	0.43	0.43
Avail Cap(c_a), veh/h	514	1080	915	514	1026	979	514	1282	1327	514	1282	1276
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	22.2	24.3	34.2	25.5	25.5	31.5	12.9	12.9	34.1	15.8	15.8
Incr Delay (d2), s/veh	3.3	0.1	1.5	2.6	0.1	0.2	3.1	0.5	0.5	2.5	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.6	3.0	0.3	0.3	0.3	2.4	4.6	4.7	0.3	4.3	4.4
LnGrp Delay(d),s/veh	35.2	22.4	25.8	36.8	25.6	25.7	34.6	13.5	13.4	36.6	16.4	16.5
LnGrp LOS	D	C	C	D	C	C	C	B	B	D	B	B
Approach Vol, veh/h		313			50			815			610	
Approach Delay, s/veh		28.6			28.3			16.5			16.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	37.8	5.9	20.8	10.6	33.1	10.1	16.6
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.5	11.0	2.5	8.5	6.5	10.6	6.1	2.7
Green Ext Time (p_c), s	0.0	16.0	0.0	1.4	0.1	16.0	0.1	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	22	0	0	10	0	716	42	0	809	0
Future Vol, veh/h	0	0	22	0	0	10	0	716	42	0	809	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	26	0	0	12	0	842	49	0	952	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	476	-	-	421	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	462	0	0	587	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	462	-	-	587	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.3	11.3	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	462	587	-	-
HCM Lane V/C Ratio	-	-	0.056	0.02	-	-
HCM Control Delay (s)	-	-	13.3	11.3	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	425	255	0	0	361	162	135	0	119	0
Future Volume (veh/h)	0	0	425	255	0	0	361	162	135	0	119	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	500	300	0	0	425	191	159	0	140	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	799	964	528	799	679	649	357	281	367	374	171
Arrive On Green	0.00	0.00	0.42	0.42	0.00	0.00	0.19	0.19	0.19	0.00	0.11	0.00
Sat Flow, veh/h	0	1900	1583	894	1900	1615	3442	1886	1485	3510	3539	1615
Grp Volume(v), veh/h	0	0	500	300	0	0	425	179	171	0	140	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	894	1900	1615	1721	1770	1601	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	0.0	13.8	0.0	0.0	5.4	4.3	4.6	0.0	1.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	13.8	0.0	0.0	5.4	4.3	4.6	0.0	1.7	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		0.93	1.00		1.00
Lane Grp Cap(c), veh/h	0	799	964	528	799	679	649	335	303	367	374	171
V/C Ratio(X)	0.00	0.00	0.52	0.57	0.00	0.00	0.66	0.53	0.57	0.00	0.37	0.00
Avail Cap(c_a), veh/h	0	2030	1990	1108	2030	1725	2148	1909	1727	371	1984	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	5.3	11.9	0.0	0.0	17.8	17.3	17.4	0.0	19.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.0	0.0	0.0	1.1	1.3	1.7	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.7	3.5	0.0	0.0	2.6	2.2	2.1	0.0	0.9	0.0
LnGrp Delay(d),s/veh	0.0	0.0	5.7	12.9	0.0	0.0	18.9	18.6	19.0	0.0	20.3	0.0
LnGrp LOS			A	B			B	B	B		C	
Approach Vol, veh/h		500			300			775			140	
Approach Delay, s/veh		5.7			12.9			18.9			20.3	
Approach LOS		A			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.4	13.5		24.4	13.4	9.5		24.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	51.0		50.5	29.5	26.5		50.5
Max Q Clear Time (g_c+I1), s	0.0	6.6		2.0	7.4	3.7		15.8
Green Ext Time (p_c), s	0.0	2.4		4.1	1.5	0.8		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	106	13	0	0	151	0	12	0	0	0
Future Vol, veh/h	0	0	106	13	0	0	151	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	125	15	0	0	178	0	14	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	356	356	1	356	356	0	1	0	0	0	0	0
Stage 1	1	1	-	355	355	-	-	-	-	-	-	-
Stage 2	355	355	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	580	573	1089	580	573	-	1635	-	-	-	-	-
Stage 1	1027	899	-	641	633	-	-	-	-	-	-	-
Stage 2	641	633	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	510	1089	470	510	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	510	-	470	510	-	-	-	-	-	-	-
Stage 1	914	899	-	570	563	-	-	-	-	-	-	-
Stage 2	570	563	-	909	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			6.9	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.109	-	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1009	448	284	1289	0	0	0	0	705	0	445
Future Volume (veh/h)	0	1009	448	284	1289	0	0	0	0	705	0	445
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1073	477	302	1371	0				750	0	473
Adj No. of Lanes	0	3	1	2	3	0				2	0	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2332	726	385	3161	0				885	0	790
Arrive On Green	0.00	0.46	0.46	0.04	0.21	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	5253	1583	3442	5253	0				3548	0	3167
Grp Volume(v), veh/h	0	1073	477	302	1371	0				750	0	473
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1695	0				1774	0	1583
Q Serve(g_s), s	0.0	13.0	21.0	7.8	21.2	0.0				18.1	0.0	11.9
Cycle Q Clear(g_c), s	0.0	13.0	21.0	7.8	21.2	0.0				18.1	0.0	11.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2332	726	385	3161	0				885	0	790
V/C Ratio(X)	0.00	0.46	0.66	0.78	0.43	0.00				0.85	0.00	0.60
Avail Cap(c_a), veh/h	0	2332	726	535	3161	0				1222	0	1091
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.74	0.74	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.7	18.9	42.3	22.0	0.0				32.1	0.0	29.8
Incr Delay (d2), s/veh	0.0	0.7	4.6	2.4	0.3	0.0				3.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.2	10.1	3.9	10.1	0.0				9.2	0.0	5.2
LnGrp Delay(d),s/veh	0.0	17.4	23.5	44.7	22.3	0.0				35.3	0.0	30.1
LnGrp LOS		B	C	D	C					D		C
Approach Vol, veh/h		1550			1673						1223	
Approach Delay, s/veh		19.3			26.3						33.2	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.7	47.1		28.3		61.7		
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		
Max Green Setting (Gmax), s	14.0	28.0		31.0		47.0		
Max Q Clear Time (g_c+I1), s	9.8	23.0		20.1		23.2		
Green Ext Time (p_c), s	0.2	4.4		2.4		16.0		

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	1360	0	0	944	612	646	0	471	0	0	0
Future Volume (veh/h)	341	1360	0	0	944	612	646	0	471	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	371	1478	0	0	1026	665	861	0	341			
Adj No. of Lanes	2	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	447	3033	0	0	2084	641	975	0	435			
Arrive On Green	0.13	0.60	0.00	0.00	0.41	0.41	0.27	0.00	0.27			
Sat Flow, veh/h	3442	5253	0	0	5253	1563	3548	0	1583			
Grp Volume(v), veh/h	371	1478	0	0	1026	665	861	0	341			
Grp Sat Flow(s),veh/h/ln	1721	1695	0	0	1695	1563	1774	0	1583			
Q Serve(g_s), s	9.5	14.9	0.0	0.0	13.4	36.9	20.9	0.0	17.9			
Cycle Q Clear(g_c), s	9.5	14.9	0.0	0.0	13.4	36.9	20.9	0.0	17.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	447	3033	0	0	2084	641	975	0	435			
V/C Ratio(X)	0.83	0.49	0.00	0.00	0.49	1.04	0.88	0.00	0.78			
Avail Cap(c_a), veh/h	535	3033	0	0	2084	641	1183	0	528			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	0.76	0.76	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.2	10.3	0.0	0.0	19.6	26.6	31.3	0.0	30.2			
Incr Delay (d2), s/veh	6.2	0.4	0.0	0.0	0.6	41.2	6.2	0.0	5.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.9	7.0	0.0	0.0	6.4	23.2	11.0	0.0	8.4			
LnGrp Delay(d),s/veh	44.3	10.8	0.0	0.0	20.3	67.7	37.5	0.0	35.1			
LnGrp LOS	D	B			C	F	D		D			
Approach Vol, veh/h		1849			1691			1202				
Approach Delay, s/veh		17.5			38.9			36.8				
Approach LOS		B			D			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		59.5			16.8	42.7		30.5
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8
Max Green Setting (Gmax), s		48.0			14.0	28.0		30.0
Max Q Clear Time (g_c+I1), s		16.9			11.5	38.9		22.9
Green Ext Time (p_c), s		20.4			0.2	0.0		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	1303	38	134	1146	65	74	38	104	181	29	128
Future Volume (veh/h)	288	1303	38	134	1146	65	74	38	104	181	29	128
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	294	1330	39	137	1169	66	76	39	106	185	30	131
Adj No. of Lanes	1	3	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	419	2594	76	172	1251	547	369	114	309	300	478	406
Arrive On Green	0.24	0.51	0.51	0.10	0.35	0.35	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5078	149	1774	3539	1548	1219	443	1205	1237	1863	1581
Grp Volume(v), veh/h	294	888	481	137	1169	66	76	0	145	185	30	131
Grp Sat Flow(s),veh/h/ln	1774	1695	1836	1774	1770	1548	1219	0	1648	1237	1863	1581
Q Serve(g_s), s	15.3	17.5	17.5	7.6	32.2	2.9	5.1	0.0	7.2	14.5	1.2	6.8
Cycle Q Clear(g_c), s	15.3	17.5	17.5	7.6	32.2	2.9	6.3	0.0	7.2	21.7	1.2	6.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	419	1732	938	172	1251	547	369	0	423	300	478	406
V/C Ratio(X)	0.70	0.51	0.51	0.80	0.93	0.12	0.21	0.00	0.34	0.62	0.06	0.32
Avail Cap(c_a), veh/h	419	1732	938	255	1251	547	492	0	589	412	647	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.72	0.72	0.72	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	16.4	16.4	44.6	31.5	22.0	30.7	0.0	30.6	39.5	28.4	30.4
Incr Delay (d2), s/veh	3.6	0.9	1.6	4.2	10.8	0.3	0.3	0.0	0.5	2.1	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	8.4	9.2	3.9	17.6	1.3	1.7	0.0	3.4	5.1	0.6	3.0
LnGrp Delay(d),s/veh	38.9	17.3	18.0	48.9	42.3	22.4	31.0	0.0	31.1	41.5	28.4	30.9
LnGrp LOS	D	B	B	D	D	C	C		C	D	C	C
Approach Vol, veh/h		1663			1372			221			346	
Approach Delay, s/veh		21.3			42.0			31.1			36.4	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.3	56.9		30.8	29.2	41.0		30.8
Change Period (Y+Rc), s	3.5	5.3		4.9	5.3	* 5.3		4.9
Max Green Setting (Gmax), s	14.5	36.7		35.1	15.5	* 36		36.1
Max Q Clear Time (g_c+I1), s	9.6	19.5		23.7	17.3	34.2		9.2
Green Ext Time (p_c), s	0.1	11.4		1.9	0.0	1.2		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	5	1109	374	55	855	500	109
Future Volume (veh/h)	5	1109	374	55	855	500	109
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h		1192	402	59	919	538	117
Adj No. of Lanes		2	1	1	2	1	1
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1523	681	81	1904	589	525
Arrive On Green		0.43	0.43	0.05	0.54	0.33	0.33
Sat Flow, veh/h		3632	1583	1774	3632	1774	1583
Grp Volume(v), veh/h		1192	402	59	919	538	117
Grp Sat Flow(s),veh/h/ln		1770	1583	1774	1770	1774	1583
Q Serve(g_s), s		23.3	15.6	2.6	13.1	23.4	4.3
Cycle Q Clear(g_c), s		23.3	15.6	2.6	13.1	23.4	4.3
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1523	681	81	1904	589	525
V/C Ratio(X)		0.78	0.59	0.73	0.48	0.91	0.22
Avail Cap(c_a), veh/h		1757	786	660	1904	660	589
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		19.7	17.5	38.0	11.6	25.8	19.4
Incr Delay (d2), s/veh		1.9	0.7	4.7	0.1	16.5	0.3
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		11.7	6.9	1.4	6.4	14.1	1.9
LnGrp Delay(d),s/veh		21.6	18.2	42.7	11.8	42.3	19.7
LnGrp LOS		C	B	D	B	D	B
Approach Vol, veh/h		1594			978	655	
Approach Delay, s/veh		20.8			13.6	38.3	
Approach LOS		C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.7	40.2				48.8		31.7
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	30.0	40.0				40.0		30.0
Max Q Clear Time (g_c+I1), s	4.6	25.3				15.1		25.4
Green Ext Time (p_c), s	0.0	9.4				16.7		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1237	874	28	20	6
Future Vol, veh/h	10	1237	874	28	20	6
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	1359	960	31	22	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	992	0	-	0	1679	497
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	702	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	693	-	-	-	86	519
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	453	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	693	-	-	-	84	519
Mov Cap-2 Maneuver	-	-	-	-	84	-
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	52.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	693	-	-	-	104
HCM Lane V/C Ratio	0.016	-	-	-	0.275
HCM Control Delay (s)	10.3	-	-	-	52.2
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	1196	2	4	855	11	4	0	1	9	0	49
Future Vol, veh/h	68	1196	2	4	855	11	4	0	1	9	0	49
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	1272	2	4	910	12	4	0	1	10	0	52

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	922	0	0	1274	0	0	1881	2349	637	1706	2344	462
Stage 1	-	-	-	-	-	-	1418	1418	-	925	925	-
Stage 2	-	-	-	-	-	-	463	931	-	781	1419	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	736	-	-	541	-	-	44	36	420	59	36	547
Stage 1	-	-	-	-	-	-	144	201	-	290	346	-
Stage 2	-	-	-	-	-	-	548	344	-	354	201	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	736	-	-	541	-	-	37	32	420	54	32	546
Mov Cap-2 Maneuver	-	-	-	-	-	-	37	32	-	54	32	-
Stage 1	-	-	-	-	-	-	130	181	-	261	343	-
Stage 2	-	-	-	-	-	-	492	341	-	319	181	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	95.4	26.8
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	45	736	-	-	541	-	-	226
HCM Lane V/C Ratio	0.118	0.098	-	-	0.008	-	-	0.273
HCM Control Delay (s)	95.4	10.4	-	-	11.7	-	-	26.8
HCM Lane LOS	F	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0	-	-	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	1112	28	15	780	73	32	1	3	61	1	54
Future Volume (veh/h)	62	1112	28	15	780	73	32	1	3	61	1	54
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	67	1196	30	16	839	78	34	1	3	66	1	58
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	2014	50	33	1768	164	60	28	85	88	2	132
Arrive On Green	0.05	0.57	0.57	0.02	0.54	0.54	0.03	0.07	0.07	0.05	0.08	0.08
Sat Flow, veh/h	1774	3526	88	1774	3274	304	1774	410	1230	1774	27	1555
Grp Volume(v), veh/h	67	600	626	16	453	464	34	0	4	66	0	59
Grp Sat Flow(s),veh/h/ln	1774	1770	1845	1774	1770	1809	1774	0	1640	1774	0	1582
Q Serve(g_s), s	2.8	16.6	16.6	0.7	12.0	12.0	1.4	0.0	0.2	2.8	0.0	2.7
Cycle Q Clear(g_c), s	2.8	16.6	16.6	0.7	12.0	12.0	1.4	0.0	0.2	2.8	0.0	2.7
Prop In Lane	1.00		0.05	1.00		0.17	1.00		0.75	1.00		0.98
Lane Grp Cap(c), veh/h	89	1011	1054	33	956	977	60	0	113	88	0	134
V/C Ratio(X)	0.76	0.59	0.59	0.48	0.47	0.47	0.57	0.00	0.04	0.75	0.00	0.44
Avail Cap(c_a), veh/h	705	1289	1344	705	1289	1318	705	0	869	705	0	838
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.4	10.5	10.5	36.7	10.7	10.7	35.9	0.0	32.8	35.4	0.0	32.8
Incr Delay (d2), s/veh	4.8	0.7	0.6	3.9	0.4	0.4	3.1	0.0	0.1	4.7	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.2	8.5	0.4	5.9	6.0	0.8	0.0	0.1	1.5	0.0	1.2
LnGrp Delay(d),s/veh	40.2	11.2	11.2	40.5	11.2	11.2	39.0	0.0	32.9	40.1	0.0	34.5
LnGrp LOS	D	B	B	D	B	B	D		C	D		C
Approach Vol, veh/h		1293			933			38			125	
Approach Delay, s/veh		12.7			11.7			38.4			37.5	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	50.1	7.5	11.4	8.8	47.8	8.7	10.2
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	55.0	30.0	40.0	30.0	55.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	2.7	18.6	3.4	4.7	4.8	14.0	4.8	2.2
Green Ext Time (p_c), s	0.0	24.5	0.0	0.3	0.0	26.5	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	378	737	117	198	10	605	384	127	11	283	117
Future Volume (veh/h)	142	378	737	117	198	10	605	384	127	11	283	117
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	156	415	810	129	218	11	665	422	140	12	311	129
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	1350	596	186	1278	64	726	1016	334	47	468	190
Arrive On Green	0.06	0.38	0.38	0.05	0.37	0.37	0.21	0.39	0.39	0.01	0.19	0.19
Sat Flow, veh/h	3442	3539	1562	3442	3427	172	3442	2619	860	3442	2455	997
Grp Volume(v), veh/h	156	415	810	129	112	117	665	284	278	12	222	218
Grp Sat Flow(s),veh/h/ln	1721	1770	1562	1721	1770	1830	1721	1770	1709	1721	1770	1683
Q Serve(g_s), s	5.3	9.7	45.0	4.3	5.0	5.1	22.3	13.8	14.0	0.4	13.7	14.2
Cycle Q Clear(g_c), s	5.3	9.7	45.0	4.3	5.0	5.1	22.3	13.8	14.0	0.4	13.7	14.2
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.50	1.00		0.59
Lane Grp Cap(c), veh/h	215	1350	596	186	660	682	726	687	663	47	338	321
V/C Ratio(X)	0.72	0.31	1.36	0.69	0.17	0.17	0.92	0.41	0.42	0.25	0.66	0.68
Avail Cap(c_a), veh/h	875	1350	596	875	675	698	875	687	663	875	675	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	25.6	36.5	54.8	24.8	24.8	45.5	26.3	26.4	57.6	44.2	44.4
Incr Delay (d2), s/veh	1.7	0.1	172.5	1.7	0.1	0.1	11.5	0.4	0.4	1.0	2.2	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.8	47.9	2.1	2.4	2.6	11.8	6.8	6.7	0.2	6.9	6.8
LnGrp Delay(d),s/veh	56.1	25.7	209.0	56.6	24.9	24.9	57.1	26.7	26.8	58.6	46.4	46.9
LnGrp LOS	E	C	F	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		1381			358			1227			452	
Approach Delay, s/veh		136.7			36.3			43.2			46.9	
Approach LOS		F			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	50.9	28.6	28.4	11.1	49.9	5.3	51.7
Change Period (Y+Rc), s	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9
Max Green Setting (Gmax), s	30.0	* 45	30.0	* 45	30.0	* 45	30.0	* 45
Max Q Clear Time (g_c+I1), s	16.3	47.0	24.3	16.2	7.3	7.1	2.4	16.0
Green Ext Time (p_c), s	0.1	0.0	0.6	6.1	0.2	9.9	0.0	7.1

Intersection Summary	
HCM 2010 Ctrl Delay	80.7
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	391	664	105	358	20	652	1407	125	46	826	194
Future Volume (veh/h)	230	391	664	105	358	20	652	1407	125	46	826	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	240	407	692	109	373	21	679	1466	130	48	860	202
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	533	776	131	371	21	363	1485	131	62	997	446
Arrive On Green	0.15	0.29	0.29	0.07	0.21	0.21	0.20	0.45	0.45	0.03	0.28	0.28
Sat Flow, veh/h	1774	1863	1578	1774	1747	98	1774	3291	290	1774	3539	1583
Grp Volume(v), veh/h	240	407	692	109	0	394	679	784	812	48	860	202
Grp Sat Flow(s),veh/h/ln	1774	1863	1578	1774	0	1845	1774	1770	1812	1774	1770	1583
Q Serve(g_s), s	19.6	29.3	42.0	8.9	0.0	31.2	30.0	64.1	65.4	3.9	33.8	15.4
Cycle Q Clear(g_c), s	19.6	29.3	42.0	8.9	0.0	31.2	30.0	64.1	65.4	3.9	33.8	15.4
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	262	533	776	131	0	392	363	799	818	62	997	446
V/C Ratio(X)	0.92	0.76	0.89	0.83	0.00	1.00	1.87	0.98	0.99	0.77	0.86	0.45
Avail Cap(c_a), veh/h	302	533	776	302	0	392	363	799	818	302	1447	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	47.8	33.9	67.0	0.0	57.8	58.4	39.7	40.0	70.2	50.0	43.4
Incr Delay (d2), s/veh	27.0	5.8	12.3	5.0	0.0	46.7	402.7	27.2	29.6	7.4	2.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	15.9	28.0	4.5	0.0	20.9	55.2	37.2	39.4	2.1	16.9	6.8
LnGrp Delay(d),s/veh	88.6	53.6	46.2	72.0	0.0	104.4	461.1	66.8	69.6	77.6	52.7	43.6
LnGrp LOS	F	D	D	E		F	F	E	E	E	D	D
Approach Vol, veh/h		1339			503			2275			1110	
Approach Delay, s/veh		56.0			97.4			185.5			52.1	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	72.7	16.0	47.8	35.1	47.9	26.8	37.0
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	25.0	60.0	25.0	42.0	30.0	60.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	5.9	67.4	10.9	44.0	32.0	35.8	21.6	33.2
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	5.5	0.1	0.0

Intersection Summary		
HCM 2010 Ctrl Delay	115.5	
HCM 2010 LOS	F	

2021 Cumulative Saturday Midday with Creighton Avenue Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	730	65	269	680	108	73	43	295	101	32	22
Future Volume (veh/h)	34	730	65	269	680	108	73	43	295	101	32	22
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1860	1900	1881	1876	1900	1863	1863	1881	1827	1794	1900
Adj Flow Rate, veh/h	38	820	73	302	764	121	82	48	331	113	36	25
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	2	2	1	1	1	2	2	1	4	10	10
Cap, veh/h	70	1272	113	339	1652	262	373	466	395	302	247	172
Arrive On Green	0.04	0.39	0.39	0.19	0.54	0.54	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1740	3276	292	1792	3073	487	1335	1863	1577	980	987	685
Grp Volume(v), veh/h	38	442	451	302	443	442	82	48	331	113	0	61
Grp Sat Flow(s),veh/h/ln	1740	1767	1801	1792	1782	1778	1335	1863	1577	980	0	1672
Q Serve(g_s), s	2.0	19.2	19.3	15.5	14.4	14.4	4.8	1.9	18.8	9.5	0.0	2.7
Cycle Q Clear(g_c), s	2.0	19.2	19.3	15.5	14.4	14.4	7.5	1.9	18.8	11.3	0.0	2.7
Prop In Lane	1.00		0.16	1.00		0.27	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	70	686	699	339	958	956	373	466	395	302	0	419
V/C Ratio(X)	0.54	0.64	0.64	0.89	0.46	0.46	0.22	0.10	0.84	0.37	0.00	0.15
Avail Cap(c_a), veh/h	135	845	862	658	1369	1366	567	737	624	445	0	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.4	23.5	23.5	37.2	13.4	13.4	30.4	27.2	33.5	31.5	0.0	27.5
Incr Delay (d2), s/veh	2.4	1.6	1.5	3.2	0.5	0.5	0.3	0.1	5.8	0.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	9.6	9.8	7.9	7.1	7.1	1.8	1.0	8.8	2.6	0.0	1.3
LnGrp Delay(d),s/veh	46.8	25.1	25.0	40.5	13.9	13.9	30.7	27.3	39.3	32.3	0.0	27.6
LnGrp LOS	D	C	C	D	B	B	C	C	D	C		C
Approach Vol, veh/h		931			1187			461			174	
Approach Delay, s/veh		25.9			20.7			36.5			30.7	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	56.5		29.4	22.4	42.4		29.4
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8
Max Green Setting (Gmax), s	7.3	72.4		37.3	34.6	45.1		37.3
Max Q Clear Time (g_c+I1), s	4.0	16.4		13.3	17.5	21.3		20.8
Green Ext Time (p_c), s	0.0	24.2		2.7	0.4	15.3		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	993	112	414	916	123	531
Future Volume (vph)	993	112	414	916	123	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.95		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.90	0.85
Flt Protected	1.00		0.95	1.00	0.98	1.00
Satd. Flow (prot)	3480		1787	3539	3214	1455
Flt Permitted	1.00		0.95	1.00	0.98	1.00
Satd. Flow (perm)	3480		1787	3539	3214	1455
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1056	119	440	974	131	565
RTOR Reduction (vph)	4	0	0	0	243	254
Lane Group Flow (vph)	1171	0	440	974	171	28
Confl. Peds. (#/hr)		1	1			
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	2%	1%	1%	2%	2%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Actuated Green, G (s)	55.6		41.5	101.7	12.3	12.3
Effective Green, g (s)	55.6		41.5	101.7	12.3	12.3
Actuated g/C Ratio	0.44		0.33	0.81	0.10	0.10
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1540		590	2865	314	142
v/s Ratio Prot	c0.34		c0.25	0.28	c0.05	
v/s Ratio Perm						0.02
v/c Ratio	0.76		0.75	0.34	0.55	0.19
Uniform Delay, d1	29.4		37.4	3.1	54.0	52.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4		5.1	0.1	2.3	0.9
Delay (s)	31.8		42.5	3.2	56.3	53.0
Level of Service	C		D	A	E	D
Approach Delay (s)	31.8			15.4	54.9	
Approach LOS	C			B	D	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	125.6	Sum of lost time (s)	20.8
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1515	39	87	1301	176	33	0	93	157	0	30
Future Volume (veh/h)	46	1515	39	87	1301	176	33	0	93	157	0	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1860	1900	1827	1881	1863	1845	1900	1900	1881	1827	1900
Adj Flow Rate, veh/h	49	1629	42	94	1399	189	35	0	100	169	0	32
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	4	1	2	3	0	0	1	0	0
Cap, veh/h	66	1955	50	305	2512	1088	229	282	240	245	0	231
Arrive On Green	0.04	0.56	0.56	0.23	0.93	0.93	0.15	0.00	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1810	3518	90	1740	3574	1548	1358	1900	1615	1302	0	1553
Grp Volume(v), veh/h	49	816	855	94	1399	189	35	0	100	169	0	32
Grp Sat Flow(s),veh/h/ln	1810	1767	1842	1740	1787	1548	1358	1900	1615	1302	0	1553
Q Serve(g_s), s	3.8	53.4	53.9	6.3	7.4	1.3	3.2	0.0	7.9	17.8	0.0	2.5
Cycle Q Clear(g_c), s	3.8	53.4	53.9	6.3	7.4	1.3	5.7	0.0	7.9	17.8	0.0	2.5
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	982	1023	305	2512	1088	229	282	240	245	0	231
V/C Ratio(X)	0.74	0.83	0.84	0.31	0.56	0.17	0.15	0.00	0.42	0.69	0.00	0.14
Avail Cap(c_a), veh/h	121	982	1023	305	2512	1088	377	490	416	387	0	400
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.84	0.84	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.8	25.7	25.8	46.7	1.6	1.4	54.3	0.0	54.1	58.3	0.0	51.8
Incr Delay (d2), s/veh	3.5	4.9	4.8	0.2	0.8	0.3	0.3	0.0	1.2	3.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	27.2	28.7	3.0	3.4	0.6	1.2	0.0	3.6	6.6	0.0	1.1
LnGrp Delay(d),s/veh	70.3	30.6	30.6	46.9	2.4	1.7	54.6	0.0	55.3	61.8	0.0	52.1
LnGrp LOS	E	C	C	D	A	A	D		E	E		D
Approach Vol, veh/h		1720			1682			135			201	
Approach Delay, s/veh		31.7			4.8			55.1			60.2	
Approach LOS		C			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.3	83.6		26.1	9.7	104.2		26.1
Change Period (Y+Rc), s	5.8	* 5.8		5.3	4.6	5.8		5.3
Max Green Setting (Gmax), s	10.4	* 78		36.1	9.4	78.8		36.1
Max Q Clear Time (g_c+I1), s	8.3	55.9		19.8	5.8	9.4		9.9
Green Ext Time (p_c), s	0.1	18.5		1.0	0.0	38.8		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	1665	18	203	1450	100	21	6	180	115	6	90
Future Volume (veh/h)	87	1665	18	203	1450	100	21	6	180	115	6	90
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1862	1900	1900	1881	1900	1810	1846	1900	1429	1900	1759
Adj Flow Rate, veh/h	93	1771	19	216	1543	106	22	6	191	122	6	96
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	1	0	5	0	0	33	0	8
Cap, veh/h	78	1552	17	358	3062	957	167	8	257	113	220	171
Arrive On Green	0.03	0.29	0.29	0.40	1.00	1.00	0.10	0.17	0.17	0.04	0.12	0.12
Sat Flow, veh/h	1810	3584	38	1810	5136	1606	1723	48	1515	2639	1900	1476
Grp Volume(v), veh/h	93	873	917	216	1543	106	22	0	197	122	6	96
Grp Sat Flow(s),veh/h/ln	1810	1769	1854	1810	1712	1606	1723	0	1563	1320	1900	1476
Q Serve(g_s), s	6.0	60.6	60.6	13.3	0.0	0.0	1.6	0.0	16.8	6.0	0.4	8.6
Cycle Q Clear(g_c), s	6.0	60.6	60.6	13.3	0.0	0.0	1.6	0.0	16.8	6.0	0.4	8.6
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.97	1.00		1.00
Lane Grp Cap(c), veh/h	78	766	802	358	3062	957	167	0	265	113	220	171
V/C Ratio(X)	1.20	1.14	1.14	0.60	0.50	0.11	0.13	0.00	0.74	1.08	0.03	0.56
Avail Cap(c_a), veh/h	78	766	802	358	3062	957	167	0	447	113	543	422
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.72	0.72	0.72	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	49.7	49.7	38.0	0.0	0.0	57.9	0.0	55.2	67.0	54.9	58.6
Incr Delay (d2), s/veh	145.4	73.5	74.5	1.5	0.4	0.2	0.1	0.0	9.3	107.3	0.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	45.3	47.7	6.7	0.1	0.0	0.8	0.0	7.9	3.9	0.2	3.7
LnGrp Delay(d),s/veh	213.3	123.2	124.2	39.5	0.4	0.2	58.0	0.0	64.6	174.4	55.0	61.7
LnGrp LOS	F	F	F	D	A	A	E		E	F	D	E
Approach Vol, veh/h		1883			1865			219			224	
Approach Delay, s/veh		128.1			4.9			63.9			122.9	
Approach LOS		F			A			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.5	66.4	10.6	29.5	10.6	89.3	18.1	22.0
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	12.6	* 61	6.0	40.0	6.0	67.2	6.0	40.0
Max Q Clear Time (g_c+I1), s	15.3	62.6	8.0	18.8	8.0	2.0	3.6	10.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	38.8	0.1	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	69.7
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	1585	14	26	1379	407	11	10	23	640	16	376
Future Volume (veh/h)	381	1585	14	26	1379	407	11	10	23	640	16	376
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1881	1863	1900	1900	1900	1881	1864	1900
Adj Flow Rate, veh/h	401	1668	15	27	1452	428	12	11	24	674	17	396
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	1	2	0	0	0	1	0	0
Cap, veh/h	663	2441	769	155	1915	921	29	38	82	750	18	419
Arrive On Green	0.39	0.96	0.96	0.17	0.75	0.75	0.02	0.07	0.07	0.22	0.27	0.27
Sat Flow, veh/h	3442	5085	1602	1810	5136	1552	1810	528	1152	3476	65	1524
Grp Volume(v), veh/h	401	1668	15	27	1452	428	12	0	35	674	0	413
Grp Sat Flow(s),veh/h/ln	1721	1695	1602	1810	1712	1552	1810	0	1679	1738	0	1589
Q Serve(g_s), s	13.1	5.3	0.0	1.8	23.2	0.0	0.9	0.0	2.8	26.4	0.0	35.6
Cycle Q Clear(g_c), s	13.1	5.3	0.0	1.8	23.2	0.0	0.9	0.0	2.8	26.4	0.0	35.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.96
Lane Grp Cap(c), veh/h	663	2441	769	155	1915	921	29	0	120	750	0	437
V/C Ratio(X)	0.60	0.68	0.02	0.17	0.76	0.46	0.41	0.00	0.29	0.90	0.00	0.95
Avail Cap(c_a), veh/h	663	2441	769	155	1915	921	83	0	155	804	0	442
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.8	1.6	1.0	53.8	14.1	5.4	68.2	0.0	61.6	53.4	0.0	49.7
Incr Delay (d2), s/veh	0.4	0.6	0.0	0.1	2.1	1.2	9.2	0.0	1.3	11.8	0.0	29.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	2.0	0.0	0.9	10.9	3.4	0.5	0.0	1.3	13.9	0.0	19.2
LnGrp Delay(d),s/veh	39.2	2.1	1.0	54.0	16.2	6.6	77.4	0.0	63.0	65.2	0.0	79.1
LnGrp LOS	D	A	A	D	B	A	E		E	E		E
Approach Vol, veh/h		2084			1907			47			1087	
Approach Delay, s/veh		9.2			14.6			66.7			70.5	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	73.0	6.8	43.6	31.6	58.0	35.3	15.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	5.1	* 5.1
Max Green Setting (Gmax), s	7.4	67.2	6.4	38.9	22.4	52.2	32.4	* 13
Max Q Clear Time (g_c+I1), s	13.8	7.3	2.9	37.6	15.1	25.2	28.4	4.8
Green Ext Time (p_c), s	0.3	38.6	0.0	0.7	0.5	22.0	1.8	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1643	582	0	1392	520	0	0	0	539	0	648
Future Volume (veh/h)	0	1643	582	0	1392	520	0	0	0	539	0	648
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1881	0	1881	1881				1900	1776	1863
Adj Flow Rate, veh/h	0	1748	619	0	1481	0				573	0	689
Adj No. of Lanes	0	3	1	0	3	1				0	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	1	0	1	1				2	0	2
Cap, veh/h	0	2412	745	0	2436	758				609	0	1001
Arrive On Green	0.00	0.95	0.95	0.00	0.95	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	5253	1571	0	5305	1599				1691	0	2782
Grp Volume(v), veh/h	0	1748	619	0	1481	0				573	0	689
Grp Sat Flow(s),veh/h/ln	0	1695	1571	0	1712	1599				1691	0	1391
Q Serve(g_s), s	0.0	4.0	6.7	0.0	2.4	0.0				23.0	0.0	14.7
Cycle Q Clear(g_c), s	0.0	4.0	6.7	0.0	2.4	0.0				23.0	0.0	14.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2412	745	0	2436	758				609	0	1001
V/C Ratio(X)	0.00	0.72	0.83	0.00	0.61	0.00				0.94	0.00	0.69
Avail Cap(c_a), veh/h	0	2412	745	0	2436	758				614	0	1009
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.70	0.70	0.00	0.67	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	1.0	1.1	0.0	1.0	0.0				21.7	0.0	19.1
Incr Delay (d2), s/veh	0.0	1.4	7.5	0.0	0.8	0.0				22.5	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	2.9	0.0	0.7	0.0				14.5	0.0	5.9
LnGrp Delay(d),s/veh	0.0	2.4	8.6	0.0	1.8	0.0				44.2	0.0	20.7
LnGrp LOS		A	A		A					D		C
Approach Vol, veh/h		2367			1481						1262	
Approach Delay, s/veh		4.0			1.8						31.4	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		39.0		31.0		39.0		
Change Period (Y+Rc), s		5.8		5.8		5.8		
Max Green Setting (Gmax), s		33.0		25.4		33.0		
Max Q Clear Time (g_c+I1), s		8.7		25.0		4.4		
Green Ext Time (p_c), s		19.2		0.2		21.8		

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1569	605	0	1426	511	554
Future Volume (veh/h)	1569	605	0	1426	511	554
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1845	0	1863	1881	1881
Adj Flow Rate, veh/h	1743	0	0	1584	590	592
Adj No. of Lanes	3	1	0	3	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	0	2	1	1
Cap, veh/h	2679	826	0	2679	699	624
Arrive On Green	1.00	0.00	0.00	1.00	0.39	0.39
Sat Flow, veh/h	5253	1568	0	5421	1792	1599
Grp Volume(v), veh/h	1743	0	0	1584	590	592
Grp Sat Flow(s),veh/h/ln	1695	1568	0	1695	1792	1599
Q Serve(g_s), s	0.0	0.0	0.0	0.0	41.9	50.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	41.9	50.2
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2679	826	0	2679	699	624
V/C Ratio(X)	0.65	0.00	0.00	0.59	0.84	0.95
Avail Cap(c_a), veh/h	2679	826	0	2679	796	710
HCM Platoon Ratio	2.00	2.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	0.62	0.00	0.00	0.72	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	38.8	41.3
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.7	7.1	20.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.2	22.0	25.7
LnGrp Delay(d),s/veh	0.8	0.0	0.0	0.7	45.9	61.6
LnGrp LOS	A			A	D	E
Approach Vol, veh/h	1743			1584	1182	
Approach Delay, s/veh	0.8			0.7	53.8	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		79.5				79.5		60.5
Change Period (Y+Rc), s		5.8				5.8		5.8
Max Green Setting (Gmax), s		66.2				66.2		62.2
Max Q Clear Time (g_c+I1), s		2.0				2.0		52.2
Green Ext Time (p_c), s		33.6				33.6		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	1723	54	7	1533	139	53	0	12	133	0	286
Future Volume (veh/h)	341	1723	54	7	1533	139	53	0	12	133	0	286
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1696	1863	1863	1881	1743	1900	1863	1863	1900
Adj Flow Rate, veh/h	379	1914	60	8	1703	154	59	0	13	148	0	318
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	12	2	2	1	2	2	2	2	2
Cap, veh/h	573	2824	877	19	1210	376	128	0	378	63	0	348
Arrive On Green	0.65	1.00	1.00	0.01	0.24	0.24	0.07	0.00	0.26	0.04	0.00	0.22
Sat Flow, veh/h	1774	5085	1580	1616	5085	1581	1792	0	1482	1774	0	1583
Grp Volume(v), veh/h	379	1914	60	8	1703	154	59	0	13	148	0	318
Grp Sat Flow(s),veh/h/ln	1774	1695	1580	1616	1695	1581	1792	0	1482	1774	0	1583
Q Serve(g_s), s	18.5	0.0	0.0	0.7	33.3	9.9	4.4	0.0	0.9	5.0	0.0	27.5
Cycle Q Clear(g_c), s	18.5	0.0	0.0	0.7	33.3	9.9	4.4	0.0	0.9	5.0	0.0	27.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	573	2824	877	19	1210	376	128	0	378	63	0	348
V/C Ratio(X)	0.66	0.68	0.07	0.43	1.41	0.41	0.46	0.00	0.03	2.34	0.00	0.91
Avail Cap(c_a), veh/h	573	2824	877	69	1210	376	307	0	612	63	0	430
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.69	0.69	0.69	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	0.0	0.0	68.7	53.3	33.3	62.4	0.0	39.2	67.5	0.0	53.3
Incr Delay (d2), s/veh	1.8	0.8	0.1	4.0	187.0	2.3	2.6	0.0	0.0	647.3	0.0	21.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.2	0.0	0.3	36.5	4.5	2.3	0.0	0.4	13.8	0.0	14.1
LnGrp Delay(d),s/veh	21.8	0.8	0.1	72.8	240.4	35.6	65.0	0.0	39.2	714.8	0.0	74.4
LnGrp LOS	C	A	A	E	F	D	E		D	F		E
Approach Vol, veh/h		2353			1865			72			466	
Approach Delay, s/veh		4.2			222.8			60.3			277.8	
Approach LOS		A			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	83.1	15.4	35.3	50.6	38.7	9.5	41.2
Change Period (Y+Rc), s	4.6	5.4	5.4	4.5	5.4	5.4	4.5	* 5.4
Max Green Setting (Gmax), s	6.6	52.1	24.0	38.0	24.0	33.3	5.0	* 58
Max Q Clear Time (g_c+I1), s	2.7	2.0	6.4	29.5	20.5	35.3	7.0	2.9
Green Ext Time (p_c), s	0.0	25.6	0.2	1.3	0.5	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	117.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	794	1045	0	0	1009	333	0	0	0	451	0	644
Future Volume (veh/h)	794	1045	0	0	1009	333	0	0	0	451	0	644
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	957	1259	0	0	1216	401	0	0	0	543	0	776
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	2	2	0	2	0	0	0	0	0	0	0
Cap, veh/h	1015	3132	0	2	1466	464	3	2	1	1077	583	872
Arrive On Green	0.29	0.62	0.00	0.00	0.29	0.29	0.00	0.00	0.00	0.31	0.00	0.31
Sat Flow, veh/h	3510	5253	0	1810	5085	1610	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	957	1259	0	0	1216	401	0	0	0	543	0	776
Grp Sat Flow(s),veh/h/ln	1755	1695	0	1810	1695	1610	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	31.1	14.7	0.0	0.0	26.1	12.7	0.0	0.0	0.0	14.8	0.0	30.4
Cycle Q Clear(g_c), s	31.1	14.7	0.0	0.0	26.1	12.7	0.0	0.0	0.0	14.8	0.0	30.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1015	3132	0	2	1466	464	3	2	1	1077	583	872
V/C Ratio(X)	0.94	0.40	0.00	0.00	0.83	0.86	0.00	0.00	0.00	0.50	0.00	0.89
Avail Cap(c_a), veh/h	1038	3132	0	78	1656	524	150	651	554	1077	887	1328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	11.4	0.0	0.0	38.8	8.3	0.0	0.0	0.0	33.2	0.0	38.5
Incr Delay (d2), s/veh	15.9	0.1	0.0	0.0	3.3	12.8	0.0	0.0	0.0	0.4	0.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.3	6.9	0.0	0.0	12.6	10.8	0.0	0.0	0.0	7.2	0.0	12.5
LnGrp Delay(d),s/veh	56.5	11.5	0.0	0.0	42.2	21.2	0.0	0.0	0.0	33.5	0.0	43.8
LnGrp LOS	E	B			D	C				C		D
Approach Vol, veh/h		2216			1617			0			1319	
Approach Delay, s/veh		30.9			37.0			0.0			39.6	
Approach LOS		C			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	76.4	0.0	40.3	38.2	38.1	40.3	0.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	67.5	5.0	54.5	34.5	38.0	19.5	40.0
Max Q Clear Time (g_c+I1), s	0.0	16.7	0.0	32.4	33.1	28.1	16.8	0.0
Green Ext Time (p_c), s	0.0	32.9	0.0	3.4	0.6	5.4	1.6	0.0

Intersection Summary		
HCM 2010 Ctrl Delay	35.0	
HCM 2010 LOS	D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	1338	23	36	1168	125	61	0	10	136	0	111
Future Volume (veh/h)	145	1338	23	36	1168	125	61	0	10	136	0	111
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1846	1900	1900	1863	1863	1900	1900	1900	1863	1863	1900
Adj Flow Rate, veh/h	169	1556	27	42	1358	145	71	0	12	158	0	129
Adj No. of Lanes	1	3	0	1	3	1	2	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	3	3	0	2	2	0	2	2	2	2	2
Cap, veh/h	234	2543	44	86	2050	637	225	0	109	203	0	186
Arrive On Green	0.13	0.50	0.50	0.05	0.40	0.40	0.06	0.00	0.07	0.11	0.00	0.12
Sat Flow, veh/h	1774	5099	88	1810	5085	1579	3510	0	1615	1774	0	1583
Grp Volume(v), veh/h	169	1025	558	42	1358	145	71	0	12	158	0	129
Grp Sat Flow(s),veh/h/ln	1774	1679	1829	1810	1695	1579	1755	0	1615	1774	0	1583
Q Serve(g_s), s	6.4	15.5	15.5	1.6	15.3	2.4	1.4	0.0	0.5	6.1	0.0	5.5
Cycle Q Clear(g_c), s	6.4	15.5	15.5	1.6	15.3	2.4	1.4	0.0	0.5	6.1	0.0	5.5
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	1675	912	86	2050	637	225	0	109	203	0	186
V/C Ratio(X)	0.72	0.61	0.61	0.49	0.66	0.23	0.32	0.00	0.11	0.78	0.00	0.69
Avail Cap(c_a), veh/h	234	1765	961	155	2498	776	2049	0	1304	538	0	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.3	12.7	12.7	32.6	17.1	4.5	31.4	0.0	30.8	30.2	0.0	29.8
Incr Delay (d2), s/veh	9.1	1.7	3.1	1.6	0.6	0.2	0.8	0.0	0.4	6.4	0.0	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.5	8.5	0.8	7.2	1.7	0.7	0.0	0.2	3.3	0.0	2.6
LnGrp Delay(d),s/veh	38.4	14.4	15.8	34.2	17.7	4.8	32.2	0.0	31.2	36.6	0.0	34.3
LnGrp LOS	D	B	B	C	B	A	C		C	D		C
Approach Vol, veh/h		1752			1545			83			287	
Approach Delay, s/veh		17.1			16.9			32.1			35.6	
Approach LOS		B			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	40.4	9.1	12.8	14.7	33.7	12.5	9.3
Change Period (Y+Rc), s	4.6	5.4	4.6	4.5	5.4	* 5.4	4.5	4.6
Max Green Setting (Gmax), s	6.6	36.9	41.0	37.0	8.4	* 35	21.3	56.7
Max Q Clear Time (g_c+I1), s	3.6	17.5	3.4	7.5	8.4	17.3	8.1	2.5
Green Ext Time (p_c), s	0.0	17.6	0.3	0.8	0.0	11.0	0.3	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	506	679	324	116	584	60	278	198	93	96	280	411
Future Volume (veh/h)	506	679	324	116	584	60	278	198	93	96	280	411
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1827	1900	1900	1900	1881	1887	1900	1900	1878	1900
Adj Flow Rate, veh/h	575	772	368	132	664	68	316	225	106	109	318	467
Adj No. of Lanes	2	2	1	2	3	1	1	1	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	0	4	0	0	0	1	1	1	0	0	0
Cap, veh/h	696	1033	445	179	739	230	348	539	254	132	557	490
Arrive On Green	0.20	0.29	0.29	0.05	0.14	0.14	0.19	0.45	0.45	0.07	0.31	0.31
Sat Flow, veh/h	3476	3610	1553	3510	5187	1615	1792	1208	569	1810	1784	1570
Grp Volume(v), veh/h	575	772	368	132	664	68	316	0	331	109	318	467
Grp Sat Flow(s),veh/h/ln	1738	1805	1553	1755	1729	1615	1792	0	1777	1810	1784	1570
Q Serve(g_s), s	22.7	27.9	19.7	5.3	18.1	4.6	24.8	0.0	18.2	8.5	21.4	41.8
Cycle Q Clear(g_c), s	22.7	27.9	19.7	5.3	18.1	4.6	24.8	0.0	18.2	8.5	21.4	41.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	696	1033	445	179	739	230	348	0	793	132	557	490
V/C Ratio(X)	0.83	0.75	0.83	0.74	0.90	0.30	0.91	0.00	0.42	0.83	0.57	0.95
Avail Cap(c_a), veh/h	712	1046	450	210	810	252	417	0	793	214	562	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.0	46.5	18.3	67.1	60.5	39.4	56.6	0.0	27.0	65.6	41.3	48.3
Incr Delay (d2), s/veh	7.2	4.9	16.1	10.7	11.5	0.3	19.3	0.0	1.3	5.8	3.6	30.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	14.6	12.3	2.9	9.5	2.3	14.2	0.0	9.2	4.5	11.1	22.2
LnGrp Delay(d),s/veh	62.2	51.4	34.4	77.9	72.0	39.6	75.8	0.0	28.4	71.5	44.9	78.3
LnGrp LOS	E	D	C	E	E	D	E		C	E	D	E
Approach Vol, veh/h		1715			864			647			894	
Approach Delay, s/veh		51.4			70.4			51.6			65.6	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	69.9	12.7	46.5	33.7	50.6	34.2	25.1
Change Period (Y+Rc), s	4.0	5.8	5.4	5.4	5.8	* 5.8	5.4	* 4.6
Max Green Setting (Gmax), s	17.6	62.2	8.6	41.6	33.4	* 45	29.4	* 22
Max Q Clear Time (g_c+I1), s	10.5	20.2	7.3	29.9	26.8	43.8	24.7	20.1
Green Ext Time (p_c), s	0.1	5.0	0.0	9.2	1.1	1.1	4.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	58.5
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	2	90	3	2	4	46	613	2	10	682	66
Future Volume (veh/h)	107	2	90	3	2	4	46	613	2	10	682	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1267	1900	1900	1900	1900	1900	1881	1900	1900	1878	1900
Adj Flow Rate, veh/h	113	2	95	3	2	4	48	645	2	11	718	69
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	50	0	0	0	0	0	1	1	0	1	1
Cap, veh/h	210	151	193	8	5	11	143	2106	7	30	1686	162
Arrive On Green	0.12	0.12	0.12	0.01	0.01	0.01	0.08	0.58	0.58	0.02	0.51	0.51
Sat Flow, veh/h	1757	1267	1615	578	386	771	1810	3655	11	1810	3282	315
Grp Volume(v), veh/h	113	2	95	9	0	0	48	315	332	11	390	397
Grp Sat Flow(s),veh/h/ln	1757	1267	1615	1735	0	0	1810	1787	1879	1810	1784	1814
Q Serve(g_s), s	4.6	0.1	4.2	0.4	0.0	0.0	1.9	6.9	6.9	0.5	10.3	10.3
Cycle Q Clear(g_c), s	4.6	0.1	4.2	0.4	0.0	0.0	1.9	6.9	6.9	0.5	10.3	10.3
Prop In Lane	1.00		1.00	0.33		0.44	1.00		0.01	1.00		0.17
Lane Grp Cap(c), veh/h	210	151	193	24	0	0	143	1030	1083	30	916	931
V/C Ratio(X)	0.54	0.01	0.49	0.38	0.00	0.00	0.34	0.31	0.31	0.37	0.43	0.43
Avail Cap(c_a), veh/h	811	585	745	801	0	0	477	1178	1239	477	1176	1196
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	29.5	31.2	37.1	0.0	0.0	33.0	8.3	8.3	36.9	11.5	11.5
Incr Delay (d2), s/veh	9.6	0.2	8.7	3.7	0.0	0.0	0.5	0.6	0.6	7.6	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.3	0.2	0.0	0.0	1.0	3.5	3.7	0.3	5.3	5.4
LnGrp Delay(d),s/veh	41.0	29.6	40.0	40.8	0.0	0.0	33.5	8.9	8.9	44.5	12.7	12.7
LnGrp LOS	D	C	D	D			C	A	A	D	B	B
Approach Vol, veh/h		210			9			695			798	
Approach Delay, s/veh		40.4			40.8			10.6			13.1	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	49.5		14.9	10.6	44.7		5.6
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		4.6
Max Green Setting (Gmax), s	20.0	50.0		35.0	20.0	50.0		35.0
Max Q Clear Time (g_c+I1), s	2.5	8.9		6.6	3.9	12.3		2.4
Green Ext Time (p_c), s	0.0	28.3		2.6	0.0	26.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	9	161	30	14	8	188	478	37	8	553	37
Future Volume (veh/h)	73	9	161	30	14	8	188	478	37	8	553	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1759	1900	1718	1900	1810	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	10	173	32	15	9	202	514	40	9	595	40
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	8	0	17	17	5	0	0	0	0	0
Cap, veh/h	120	329	259	72	298	163	245	925	768	25	1229	83
Arrive On Green	0.07	0.17	0.17	0.04	0.15	0.15	0.14	0.49	0.49	0.01	0.36	0.36
Sat Flow, veh/h	1810	1900	1493	1810	2036	1114	1723	1900	1579	1810	3430	230
Grp Volume(v), veh/h	78	10	173	32	12	12	202	514	40	9	313	322
Grp Sat Flow(s),veh/h/ln	1810	1900	1493	1810	1632	1518	1723	1900	1579	1810	1805	1855
Q Serve(g_s), s	3.0	0.3	7.7	1.2	0.4	0.5	8.1	13.5	0.9	0.4	9.6	9.6
Cycle Q Clear(g_c), s	3.0	0.3	7.7	1.2	0.4	0.5	8.1	13.5	0.9	0.4	9.6	9.6
Prop In Lane	1.00		1.00	1.00		0.73	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	120	329	259	72	239	222	245	925	768	25	647	665
V/C Ratio(X)	0.65	0.03	0.67	0.45	0.05	0.06	0.83	0.56	0.05	0.36	0.48	0.48
Avail Cap(c_a), veh/h	509	1069	840	509	918	854	485	1336	1110	509	1269	1304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	24.4	27.5	33.4	26.1	26.1	29.7	12.8	9.6	34.8	17.7	17.7
Incr Delay (d2), s/veh	2.2	0.1	4.1	1.6	0.1	0.1	2.7	0.8	0.0	3.3	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.2	3.5	0.6	0.2	0.2	4.1	7.2	0.4	0.2	4.9	5.1
LnGrp Delay(d),s/veh	34.6	24.5	31.6	35.0	26.2	26.3	32.4	13.7	9.7	38.0	18.6	18.6
LnGrp LOS	C	C	C	D	C	C	C	B	A	D	B	B
Approach Vol, veh/h		261			56			756			644	
Approach Delay, s/veh		32.2			31.3			18.5			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	40.4	7.4	17.7	14.7	31.3	9.3	15.8
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.4	15.5	3.2	9.7	10.1	11.6	5.0	2.5
Green Ext Time (p_c), s	0.0	13.2	0.0	1.1	0.2	13.8	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	31	105	17	29	9	97	376	9	8	450	76
Future Volume (veh/h)	76	31	105	17	29	9	97	376	9	8	450	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1727	1900	1900	1848	1900	1827	1882	1900	1900	1855	1900
Adj Flow Rate, veh/h	86	35	119	19	33	10	110	427	10	9	511	86
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	10	0	0	0	0	4	1	1	0	2	2
Cap, veh/h	127	357	333	49	430	124	142	1519	36	25	1080	181
Arrive On Green	0.07	0.21	0.21	0.03	0.16	0.16	0.08	0.43	0.43	0.01	0.36	0.36
Sat Flow, veh/h	1723	1727	1613	1810	2688	778	1740	3569	83	1810	3015	505
Grp Volume(v), veh/h	86	35	119	19	21	22	110	214	223	9	298	299
Grp Sat Flow(s),veh/h/ln	1723	1727	1613	1810	1756	1709	1740	1788	1865	1810	1762	1758
Q Serve(g_s), s	3.1	1.0	4.0	0.7	0.6	0.7	3.9	5.0	5.0	0.3	8.3	8.4
Cycle Q Clear(g_c), s	3.1	1.0	4.0	0.7	0.6	0.7	3.9	5.0	5.0	0.3	8.3	8.4
Prop In Lane	1.00		1.00	1.00		0.46	1.00		0.04	1.00		0.29
Lane Grp Cap(c), veh/h	127	357	333	49	281	273	142	761	794	25	631	629
V/C Ratio(X)	0.68	0.10	0.36	0.39	0.07	0.08	0.78	0.28	0.28	0.36	0.47	0.48
Avail Cap(c_a), veh/h	542	1086	1014	569	1104	1075	547	1405	1465	569	1385	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	20.4	21.6	30.4	22.7	22.7	28.7	11.9	11.9	31.1	15.8	15.8
Incr Delay (d2), s/veh	2.3	0.2	0.9	1.9	0.2	0.2	3.4	0.3	0.3	3.2	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.5	1.8	0.4	0.3	0.3	2.0	2.5	2.6	0.2	4.2	4.2
LnGrp Delay(d),s/veh	31.1	20.6	22.5	32.3	22.9	22.9	32.1	12.2	12.2	34.3	16.6	16.7
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		240			62			547			606	
Approach Delay, s/veh		25.3			25.8			16.2			16.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	32.9	6.3	19.0	9.8	28.6	9.3	16.0
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	20.0	50.0	20.0	40.0	20.0	50.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.3	7.0	2.7	6.0	5.9	10.4	5.1	2.7
Green Ext Time (p_c), s	0.0	12.4	0.0	1.2	0.1	12.1	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	25	0	0	14	0	1059	67	0	1070	0
Future Vol, veh/h	0	0	25	0	0	14	0	1059	67	0	1070	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	29	0	0	16	0	1246	79	0	1259	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	629	-	-	623	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	368	0	0	434	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	368	-	-	434	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.6	13.6	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	368	434	-	-
HCM Lane V/C Ratio	-	-	0.08	0.038	-	-
HCM Control Delay (s)	-	-	15.6	13.6	-	-
HCM Lane LOS	-	-	C	B	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	554	346	0	0	516	234	215	0	156	0
Future Volume (veh/h)	0	0	554	346	0	0	516	234	215	0	156	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	652	407	0	0	607	275	253	0	184	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	1016	1179	491	1016	864	723	658	587	4	405	185
Arrive On Green	0.00	0.00	0.53	0.53	0.00	0.00	0.21	0.37	0.37	0.00	0.11	0.00
Sat Flow, veh/h	0	1900	1583	777	1900	1615	3442	1773	1580	3510	3539	1615
Grp Volume(v), veh/h	0	0	652	407	0	0	607	274	254	0	184	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	777	1900	1615	1721	1770	1584	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	17.1	49.1	0.0	0.0	16.2	11.1	11.5	0.0	4.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	17.1	49.1	0.0	0.0	16.2	11.1	11.5	0.0	4.7	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1016	1179	491	1016	864	723	657	588	4	405	185
V/C Ratio(X)	0.00	0.00	0.55	0.83	0.00	0.00	0.84	0.42	0.43	0.00	0.45	0.00
Avail Cap(c_a), veh/h	0	1019	1182	492	1019	866	1101	922	825	183	896	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	5.3	21.8	0.0	0.0	36.4	22.5	22.6	0.0	39.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	11.3	0.0	0.0	3.7	0.4	0.5	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	7.5	11.9	0.0	0.0	8.0	5.5	5.1	0.0	2.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	5.9	33.1	0.0	0.0	40.1	22.9	23.1	0.0	40.5	0.0
LnGrp LOS			A	C			D	C	C		D	
Approach Vol, veh/h		652			407			1135			184	
Approach Delay, s/veh		5.9			33.1			32.1			40.5	
Approach LOS		A			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	40.1		55.9	24.7	15.5		55.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	50.0		51.5	30.7	24.3		51.5
Max Q Clear Time (g_c+I1), s	0.0	13.5		19.1	18.2	6.7		51.1
Green Ext Time (p_c), s	0.0	5.2		6.7	1.9	4.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

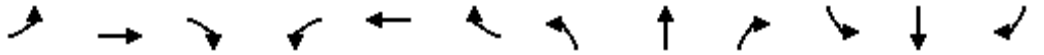
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	139	17	0	0	215	0	19	0	0	0
Future Vol, veh/h	0	0	139	17	0	0	215	0	19	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	92	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	164	20	0	0	253	0	22	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	507	507	1	507	507	0	1	0	0	0	0	0
Stage 1	1	1	-	506	506	-	-	-	-	-	-	-
Stage 2	506	506	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	453	471	1089	453	471	-	1635	-	-	-	-	-
Stage 1	1027	899	-	522	543	-	-	-	-	-	-	-
Stage 2	522	543	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	397	1089	339	397	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	397	-	339	397	-	-	-	-	-	-	-
Stage 1	866	899	-	440	458	-	-	-	-	-	-	-
Stage 2	440	458	-	873	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			7	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.155	-	-	-	-	-	-	-
HCM Control Delay (s)	7.6	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	919	543	296	1093	0	0	0	0	421	1	372
Future Volume (veh/h)	0	919	543	296	1093	0	0	0	0	421	1	372
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	957	566	308	1139	0				440	0	388
Adj No. of Lanes	0	3	1	2	3	0				2	0	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2799	871	391	3637	0				553	0	494
Arrive On Green	0.00	0.55	0.55	0.11	0.72	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	5253	1583	3442	5253	0				3548	0	3167
Grp Volume(v), veh/h	0	957	566	308	1139	0				440	0	388
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1695	0				1774	0	1583
Q Serve(g_s), s	0.0	9.4	22.5	7.8	7.4	0.0				10.8	0.0	10.6
Cycle Q Clear(g_c), s	0.0	9.4	22.5	7.8	7.4	0.0				10.8	0.0	10.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2799	871	391	3637	0				553	0	494
V/C Ratio(X)	0.00	0.34	0.65	0.79	0.31	0.00				0.79	0.00	0.79
Avail Cap(c_a), veh/h	0	2799	871	688	3637	0				788	0	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.87	0.87	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.2	14.2	38.8	4.7	0.0				36.6	0.0	36.5
Incr Delay (d2), s/veh	0.0	0.3	3.7	1.2	0.2	0.0				2.3	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.4	10.7	3.8	3.4	0.0				5.4	0.0	4.8
LnGrp Delay(d),s/veh	0.0	11.5	17.9	40.0	4.9	0.0				38.9	0.0	38.8
LnGrp LOS		B	B	D	A					D		D
Approach Vol, veh/h		1523			1447						828	
Approach Delay, s/veh		13.9			12.4						38.9	
Approach LOS		B			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.8	55.3		19.8		70.2		
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		
Max Green Setting (Gmax), s	18.0	35.0		20.0		58.0		
Max Q Clear Time (g_c+I1), s	9.8	24.5		12.8		9.4		
Green Ext Time (p_c), s	0.4	7.8		1.3		19.4		

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	1063	0	0	820	523	455	5	365	0	0	0
Future Volume (veh/h)	347	1063	0	0	820	523	455	5	365	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	358	1096	0	0	845	539	588	0	252			
Adj No. of Lanes	2	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	438	3424	0	0	2488	765	702	0	313			
Arrive On Green	0.13	0.67	0.00	0.00	0.49	0.49	0.20	0.00	0.20			
Sat Flow, veh/h	3442	5253	0	0	5253	1563	3548	0	1583			
Grp Volume(v), veh/h	358	1096	0	0	845	539	588	0	252			
Grp Sat Flow(s),veh/h/ln	1721	1695	0	0	1695	1563	1774	0	1583			
Q Serve(g_s), s	9.1	8.1	0.0	0.0	9.2	24.2	14.3	0.0	13.7			
Cycle Q Clear(g_c), s	9.1	8.1	0.0	0.0	9.2	24.2	14.3	0.0	13.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	438	3424	0	0	2488	765	702	0	313			
V/C Ratio(X)	0.82	0.32	0.00	0.00	0.34	0.70	0.84	0.00	0.80			
Avail Cap(c_a), veh/h	612	3424	0	0	2488	765	1104	0	493			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.90	0.90	0.00	0.00	0.86	0.86	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.2	6.1	0.0	0.0	14.1	17.9	34.7	0.0	34.4			
Incr Delay (d2), s/veh	3.7	0.2	0.0	0.0	0.3	4.7	1.8	0.0	2.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.6	3.8	0.0	0.0	4.3	11.3	7.2	0.0	6.2			
LnGrp Delay(d),s/veh	42.0	6.3	0.0	0.0	14.4	22.6	36.5	0.0	36.8			
LnGrp LOS	D	A			B	C	D		D			
Approach Vol, veh/h		1454			1384			840				
Approach Delay, s/veh		15.1			17.6			36.6				
Approach LOS		B			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		66.4			16.6	49.8		23.6
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8
Max Green Setting (Gmax), s		50.0			16.0	28.0		28.0
Max Q Clear Time (g_c+I1), s		10.1			11.1	26.2		16.3
Green Ext Time (p_c), s		16.2			0.4	1.6		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	900	31	113	935	45	75	29	85	210	36	132
Future Volume (veh/h)	267	900	31	113	935	45	75	29	85	210	36	132
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	281	947	33	119	984	47	79	31	89	221	38	139
Adj No. of Lanes	1	3	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	2501	87	171	1370	598	378	115	330	341	504	427
Arrive On Green	0.19	0.50	0.50	0.10	0.39	0.39	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1774	5042	175	1774	3539	1544	1199	424	1219	1263	1863	1578
Grp Volume(v), veh/h	281	636	344	119	984	47	79	0	120	221	38	139
Grp Sat Flow(s),veh/h/ln	1774	1695	1827	1774	1770	1544	1199	0	1643	1263	1863	1578
Q Serve(g_s), s	15.3	11.6	11.7	6.5	23.6	1.9	5.3	0.0	5.7	16.7	1.5	7.0
Cycle Q Clear(g_c), s	15.3	11.6	11.7	6.5	23.6	1.9	6.8	0.0	5.7	22.4	1.5	7.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	333	1682	906	171	1370	598	378	0	445	341	504	427
V/C Ratio(X)	0.85	0.38	0.38	0.70	0.72	0.08	0.21	0.00	0.27	0.65	0.08	0.33
Avail Cap(c_a), veh/h	333	1682	906	222	1370	598	481	0	585	442	652	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.89	0.89	0.89	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	15.6	15.6	43.8	26.0	19.4	29.7	0.0	28.7	37.5	27.2	29.2
Incr Delay (d2), s/veh	15.9	0.6	1.1	3.1	2.9	0.2	0.3	0.0	0.3	2.1	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	5.5	6.1	3.3	12.0	0.9	1.8	0.0	2.6	6.0	0.8	3.1
LnGrp Delay(d),s/veh	55.1	16.2	16.8	46.9	28.9	19.6	29.9	0.0	29.0	39.6	27.2	29.6
LnGrp LOS	E	B	B	D	C	B	C		C	D	C	C
Approach Vol, veh/h		1261			1150			199			398	
Approach Delay, s/veh		25.0			30.4			29.4			34.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	54.9		32.0	24.0	44.0		32.0
Change Period (Y+Rc), s	3.5	5.3		4.9	5.3	* 5.3		4.9
Max Green Setting (Gmax), s	12.5	38.7		35.0	12.5	* 39		35.6
Max Q Clear Time (g_c+I1), s	8.5	13.7		24.4	17.3	25.6		8.8
Green Ext Time (p_c), s	0.0	10.1		1.9	0.0	7.4		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Notes

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	864	253	28	772	250	29
Future Volume (veh/h)	0	864	253	28	772	250	29
Number		2	12	1	6	3	18
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			0.98	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h		891	261	29	796	258	30
Adj No. of Lanes		2	1	1	2	1	1
Peak Hour Factor		0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1687	736	58	2142	343	306
Arrive On Green		0.48	0.48	0.03	0.61	0.19	0.19
Sat Flow, veh/h		3632	1544	1774	3632	1774	1583
Grp Volume(v), veh/h		891	261	29	796	258	30
Grp Sat Flow(s),veh/h/ln		1770	1544	1774	1770	1774	1583
Q Serve(g_s), s		9.2	5.6	0.8	6.0	7.2	0.8
Cycle Q Clear(g_c), s		9.2	5.6	0.8	6.0	7.2	0.8
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1687	736	58	2142	343	306
V/C Ratio(X)		0.53	0.35	0.50	0.37	0.75	0.10
Avail Cap(c_a), veh/h		2716	1185	1021	2716	1021	911
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		9.5	8.6	24.8	5.2	19.9	17.3
Incr Delay (d2), s/veh		0.2	0.2	2.4	0.1	4.0	0.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		4.5	2.4	0.4	2.9	3.9	0.4
LnGrp Delay(d),s/veh		9.7	8.8	27.2	5.3	23.9	17.5
LnGrp LOS		A	A	C	A	C	B
Approach Vol, veh/h		1152			825	288	
Approach Delay, s/veh		9.5			6.1	23.2	
Approach LOS		A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.7	30.3				37.1		15.1
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	30.0	40.0				40.0		30.0
Max Q Clear Time (g_c+I1), s	2.8	11.2				8.0		9.2
Green Ext Time (p_c), s	0.0	13.7				14.3		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	843	853	12	15	5
Future Vol, veh/h	10	843	853	12	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	878	889	13	16	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	901	0	-	0	1355	451
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	460	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	750	-	-	-	141	556
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	750	-	-	-	139	556
Mov Cap-2 Maneuver	-	-	-	-	139	-
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	594	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	29
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	750	-	-	-	171
HCM Lane V/C Ratio	0.014	-	-	-	0.122
HCM Control Delay (s)	9.9	-	-	-	29
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	832	4	0	810	9	4	0	3	9	0	60
Future Vol, veh/h	36	832	4	0	810	9	4	0	3	9	0	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	867	4	0	844	9	4	0	3	9	0	63

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	853	0	0	871	0	0	1366	1797	435	1356	1794	427
Stage 1	-	-	-	-	-	-	944	944	-	848	848	-
Stage 2	-	-	-	-	-	-	422	853	-	508	946	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	782	-	-	770	-	-	106	79	569	108	80	576
Stage 1	-	-	-	-	-	-	282	339	-	322	376	-
Stage 2	-	-	-	-	-	-	580	374	-	516	338	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	782	-	-	770	-	-	91	75	569	103	76	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	75	-	103	76	-
Stage 1	-	-	-	-	-	-	268	323	-	306	376	-
Stage 2	-	-	-	-	-	-	517	374	-	488	322	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	31.7	17.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	142	782	-	-	770	-	-	360
HCM Lane V/C Ratio	0.051	0.048	-	-	-	-	-	0.2
HCM Control Delay (s)	31.7	9.8	-	-	0	-	-	17.5
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	768	26	21	747	54	35	2	3	49	0	38
Future Volume (veh/h)	51	768	26	21	747	54	35	2	3	49	0	38
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	53	800	27	22	778	56	36	2	3	51	0	40
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	1778	60	45	1628	117	66	48	73	83	0	129
Arrive On Green	0.05	0.51	0.51	0.03	0.49	0.49	0.04	0.07	0.07	0.05	0.00	0.08
Sat Flow, veh/h	1774	3491	118	1774	3343	241	1774	674	1011	1774	0	1583
Grp Volume(v), veh/h	53	406	421	22	412	422	36	0	5	51	0	40
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1774	1770	1814	1774	0	1684	1774	0	1583
Q Serve(g_s), s	1.9	9.3	9.3	0.8	9.9	9.9	1.3	0.0	0.2	1.8	0.0	1.5
Cycle Q Clear(g_c), s	1.9	9.3	9.3	0.8	9.9	9.9	1.3	0.0	0.2	1.8	0.0	1.5
Prop In Lane	1.00		0.06	1.00		0.13	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	85	901	937	45	862	883	66	0	121	83	0	129
V/C Ratio(X)	0.62	0.45	0.45	0.49	0.48	0.48	0.55	0.00	0.04	0.62	0.00	0.31
Avail Cap(c_a), veh/h	839	1534	1594	839	1534	1572	839	0	1062	839	0	998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.7	9.9	9.9	30.5	10.9	10.9	30.0	0.0	27.4	29.7	0.0	27.5
Incr Delay (d2), s/veh	2.8	0.4	0.4	3.0	0.5	0.5	2.6	0.0	0.1	2.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.6	4.8	0.4	4.9	5.0	0.7	0.0	0.1	0.9	0.0	0.7
LnGrp Delay(d),s/veh	32.4	10.3	10.3	33.6	11.4	11.4	32.7	0.0	27.5	32.4	0.0	28.5
LnGrp LOS	C	B	B	C	B	B	C		C	C		C
Approach Vol, veh/h		880			856			41			91	
Approach Delay, s/veh		11.7			11.9			32.0			30.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	39.3	7.3	10.2	8.0	37.9	8.0	9.6
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	55.0	30.0	40.0	30.0	55.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	2.8	11.3	3.3	3.5	3.9	11.9	3.8	2.2
Green Ext Time (p_c), s	0.0	19.1	0.0	0.2	0.0	19.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	218	655	118	171	0	520	225	114	7	304	109
Future Volume (veh/h)	98	218	655	118	171	0	520	225	114	7	304	109
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	103	229	689	124	180	0	547	237	120	7	320	115
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	1444	646	184	1469	0	616	820	401	30	476	168
Arrive On Green	0.05	0.41	0.41	0.05	0.42	0.00	0.18	0.36	0.36	0.01	0.19	0.19
Sat Flow, veh/h	3442	3539	1583	3442	3632	0	3442	2305	1129	3442	2567	906
Grp Volume(v), veh/h	103	229	689	124	180	0	547	180	177	7	219	216
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	0	1721	1770	1664	1721	1770	1703
Q Serve(g_s), s	3.2	4.5	45.0	3.9	3.5	0.0	17.1	8.1	8.5	0.2	12.7	13.1
Cycle Q Clear(g_c), s	3.2	4.5	45.0	3.9	3.5	0.0	17.1	8.1	8.5	0.2	12.7	13.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.68	1.00		0.53
Lane Grp Cap(c), veh/h	160	1444	646	184	1469	0	616	629	592	30	328	316
V/C Ratio(X)	0.64	0.16	1.07	0.67	0.12	0.00	0.89	0.29	0.30	0.23	0.67	0.68
Avail Cap(c_a), veh/h	936	1444	646	936	1469	0	936	722	679	936	722	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	20.7	32.6	51.3	19.9	0.0	44.2	25.5	25.6	54.3	41.7	41.9
Incr Delay (d2), s/veh	1.6	0.1	54.5	1.6	0.0	0.0	5.0	0.2	0.3	1.4	2.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.2	29.4	1.9	1.7	0.0	8.6	4.0	3.9	0.1	6.4	6.4
LnGrp Delay(d),s/veh	53.3	20.7	87.2	52.9	19.9	0.0	49.2	25.7	25.9	55.7	44.1	44.5
LnGrp LOS	D	C	F	D	B		D	C	C	E	D	D
Approach Vol, veh/h		1021			304			904			442	
Approach Delay, s/veh		68.8			33.4			40.0			44.5	
Approach LOS		E			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	50.9	23.4	26.4	8.8	51.7	4.7	45.1
Change Period (Y+Rc), s	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9
Max Green Setting (Gmax), s	30.0	* 45	30.0	* 45	30.0	* 45	30.0	* 45
Max Q Clear Time (g_c+I1), s	5.9	47.0	19.1	15.1	5.2	5.5	2.2	10.5
Green Ext Time (p_c), s	0.1	0.0	0.6	5.4	0.1	6.5	0.0	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	306	562	140	260	21	460	959	152	30	1057	159
Future Volume (veh/h)	158	306	562	140	260	21	460	959	152	30	1057	159
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	166	322	592	147	274	22	484	1009	160	32	1113	167
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	472	686	168	413	33	321	1509	239	41	1186	530
Arrive On Green	0.11	0.25	0.25	0.09	0.24	0.24	0.18	0.49	0.49	0.02	0.33	0.33
Sat Flow, veh/h	1774	1863	1576	1774	1701	137	1774	3061	485	1774	3539	1582
Grp Volume(v), veh/h	166	322	592	147	0	296	484	583	586	32	1113	167
Grp Sat Flow(s),veh/h/ln	1774	1863	1576	1774	0	1838	1774	1770	1777	1774	1770	1582
Q Serve(g_s), s	15.3	25.8	42.0	13.6	0.0	24.1	30.0	41.3	41.4	3.0	50.5	13.0
Cycle Q Clear(g_c), s	15.3	25.8	42.0	13.6	0.0	24.1	30.0	41.3	41.4	3.0	50.5	13.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	187	472	686	168	0	446	321	872	876	41	1186	530
V/C Ratio(X)	0.89	0.68	0.86	0.88	0.00	0.66	1.51	0.67	0.67	0.78	0.94	0.32
Avail Cap(c_a), veh/h	268	472	686	268	0	446	321	872	876	268	1282	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.2	55.8	42.4	74.0	0.0	56.6	67.8	31.8	31.8	80.5	53.4	41.0
Incr Delay (d2), s/veh	17.3	3.3	10.5	10.9	0.0	3.0	243.5	1.6	1.6	10.9	12.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	13.8	26.4	7.2	0.0	12.6	36.4	20.5	20.7	1.6	26.7	5.7
LnGrp Delay(d),s/veh	90.5	59.1	52.9	84.9	0.0	59.6	311.3	33.4	33.4	91.4	65.6	41.1
LnGrp LOS	F	E	D	F		E	F	C	C	F	E	D
Approach Vol, veh/h		1080			443			1653			1312	
Approach Delay, s/veh		60.5			68.0			114.8			63.1	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	88.1	20.8	47.8	35.1	62.0	22.5	46.0
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	25.0	60.0	25.0	42.0	30.0	60.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	5.0	43.4	15.6	44.0	32.0	52.5	17.3	26.1
Green Ext Time (p_c), s	0.0	10.8	0.1	0.0	0.0	3.0	0.1	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	82.0
HCM 2010 LOS	F

2021 Cumulative PM without Creighton Avenue Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	2174	84	39	1641	127	55	0	25	132	0	263
Future Volume (veh/h)	257	2174	84	39	1641	127	55	0	25	132	0	263
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1863	1827	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	2389	92	43	1803	140	60	0	27	145	0	289
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	1	0	1	0	2	0	0	0	0	0
Cap, veh/h	139	2216	662	237	2495	776	136	0	372	70	0	325
Arrive On Green	0.15	0.86	0.86	0.13	0.49	0.49	0.08	0.00	0.24	0.04	0.00	0.20
Sat Flow, veh/h	1810	5136	1533	1810	5136	1598	1774	0	1553	1810	0	1615
Grp Volume(v), veh/h	282	2389	92	43	1803	140	60	0	27	145	0	289
Grp Sat Flow(s),veh/h/ln	1810	1712	1533	1810	1712	1598	1774	0	1553	1810	0	1615
Q Serve(g_s), s	10.0	56.1	1.2	2.7	36.2	6.4	4.2	0.0	1.7	5.0	0.0	22.6
Cycle Q Clear(g_c), s	10.0	56.1	1.2	2.7	36.2	6.4	4.2	0.0	1.7	5.0	0.0	22.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	2216	662	237	2495	776	136	0	372	70	0	325
V/C Ratio(X)	2.03	1.08	0.14	0.18	0.72	0.18	0.44	0.00	0.07	2.08	0.00	0.89
Avail Cap(c_a), veh/h	139	2216	662	237	2495	776	136	0	523	70	0	472
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	8.9	5.1	50.3	26.5	18.8	57.3	0.0	38.3	62.5	0.0	50.5
Incr Delay (d2), s/veh	472.1	39.3	0.2	0.1	1.5	0.4	2.2	0.0	0.1	533.0	0.0	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.2	31.9	0.5	1.4	17.4	2.9	2.2	0.0	0.8	12.8	0.0	11.4
LnGrp Delay(d),s/veh	527.1	48.2	5.3	50.4	28.0	19.2	59.5	0.0	38.3	595.5	0.0	64.3
LnGrp LOS	F	F	A	D	C	B	E		D	F		E
Approach Vol, veh/h		2763			1986			87			434	
Approach Delay, s/veh		95.6			27.8			53.0			241.8	
Approach LOS		F			C			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.5	61.5	15.4	30.6	15.4	68.6	9.5	36.5
Change Period (Y+Rc), s	5.4	* 5.4	5.4	4.5	5.4	5.4	4.5	* 5.4
Max Green Setting (Gmax), s	6.0	* 56	10.0	38.0	10.0	51.3	5.0	* 44
Max Q Clear Time (g_c+I1), s	4.7	58.1	6.2	24.6	12.0	38.2	7.0	3.7
Green Ext Time (p_c), s	1.2	0.0	0.1	1.5	0.0	11.3	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	81.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	567	1680	50	0	1281	227	0	0	21	348	0	521
Future Volume (veh/h)	567	1680	50	0	1281	227	0	0	21	348	0	521
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1882	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	644	1909	57	0	1456	258	0	0	24	395	0	592
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	1	0	0	0	0	0	0	0
Cap, veh/h	1132	3563	106	1	1738	541	3	73	62	569	447	669
Arrive On Green	0.43	0.92	0.92	0.00	0.68	0.68	0.00	0.00	0.04	0.16	0.00	0.24
Sat Flow, veh/h	3510	5123	153	1810	5136	1598	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	644	1275	691	0	1456	258	0	0	24	395	0	592
Grp Sat Flow(s),veh/h/ln	1755	1712	1852	1810	1712	1598	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	18.0	7.2	7.2	0.0	27.5	10.0	0.0	0.0	1.8	13.8	0.0	26.2
Cycle Q Clear(g_c), s	18.0	7.2	7.2	0.0	27.5	10.0	0.0	0.0	1.8	13.8	0.0	26.2
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1132	2382	1288	1	1738	541	3	73	62	569	447	669
V/C Ratio(X)	0.57	0.54	0.54	0.00	0.84	0.48	0.00	0.00	0.39	0.69	0.00	0.89
Avail Cap(c_a), veh/h	1132	2382	1288	70	1738	541	135	628	534	569	709	1060
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.00	0.89	0.89	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.3	1.8	1.8	0.0	18.3	15.5	0.0	0.0	56.7	51.4	0.0	48.0
Incr Delay (d2), s/veh	0.4	0.5	0.9	0.0	4.5	2.7	0.0	0.0	3.9	3.6	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	3.2	3.6	0.0	13.4	4.7	0.0	0.0	0.9	7.0	0.0	10.8
LnGrp Delay(d),s/veh	30.7	2.3	2.7	0.0	22.8	18.2	0.0	0.0	60.6	55.0	0.0	53.8
LnGrp LOS	C	A	A		C	B			E	E		D
Approach Vol, veh/h		2610			1714			24			987	
Approach Delay, s/veh		9.4			22.1			60.6			54.3	
Approach LOS		A			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	94.9	0.0	35.1	46.4	48.5	25.6	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	53.5	5.0	48.5	14.5	44.0	10.5	43.0
Max Q Clear Time (g_c+I1), s	0.0	9.2	0.0	28.2	20.0	29.5	15.8	3.8
Green Ext Time (p_c), s	0.0	25.8	0.0	2.4	0.0	8.8	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	22	0	0	10	0	752	42	0	848	0
Future Vol, veh/h	0	0	22	0	0	10	0	752	42	0	848	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	26	0	0	12	0	885	49	0	998	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	499	-	-	442	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	447	0	0	569	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	447	-	-	569	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	11.5	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	447	569	-	-
HCM Lane V/C Ratio	-	-	0.058	0.021	-	-
HCM Control Delay (s)	-	-	13.5	11.5	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	456	255	0	0	376	173	135	0	127	0
Future Volume (veh/h)	0	0	456	255	0	0	376	173	135	0	127	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	536	300	0	0	442	204	159	0	149	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	819	987	520	819	696	661	371	275	360	360	164
Arrive On Green	0.00	0.00	0.43	0.43	0.00	0.00	0.19	0.19	0.19	0.00	0.10	0.00
Sat Flow, veh/h	0	1900	1583	865	1900	1615	3442	1940	1438	3510	3539	1615
Grp Volume(v), veh/h	0	0	536	300	0	0	442	185	178	0	149	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	865	1900	1615	1721	1770	1609	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	0.0	14.8	0.0	0.0	5.8	4.6	4.9	0.0	1.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	14.8	0.0	0.0	5.8	4.6	4.9	0.0	1.9	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	0	819	987	520	819	696	661	338	308	360	360	164
V/C Ratio(X)	0.00	0.00	0.54	0.58	0.00	0.00	0.67	0.55	0.58	0.00	0.41	0.00
Avail Cap(c_a), veh/h	0	1916	1901	1019	1916	1629	2139	1875	1705	360	1911	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	5.3	12.2	0.0	0.0	18.4	17.9	18.0	0.0	20.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.5	1.0	0.0	0.0	1.2	1.4	1.7	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.0	3.6	0.0	0.0	2.9	2.4	2.3	0.0	1.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	5.7	13.2	0.0	0.0	19.6	19.3	19.8	0.0	21.4	0.0
LnGrp LOS			A	B			B	B	B		C	
Approach Vol, veh/h		536			300			805			149	
Approach Delay, s/veh		5.7			13.2			19.5			21.4	
Approach LOS		A			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	13.9		25.7	13.9	9.5		25.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	52.0		49.5	30.5	26.5		49.5
Max Q Clear Time (g_c+I1), s	0.0	6.9		2.0	7.8	3.9		16.8
Green Ext Time (p_c), s	0.0	2.5		4.4	1.6	0.8		4.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	114	13	0	0	161	0	12	0	0	0
Future Vol, veh/h	0	0	114	13	0	0	161	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	134	15	0	0	189	0	14	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	380	380	1	380	380	0	1	0	0	0	0	0
Stage 1	1	1	-	379	379	-	-	-	-	-	-	-
Stage 2	379	379	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	557	556	1089	557	556	-	1635	-	-	-	-	-
Stage 1	1027	899	-	620	618	-	-	-	-	-	-	-
Stage 2	620	618	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	491	1089	445	491	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	491	-	445	491	-	-	-	-	-	-	-
Stage 1	907	899	-	547	546	-	-	-	-	-	-	-
Stage 2	547	546	-	901	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			7	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.116	-	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	-	-	-

2021 Cumulative Saturday Midday without Creighton Avenue Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	1779	54	7	1585	139	53	0	12	133	0	233
Future Volume (veh/h)	285	1779	54	7	1585	139	53	0	12	133	0	233
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1696	1863	1863	1881	1743	1900	1863	1863	1900
Adj Flow Rate, veh/h	317	1977	60	8	1761	154	59	0	13	148	0	259
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	12	2	2	1	2	2	2	2	2
Cap, veh/h	638	3008	935	19	1210	376	128	0	325	63	0	291
Arrive On Green	0.72	1.00	1.00	0.01	0.24	0.24	0.07	0.00	0.22	0.04	0.00	0.18
Sat Flow, veh/h	1774	5085	1580	1616	5085	1581	1792	0	1482	1774	0	1583
Grp Volume(v), veh/h	317	1977	60	8	1761	154	59	0	13	148	0	259
Grp Sat Flow(s),veh/h/ln	1774	1695	1580	1616	1695	1581	1792	0	1482	1774	0	1583
Q Serve(g_s), s	10.9	0.0	0.0	0.7	33.3	9.9	4.4	0.0	1.0	5.0	0.0	22.4
Cycle Q Clear(g_c), s	10.9	0.0	0.0	0.7	33.3	9.9	4.4	0.0	1.0	5.0	0.0	22.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	638	3008	935	19	1210	376	128	0	325	63	0	291
V/C Ratio(X)	0.50	0.66	0.06	0.43	1.46	0.41	0.46	0.00	0.04	2.34	0.00	0.89
Avail Cap(c_a), veh/h	638	3008	935	69	1210	376	307	0	612	63	0	430
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.67	0.67	0.67	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	0.0	68.7	53.3	33.3	62.4	0.0	43.1	67.5	0.0	55.8
Incr Delay (d2), s/veh	0.4	0.7	0.1	3.9	208.3	2.2	2.6	0.0	0.0	647.3	0.0	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.2	0.0	0.3	38.9	4.5	2.3	0.0	0.4	13.8	0.0	11.0
LnGrp Delay(d),s/veh	14.5	0.7	0.1	72.6	261.6	35.5	65.0	0.0	43.1	714.8	0.0	70.5
LnGrp LOS	B	A	A	E	F	D	E		D	F		E
Approach Vol, veh/h		2354			1923			72			407	
Approach Delay, s/veh		2.6			242.7			61.0			304.8	
Approach LOS		A			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	88.2	15.4	30.2	55.7	38.7	9.5	36.1
Change Period (Y+Rc), s	4.6	5.4	5.4	4.5	5.4	5.4	4.5	* 5.4
Max Green Setting (Gmax), s	6.6	52.1	24.0	38.0	24.0	33.3	5.0	* 58
Max Q Clear Time (g_c+I1), s	12.7	2.0	6.4	24.4	12.9	35.3	7.0	3.0
Green Ext Time (p_c), s	0.0	26.3	0.2	1.3	7.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	126.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	849	1045	0	0	1009	333	0	0	0	451	0	696
Future Volume (veh/h)	849	1045	0	0	1009	333	0	0	0	451	0	696
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1023	1259	0	0	1216	401	0	0	0	543	0	839
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	2	2	0	2	0	0	0	0	0	0	0
Cap, veh/h	994	3045	0	1	1417	449	3	2	1	1149	622	930
Arrive On Green	0.28	0.60	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.33	0.00	0.33
Sat Flow, veh/h	3510	5253	0	1810	5085	1610	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	1023	1259	0	0	1216	401	0	0	0	543	0	839
Grp Sat Flow(s),veh/h/ln	1755	1695	0	1810	1695	1610	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	34.5	16.1	0.0	0.0	27.6	12.9	0.0	0.0	0.0	15.0	0.0	34.3
Cycle Q Clear(g_c), s	34.5	16.1	0.0	0.0	27.6	12.9	0.0	0.0	0.0	15.0	0.0	34.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	994	3045	0	1	1417	449	3	2	1	1149	622	930
V/C Ratio(X)	1.03	0.41	0.00	0.00	0.86	0.89	0.00	0.00	0.00	0.47	0.00	0.90
Avail Cap(c_a), veh/h	994	3045	0	74	1586	502	144	624	530	1149	850	1271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	13.0	0.0	0.0	41.7	8.3	0.0	0.0	0.0	32.6	0.0	39.1
Incr Delay (d2), s/veh	36.3	0.1	0.0	0.0	4.5	17.0	0.0	0.0	0.0	0.3	0.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	7.5	0.0	0.0	13.5	11.8	0.0	0.0	0.0	7.3	0.0	14.3
LnGrp Delay(d),s/veh	79.9	13.1	0.0	0.0	46.2	25.3	0.0	0.0	0.0	32.9	0.0	46.2
LnGrp LOS	F	B			D	C				C		D
Approach Vol, veh/h		2282			1617			0			1382	
Approach Delay, s/veh		43.1			41.0			0.0			41.0	
Approach LOS		D			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	77.5	0.0	44.4	39.0	38.5	44.4	0.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	67.5	5.0	54.5	34.5	38.0	19.5	40.0
Max Q Clear Time (g_c+I1), s	0.0	18.1	0.0	36.3	36.5	29.6	17.0	0.0
Green Ext Time (p_c), s	0.0	32.3	0.0	3.6	0.0	4.3	1.5	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		41.9
HCM 2010 LOS		D

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	25	0	0	14	0	1115	67	0	1122	0
Future Vol, veh/h	0	0	25	0	0	14	0	1115	67	0	1122	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	29	0	0	16	0	1312	79	0	1320	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	660	-	-	656	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	352	0	0	413	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	352	-	-	413	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	14.1	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	352	413	-	-
HCM Lane V/C Ratio	-	-	0.084	0.04	-	-
HCM Control Delay (s)	-	-	16.2	14.1	-	-
HCM Lane LOS	-	-	C	B	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	596	346	0	0	555	251	215	0	166	0
Future Volume (veh/h)	0	0	596	346	0	0	555	251	215	0	166	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1863	1863	1900	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	701	407	0	0	653	295	253	0	195	0
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	2	2	0	0	2	2	2	0	2	0
Cap, veh/h	0	987	1178	460	987	839	772	710	593	4	415	189
Arrive On Green	0.00	0.00	0.52	0.52	0.00	0.00	0.22	0.39	0.39	0.00	0.12	0.00
Sat Flow, veh/h	0	1900	1583	742	1900	1615	3442	1833	1530	3510	3539	1615
Grp Volume(v), veh/h	0	0	701	407	0	0	653	285	263	0	195	0
Grp Sat Flow(s),veh/h/ln	0	1900	1583	742	1900	1615	1721	1770	1593	1755	1770	1615
Q Serve(g_s), s	0.0	0.0	19.8	50.5	0.0	0.0	17.7	11.4	11.8	0.0	5.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	19.8	50.5	0.0	0.0	17.7	11.4	11.8	0.0	5.0	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Lane Grp Cap(c), veh/h	0	987	1178	460	987	839	772	686	617	4	415	189
V/C Ratio(X)	0.00	0.00	0.60	0.88	0.00	0.00	0.85	0.41	0.43	0.00	0.47	0.00
Avail Cap(c_a), veh/h	0	987	1178	460	987	839	1158	929	836	181	849	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	5.7	24.6	0.0	0.0	36.1	21.7	21.8	0.0	40.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	18.2	0.0	0.0	3.8	0.4	0.5	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	8.6	13.2	0.0	0.0	8.8	5.6	5.3	0.0	2.5	0.0
LnGrp Delay(d),s/veh	0.0	0.0	6.5	42.9	0.0	0.0	39.9	22.1	22.3	0.0	40.9	0.0
LnGrp LOS			A	D			D	C	C		D	
Approach Vol, veh/h		701			407			1201			195	
Approach Delay, s/veh		6.5			42.9			31.8			40.9	
Approach LOS		A			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	42.2		55.0	26.3	15.9		55.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	51.0		50.5	32.7	23.3		50.5
Max Q Clear Time (g_c+I1), s	0.0	13.8		21.8	19.7	7.0		52.5
Green Ext Time (p_c), s	0.0	5.5		7.1	2.1	4.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	149	17	0	0	232	0	19	0	0	0
Future Vol, veh/h	0	0	149	17	0	0	232	0	19	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	92	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	175	20	0	0	273	0	22	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	547	547	1	547	547	0	1	0	0	0	0	0
Stage 1	1	1	-	546	546	-	-	-	-	-	-	-
Stage 2	546	546	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	424	447	1089	424	447	-	1635	-	-	-	-	-
Stage 1	1027	899	-	495	521	-	-	-	-	-	-	-
Stage 2	495	521	-	1027	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	371	1089	310	371	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	371	-	310	371	-	-	-	-	-	-	-
Stage 1	853	899	-	411	433	-	-	-	-	-	-	-
Stage 2	411	433	-	862	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			7.1	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-	-	-	-
HCM Lane V/C Ratio	0.167	-	-	-	-	-	-	-
HCM Control Delay (s)	7.6	0	-	-	-	0	-	-
HCM Lane LOS	A	A	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-	-	-	-	-

2035 General Plan Buildout PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2265	784	0	2361	592	0	0	0	459	3	1104
Future Volume (veh/h)	0	2265	784	0	2361	592	0	0	0	459	3	1104
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1863	0	1863	1900				1900	1881	1881
Adj Flow Rate, veh/h	0	2335	808	0	2434	0				473	3	1138
Adj No. of Lanes	0	3	1	0	3	1				0	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	3	2	0	2	0				1	0	1
Cap, veh/h	0	2693	844	0	2719	863				691	4	1092
Arrive On Green	0.00	1.00	1.00	0.00	1.00	0.00				0.39	0.39	0.39
Sat Flow, veh/h	0	5202	1578	0	5253	1615				1781	11	2814
Grp Volume(v), veh/h	0	2335	808	0	2434	0				476	0	1138
Grp Sat Flow(s),veh/h/ln	0	1679	1578	0	1695	1615				1792	0	1407
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				33.2	0.0	58.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				33.2	0.0	58.2
Prop In Lane	0.00		1.00	0.00		1.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	2693	844	0	2719	863				695	0	1092
V/C Ratio(X)	0.00	0.87	0.96	0.00	0.90	0.00				0.68	0.00	1.04
Avail Cap(c_a), veh/h	0	2693	844	0	2719	863				695	0	1092
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.37	0.37	0.00	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				38.2	0.0	45.9
Incr Delay (d2), s/veh	0.0	1.6	11.2	0.0	0.5	0.0				2.3	0.0	38.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	2.6	0.0	0.1	0.0				16.8	0.0	28.5
LnGrp Delay(d),s/veh	0.0	1.6	11.2	0.0	0.5	0.0				40.6	0.0	84.8
LnGrp LOS		A	B		A					D		F
Approach Vol, veh/h		3143			2434						1614	
Approach Delay, s/veh		4.1			0.5						71.7	
Approach LOS		A			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		86.0		64.0		86.0		
Change Period (Y+Rc), s		5.8		5.8		5.8		
Max Green Setting (Gmax), s		80.2		58.2		80.2		
Max Q Clear Time (g_c+I1), s		2.0		60.2		2.0		
Green Ext Time (p_c), s		70.0		0.0		70.0		

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1805	919	0	2400	552	733
Future Volume (veh/h)	1805	919	0	2400	552	733
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1845	0	1881	1881	1881
Adj Flow Rate, veh/h	1962	0	0	2609	692	698
Adj No. of Lanes	3	1	0	3	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	3	0	1	1	1
Cap, veh/h	2602	794	0	2602	745	665
Arrive On Green	1.00	0.00	0.00	1.00	0.42	0.42
Sat Flow, veh/h	5305	1568	0	5474	1792	1599
Grp Volume(v), veh/h	1962	0	0	2609	692	698
Grp Sat Flow(s),veh/h/ln	1712	1568	0	1712	1792	1599
Q Serve(g_s), s	0.0	0.0	0.0	76.0	55.1	62.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	76.0	55.1	62.4
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2602	794	0	2602	745	665
V/C Ratio(X)	0.75	0.00	0.00	1.00	0.93	1.05
Avail Cap(c_a), veh/h	2602	794	0	2602	745	665
HCM Platoon Ratio	2.00	2.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	0.38	0.00	0.00	0.31	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	41.7	43.8
Incr Delay (d2), s/veh	0.8	0.0	0.0	10.5	17.8	48.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.5	31.0	36.5
LnGrp Delay(d),s/veh	0.8	0.0	0.0	10.5	59.4	92.3
LnGrp LOS	A			F	E	F
Approach Vol, veh/h	1962			2609	1390	
Approach Delay, s/veh	0.8			10.5	76.0	
Approach LOS	A			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		81.8				81.8		68.2
Change Period (Y+Rc), s		5.8				5.8		5.8
Max Green Setting (Gmax), s		76.0				76.0		62.4
Max Q Clear Time (g_c+I1), s		2.0				78.0		64.4
Green Ext Time (p_c), s		60.4				0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	2128	111	31	2407	127	66	0	25	132	0	263
Future Volume (veh/h)	299	2128	111	31	2407	127	66	0	25	132	0	263
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1863	1827	1900	1900	1900	1900
Adj Flow Rate, veh/h	329	2338	122	34	2645	140	73	0	27	145	0	289
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	1	0	1	0	2	0	0	0	0	0
Cap, veh/h	249	2513	752	200	2375	738	116	0	42	425	0	318
Arrive On Green	0.27	0.98	0.98	0.22	0.92	0.92	0.07	0.00	0.03	0.23	0.00	0.20
Sat Flow, veh/h	1810	5136	1537	1810	5136	1597	1774	0	1553	1810	0	1615
Grp Volume(v), veh/h	329	2338	122	34	2645	140	73	0	27	145	0	289
Grp Sat Flow(s),veh/h/ln	1810	1712	1537	1810	1712	1597	1774	0	1553	1810	0	1615
Q Serve(g_s), s	20.6	16.3	0.3	2.3	69.4	0.5	6.0	0.0	2.6	10.0	0.0	26.3
Cycle Q Clear(g_c), s	20.6	16.3	0.3	2.3	69.4	0.5	6.0	0.0	2.6	10.0	0.0	26.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	2513	752	200	2375	738	116	0	42	425	0	318
V/C Ratio(X)	1.32	0.93	0.16	0.17	1.11	0.19	0.63	0.00	0.64	0.34	0.00	0.91
Avail Cap(c_a), veh/h	249	2513	752	200	2375	738	150	0	435	425	0	409
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.45	0.45	0.45	0.54	0.54	0.54	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	1.0	0.8	52.9	5.6	0.6	68.3	0.0	72.3	47.8	0.0	58.9
Incr Delay (d2), s/veh	158.0	3.8	0.2	0.1	55.0	0.3	5.5	0.0	11.6	0.5	0.0	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.1	3.9	0.2	1.1	39.3	0.3	3.1	0.0	1.2	5.1	0.0	13.5
LnGrp Delay(d),s/veh	212.4	4.8	1.0	53.0	60.6	0.9	73.8	0.0	83.8	48.2	0.0	79.4
LnGrp LOS	F	A	A	D	F	A	E		F	D		E
Approach Vol, veh/h		2789			2819			100			434	
Approach Delay, s/veh		29.1			57.6			76.5			69.0	
Approach LOS		C			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	78.8	15.2	34.0	26.0	74.8	40.6	8.7
Change Period (Y+Rc), s	5.4	* 5.4	5.4	4.5	5.4	5.4	5.4	* 4.6
Max Green Setting (Gmax), s	6.6	* 73	12.7	38.0	20.6	58.0	9.5	* 42
Max Q Clear Time (g_c+I1), s	14.3	18.3	8.0	28.3	22.6	71.4	12.0	4.6
Green Ext Time (p_c), s	1.7	33.5	0.1	1.3	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	45.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	720	1518	50	0	1755	427	0	0	21	384	0	810
Future Volume (veh/h)	720	1518	50	0	1755	427	0	0	21	384	0	810
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1882	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	818	1725	57	0	1994	485	0	0	24	436	0	920
Adj No. of Lanes	2	3	0	1	3	1	2	1	1	2	1	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	1	0	0	0	0	0	0	0
Cap, veh/h	1451	4016	133	1	1763	694	279	63	54	316	83	1300
Arrive On Green	0.83	1.00	1.00	0.00	0.69	0.69	0.00	0.00	0.03	0.09	0.00	0.04
Sat Flow, veh/h	3510	5105	169	1810	5136	1598	3510	1900	1615	3510	1900	2842
Grp Volume(v), veh/h	818	1157	625	0	1994	485	0	0	24	436	0	920
Grp Sat Flow(s),veh/h/ln	1755	1712	1849	1810	1712	1598	1755	1900	1615	1755	1900	1421
Q Serve(g_s), s	11.3	0.0	0.0	0.0	51.5	1.6	0.0	0.0	2.1	13.5	0.0	0.0
Cycle Q Clear(g_c), s	11.3	0.0	0.0	0.0	51.5	1.6	0.0	0.0	2.1	13.5	0.0	0.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1451	2694	1454	1	1763	694	279	63	54	316	83	1300
V/C Ratio(X)	0.56	0.43	0.43	0.00	1.13	0.70	0.00	0.00	0.45	1.38	0.00	0.71
Avail Cap(c_a), veh/h	1451	2694	1454	60	1763	694	279	545	463	316	652	2151
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	0.00	0.69	0.69	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	0.0	0.0	23.5	13.4	0.0	0.0	66.8	68.3	0.0	32.7
Incr Delay (d2), s/veh	0.3	0.3	0.6	0.0	64.4	4.0	0.0	0.0	5.7	189.7	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.1	0.3	0.0	34.0	1.1	0.0	0.0	1.0	14.9	0.0	15.3
LnGrp Delay(d),s/veh	9.0	0.3	0.6	0.0	87.9	17.4	0.0	0.0	72.5	257.9	0.0	33.4
LnGrp LOS	A	A	A		F	B			E	F		C
Approach Vol, veh/h		2600			2479			24			1356	
Approach Delay, s/veh		3.1			74.1			72.5			105.6	
Approach LOS		A			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	122.5	16.4	11.1	66.5	56.0	18.0	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	70.5	5.0	51.5	24.0	51.5	13.5	43.0
Max Q Clear Time (g_c+I1), s	0.0	2.0	0.0	2.0	13.3	53.5	15.5	4.1
Green Ext Time (p_c), s	0.0	29.6	0.0	4.6	3.5	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	52.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	1675	126	176	1958	78	128	0	75	100	0	81
Future Volume (veh/h)	121	1675	126	176	1958	78	128	0	75	100	0	81
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1900	1900	1881	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	1903	143	200	2225	89	145	0	85	114	0	92
Adj No. of Lanes	1	3	0	1	3	1	2	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	0	0	1	0	0	0	0	0
Cap, veh/h	527	1984	148	596	2310	718	218	0	105	127	0	118
Arrive On Green	0.58	0.81	0.81	0.33	0.45	0.45	0.06	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1810	4870	364	1810	5187	1611	3476	0	1615	1810	0	1615
Grp Volume(v), veh/h	138	1335	711	200	2225	89	145	0	85	114	0	92
Grp Sat Flow(s),veh/h/ln	1810	1712	1811	1810	1729	1611	1738	0	1615	1810	0	1615
Q Serve(g_s), s	5.6	49.3	50.7	12.5	62.5	3.7	6.1	0.0	7.8	9.4	0.0	8.4
Cycle Q Clear(g_c), s	5.6	49.3	50.7	12.5	62.5	3.7	6.1	0.0	7.8	9.4	0.0	8.4
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	527	1395	738	596	2310	718	218	0	105	127	0	118
V/C Ratio(X)	0.26	0.96	0.96	0.34	0.96	0.12	0.66	0.00	0.81	0.90	0.00	0.78
Avail Cap(c_a), veh/h	527	1395	738	596	2310	718	218	0	441	127	0	477
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	12.8	12.9	37.9	40.4	13.9	68.7	0.0	69.2	69.2	0.0	68.3
Incr Delay (d2), s/veh	0.1	13.8	22.4	0.1	11.9	0.4	6.0	0.0	13.4	49.6	0.0	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	24.6	28.3	6.2	32.2	1.7	3.1	0.0	3.9	6.4	0.0	4.1
LnGrp Delay(d),s/veh	23.4	26.7	35.3	38.0	52.3	14.2	74.7	0.0	82.6	118.9	0.0	79.0
LnGrp LOS	C	C	D	D	D	B	E		F	F		E
Approach Vol, veh/h		2184			2514			230			206	
Approach Delay, s/veh		29.3			49.8			77.6			101.0	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	66.5	14.0	15.4	48.3	72.2	15.1	14.4
Change Period (Y+Rc), s	4.6	5.4	4.6	4.5	4.6	5.4	4.6	4.6
Max Green Setting (Gmax), s	18.3	61.1	7.3	44.3	12.5	66.8	10.5	41.0
Max Q Clear Time (g_c+I1), s	11.5	52.7	8.1	10.4	7.6	64.5	11.4	9.8
Green Ext Time (p_c), s	0.2	8.2	0.0	0.5	0.2	2.2	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	22	0	0	10	0	1105	42	0	1171	5
Future Vol, veh/h	0	0	22	0	0	10	0	1105	42	0	1171	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	26	0	0	12	0	1300	49	0	1378	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	692	-	-	650	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	335	0	0	417	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	335	-	-	417	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.6	13.9	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	335	417	-	-
HCM Lane V/C Ratio	-	-	0.077	0.028	-	-
HCM Control Delay (s)	-	-	16.6	13.9	-	-
HCM Lane LOS	-	-	C	B	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	1051	64	0	1176
Future Vol, veh/h	0	5	1051	64	0	1176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	6	1236	75	0	1384

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	656	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	354	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	354	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	354	-
HCM Lane V/C Ratio	-	-	0.017	-
HCM Control Delay (s)	-	-	15.3	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	5	380	254	5	7	461	476	129	13	543	25
Future Volume (veh/h)	54	5	380	254	5	7	461	476	129	13	543	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	64	6	447	299	6	8	542	560	152	15	639	29
Adj No. of Lanes	0	1	1	1	1	1	2	2	0	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	605	53	950	436	744	633	689	767	208	575	869	389
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.20	0.27	0.27	0.16	0.24	0.24
Sat Flow, veh/h	1321	135	1615	953	1900	1615	3510	2810	760	3510	3610	1615
Grp Volume(v), veh/h	70	0	447	299	6	8	542	359	353	15	639	29
Grp Sat Flow(s),veh/h/ln	1456	0	1615	953	1900	1615	1755	1805	1766	1755	1805	1615
Q Serve(g_s), s	2.2	0.0	0.0	23.0	0.2	0.2	11.6	14.2	14.3	0.3	12.9	1.1
Cycle Q Clear(g_c), s	2.4	0.0	0.0	25.4	0.2	0.2	11.6	14.2	14.3	0.3	12.9	1.1
Prop In Lane	0.91		1.00	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	658	0	950	436	744	633	689	493	482	575	869	389
V/C Ratio(X)	0.11	0.00	0.47	0.69	0.01	0.01	0.79	0.73	0.73	0.03	0.74	0.07
Avail Cap(c_a), veh/h	890	0	1208	588	1048	891	1403	1316	1288	575	1442	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	9.3	23.4	14.6	14.7	30.1	26.0	26.0	27.7	27.6	23.1
Incr Delay (d2), s/veh	0.1	0.0	0.4	2.0	0.0	0.0	2.0	2.1	2.2	0.0	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	5.6	6.2	0.1	0.1	5.8	7.4	7.3	0.1	6.5	0.5
LnGrp Delay(d),s/veh	15.4	0.0	9.6	25.4	14.6	14.7	32.2	28.1	28.2	27.7	28.8	23.2
LnGrp LOS	B		A	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		517			313			1254			683	
Approach Delay, s/veh		10.4			24.9			29.9			28.6	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.4	26.0		35.4	20.0	23.5		35.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	57.5		43.5	31.5	31.5		43.5
Max Q Clear Time (g_c+I1), s	2.3	16.3		4.4	13.6	14.9		27.4
Green Ext Time (p_c), s	0.7	5.2		4.1	1.9	4.1		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	95	0	0	7	0	527	11	0	486	25
Future Vol, veh/h	0	0	95	0	0	7	0	527	11	0	486	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	100	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	112	0	0	8	0	620	13	0	572	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	286	-	-	310	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	717	0	0	692	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	717	-	-	692	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	10.3	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	717	692	-	-
HCM Lane V/C Ratio	-	-	0.156	0.012	-	-
HCM Control Delay (s)	-	-	10.9	10.3	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-	-

Appendix E Signal Timing and Phasing Worksheets (Synchro)

Existing Signal Timing

Location: CLINTON KEITH ROAD @ I-15 SOUTHBOUND -RAMP
Designed By:
System:
District: 08 - SAN BERNARDINO
Installed By: JP/KT
Master At: I-15 N/B RAMP @ CLINTON
I/C:
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
9/10/2018	6/10/2010			4/10/2002

			FLASH
PHASE	1)	W/B CLINTON KEITH RD --LEFT TURN	[ ]
	2)	E/B CLINTON KEITH RD	[ ]
	3)		[ ]
	4)	I-15 S/B ON OFF RAMP	[ ]
	5)		[ ]
	6)	W/B CLINTON KEITH RD	[ ]
	7)		[ ]
	8)		[ ]
OVERLAP	A)		[ ]
	B)		[ ]
	C)		[ ]
	D)		[ ]
	E)		[ ]
	F)		[ ]

Intersection Layout

Comments and Notes:
TSCP 2.21 BUILD 2

RAM Checksum

Page 2: 454D	Page 8: 26C1
Page 3: 92C6	Page 9: D2FD
Page 4: 508C	Page 10: BDAC
Page 5: 191A	Page 11: 1D0B
Page 6: 191A	Page 12: 2FBE
Page 7: D4AE	Page 13: 86F7

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	1 2 . 4 . 6 . .
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . .
Vehicle Calls	1 2 . 4 . 6 . .
Pedestrian Calls	. 2 . . . 6 . .
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. . . . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	7	0	0
Flash Don't Walk	0	23	0	0	0	28	0	0
Minimum Green	5	5	0	5	0	5	0	0
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	25	45	0	45	0	45	0	0
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Maximum Gap	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Gap	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.6	4.8	3.0	4.8	3.0	4.8	3.0	3.0
All-Red	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	90		. . . . .				15	38		20		58		
Plan 2	Green Factor	90		. . . . .				18	35		20		58		
Plan 3	Green Factor	90		. . . . .				14	28		31		47		
Plan 4	Green Factor			. . . . .											
Plan 5	Green Factor			. . . . .											
Plan 6	Green Factor			. . . . .											
Plan 7	Green Factor			. . . . .											
Plan 8	Green Factor			. . . . .											
Plan 9	Green Factor			. . . . .											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	. . . . .
11-19	. . . . .
21-29	. . . . .

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	. . . . .
Veh Min	Veh Max
. 2 . . . 6 . .	. . . . .
Ped	Bike
. . . . .	. . . . .
Cond	Cond Grn
. . . . .	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	1	. . . . .	. . . . .	. . . . .
Plan 2	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	1	. . . . .	. . . . .	. . . . .
Plan 3	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	1	. . . . .	. . . . .	. . . . .
Plan 4	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 5	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 6	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 7	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 9	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)				Slot
Det	Type	Phases	Lock	
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	CALL+EXTEND	. 2	NO	I3L
7	CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	CALL+EXTEND	. . . 4 . . .	NO	I7L
15	CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	CALL+EXTEND	 8	NO	J7L
35	CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. . . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)				
Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)								
Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)								
Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	1	A
0900	255	A
1100	2	A
1300	255	A
1430	3	A
1830	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	. . . . .
Holiday	. . . . .

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			. . . . .		. . . . .
2			. . . . .		. . . . .
3			. . . . .		. . . . .
4			. . . . .		. . . . .
5			. . . . .		. . . . .
6			. . . . .		. . . . .
7			. . . . .		. . . . .
8			. . . . .		. . . . .
9			. . . . .		. . . . .
10			. . . . .		. . . . .
11			. . . . .		. . . . .
12			. . . . .		. . . . .
13			. . . . .		. . . . .
14			. . . . .		. . . . .
15			. . . . .		. . . . .
16			. . . . .		. . . . .

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	1
Protocol	AB3418
Access Level	7
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)

#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27001
Type	STATIC
Central Access	6
Field Access	0

IP Address	192	.	168	.	0	.	101
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	255
Gateway	192	.	168	.	0	.	1

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . .	. . . .	. . . .	. . . .	. 2 . 4 . 6 . 8	. . . . . .	. . . . . .	. . . . . .
Clear 2		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Clear 3		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Hold		. . . .	. . . .	1 2 3 4 5 6 7 8	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . .	. . . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)			
Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . .	. . . .	. . . .	. . . .	. 2 . 4 . 6 . 8	. . . . . .	. . . . . .	. . . . . .
Clear 2		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Clear 3		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Hold		1 2 3 . . 6 . .	. . . .	. . . .	. 2 . . . 6 . .	. . . .	. . . 4 . . . 8	. . . . . .	. . . . . .	. . . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . .	. . . . . .	. . . 4 . . 7 .	. . . .

Configuration (3-2-6)			
Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	. 2 . . 5 . . .	. . . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	. . . 4 . . 7 .	. . . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	1 . . . . 6 . .	. . . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	. . 3 8	. . . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	NORMAL

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

\+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

Location: CLINTON KEITH ROAD @ NORTHBOUND RAMP
Designed By:
System:
District: 08-SAN BERNARDINO
Installed By: JP/KT
Master At: THIS LOCATION
I/C:
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
9/12/2018	6/10/2010			4/10/2002

			FLASH
PHASE	1)		[ ]
	2)	E/B CLINTON KEITH RD.	[ ]
	3)		[ ]
	4)		[ ]
	5)	E/B CLINTON KEITH RD---LEFT TURN	[ ]
	6)	W/B CLINTON KEITH RD	[ ]
	7)		[ ]
	8)	I-15 N/B RAMP	[ ]
OVERLAP	A)		[ ]
	B)		[ ]
	C)		[ ]
	D)		[ ]
	E)		[ ]
	F)		[ ]

Intersection Layout

Comments and Notes:
TSCP 2.21 Build 2

RAM Checksum

Page 2: 3608	Page 8: 26C1
Page 3: FA42	Page 9: D2FD
Page 4: 940D	Page 10: EBC4
Page 5: 191A	Page 11: 1D0B
Page 6: 191A	Page 12: 2FBE
Page 7: D4AE	Page 13: 86F7

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	. 2 . . 5 6 . 8
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . .
Vehicle Calls	. 2 . . 5 6 . 8
Pedestrian Calls	. 2 . . . 6 . .
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. . . . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	7	0	0
Flash Don't Walk	0	23	0	0	0	23	0	0
Minimum Green	0	5	0	0	5	5	0	5
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	45	0	0	25	45	0	35
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Maximum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Minimum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.8	3.0	3.0	4.1	4.8	3.0	4.8
All-Red	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0

Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	90		. . . . .	47				54			19	29		24
Plan 2	Green Factor	90		. . . . .	37				50			16	28		28
Plan 3	Green Factor	90		. . . . .	46				48			14	28		30
Plan 4	Green Factor			. . . . .											
Plan 5	Green Factor			. . . . .											
Plan 6	Green Factor			. . . . .											
Plan 7	Green Factor			. . . . .											
Plan 8	Green Factor			. . . . .											
Plan 9	Green Factor			. . . . .											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	. . . . .
11-19	. . . . .
21-29	. . . . .

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	. . . . .
Veh Min	Veh Max
. 2 . . . 6 . .	. . . . .
Ped	Bike
. . . . .	. . . . .
Cond	Cond Grn
. . . . .	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	 8	. . . . .	. . . . .	. . . . .
Plan 2	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	 8	. . . . .	. . . . .	. . . . .
Plan 3	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	 8	. . . . .	. . . . .	. . . . .
Plan 4	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 5	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 6	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 7	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 9	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)				Slot
Det	Type	Phases	Lock	
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	CALL+EXTEND	. 2	NO	I3L
7	CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	CALL+EXTEND	. . . 4 . . .	NO	I7L
15	CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	CALL+EXTEND	 8	NO	J7L
35	CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. . . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)				
Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)								
Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)								
Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	1	A
0900	255	A
1100	2	A
1300	255	A
1430	3	A
1830	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	. . . . .
Holiday	. . . . .

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			. . . . .		. . . . .
2			. . . . .		. . . . .
3			. . . . .		. . . . .
4			. . . . .		. . . . .
5			. . . . .		. . . . .
6			. . . . .		. . . . .
7			. . . . .		. . . . .
8			. . . . .		. . . . .
9			. . . . .		. . . . .
10			. . . . .		. . . . .
11			. . . . .		. . . . .
12			. . . . .		. . . . .
13			. . . . .		. . . . .
14			. . . . .		. . . . .
15			. . . . .		. . . . .
16			. . . . .		. . . . .

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	2
Protocol	AB3418
Access Level	7
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	1
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27002
Type	STATIC
Central Access	6
Field Access	0

IP Address	192	.	168	.	0	.	102
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	255
Gateway	192	.	168	.	0	.	1

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		. . . . .	. . . . .	1 2 3 4 5 6 7 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)			
Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		1 2 3 . . 6 . .	. . . . .	. . . . .	. 2 . . . 6 . .	. . . . .	. . . 4 . . . 8	. . . . .	. . . . .	. . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	. . . 4 . . 7 .	. . . . .

Configuration (3-2-6)			
Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	. 2 . . 5 . . .	. . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	. . . 4 . . 7 .	. . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	1 . . . . 6 . .	. . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	45	. . 3 8	. . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	NORMAL

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

\+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

Unofficial

INTERSECTION: Clinton Keith at: George

By: Date Prepared: 1/27/2009

COORDINATION — 0

DEMAND (VEH & PEDS) — 1 2 3 4 5 6 7 8

PREEMPTION — 9

BASE DISPLAY

A		b	
PHASE	INTYL	PHASE	INTYL
RING A		RING B	

1	2	3	4	RING A
5	6	7	8	RING B

PHASES

INTERVALS

0 - WALK
1 – FLASH DONT WALK
2 – MINIMUM GREEN
3 –
4 – VARIABLE INITIAL
5 – EXTENSION
6 –
7 – REDUCED GAP
8 – RED REST
9 – PREEMPTION
A – STOP TIME
B – RED REVERT
C – GAP TERMINATION
D – MAX TERMINATION
E – FORCEOFF
F – RED CLEARANCE

OVERLAP LOAD SWITCH ASSIGNMENT D-O-

OVERLAP A		(0 -8)
OVERLAP B		(0-8)
OVERLAP C		(0-8)
OVERLAP D		(0-8)

bAdE	EPROM ERROR, SEE C-E-D WATCHDOG STOPS IF F-C-F = 0
bAdA	TURN STOPTIME SW ON THEN OFF TO REINITIALIZE

CONFIGURATION DATA

NOTE: "E" KEY ENABLED (F-9-E ≠ 0)

KEYSTROKES: E + E + INTERVAL

INTERVAL		PHASE 1	2	3	4	5	6	7	8
0	EXCLU PH								
1	RR 1 GRN CL								
2	RR2 GRN CL								
3	RR2 LTD								
4	PROT/PERM								
5	OLA GOMIT								
6	OLB GOMIT								
7	OLC GOMIT								
8	OLD GOMIT								
9	OV FL YEL								
A	EMVEH A		X			X			
B	EMVEH B				X				X
C	EMVEH C	X					X		
D	EMVEH D			X				X	X
E	EXTRA	X							
F	IC SELECT		X						

EXTRA (E + E + E)

1 - TBC TYPE 1
3 - DAYLIGHT SAV
4 - EV ADVANCE
5 - RESERVED
6 - SPECIAL EVENT
7 - PRETIMED
8 - SPLIT RING

IC SELECT (E + E + F)

2 - DUPLEX LOCAL
3 - 7 WIRE IN
4 - FLH/FREE
6 - SIMPLEX MASTER
7 - 7 WIRE OUT
8 - OFFSET INTERRUPTER

ASSIGNS (E + F + F)

1 - RT OVERLAP
2 - TOD OUTPUTS
3 - STEADY EV BEACON
4 - FLASH EV BEACON
5 - RESERVED
6 - PHASES 3 & 7 PED
7 - ADVANCE WARNING BEACON
8 - SPECIAL EVENT

KEYSTROKES: E + F + INTERVAL

INTERVAL		PHASE 1	2	3	4	5	6	7	8
0									
1	RR OLAP A								
2	RR OLAP B								
3	RR OLAP C								
4	RR OLAP D								
5	PED2P		X						
6	PED6P						X		
7	PED4P				X				
8	PED8P								X
9	FLH YELO								
A	OVERLAP A								
B	OVERLAP B								
C	OVERLAP C								
D	OVERLAP D								
E	RESTRICT								
F	ASSIGNS								

INTERSECTION: Clinton Keith and George

Date Prepared: Sheet: 2 of 4

PHASE TIMING
KEYSTROKES: F + PHASE + INTERVAL

		PHASE								PREEMPT		
INTERVAL		1	2	3	4	5	6	7	8		E	
WALK	0		7		7		7		7	RR-1 Delay		0
Ped D/W	1		18		23		19		23	RR-1 Clear		1
Min Green	2	10	6	4	5	4	9	4	9	EVA Delay		2
Type 3 Det	3									EVA Clear	1	3
Add / Veh	4		1.5				1.5			EVB Delay		4
Veh Exten *	5	2	4.0	2	3	2	4.0	2	3	EVB Clear	1	5
Max Gap *	6	2	5.0	2	3	2	5.0	2	3	EVC Delay		6
Min Gap *	7	2	3.0	2	3	2	3.0	2	3	EVC Clear	1	7
Max Exten	8	25	45	30	30	25	45	25	30	EVD Delay		8
Max 2	9									EVD Clear	1	9
	A									RR-2 Delay		A
Call To Phase	B									RR-2 Clear		B
Reduce By	C		0.1				0.1			View EV Delay		C
Reduce Every	D		10				10.0			View EV Clear		D
Yellow Change	E	3.0	4.3	3.9	3.9	3.9	4.3	3.0	3.9	View RR Delay		E
Red Clear	F	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0	View RR Clear		F

Max Initial <F-0-E> = 20

Red Revert <F-0-F> = 2

All Red Start <F-C-0> = 3

* Must be same for non-density operation

PHASE FUNCTION FLAGS
KEYSTROKES: F + F + FUNCTION#

FUNCTION			PHASE							
			1	2	3	4	5	6	7	8
	Permit	0	X	X	X	X	X	X	X	X
	Red Lock	1								
	Yellow Lock	2								
	Veh Recall	3		X				X		
	Ped Recall	4								
	Peds	5								
	Rest in Walk	6								
	Red Rest	7								
	Double Entry	8		X		X		X		X
	Max Recall	9								
	Soft Recall	A								
	Max 2	B								
	Cond Serve	C								
	Man Cont Recall	D								
	Startup	E	X				X			
	First Phases	F		X				X		

OVERLAP TIMING
KEYSTROKE: F + COLOR CODE + OVERLAP

	9 Green	C Yello	D Red
Overlap A			
Overlap B			
Overlap C			
Overlap D			

INTERSECTION: Clinton Keith and George

Date Prepared: Sheet: 3 of 4

COORDINATION TIMING
KEYSTROKES: C + PLAN + FEATURE

FEATURE		PLAN 1	2	3	4	5	6	7	8	9	
CYCLE	0	80	90	90							0
FORCE 1	1	58/64	68/46	18 67							1
FORCE 2	2	0	0	0							2
FORCE 3	3										3
FORCE 4	4	44/49	47/30	47	49						4
FORCE 5	5	64 18	14 46	18	19						5
FORCE 6	6	0	0	0							6
FORCE 7	7										7
FORCE 8	8	44/49	47/30	47 4 9							8
RING OFFSET	9	37									9
OFFSET A	A	25	30	37							A
OFFSET B	B		31								B
OFFSET C	C										C
PERMISSIVE	D	5	5	5							D
HOLD RELEASE	E	255	255	255							E
ZONE OFFSET	F										F

ADDRESS
(C-0-0) = 5

MANUAL PLAN:
(C-A-1) = 0
AUTO = 0
PLAN = 1-9
FREE = 14
FLASH = 15

MANUAL OFFSET:
(C-B-1) = 0
AUTO = 0
OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

TRANSITION TYPE
(C-D-D) = 0
SHORTWAY = 0
DWELL > 0

FORCEOFF SHIFT FOR PEDESTRIAN
(C-D-F) 1

FOR OBSERVATION ONLY

MASTER PLAN	(C-A-2)
CURRENT PLAN	(C-A-3)
TOD PLAN	(C-A-5)
MASTER CYCLE	(C-A-0)
RING A CYCLE	(C-B-0)
RING B CYCLE	(C-D-0)
MINIMUM CYCLE	(C-A-E)
MAXIMUM CYCLE	(C-B-E)

SYNCHRONIZED PHASES
KEYSTROKES: C + E + PLAN

PLAN		PHASE 1	2	3	4	5	6	7	8
0			X				X		
1	SYNC 1		X				X		
2	SYNC 2		X				X		
3	SYNC 3		X				X		
4	SYNC 4								
5	SYNC 5								
6	SYNC 6								
7	SYNC 7								
8	SYNC 8								
9	SYNC 9								
A	CPEDRCL								
B	NEMA HLD								
C	SCANMEM								
D	BADPROM								
E	TODFN E								
F	TODFN F								

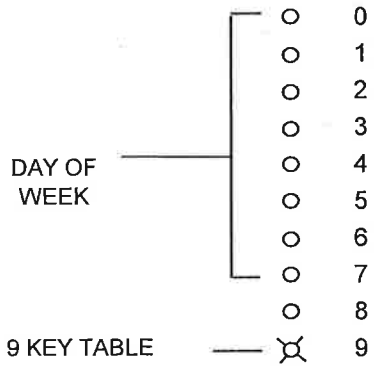
PHASE SEQUENCES
KEYSTROKES: C + F + FUNCTION

FUNCTION		PHASE 1	2	3	4	5	6	7	8
0	LAG 0 (FREE)		X		X		X		X
1	LAG 1		X		X	X	X		X
2	LAG 2		X		X	X	X		X
3	LAG 3	X	X		X	X			X
4	LAG 4								
5	LAG 5								
6	LAG 6								
7	LAG 7								
8	LAG 8								
9	LAG 9								
A	COOR MAX RECALL								
B	COOR LAG RECALL					X			
C	SYNC PHASES								
D	HOLD								
E	NEXT PHASE								
F	FORCE OFF								

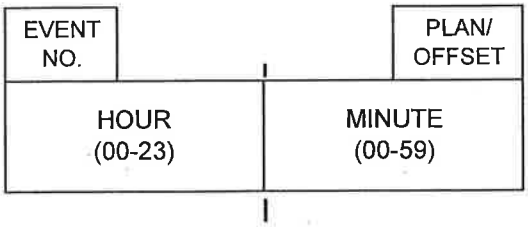
INTERSECTION: Clinton Keith and George

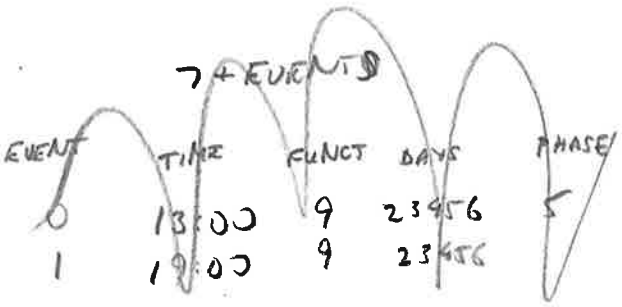
Date Prepared: Sheet: 4 of 4

9 - KEY



TIME OF DAY DISPLAYS





16 EVENT TABLE

TIME BASE COORDINATION
KEYSTROKES: 9+EVENT#

EVENT

	TIME	PLAN	OFFSET	DAY OF WEEK: S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	05 : 00	1	A		X	X	X	X	X	
1	07 : 00	2	A		X	X	X	X	X	
2	13 : 00	3	A		X	X	X	X	X	
3	19 : 00	E	A		X	X	X	X	X	
4	07 : 00	1	A	X						X
5	19 : 00	E	A	X						X
6	:									
7	:									
8	:									
9	:									
A	:									
B	:									
C	:									
D	:									
E	:									
F	:									

PLAN = 1 . . . 9 (DIAL)
E (FREE)
F (FLASH)

OFFSET = A . . . C

INTERSECTION: Clinton Keith at Inland Valley

by: _____ Date: _____

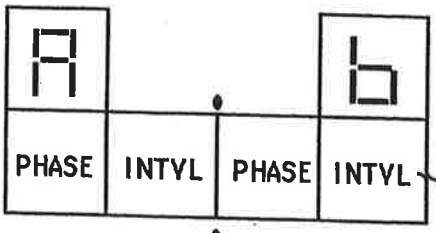
PROGRAM **200SA**

VERSION 1.F
OCT. 1991

Unoficial timing sheet
copy from cab
Jorge L. L.
10-21-10

BASE DISPLAY

COORDINATION — 0
DEMAND (VEH & PEDS) — 1 2 3 4 5 6 7 8
PREEMPTION — 9



RING A RING B

1	2	3	4	RING A
5	6	7	8	RING B

PHASES

INTERVALS

0 - WALK
1 - FLASH DONT WALK
2 - MINIMUM GREEN
3 -
4 - VARIABLE INITIAL
5 - EXTENSION
6 -
7 - REDUCED GAP
8 - RED REST
9 - PREEMPTION
A - STOP TIME
B - RED REVERT
C - GAP TERMINATION
D - MAX TERMINATION
E - FORCEOFF
F - RED CLEARANCE

OVERLAP LOAD SWITCH ASSIGNMENT D-O-

OVERLAP A		(0-8)
OVERLAP B		(0-8)
OVERLAP C		(0-8)
OVERLAP D		(0-8)

bAdE EPROM ERROR, SEE C-E-D
WATCHDOG STOPS IF F-C-F = 0

bAdA TURN STOPTIME SW ON THEN OFF TO REINITIALIZE

CONFIGURATION DATA

NOTE: "E" KEY ENABLED (F-9-E ≠ 0)

KEYSTROKES: E+E+INTERVAL

INTERVAL

		PHASE 1	2	3	4	5	6	7	8
0	EXCLU PH								
1	RR1 GRN CL								
2	RR2 GRN CL								
3	RR2 LTD								
4	PROT/PERM								
5	OLA GOMIT								
6	OLB GOMIT								
7	OLC GOMIT								
8	OLD GOMIT								
9	OV FL YEL				▒	▒	▒	▒	
A	EMVEH A		X		X				
B	EMVEH B								
C	EMVEH C	X				X			
D	EMVEH D							X	
E	EXTRA	X							
F	IC SELECT		X						

EXTRA (E+E+E)

1-TBC TYPE 1
3-DAYLIGHT SAV
4-EV ADVANCE
5-RESERVED
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

IC SELECT (E+E+F)

2-DUPLEX LOCAL
3-7 WIRE IN
4-FLH/FREE
6-SIMPLEX MASTER
7-7 WIRE OUT
8-OFFSET INTERRUPTER

ASSIGN5 (E+F+F)

1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON
5-RESERVED
6-PHASES 3 & 7 PED
7-ADVANCE WARNING BEACON
8-SPECIAL EVENT

KEYSTROKES: E+F+INTERVAL

INTERVAL

		PHASE 1	2	3	4	5	6	7	8
0									
1	RR OLAP A								
2	RR OLAP B								
3	RR OLAP C								
4	RR OLAP D								
5	PED2P		X						
6	PED6P								
7	PED4P								
8	PED8P								▒
9	FLH YELO								
A	OVERLAP A								
B	OVERLAP B								
C	OVERLAP C								
D	OVERLAP D								
E	RESTRICT								
F	ASSIGN5								

BI TRAN SYSTEMS, INC.

PHASE TIMING

KEYSTROKES: F+PHASE+INTERVAL

200SA
VERSION 1.F
OCT. 1991

INTERVAL		PHASE 1	2	3	4	5	6	7	8	PREEMPT	E	
WALK	0		8						9	RR1 DELAY		0
FLASH D/W	1		12						16	RR1 CLEAR	10	1
MIN GREEN	2	5	10			5	10		6	EVA DELAY		2
TYPE 3 DET	3									EVA CLEAR	1	3
ADD/VEH	4									EVB DELAY		4
VEH EXTEN *	5	1.5	2.5			1.5	2.5		3.5	EVB CLEAR	1	5
MAX GAP *	6	1.5	2.5			1.5	2.5		3.5	EVC DELAY		6
MIN GAP *	7	1.5	2.5			1.5	2.5		3.5	EVC CLEAR	1	7
MAX EXTEN	8	30	40			30	40		30	EVD DELAY		8
MAX 2	9									EVD CLEAR	1	9
	A									RR2 DELAY		A
CALLTO PHASE	B									RR2 CLEAR	10	B
REDUCE BY	C									EV CLR TMR		C
REDUCE EVERY	D									EV DLY TMR		D
YELLOW	E	4.0	4.5			4.0	4.5		4.0	RR CLR TMR		E
RED CLEAR	F	1.0	1.0			1.0	1.0		1.0	RR DLY TMR		F

MAX INITIAL (F-0-E) = 20

RED REVERT (F-0-F) = 2.0

ALL RED START (F-C-0) = 5.0

* MUST BE SAME FOR NON-DENSITY OPERATION

PHASE FUNCTION FLAGS

KEYSTROKES: F+F+FUNCTION#

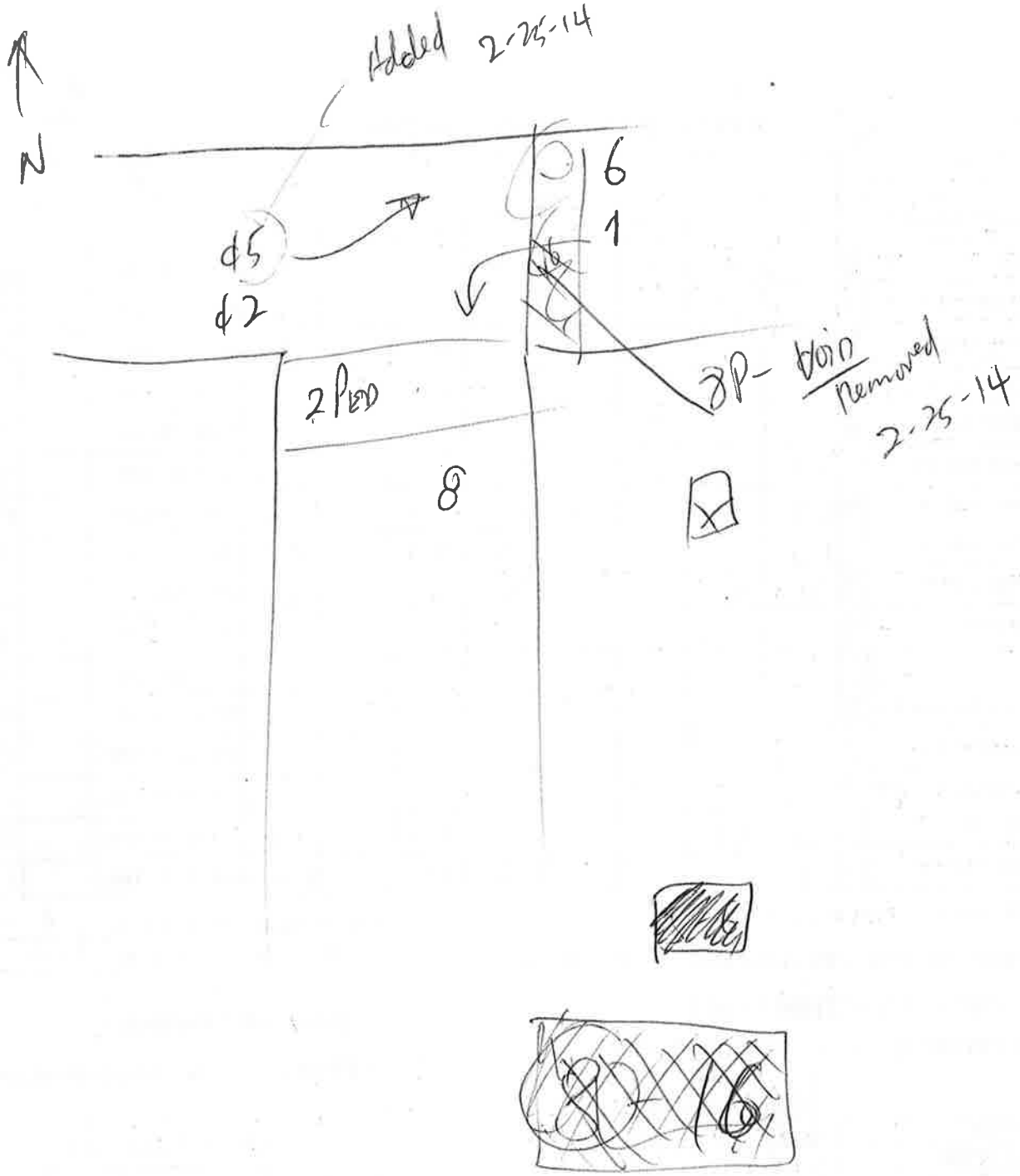
FUNCTION		PHASE 1	2	3	4	5	6	7	8
PERMIT	0	X	X			X	X		X
RED LOCK	1								
YELLOW LOCK	2								
VEH RECALL	3		X				X		
PED RECALL	4								
PEDS	5		X						
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVE	C								
MAN CONT RECALL	D								
STARTUP	E								X
FIRST PHASES	F		X				X		

OVERLAP TIMING

KEYSTROKE: F+ COLOR CODE+OVERLAP

	9 GREEN	C YELLO	D RED
OVERLAP A			
OVERLAP B			
OVERLAP C			
OVERLAP D			

BI TRAN SYSTEMS, INC.


N
Added 2-25-14
6
1
ϕ5
ϕ2
2 PED
8
8P- Void
Removed
2-25-14

INTERSECTION: CLINTON KEITH RD at SMITH RANCH RD

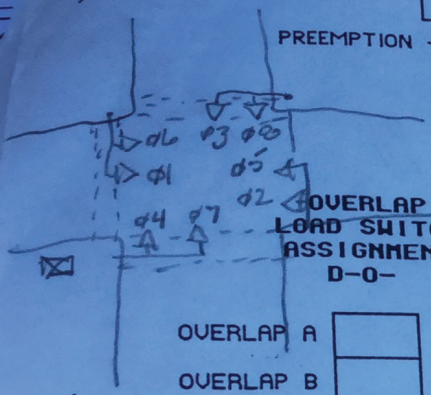
BY: _____ Date: 4/19/05

PROGRAM 200SA

VERSION 1.F
OCT. 1991

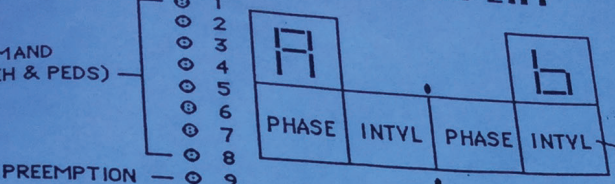
BASE DISPLAY SG-1403

COORDINATION — 0
DEMAND (VEH & PEDS) — 1 2 3 4 5 6 7
PREEMPTION — 8 9



OVERLAP LOAD SWITCH ASSIGNMENT D-0-

OVERLAP A		(0-8)
OVERLAP B		(0-8)
OVERLAP C		(0-8)
OVERLAP D		(0-8)



1	2	3	4	RING A
5	6	7	8	RING B

PHASES

INTERVALS
0 - WALK
1 - FLASH DONT WALK
2 - MINIMUM GREEN
3 -
4 - VARIABLE INITIAL
5 - EXTENSION
6 -
7 - REDUCED GAP
8 - RED REST
9 - PREEMPTION
A - STOP TIME
B - RED REVERT
C - GAP TERMINATION
D - MAX TERMINATION
E - FORCEOFF
F - RED CLEARANCE

bAdE EPROM ERROR, SEE C-E-D
WATCHDOG STOPS IF F-C-F = 0

bAdA TURN STOPTIME SW ON THEN OFF TO REINITIALIZE

CONFIGURATION DATA

NOTE: "E" KEY ENABLED (F-9-E ≠ 0)

KEYSTROKES: E+E+INTERVAL

INTERVAL

		PHASE 1	2	3	4	5	6	7	8
0	EXCLU PH								
1	RR1 GRN CL								
2	RR2 GRN CL								
3	RR2 LTD								
4	PROT/PERM								
5	OLA GOMIT								
6	OLB GOMIT								
7	OLC GOMIT								
8	OLD GOMIT								
9	OV FL YEL								
A	EMVEH A	X			X				
B	EMVEH B				X			X	
C	EMVEH C	X							X
D	EMVEH D			X					
E	EXTRA	X		X					
F	IC SELECT		X						

EXTRA (E+E+E)
1-TBC TYPE 1
3-DAYLIGHT SAV
4-EV ADVANCE
5-RESERVED
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

IC SELECT (E+E+F)
2-DUPLEX LOCAL
3-7 WIRE IN
4-FLH/FREE
6-SIMPLEX MASTER
7-7 WIRE OUT
8-OFFSET INTERRUPTER

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON
5-RESERVED
6-PHASES 3 & 7 PED
7-ADVANCE WARNING BEACON
8-SPECIAL EVENT

KEYSTROKES: E+F+INTERVAL

INTERVAL

		PHASE 1	2	3	4	5	6	7	8
0									
1	RR OLAP A								
2	RR OLAP B								
3	RR OLAP C								
4	RR OLAP D								
5	PED2P				X				
6	PED6P								X
7	PED4P							X	
8	PED8P								
9	FLH YELO								
A	OVERLAP A								
B	OVERLAP B								
C	OVERLAP C								
D	OVERLAP D								
E	RESTRICT								
F	ASSIGN5								

BI TRAN SYSTEMS, INC.

CABINET LOG

Lon Keith AND Smith Ranch #

NAME

SR BM

FM

PHASE TIMING

KEYSTROKES: F+PHASE+INTERVAL

200SA
VERSION 1.F
OCT. 1991

INTERVAL		PHASE 1	2	3	4	5	6	7	8
WALK	0		7		12		7		
FLASH D/W	1		8		16		8		
MIN GREEN	2	5	6	5	6	5	6	5	6
TYPE 3 DET	3								
ADD/VEH	4		1				1		
VEH EXTEN *	5	1.5	3.5	1.5	2.5	1.5	3.5	1.5	2.5
MAX GAP *	6	1.5	4	1.5	2.5	1.5	4	1.5	2.5
MIN GAP *	7	1.5	3	1.5	2.5	1.5	3	1.5	2.5
MAX EXTEN	8	30	55	30	40	30	55	30	40
MAX 2	9								
	A								
CALLTO PHASE	B								
REDUCE BY	C		1				1		
REDUCE EVERY	D		5				5		
YELLOW	E	4	5	4	4	4	5	4	4
RED CLEAR	F	1	2	1	1	1	2	1	1

PREEMPT	E	
RR1 DELAY		0
RR1 CLEAR		1
EVA DELAY		2
EVA CLEAR	1	3
EVB DELAY		4
EVB CLEAR	1	5
EVC DELAY		6
EVC CLEAR	1	7
EVD DELAY		8
EVD CLEAR	1	9
RR2 DELAY		A
RR2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

MAX INITIAL (F-O-E) = 20

RED REVERT (F-O-F) = 2

ALL RED START (F-C-O)= 6

* MUST BE SAME FOR NON-DENSITY OPERATION

PHASE FUNCTION FLAGS

KEYSTROKES: F+F+FUNCTION#

FUNCTION		PHASE 1	2	3	4	5	6	7	8
PERMIT	0	X	X	X	X	X	X	X	X
RED LOCK	1								
YELLOW LOCK	2								
VEH RECALL	3		X				X		
PED RECALL	4								
PEDS	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVE	C								
MAN CONT RECALL	D								
STARTUP	E	X					X		
FIRST PHASES	F		X					X	

OVERLAP TIMING

KEYSTROKE: F+ COLOR CODE+OVERLAP

	9 GREEN	C YELLO	D RED
OVERLAP A			
OVERLAP B			
OVERLAP C			
OVERLAP D			

BI TRAN SYSTEMS, I

INTERSECTION: Clinton Keith & Nutmeg St

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **12**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **5/9/2017 14:04**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	3	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	234	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	21	0	0	0	22	0	30
2	Min Green	6	10	3	6	6	10	3	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	3.9	0.5	3.0	2.0	3.9	0.5	3.0
6	Max Gap	2.0	6.0	0.5	3.0	2.0	6.0	0.5	3.0
7	Min Gap	2.0	2.0	0.5	3.0	2.0	2.0	0.5	3.0
8	Max Limit	30	50	17	30	20	50	17	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	0	0	5	0	5
B	PE Min Ped FDW	0	21	0	0	0	22	0	30
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F		Row
Permit	12_456_8	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	_____	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_2_4_6_8	8
Max Recall	_____	9
Soft Recall	_2___6__	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	___4___8	E
First Phases	_2___6__	F

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall	N	N	N	N	N	N	N	N
9	Queue Jump Phase								
A	Queue Jump Time	0	0	0	0	0	0	0	0
B	Minimum Green	0	0	0	0	0	0	0	0
C	Maximum Green	0	0	0	0	0	0	0	0
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 6 8
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 6 8
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---> / Plan Name --->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Reserved	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
			0
	Plan 1 - Sync	_2__6_	1
	Plan 2 - Sync	_2__6_	2
	Plan 3 - Sync	_2__6_	3
	Plan 4 - Sync	_2__6_	4
	Plan 5 - Sync	_2__6_	5
	Plan 6 - Sync	_2__6_	6
	Plan 7 - Sync	_2__6_	7
	Plan 8 - Sync	_2__6_	8
	Plan 9 - Sync	_2__6_	9
	NEMA Sync	_____	A
	NEMA Hold	_____	B
			C
			D
			E
			F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	____	____	____	____	____	____	____	____	____	6
7											7
8	Pretimed Phases	____	____	____	____	____	____	____	____	____	8
9	Max Recall	____	____	____	____	____	____	____	____	____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	____	____	____	____	____	____	____	____	____	C
D	Perm 2 Ped Phase	____	____	____	____	____	____	____	____	____	D
E	Perm 3 Veh Phase	____	____	____	____	____	____	____	____	____	E
F	Perm 3 Ped Phase	____	____	____	____	____	____	____	____	____	F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
			0
	Free Lag	_2_4_6_8	1
	Plan 1 - Lag	_2_4_6_8	2
	Plan 2 - Lag	_2_4_6_8	3
	Plan 3 - Lag	_2_4_6_8	4
	Plan 4 - Lag	_2_4_6_8	5
	Plan 5 - Lag	_2_4_6_8	6
	Plan 6 - Lag	_2_4_6_8	7
	Plan 7 - Lag	_2_4_6_8	8
	Plan 8 - Lag	_2_4_6_8	9
	Plan 9 - Lag	_2_4_6_8	A
	External Lag	_____	B
	Lag Hold	_____	C
			D
			E
			F

Lag Phases <C+0+C=1>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	One-Shot Timer	0	Latch 1 Set	0	NOT-3	0	Max 2	0	Pretimed	0	Set DOW	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	AND-5 (a)	0	Latch 1 Reset	0	NOT-4	0	Reserved	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	AND-5 (b)	0	Latch 2 Set	0	OR-4 (a)	0	Reserved	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	AND-6 (a)	0	Latch 2 Reset	0	OR-4 (b)	0	Reserved	0	Plan 3	0	Gate Down	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	AND-6 (b)	0	NAND-3 (a)	0	OR-5 (a)	0	Reserved	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	Reserved		NAND-3 (b)	0	OR-5 (b)	0	Reserved	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	Reserved		NAND-4 (a)	0	OR-6 (a)	0	Reserved	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	Reserved		NAND-4 (b)	0	OR-6 (b)	0	Reserved	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Spec. Funct. 1	0	OR-7 (a)	0	EXTMR	0	Reserved	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Spec. Funct. 2	0	OR-7 (b)	0	Reserved		Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	Spec. Funct. 3	0	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	Spec. Funct. 4	0	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	Reserved		OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	Reserved		OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	Reserved		OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	Reserved		OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Reserved		Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Reserved		Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Reserved		Phase ON - 4	0	Sp Evnt Out 3	0	EXTMR	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Reserved		Phase ON - 5	0	Sp Evnt Out 4	0	One-Shot Timer	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Reserved		Phase ON - 6	0	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Reserved		Phase ON - 7	0	Sp Evnt Out 6	0	Latch 1	0	Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Reserved		Phase ON - 8	0	Sp Evnt Out 7	0	Latch 2	0	Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Flh Yell Arrow 1	0	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Green 1	0	Ph. Check - 2	0	Coord On	0	NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Flh Yell Arrow 3	0	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Green 3	0	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Flh Yell Arrow 5	0	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0	AND-5	0	C
D	Green 5	0	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0	AND-6	0	D
E	Flh Yell Arrow 7	0	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0	Reserved		E
F	Green 7	0	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0	Reserved		F

Assignable Outputs <C+0+E=127>

Row	Column Numbers —> / Phase Names —>	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	28	0	0	0	19	0	27
2	Min Green	6	10	4	4	6	10	6	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	4.3	2.0	2.5	2.0	4.3	3.0	3.0
6	Max Gap	2.0	6.0	3.0	3.0	2.0	6.0	3.0	3.0
7	Min Gap	2.0	2.0	0.5	1.5	2.0	2.0	3.0	3.0
8	Max Limit	25	25	20	45	20	25	20	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	0	0	5	0	5
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.0	4.3	3.0	3.0	3.0	4.3	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	0	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	12345678	<C/5+F+0>

Local Alarm Disable

Column Numbers —>	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123	0.0	0.0
1		40	45_7_	6	123	0.0	0.0
2		41	45_7_	4	123	5.0	0.0
3		42	45_7_	8	123	5.0	0.0
4		43	45_7_	2	123	0.0	0.0
5		44	45_7_	6	123	0.0	0.0
6		45	45_7_	4	123	5.0	0.0
7		46	45_7_	8	123	5.0	0.0
8		47	67_	2	123	0.0	0.0
9		48	67_	6	123	0.0	0.0
A		49	67_	4	123	0.0	0.0
B		50	67_	8	123	0.0	0.0
C		55	45_7_	5	123	0.0	0.0
D		56	45_7_	1	123	0.0	0.0
E		57	45_7_	7	123	0.0	0.0
F		58	45_7_	3	123	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123	0.0	0.0
1		60	45_7_	1	123	0.0	0.0
2		61	45_7_	7	123	0.0	0.0
3		62	45_7_	3	123	0.0	0.0
4		63	45_7_	2	123	0.0	0.0
5		64	45_7_	6	123	0.0	0.0
6		65	45_7_	4	123	5.0	0.0
7		66	45_7_	8	123	10.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45_7_	2	123	0.0	0.0
D		77	45_7_	6	123	0.0	0.0
E		78	45_7_	4	123	0.0	0.0
F		79	45_7_	8	123	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers —>	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20 <D/0+0+1>
Max ON (minutes)	7 <D/0+0+2>
Chatter Fail Time	0 <D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0.0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	

TOD Function <C+0+7=0.1>

Column 4 Phases/Bits

<C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	

Holiday TOD Function <C+0+7=0.2>

Column 4 Phases/Bits

<C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, Decmber = C

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>

Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>

Limited Service Interval

INTERSECTION: Clinton Keith & Calif Oaks

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **11**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **5/9/2017 13:59**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Drop Number	27	<C+0+0>
Zone Number		<C+0+1>
Area Number	2	<C+0+2>
Area Address	27	<C+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	2.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers —> / Phase Names —>	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	0	0	0
1	Ped FDW	0	20	0	21	0	0	0	0
2	Min Green	6	10	3	0	3	10	3	6
3	Type 3 Limit	0	99	0	0	0	99	0	0
4	Added Initial	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	3.0	3.8	0.5	0.0	0.5	3.8	0.5	3.8
6	Max Gap	3.0	6.0	0.5	0.0	0.5	6.0	0.5	5.0
7	Min Gap	3.0	2.0	0.5	0.0	0.5	2.0	0.5	2.0
8	Max Limit	40	50	17	0	17	50	17	35
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0
E	Yellow Change	3.6	4.8	3.6	3.6	3.6	4.8	3.6	4.8
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F Page>

	E
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

Row		F
0	Permit	12_4_6_8
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	- - - - -
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2___6__
9	Max Recall	_____
A	Soft Recall	_2___6__
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____8
F	First Phases	_2___6__

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Coordination <C Page>

Row	Column Numbers —> / Plan Name —>	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length	100	95	95	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	69	66	61	65	65	65	65	65	65	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	25	25	25	25	25	25	3
4	Phase 4 - ForceOff	0	0	0	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	0	0	0	65	65	65	65	65	65	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	25	25	25	25	25	25	7
8	Phase 8 - ForceOff	32	32	33	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	90	5	93	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	12	12	12	12	12	12	12	12	0	D
E	Hold Release	255	255	255	255	255	255	255	255	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

	E	Row
		0
Plan 1 - Sync	2 6	1
Plan 2 - Sync	2 6	2
Plan 3 - Sync	2 6	3
Plan 4 - Sync	2 6	4
Plan 5 - Sync	2 6	5
Plan 6 - Sync	2 6	6
Plan 7 - Sync	2 6	7
Plan 8 - Sync	2 6	8
Plan 9 - Sync	2 6	9
Coord Ped *		A
NEMA Hold		B
		C
		D
		E
		F

Configuration <E Page>

Row	Column Numbers —>	E
0	Exclusive Phases	4 8
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 3
F	IC Select (Interconnect)	2

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	
Ped 4P	4
Ped 8P	
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

	F	Row
Free Lag	2 4 6 8	0
Plan 1 - Lag	2 4 6 8	1
Plan 2 - Lag	2 4 6 8	2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag	2 4 6 8	4
Plan 5 - Lag	2 4 6 8	5
Plan 6 - Lag	2 4 6 8	6
Plan 7 - Lag	2 4 6 8	7
Plan 8 - Lag	2 4 6 8	8
Plan 9 - Lag	2 4 6 8	9
Coord Max *		A
Coord Lag *		B
		C
		D
		E
		F

Row	Time	Plan	Offset	Day of Week
0	06 : 30	E	A	_23456_
1	10 : 00	E	A	_23456_
2	14 : 00	E	A	_23456_
3	19 : 00	E	A	1234567
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00 : 00	0	0		0
00 : 00	0	0		1
00 : 00	0	0		2
00 : 00	0	0		3
00 : 00	0	0		4
00 : 00	0	0		5
00 : 00	0	0		6
00 : 00	0	0		7
00 : 00	0	0		8
00 : 00	0	0		9
00 : 00	0	0		A
00 : 00	0	0		B
00 : 00	0	0		C
00 : 00	0	0		D
00 : 00	0	0		E
00 : 00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	2.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	5.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Row	Column Numbers --->	Phase 1	2	3	4	5	6	7	8
	Phase Names --->								
0	Ped Walk	0	10	0	10	0	0	0	0
1	Ped FDW	0	18	0	20	0	0	0	0
2	Min Green	5	10	3	0	3	10	3	5
3	Type 3 Limit	0	99	0	0	0	99	0	0
4	Added Initial	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	3.0	3.8	0.5	0.0	0.5	3.8	0.5	3.8
6	Max Gap	3.0	6.0	0.5	0.0	0.5	6.0	0.5	5.0
7	Min Gap	3.0	2.0	0.5	0.0	0.5	2.0	0.5	2.0
8	Max Limit	35	50	17	0	17	50	17	35
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0
E	Yellow Change	3.0	4.3	3.0	0.0	3.0	4.3	3.0	4.3
F	Red Clear	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <F Page>

Row	Column Numbers --->	Phase 1	2	3	4	5	6	7	8
	Phase Names --->								
0	Ped Walk	0	10	0	10	0	0	0	0
1	Ped FDW	0	18	0	20	0	0	0	0
2	Min Green	5	10	3	0	3	10	3	5
3	Type 3 Limit	0	99	0	0	0	99	0	0
4	Added Initial	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	3.0	3.8	0.5	0.0	0.5	3.8	0.5	3.8
6	Max Gap	3.0	6.0	0.5	0.0	0.5	6.0	0.5	5.0
7	Min Gap	3.0	2.0	0.5	0.0	0.5	2.0	0.5	2.0
8	Max Limit	35	50	17	0	17	50	17	35
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0
E	Yellow Change	3.0	4.3	3.0	0.0	3.0	4.3	3.0	4.3
F	Red Clear	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <F Page>

Row	Delay Only --->	7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0	---	---	---	---	---	---	---	---
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service Int. --->	0	0							
A		---	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

Special Event Schedule <C Page with F+9+F=22>

<--- **Limited Service Interval** (Set Dwell = 255)

INTERSECTION: Clinton Keith & Greer Rd

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **14**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **5/16/2017 7:56**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	2	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	254	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	18	0	0	0	21	0	29
2	Min Green	6	10	3	6	6	10	3	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	5.2	0.5	3.0	2.0	5.2	0.5	3.0
6	Max Gap	2.0	6.0	0.5	3.0	2.0	6.0	0.5	3.0
7	Min Gap	2.0	2.0	0.5	3.0	2.0	2.0	0.5	3.0
8	Max Limit	20	50	17	25	20	50	20	25
9	Max Limit 2	0	35	0	0	0	35	0	50
A	Adv. / Delay Walk	0	5	0	0	0	5	0	5
B	PE Min Ped FDW	0	18	0	0	0	21	0	29
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.6	4.8	3.6	4.3	3.6	4.8	3.6	4.3
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row	F	
0	Permit	12_456_8
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2_4_6_8
9	Max Recall	_____
A	Soft Recall	_2___6__
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	___4___8
F	First Phases	_2___6__

Phase Functions <C+0+F=1>

Row	Column Numbers --->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name --->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

	C
EV-A	0
EV-B	0
EV-C	0
EV-D	0
RR-1 *	- - -
RR-2 *	- - -
SE-1	0
SE-2	0

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 4 6 8
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 6 8
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2
Phase 1	10
Phase 2	10
Phase 3	10
Phase 4	10
Phase 5	10
Phase 6	10
Phase 7	10
Phase 8	10

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	100	95	95	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	60	56	55	0	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	49	45	44	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	60	56	56	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	49	45	44	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	67	87	92	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	12	12	12	0	0	0	0	0	0	D
E	Hold Release	225	255	255	0	0	0	0	0	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

	E	
		0
Plan 1 - Sync	2 6	1
Plan 2 - Sync	2 6	2
Plan 3 - Sync	2 6	3
Plan 4 - Sync		4
Plan 5 - Sync		5
Plan 6 - Sync		6
Plan 7 - Sync		7
Plan 8 - Sync		8
Plan 9 - Sync		9
NEMA Sync		A
NEMA Hold		B
		C
		D
Coord Extra	1	E
		F

Sync Phases <C+0+C=1>

Row											Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678							A
B	Perm 1 Ped Phase	2 6 8	2 6 8	2 6 8							B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

	F	
Free Lag	2 4 6 8	0
Plan 1 - Lag	2 4 6 8	1
Plan 2 - Lag	2 4 6 8	2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag		4
Plan 5 - Lag		5
Plan 6 - Lag		6
Plan 7 - Lag		7
Plan 8 - Lag		8
Plan 9 - Lag		9
External Lag		A
		B
		C
		D
		E
		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	200	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	200	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	200	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Phase Names —>	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	4	<C/5+2+A>
Begin Week	1	<C/5+2+B>
End Month	10	<C/5+2+C>
End Week	5	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	7	0	7	0	7	0	7	0
1	Ped FDW	10	0	10	0	10	0	10	0
2	Min Green	3	3	7	3	7	3	7	3
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	1.2	0.0	1.2	0.0	1.2	0.0	1.2	0.0
5	Veh Extension	3.5	0.5	3.5	0.5	3.5	0.5	3.5	0.5
6	Max Gap	5.0	0.5	5.0	0.5	5.0	0.5	5.0	0.5
7	Min Gap	2.0	0.5	2.0	0.5	2.0	0.5	2.0	0.5
8	Max Limit	40	17	40	17	40	17	40	17
9	Max Limit 2	70	30	70	30	70	30	70	30
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	32	0	0	0	0
C	Cond Serv Check	1	1	1	1	1	1	1	1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0
F	Red Clear	0.5	0.0	1.0	0.0	0.5	0.0	1.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	10	0	10	0	1.0
Phase 2	7	3	7	3	0.7
Phase 3	0	0	0	0	0.0
Phase 4	12	0	12	0	1.2
Phase 5	35	5	35	5	3.5
Phase 6	50	5	50	5	5.0
Phase 7	20	5	20	5	2.0
Phase 8	40	17	40	17	4.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123 8	0.0	0.0
1		40	45_7_	6	123 8	0.0	0.0
2		41	45_7_	4	123 8	0.0	0.0
3		42	45_7_	8	123 8	0.0	0.0
4		43	45_7_	2	123 8	0.0	0.0
5		44	45_7_	6	123 8	0.0	0.0
6		45	45_7_	4	123 8	0.0	0.0
7		46	45_7_	8	123 8	0.0	0.0
8		47	67_	2	123 8	0.0	0.0
9		48	67_	6	123 8	0.0	0.0
A		49	67_	4	123 8	0.0	0.0
B		50	67_	8	123 8	0.0	0.0
C		55	45_7_	5	123 8	0.0	0.0
D		56	45_7_	1	123 8	0.0	0.0
E		57	45_7_	7	123 8	0.0	0.0
F		58	45_7_	3	123 8	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123 8	0.0	0.0
1		60	45_7_	1	123 8	0.0	0.0
2		61	45_7_	7	123 8	0.0	0.0
3		62	45_7_	3	123 8	0.0	0.0
4		63	45_7_	2	123 8	0.0	0.0
5		64	45_7_	6	123 8	0.0	0.0
6		65	45_7_	4	123 8	0.0	0.0
7		66	45_7_	8	123 8	0.0	0.0
8		67	2	2	123 8	0.0	0.0
9		68	2	6	123 8	0.0	0.0
A		69	2	4	123 8	0.0	0.0
B		70	2	4 8	123 8	0.0	0.0
C		76	45_7_	2	123 8	0.0	0.0
D		77	45_7_	6	123 8	0.0	0.0
E		78	45_7_	4	123 8	0.0	0.0
F		79	45_7_	8	123 8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers --->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	255	<D/0+0+1>
Max ON (minutes)	255	<D/0+0+2>

Detector Failure Monitor

	D	Row
Output Port 1		0
Output Port 2		1
Output Port 3		2
Output Port 4		3
Output Port 5		4
Output Port 6		5
Output Port 7		6
		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	06 : 30	1	A	_23456_
1	10 : 00	2	A	_23456_
2	14 : 00	3	A	__3456_
3	14 : 40	E	A	__3456_
4	15 : 05	3	A	__3456_
5	19 : 00	E	A	1234567
6	13 : 50	E	A	_2_____
7	14 : 20	3	A	_2_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>

Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>

Limited Service Interval

Min Time (seconds) | 0 | <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) | 255 | <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel | _____ | <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>

Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>

Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_2____
F	00 : 00	0	0	_2345__

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Clinton Keith&Murrieta Oaks East

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **81**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **7/5/2017 15:05**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	10	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	39	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	13	0	29	0	26	0	33
2	Min Green	6	10	6	0	6	10	6	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
5	Veh Extension	2.0	5.2	3.0	5.2	2.0	5.2	2.0	3.2
6	Max Gap	2.0	6.0	3.0	5.4	2.0	6.0	2.0	3.2
7	Min Gap	2.0	2.0	3.0	2.0	2.0	2.0	2.0	3.2
8	Max Limit	30	50	35	20	20	50	20	30
9	Max Limit 2	0	35	0	0	0	35	0	50
A	Adv. / Delay Walk	0	5	0	5	0	5	0	5
B	PE Min Ped FDW	0	13	0	29	0	26	0	33
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
E	Yellow Change	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row	F	
0	Permit	12345678
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2_4_6_8
9	Max Recall	_____
A	Soft Recall	_2___6__
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____8
F	First Phases	_2___6__

Phase Functions <C+0+F=1>

Row	Column Numbers --->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name --->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Preempt Priority <C+0+E=125>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 4 6 8
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 4 6 8
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Plan Name ---->										0
1	Cycle Length	100	95	95	100	100	100	100	100	100	1
2	Phase 1 - ForceOff	61	60	61	55	55	55	55	55	55	2
3	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 3 - ForceOff	0	0	0	20	20	20	20	20	20	4
5	Phase 4 - ForceOff	0	0	0	40	40	40	40	40	40	5
6	Phase 5 - ForceOff	0	0	0	55	55	55	55	55	55	6
7	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 7 - ForceOff	0	0	0	20	20	20	20	20	20	8
9	Phase 8 - ForceOff	43	36	43	40	40	40	40	40	40	9
A	Ring Offset	0	0	0	0	0	0	0	0	0	A
B	Offset 1	93	18	66	0	0	0	0	0	0	B
C	Offset 2	0	0	0	0	0	0	0	0	0	C
D	Offset 3	0	0	0	0	0	0	0	0	0	D
E	Perm 1 - End	12	12	12	15	15	15	15	15	15	E
F	Hold Release	255	255	255	255	255	255	255	255	255	F
	Zone Offset	0	0	0	0	0	0	0	0	0	

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
			0
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E	Coord Extra	_____	E
F			F

Sync Phases <C+0+C=1>

Row											Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	200	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	200	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	200	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	4	<C/5+2+A>
Begin Week	1	<C/5+2+B>
End Month	10	<C/5+2+C>
End Week	5	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123 8	0.0	0.0
1		40	45_7_	6	123 8	0.0	0.0
2		41	45_7_	4	123 8	0.0	0.0
3		42	45_7_	8	123 8	0.0	0.0
4		43	45_7_	2	123 8	0.0	0.0
5		44	45_7_	6	123 8	0.0	0.0
6		45	45_7_	4	123 8	0.0	0.0
7		46	45_7_	8	123 8	10.0	0.0
8		47	67	2	123 8	0.0	0.0
9		48	67	6	123 8	0.0	0.0
A		49	67	4	123 8	0.0	0.0
B		50	67	8	123 8	0.0	0.0
C		55	45_7_	5	123 8	0.0	0.0
D		56	45_7_	1	123 8	0.0	0.0
E		57	45_7_	7	123 8	0.0	0.0
F		58	45_7_	3	123 8	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123 8	0.0	0.0
1		60	45_7_	1	123 8	0.0	0.0
2		61	45_7_	7	123 8	0.0	0.0
3		62	45_7_	3	123 8	0.0	0.0
4		63	45_7_	2	123 8	0.0	0.0
5		64	45_7_	6	123 8	0.0	0.0
6		65	45_7_	4	123 8	0.0	0.0
7		66	45_7_	8	123 8	0.0	0.0
8		67	2	2	123 8	0.0	0.0
9		68	2	6	123 8	0.0	0.0
A		69	2	4	123 8	0.0	0.0
B		70	2	8	123 8	0.0	0.0
C		76	45_7_	2	123 8	0.0	0.0
D		77	45_7_	6	123 8	0.0	0.0
E		78	45_7_	4	123 8	0.0	0.0
F		79	45_7_	8	123 8	0.0	0.0

Detector Assignments <C+0+E=126>

<C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers --->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	255 <D/0+0+1>
Max ON (minutes)	255 <D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	06 : 30	1	A	_23456_
1	10 : 00	2	A	_23456_
2	14 : 00	3	A	__3456_
3	14 : 40	E	A	__3456_
4	15 : 05	3	A	__3456_
5	19 : 00	E	A	1234567
6	13 : 50	E	A	_2____
7	14 : 20	3	A	_2____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) | 0 | <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) | 255 | <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel | _____ | <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>

Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>

Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_2____
F	00 : 00	0	0	_2345__

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Clinton Keith & McElwain

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **84**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **5/16/2017 9:45**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	11	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	42	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers / Phase Names	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	0
1	Ped FDW	0	15	0	27	0	22	0	0
2	Min Green	6	10	6	10	6	10	6	10
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	5.2	3.0	3.6	2.0	5.2	2.0	3.0
6	Max Gap	2.0	6.0	3.0	4.3	2.0	6.0	2.0	3.0
7	Min Gap	2.0	2.0	3.0	2.0	2.0	2.0	2.0	3.0
8	Max Limit	20	50	20	20	20	50	20	20
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	5	0	5	0	0
B	PE Min Ped FDW	0	15	0	27	0	22	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F		Row
Permit	12345678	0
Red Lock		1
Yellow Lock		2
Min Recall	_2___6__	3
Ped Recall		4
View Set Peds	-----	5
Rest In Walk		6
Red Rest		7
Dual Entry	_2_4_6_8	8
Max Recall		9
Soft Recall	_2___6__	A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	___4__7_	E
First Phases	_2___6__	F

Phase Functions <C+0+F=1>

Row	Column Numbers ⟶	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ⟶								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall	N	N	N	N	N	N	N	N
9	Queue Jump Phase								
A	Queue Jump Time	0	0	0	0	0	0	0	0
B	Minimum Green	0	0	0	0	0	0	0	0
C	Maximum Green	0	0	0	0	0	0	0	0
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Gm B4 Yellow

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority <C+0+E=125>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ⟶	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 4 6
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 4 6
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers --->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name --->										
0	Cycle Length	100	95	95	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	77	77	77	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	15	15	15	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	61	61	61	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	68	68	68	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	24	24	24	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	44	44	44	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	10	35	49	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Reserved	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
			0
	Plan 1 - Sync	2 6	1
	Plan 2 - Sync	2 6	2
	Plan 3 - Sync	2 6	3
	Plan 4 - Sync	2 6	4
	Plan 5 - Sync	2 6	5
	Plan 6 - Sync	2 6	6
	Plan 7 - Sync	2 6	7
	Plan 8 - Sync	2 6	8
	Plan 9 - Sync	2 6	9
	NEMA Sync		A
	NEMA Hold		B
			C
			D
			E
			F

Sync Phases <C+0+C=1>

Row											Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
	Free Lag	2 4 6 8	0
	Plan 1 - Lag	2 4 6 8	1
	Plan 2 - Lag	2 4 6 8	2
	Plan 3 - Lag	2 4 6 8	3
	Plan 4 - Lag	2 4 6 8	4
	Plan 5 - Lag	2 4 6 8	5
	Plan 6 - Lag	2 4 6 8	6
	Plan 7 - Lag	2 4 6 8	7
	Plan 8 - Lag	2 4 6 8	8
	Plan 9 - Lag	2 4 6 8	9
	External Lag		A
	Lag Hold		B
			C
			D
			E
			F

Lag Phases <C+0+C=1>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	One-Shot Timer	0	Latch 1 Set	0	NOT-3	0	Max 2	0	Pretimed	0	Set DOW	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	AND-5 (a)	0	Latch 1 Reset	0	NOT-4	0	Reserved	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	AND-5 (b)	0	Latch 2 Set	0	OR-4 (a)	0	Reserved	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	AND-6 (a)	0	Latch 2 Reset	0	OR-4 (b)	0	Reserved	0	Plan 3	0	Gate Down	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	AND-6 (b)	0	NAND-3 (a)	0	OR-5 (a)	0	Reserved	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	Reserved		NAND-3 (b)	0	OR-5 (b)	0	Reserved	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	Reserved		NAND-4 (a)	0	OR-6 (a)	0	Reserved	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	Reserved		NAND-4 (b)	0	OR-6 (b)	0	Reserved	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Spec. Funct. 1	0	OR-7 (a)	0	EXTMR	0	Reserved	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Spec. Funct. 2	0	OR-7 (b)	0	Reserved		Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	Spec. Funct. 3	0	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	Spec. Funct. 4	0	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	Reserved		OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	Reserved		OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	Reserved		OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	Reserved		OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Reserved		Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	200	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Reserved		Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	200	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Reserved		Phase ON - 4	0	Sp Evnt Out 3	0	EXTMR	0	Plan 3	200	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Reserved		Phase ON - 5	0	Sp Evnt Out 4	0	One-Shot Timer	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Reserved		Phase ON - 6	0	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Reserved		Phase ON - 7	0	Sp Evnt Out 6	0	Latch 1	0	Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Reserved		Phase ON - 8	0	Sp Evnt Out 7	0	Latch 2	0	Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Flh Yell Arrow 1	0	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Green 1	0	Ph. Check - 2	0	Coord On	0	NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Flh Yell Arrow 3	0	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Green 3	0	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Flh Yell Arrow 5	0	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0	AND-5	0	C
D	Green 5	0	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0	AND-6	0	D
E	Flh Yell Arrow 7	0	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0	Reserved		E
F	Green 7	0	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0	Reserved		F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	28	0	0	0	19	0	27
2	Min Green	6	10	4	4	6	10	6	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	4.3	2.0	2.5	2.0	4.3	3.0	3.0
6	Max Gap	2.0	6.0	3.0	3.0	2.0	6.0	3.0	3.0
7	Min Gap	2.0	2.0	0.5	1.5	2.0	2.0	3.0	3.0
8	Max Limit	25	25	20	45	20	25	20	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	0	0	5	0	5
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.0	4.3	3.0	3.0	3.0	4.3	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	0	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	12345678	<C/5+F+0>

Local Alarm Disable

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers -->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7	2	123	0.0	0.0
1		40	45_7	6	123	0.0	0.0
2		41	45_7	4	123	0.0	0.0
3		42	45_7	8	123	0.0	0.0
4		43	45_7	2	123	0.0	0.0
5		44	45_7	6	123	0.0	0.0
6		45	45_7	4	123	0.0	0.0
7		46	45_7	8	123	0.0	0.0
8		47	67	2	123	0.0	0.0
9		48	67	6	123	0.0	0.0
A		49	67	4	123	0.0	0.0
B		50	67	8	123	0.0	0.0
C		55	45_7	5	123	0.0	0.0
D		56	45_7	1	123	0.0	0.0
E		57	45_7	7	123	0.0	0.0
F		58	45_7	3	123	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123	0.0	0.0
1		60	45_7	1	123	0.0	0.0
2		61	45_7	7	123	0.0	0.0
3		62	45_7	3	123	0.0	0.0
4		63	45_7	2	123	0.0	0.0
5		64	45_7	6	123	0.0	0.0
6		65	45_7	4	123	0.0	0.0
7		66	45_7	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45_7	2	123	0.0	0.0
D		77	45_7	6	123	0.0	0.0
E		78	45_7	4	123	0.0	0.0
F		79	45_7	8	123	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers -->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0.0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Row	Time	Plan	Offset	Day of Week
0	06 : 30	1	A	_23456_
1	10 : 00	2	A	_23456_
2	14 : 00	3	A	_23456_
3	19 : 00	E	A	1234567
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select: October = A, November = B, Decmber = C

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	_____	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters
<F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway Schedule <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

Location: CLINTON KEITH RD @ I-215 S/B RAMP
System:
Master At: THIS LOCATION
District: 08--SAN BERNARDINO
I/C:
Designed By:
Installed By: JP
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
3/20/2017	10/12/2011			3/3/2005

		FLASH
PHASE	1)	[ ]
	2) E/B CLINTON KEITH	[ ]
	3)	[ ]
	4) I-215 CLINTON KEITH RD.	[ ]
	5)	[ ]
	6)	[ ]
	7)	[ ]
	8)	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

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CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	. 2 . 4 . 6 . .
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. . . 4 . . . .
Yellow Start Phases	. 2 . . . 6 . .
Vehicle Calls	. 2 . 4 . 6 . .
Pedestrian Calls	. 2 . . . . .
Yellow Start Overlaps	. . . . .
Startup All-Red	5.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. . . . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	0	0	0
Flash Don't Walk	0	20	0	0	0	0	0	0
Minimum Green	0	5	0	5	0	5	0	0
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	45	0	30	0	45	0	0
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Maximum Gap	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Gap	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.8	3.0	4.8	3.0	4.8	3.0	3.0
All-Red	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	100		.....	1				63		25		63		
Plan 2	Green Factor	95		.....	12				58		25		58		
Plan 3	Green Factor	95		.....	15				58		25		58		
Plan 4	Green Factor			.....											
Plan 5	Green Factor			.....											
Plan 6	Green Factor			.....											
Plan 7	Green Factor			.....											
Plan 8	Green Factor			.....											
Plan 9	Green Factor			.....											

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 2	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 3	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

Master Timer Sync (7-A)	
Enable in Plans	
1-9	.....
11-19	.....
21-29	.....

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
.2.4.6.8	.....
Veh Min	Veh Max
.2...6..	.....
Ped	Bike
.....	.....
Cond	Cond Grn
.....	10

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)				Slot
Det	Type	Phases	Lock	
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	CALL+EXTEND	. 2	NO	I3L
7	CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	CALL+EXTEND	. . . 4 . . .	NO	I7L
15	CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	CALL+EXTEND	 8	NO	J7L
35	CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. . . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)				
Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)								
Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)								
Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	1	A
1000	2	A
1400	3	A
1900	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	1
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	15
Protocol	AB3418
Access Level	0
Baud	1200
Parity	EVEN
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)

#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27000
Type	STATIC
Central Access	6
Field Access	0

IP Address	192	.	168	.	0	.	171
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	254
Gateway	192	.	168	.	0	.	1

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		. . . . .	. . . . .	1 2 3 4 5 6 7 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)			
Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		1 2 3 . . 6 . .	. . . . .	. . . . .	. 2 . . . 6 . .	. . . . .	. . . 4 . . . 8	. . . . .	. . . . .	. . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	. . . 4 . . 7 .	. . . . .

Configuration (3-2-6)			
Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. 2 . . 5 . . .	. . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. . . 4 . . 7 .	. . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	1 . . . . 6 . .	. . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. . 3 8	. . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	NORMAL

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

\+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

Location: CLINTON KEITH @ I215 N/B RAMP
Designed By:
System:
District: 08- SAN BERNARDINO
Installed By: JP
Master At: I-215 S/B RAMP @ CLINTON
I/C:
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
3/20/2017	10/12/2011			8/10/2004

		FLASH
PHASE	1)	[ ]
	2) E/B CLINTON KEITH RD	[ ]
	3)	[ ]
	4)	[ ]
	5)	[ ]
	6) W/B CLINTON KEITH RD	[ ]
	7)	[ ]
	8) I-215 N/B OFF RAMP	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

Page 2: 4DB0	Page 8: 3E84
Page 3: E8C5	Page 9: D2FD
Page 4: D6BF	Page 10: F096
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Page 6: 191A	Page 12: 2FBE
Page 7: D4AE	Page 13: 86F7

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	. 2 . . . 6 . 8
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	 8
Yellow Start Phases	. 2 . . . 6 . .
Vehicle Calls	. 2 . . . 6 . 8
Pedestrian Calls	. 2 . . . . .
Yellow Start Overlaps	. . . . .
Startup All-Red	5.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. . . . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	0	0	0
Flash Don't Walk	0	31	0	0	0	0	0	0
Minimum Green	0	5	0	0	0	5	0	5
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	45	0	0
Max Green 1	0	45	0	0	0	0	0	45
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.5
Maximum Gap	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.5
Minimum Gap	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.5
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.8	3.0	3.0	3.0	4.8	3.0	4.8
All-Red	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	100		.....	2				48				48		40
Plan 2	Green Factor	95		.....	24				58				58		25
Plan 3	Green Factor	95		.....	20				48				48		35
Plan 4	Green Factor			.....											
Plan 5	Green Factor			.....											
Plan 6	Green Factor			.....											
Plan 7	Green Factor			.....											
Plan 8	Green Factor			.....											
Plan 9	Green Factor			.....											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	.....
11-19	.....
21-29	.....

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
.2.4.6.8	.....
Veh Min	Veh Max
.2...6..	.....
Ped	Bike
.....	.....
Cond	Cond Grn
.....	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 2	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 3	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	COUNT+CALL+EXTEND	1	NO	I1U	1			10	3.2
2	COUNT+CALL+EXTEND	1	NO	I1L	2			10	7.2
3	COUNT+CALL+EXTEND	. 2	NO	I2U	3			10	1.1
4	COUNT+CALL+EXTEND	. 2	NO	I2L	4			10	1.5
5	COUNT+CALL+EXTEND	. 2	NO	I3U	5			10	4.5
6	CALL+EXTEND	. 2	NO	I3L	6			10	6.2
7	CALL+EXTEND	. 2	NO	I4U	7			10	2.1
8	COUNT+CALL+EXTEND	. 2	NO	I4L	8			10	7.4
9	COUNT+CALL+EXTEND	. . 3	NO	I5U	9			10	3.4
10	COUNT+CALL+EXTEND	. . 3	NO	I5L	10			10	7.6
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U	11			10	1.3
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L	12			10	1.7
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U	13			10	4.7
14	CALL+EXTEND	. . . 4 . . .	NO	I7L	14			10	6.4
15	CALL+EXTEND	. . . 4 . . .	NO	I8U	15			10	2.3
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L	16			10	7.8
17	COUNT+CALL+EXTEND	1	NO	I9U	17			10	3.6
18	COUNT+CALL+EXTEND	. . 3	NO	I9L	18			10	3.8
19	COUNT+CALL+EXTEND	. 2	NO	I10U	19			10	4.1
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L	20			10	4.2
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U	21			10	3.1
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L	22			10	7.1
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U	23			10	1.2
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L	24			10	1.6
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U	25			10	4.6
26	CALL+EXTEND	. . . . . 6 . .	NO	J3L	26			10	6.3
27	CALL+EXTEND	. . . . . 6 . .	NO	J4U	27			10	2.2
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L	28			10	7.3
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U	29			10	3.3
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L	30			10	7.5
31	COUNT+CALL+EXTEND	 8	NO	J6U	31			10	1.4
32	COUNT+CALL+EXTEND	 8	NO	J6L	32			10	1.8
33	COUNT+CALL+EXTEND	 8	NO	J7U	33			10	4.8
34	CALL+EXTEND	 8	NO	J7L	34			10	6.5
35	CALL+EXTEND	 8	NO	J8U	35			10	2.4
36	COUNT+CALL+EXTEND	 8	NO	J8L	36			10	7.7
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U	37			10	3.5
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L	38			10	3.7
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U	39			10	4.3
40	COUNT+CALL+EXTEND	 8	NO	J10L	40			10	4.4
41	PEDESTRIAN	. 2	NO	I12U	41			10	5.1
42	PEDESTRIAN	. . . 4 . . .	NO	I12L	42			10	5.3
43	PEDESTRIAN	. . . . . 6 . .	NO	I13U	43			10	5.2
44	PEDESTRIAN	 8	NO	I13L	44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	1	A
1000	2	A
1400	3	A
1900	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	2
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	16
Protocol	AB3418
Access Level	1
Baud	1200
Parity	EVEN
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27000
Type	STATIC
Central Access	6
Field Access	0

IP Address	192	.	168	.	0	.	172
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	254
Gateway	192	.	168	.	0	.	1

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		. . . . .	. . . . .	1 2 3 4 5 6 7 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)			
Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		1 2 3 . . 6 . .	. . . . .	. . . . .	. 2 . . . 6 . .	. . . . .	. . . 4 . . . 8	. . . . .	. . . . .	. . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	. . . 4 . . 7 .	. . . . .

Configuration (3-2-6)			
Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. 2 . . 5 . . .	. . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. . . 4 . . 7 .	. . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	1 . . . . 6 . .	. . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. . 3 8	. . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	NORMAL

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

\+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

INTERSECTION: Clinton Keith & Creighton

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **112**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **8/21/2017 8:07**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	4	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	69	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	0	0	0
1	Ped FDW	0	17	0	0	0	0	0	0
2	Min Green	6	10	3	3	6	10	3	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	99
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0
5	Veh Extension	2.0	4.3	0.5	0.5	5.0	4.3	0.5	2.5
6	Max Gap	2.0	6.0	0.5	0.5	5.0	6.0	0.5	3.2
7	Min Gap	2.0	3.0	0.5	0.5	5.0	3.0	0.5	4.9
8	Max Limit	20	40	17	17	20	40	17	25
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	0	0	0	0	0
B	PE Min Ped FDW	0	17	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0
E	Yellow Change	3.6	4.4	3.6	3.6	3.6	4.4	3.6	3.6
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row	F	
0	Permit	12__56_8
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2___6__
9	Max Recall	_____
A	Soft Recall	_2___6__
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____8
F	First Phases	_2___6__

Phase Functions <C+0+F=1>

		Overlap							
	Column Numbers ---->	1	2	3	4	5	6	7	8
Row	*Overlap Name ---->*								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	- - -	4
RR-2 *	- - -	5
SE-1	0	6
SE-2	0	7

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	*Column Numbers ---->*	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	
Ped for 4P Output	
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
Phase 1	10	0
Phase 2	10	1
Phase 3	10	2
Phase 4	10	3
Phase 5	10	4
Phase 6	10	5
Phase 7	10	6
Phase 8	10	7

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	100	95	95	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	45	45	45	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	0	0	0	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	45	45	45	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	25	25	25	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	2	32	21	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	12	12	12	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

	E	
		0
Plan 1 - Sync	_2___6__	1
Plan 2 - Sync	_2___6__	2
Plan 3 - Sync	_2___6__	3
Plan 4 - Sync	_2___6__	4
Plan 5 - Sync	_2___6__	5
Plan 6 - Sync	_2___6__	6
Plan 7 - Sync	_2___6__	7
Plan 8 - Sync	_2___6__	8
Plan 9 - Sync	_2___6__	9
NEMA Sync	_____	A
NEMA Hold	_____	B
		C
		D
Coord Extra	_____	E
		F

Sync Phases <C+0+C=1>

Row											Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

	F	
Free Lag	_2_4_6_8	0
Plan 1 - Lag	_2_4_6_8	1
Plan 2 - Lag	_2_4_6_8	2
Plan 3 - Lag	_2_4_6_8	3
Plan 4 - Lag	_2_4_6_8	4
Plan 5 - Lag	_2_4_6_8	5
Plan 6 - Lag	_2_4_6_8	6
Plan 7 - Lag	_2_4_6_8	7
Plan 8 - Lag	_2_4_6_8	8
Plan 9 - Lag	_2_4_6_8	9
External Lag	_____	A
		B
		C
		D
		E
		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	200	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	200	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	200	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	4	<C/5+2+A>
Begin Week	1	<C/5+2+B>
End Month	10	<C/5+2+C>
End Week	5	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123 8	0.0	0.0
1		40	45_7_	6	123 8	0.0	0.0
2		41	45_7_	4	123 8	0.0	0.0
3		42	45_7_	8	123 8	1.0	0.0
4		43	45_7_	2	123 8	0.0	0.0
5		44	45_7_	6	123 8	0.0	0.0
6		45	45_7_	4	123 8	0.0	0.0
7		46	45_7_	8	123 8	0.0	0.0
8		47	67_	2	123 8	0.0	0.0
9		48	67_	6	123 8	0.0	0.0
A		49	67_	4	123 8	0.0	0.0
B		50	67_	8	123 8	0.0	0.0
C		55	45_7_	5	123 8	0.0	0.0
D		56	45_7_	1	123 8	0.0	0.0
E		57	45_7_	7	123 8	0.0	0.0
F		58	45_7_	3	123 8	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123 8	0.0	0.0
1		60	45_7_	1	123 8	0.0	0.0
2		61	45_7_	7	123 8	0.0	0.0
3		62	45_7_	3	123 8	0.0	0.0
4		63	45_7_	2	123 8	0.0	0.0
5		64	45_7_	6	123 8	0.0	0.0
6		65	45_7_	4	123 8	0.0	0.0
7		66	45_7_	8	123 8	10.0	0.0
8		67	2	2	123 8	0.0	0.0
9		68	2	6	123 8	0.0	0.0
A		69	2	4	123 8	0.0	0.0
B		70	2	8	123 8	0.0	0.0
C		76	45_7_	2	123 8	0.0	0.0
D		77	45_7_	6	123 8	0.0	0.0
E		78	45_7_	4	123 8	0.0	0.0
F		79	45_7_	8	123 8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	255 <D/0+0+1>
Max ON (minutes)	255 <D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	06 : 30	1	A	_23456_
1	07 : 45	E	A	_23456_
2	14 : 00	3	A	_23456_
3	15 : 05	E	A	123456_
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) | 0 | <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) | 255 | <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel | _____ | <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>

Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>

Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Clinton Keith & Vista Murrieta

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **77**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **6/8/2017 15:32**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	14	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	35	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	0	0	7
1	Ped FDW	0	26	0	0	0	0	0	34
2	Min Green	6	10	3	3	6	10	3	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	6.9	0.5	0.5	2.0	3.9	0.5	3.0
6	Max Gap	2.0	7.0	0.5	0.5	2.0	6.0	0.5	3.0
7	Min Gap	2.0	3.0	0.5	0.5	2.0	2.0	0.5	3.0
8	Max Limit	35	50	17	17	15	50	17	40
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	0	0	0	0	5
B	PE Min Ped FDW	0	26	0	0	0	0	0	34
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.6	4.4	3.6	3.6	3.6	4.4	3.6	3.6
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row		F
0	Permit	12__56_8
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2___6__
9	Max Recall	_____
A	Soft Recall	_2___6__
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____8
F	First Phases	_2___6__

Phase Functions <C+0+F=1>

Row	Column Numbers ---> / Overlap Name --->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall	N	N	N	N	N	N	N	N
9	Queue Jump Phase								
A	Queue Jump Time	0	0	0	0	0	0	0	0
B	Minimum Green	0	0	0	0	0	0	0	0
C	Maximum Green	0	0	0	0	0	0	0	0
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0
8		
9		
A		
B		
C		
D		
E		
F		

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 8
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 8
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2
Phase 1	10
Phase 2	10
Phase 3	10
Phase 4	10
Phase 5	10
Phase 6	10
Phase 7	10
Phase 8	10

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---> / Plan Name --->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length	120	120	120	120	120	0	0	0	0	0
1	Phase 1 - ForceOff	65	78	58	54	59	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	25	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	50	55	37	37	37	0	0	0	0	4
5	Phase 5 - ForceOff	86	87	47	51	59	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	15	15	0	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	50	55	37	37	37	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	95	4	1	113	113	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	12	12	12	12	12	0	0	0	0	D
E	Hold Release	255	255	255	255	255	0	0	0	0	E
F	Reserved	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
0			0
1	Plan 1 - Sync	_2__6_	1
2	Plan 2 - Sync	_2__6_	2
3	Plan 3 - Sync	_2__6_	3
4	Plan 4 - Sync	_2__6_	4
5	Plan 5 - Sync	_2__6_	5
6	Plan 6 - Sync	_2__6_	6
7	Plan 7 - Sync	_2__6_	7
8	Plan 8 - Sync	_2__6_	8
9	Plan 9 - Sync	_2__6_	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E			E
F			F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	____	____	____	____	____	____	____	____	____	6
7											7
8	Pretimed Phases	____	____	____	____	____	____	____	____	____	8
9	Max Recall	____	____	____	____	____	____	____	____	____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	____	____	____	____	____	____	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	____	____	____	____	____	____	B
C	Perm 2 Veh Phase	____	____	____	____	____	____	____	____	____	C
D	Perm 2 Ped Phase	____	____	____	____	____	____	____	____	____	D
E	Perm 3 Veh Phase	____	____	____	____	____	____	____	____	____	E
F	Perm 3 Ped Phase	____	____	____	____	____	____	____	____	____	F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B	Lag Hold	_____	B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	One-Shot Timer	0	Latch 1 Set	0	NOT-3	0	Max 2	0	Pretimed	0	Set DOW	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	AND-5 (a)	0	Latch 1 Reset	0	NOT-4	0	Reserved	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	AND-5 (b)	0	Latch 2 Set	0	OR-4 (a)	0	Reserved	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	AND-6 (a)	0	Latch 2 Reset	0	OR-4 (b)	0	Reserved	0	Plan 3	0	Gate Down	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	AND-6 (b)	0	NAND-3 (a)	0	OR-5 (a)	0	Reserved	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	Reserved		NAND-3 (b)	0	OR-5 (b)	0	Reserved	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	Reserved		NAND-4 (a)	0	OR-6 (a)	0	Reserved	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	Reserved		NAND-4 (b)	0	OR-6 (b)	0	Reserved	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Spec. Funct. 1	0	OR-7 (a)	0	EXTMR	0	Reserved	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Spec. Funct. 2	0	OR-7 (b)	0	Reserved		Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	Spec. Funct. 3	0	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	Spec. Funct. 4	0	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	Reserved		OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	Reserved		OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	Reserved		OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	Reserved		OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Reserved		Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Reserved		Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Reserved		Phase ON - 4	0	Sp Evnt Out 3	0	EXTMR	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Reserved		Phase ON - 5	0	Sp Evnt Out 4	0	One-Shot Timer	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Reserved		Phase ON - 6	0	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Reserved		Phase ON - 7	0	Sp Evnt Out 6	0	Latch 1	0	Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Reserved		Phase ON - 8	0	Sp Evnt Out 7	0	Latch 2	0	Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Flh Yell Arrow 1	0	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Green 1	0	Ph. Check - 2	0	Coord On	0	NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Flh Yell Arrow 3	0	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Green 3	0	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Flh Yell Arrow 5	0	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0	AND-5	0	C
D	Green 5	0	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0	AND-6	0	D
E	Flh Yell Arrow 7	0	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0	Reserved		E
F	Green 7	0	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0	Reserved		F

Assignable Outputs <C+0+E=127>

Row	Column Numbers —> / Phase Names —>	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	7	0	7	0	7	0	7	0
1	Ped FDW	10	0	10	0	10	0	10	0
2	Min Green	7	3	7	3	7	3	7	3
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	1.2	0.0	1.2	0.0	1.2	0.0	1.2	0.0
5	Veh Extension	3.5	0.5	3.5	0.5	3.5	0.5	3.5	0.5
6	Max Gap	5.0	0.5	5.0	0.5	5.0	0.5	5.0	0.5
7	Min Gap	2.0	0.5	2.0	0.5	2.0	0.5	2.0	0.5
8	Max Limit	40	17	40	17	40	17	40	17
9	Max Limit 2	70	30	70	30	70	30	70	30
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	1	1	1	1	1	1	1	1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0
F	Red Clear	0.5	0.0	1.0	0.0	0.5	0.0	1.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	10	0	10	0	1.0
Phase 2	7	3	7	3	0.7
Phase 3	0	0	0	0	0.0
Phase 4	12	0	12	0	1.2
Phase 5	35	5	35	5	3.5
Phase 6	50	5	50	5	5.0
Phase 7	20	5	20	5	2.0
Phase 8	40	17	40	17	4.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	4	<C/5+2+A>
Begin Week	1	<C/5+2+B>
End Month	10	<C/5+2+C>
End Week	5	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	0	<C/5+2+F>

Yellow Yield Coordination

12345678

Omit Alarm	12345678	<C/5+F+0>

Local Alarm Disable

Row		1	2	3	4	5	6	7	8
0	Ped Walk	7	0	7	0	7	0	7	0
1	Ped FDW	10	0	10	0	10	0	10	0
2	Min Green	7	3	7	3	7	3	7	3
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	1.2	0.0	1.2	0.0	1.2	0.0	1.2	0.0
5	Veh Extension	3.5	0.5	3.5	0.5	3.5	0.5	3.5	0.5
6	Max Gap	5.0	0.5	5.0	0.5	5.0	0.5	5.0	0.5
7	Min Gap	2.0	0.5	2.0	0.5	2.0	0.5	2.0	0.5
8	Max Limit	40	17	40	17	40	17	40	17
9	Max Limit 2	70	30	70	30	70	30	70	30
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	1	1	1	1	1	1	1	1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0
F	Red Clear	0.5	0.0	1.0	0.0	0.5	0.0	1.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	10	0	10	0	1.0
Phase 2	7	3	7	3	0.7
Phase 3	0	0	0	0	0.0
Phase 4	12	0	12	0	1.2
Phase 5	35	5	35	5	3.5
Phase 6	50	5	50	5	5.0
Phase 7	20	5	20	5	2.0
Phase 8	40	17	40	17	4.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123 8	0.0	0.0
1		40	45_7_	6	123 8	0.0	0.0
2		41	45_7_	4	123 8	0.0	0.0
3		42	45_7_	8	123 8	0.0	0.0
4		43	45_7_	2	123 8	0.0	0.0
5		44	45_7_	6	123 8	0.0	0.0
6		45	45_7_	4	123 8	0.0	0.0
7		46	45_7_	8	123 8	10.0	0.0
8		47	67	2	123 8	0.0	0.0
9		48	67	6	123 8	0.0	0.0
A		49	67	4	123 8	0.0	0.0
B		50	67	8	123 8	0.0	0.0
C		55	45_7_	5	123 8	0.0	0.0
D		56	45_7_	1	123 8	0.0	0.0
E		57	45_7_	7	123 8	0.0	0.0
F		58	45_7_	3	123 8	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123 8	0.0	0.0
1		60	45_7_	1	123 8	0.0	0.0
2		61	45_7_	7	123 8	0.0	0.0
3		62	45_7_	3	123 8	0.0	0.0
4		63	45_7_	2	123 8	0.0	0.0
5		64	45_7_	6	123 8	0.0	0.0
6		65	45_7_	4	123 8	0.0	0.0
7		66	45_7_	8	123 8	0.0	0.0
8		67	2	2	123 8	0.0	0.0
9		68	2	6	123 8	0.0	0.0
A		69	2	4	123 8	0.0	0.0
B		70	2	8	123 8	0.0	0.0
C		76	45_7_	2	123 8	0.0	0.0
D		77	45_7_	6	123 8	0.0	0.0
E		78	45_7_	4	123 8	0.0	0.0
F		79	45_7_	8	123 8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers --->	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	255	<D/0+0+1>
Max ON (minutes)	255	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0.0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select: October = A, November = B, December = C

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	_____	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters
<F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway Schedule <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Clinton Keith & Whitewood

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **102**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **6/8/2017 15:33**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	15	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	53	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	0
1	Ped FDW	0	36	0	19	0	36	0	0
2	Min Green	6	10	6	6	6	10	3	3
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
5	Veh Extension	2.0	6.1	3.0	6.9	2.0	6.1	0.5	0.5
6	Max Gap	2.0	7.0	3.0	7.0	2.0	7.0	0.5	0.5
7	Min Gap	2.0	3.0	3.0	3.0	2.0	3.0	0.5	0.5
8	Max Limit	20	20	25	30	30	30	17	17
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	5	0	5	0	0
B	PE Min Ped FDW	0	36	0	19	0	36	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.0	4.8	4.4	4.4	3.6	4.8	3.6	3.6
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row	F	
0	Permit	123456__
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2___6__
9	Max Recall	_____
A	Soft Recall	_____
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	___4___
F	First Phases	_2___6__

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	3
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 4 6
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 4 6
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2
Phase 1	10
Phase 2	10
Phase 3	10
Phase 4	10
Phase 5	10
Phase 6	10
Phase 7	10
Phase 8	10

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
0			0
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E	Coord Extra	_____	E
F			F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

		Phase							
	Column Numbers --->	1	2	3	4	5	6	7	8
Row	Phase Names --->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthien
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123	0.0	0.0
1		40	45_7_	6	123	0.0	0.0
2		41	45_7_	4	123	0.0	0.0
3		42	45_7_	8	123	0.0	0.0
4		43	45_7_	2	123	0.0	0.0
5		44	45_7_	6	123	0.0	0.0
6		45	45_7_	4	123	0.0	0.0
7		46	45_7_	8	123	0.0	0.0
8		47	67_	2	123	0.0	0.0
9		48	67_	6	123	0.0	0.0
A		49	67_	4	123	0.0	0.0
B		50	67_	8	123	0.0	0.0
C		55	45_7_	5	123	0.0	0.0
D		56	45_7_	1	123	0.0	0.0
E		57	45_7_	7	123	0.0	0.0
F		58	45_7_	3	123	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123	0.0	0.0
1		60	45_7_	1	123	0.0	0.0
2		61	45_7_	7	123	0.0	0.0
3		62	45_7_	3	123	0.0	0.0
4		63	45_7_	2	123	0.0	0.0
5		64	45_7_	6	123	0.0	0.0
6		65	45_7_	4	123	0.0	0.0
7		66	45_7_	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45_7_	2	123	0.0	0.0
D		77	45_7_	6	123	0.0	0.0
E		78	45_7_	4	123	0.0	0.0
F		79	45_7_	8	123	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers --->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) | 0 | <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) | 255 | <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel | _____ | <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>

Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>

Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Whitewood & Linnel

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **103**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **5/16/2017 13:37**

Change Record					
Change	By	Date	Change	By	Date

Notes: _____

Drop Number	16	<C+0+0>
Zone Number		<C+0+1>
Area Number	0	<C+0+2>
Area Address	59	<C+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	2.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

	Phase							
Column Numbers —>	1	2	3	4	5	6	7	8
Row *Phase Names —>*								
0 Ped Walk	0	7	0	7	0	7	0	0
1 Ped FDW	0	10	0	19	0	15	0	0
2 Min Green	6	10	6	6	6	10	3	3
3 Type 3 Limit	0	99	0	99	0	99	0	0
4 Added Initial	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0
5 Veh Extension	2.0	6.1	3.0	6.9	2.0	6.1	0.5	0.5
6 Max Gap	2.0	7.0	3.0	7.5	2.0	7.0	0.5	0.5
7 Min Gap	2.0	3.0	3.0	5.0	2.0	3.0	0.5	0.5
8 Max Limit	20	50	20	35	35	50	17	17
9 Max Limit 2	0	0	0	0	0	0	0	0
A ------	0	0	0	0	0	0	0	0
B Call To Phase	0	0	0	0	0	0	0	0
C Reduce By	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0
D Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
E Yellow Change	3.6	4.8	3.6	4.8	3.6	4.8	3.6	3.6
F Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F Page>

Row	E
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	Row
Permit	123456__	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	_____	3
Ped Recall	_____	4
View Set Peds	- - - - -	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_2__6__	8
Max Recall	_____	9
Soft Recall	_2__6__	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	___4___	E
First Phases	_2__6__	F

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Coordination <C Page>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	65	65	65	65	65	65	65	65	65	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	25	25	25	25	25	25	25	25	25	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	65	65	65	65	65	65	65	65	65	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	25	25	25	25	25	25	25	25	25	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	12	12	12	12	12	12	12	12	0	D
E	Hold Release	255	255	255	255	255	255	255	255	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

	E	Row
		0
Plan 1 - Sync	2 6	1
Plan 2 - Sync	2 6	2
Plan 3 - Sync	2 6	3
Plan 4 - Sync	2 6	4
Plan 5 - Sync	2 6	5
Plan 6 - Sync	2 6	6
Plan 7 - Sync	2 6	7
Plan 8 - Sync	2 6	8
Plan 9 - Sync	2 6	9
Coord Ped *		A
NEMA Hold		B
		C
		D
		E
		F

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	3
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

	F	Row
Free Lag	2 4 6 8	0
Plan 1 - Lag	2 4 6 8	1
Plan 2 - Lag	2 4 6 8	2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag	2 4 6 8	4
Plan 5 - Lag	2 4 6 8	5
Plan 6 - Lag	2 4 6 8	6
Plan 7 - Lag	2 4 6 8	7
Plan 8 - Lag	2 4 6 8	8
Plan 9 - Lag	2 4 6 8	9
Coord Max *		A
Coord Lag *		B
		C
		D
		E
		F

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00 : 00	0	0		0
00 : 00	0	0		1
00 : 00	0	0		2
00 : 00	0	0		3
00 : 00	0	0		4
00 : 00	0	0		5
00 : 00	0	0		6
00 : 00	0	0		7
00 : 00	0	0		8
00 : 00	0	0		9
00 : 00	0	0		A
00 : 00	0	0		B
00 : 00	0	0		C
00 : 00	0	0		D
00 : 00	0	0		E
00 : 00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	2.0	0.0		I-6U	3
8	10.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	0.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 2 <F Page>

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 3 <F Page>

Row	Delay Only --->	7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0	---	---	---	---	---	---	---	---
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service Int. --->	0	0							
A		---	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

<--- Limited Service Interval (Set Dwell = 255)

Special Event Schedule <C Page with F+9+F=22>

INTERSECTION: Whitewood & Baxter

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **104**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **11/15/2017 14:34**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	7	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	84	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	25	0	28	0	25	0	28
2	Min Green	6	10	6	10	6	10	6	10
3	Type 3 Disconnect	0	99	0	99	0	99	0	99
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.3	2.0	3.9	2.0	4.3	2.0	3.9
6	Max Gap	2.0	6.0	2.0	5.0	2.0	6.0	2.0	5.0
7	Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8	Max Limit	20	50	20	40	20	50	20	40
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	5	0	5	0	5
B	PE Min Ped FDW	0	25	0	28	0	25	0	28
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.6	4.8	3.6	4.4	3.6	4.8	3.6	4.4
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row		F
0	Permit	12345678
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2_4_6_8
9	Max Recall	_____
A	Soft Recall	_2___6__
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	___4___8
F	First Phases	_2___6__

Phase Functions <C+0+F=1>

		Overlap							
	Column Numbers —>	1	2	3	4	5	6	7	8
Row	Overlap Name —>								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall	N	N	N	N	N	N	N	N
9	Queue Jump Phase								
A	Queue Jump Time	0	0	0	0	0	0	0	0
B	Minimum Green	0	0	0	0	0	0	0	0
C	Maximum Green	0	0	0	0	0	0	0	0
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers —>	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 4 6 8
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 4 6 8
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers —> / Plan Name —>	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length	95	95	120	120	120	100	100	100	100	0
1	Phase 1 - ForceOff	48	48	65	77	70	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	12	16	15	20	20	20	20	3
4	Phase 4 - ForceOff	38	37	51	57	54	40	40	40	40	4
5	Phase 5 - ForceOff	48	48	61	71	70	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	20	42	40	20	20	20	20	7
8	Phase 8 - ForceOff	38	37	51	57	54	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	53	73	10	106	106	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	12	12	12	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Reserved	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
0			0
1	Plan 1 - Sync	2 6	1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync	2 6	4
5	Plan 5 - Sync	2 6	5
6	Plan 6 - Sync	2 6	6
7	Plan 7 - Sync	2 6	7
8	Plan 8 - Sync	2 6	8
9	Plan 9 - Sync	2 6	9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E			E
F			F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	2 4 6 8	0
1	Plan 1 - Lag	2 4 6 8	1
2	Plan 2 - Lag	2 4 6 8	2
3	Plan 3 - Lag	2 4 6 8	3
4	Plan 4 - Lag	2 4 6 8	4
5	Plan 5 - Lag	2 4 6 8	5
6	Plan 6 - Lag	2 4 6 8	6
7	Plan 7 - Lag	2 4 6 8	7
8	Plan 8 - Lag	2 4 6 8	8
9	Plan 9 - Lag	2 4 6 8	9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	One-Shot Timer	0	Latch 1 Set	0	NOT-3	0	Max 2	0	Pretimed	0	Set DOW	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	AND-5 (a)	0	Latch 1 Reset	0	NOT-4	0	Reserved	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	AND-5 (b)	0	Latch 2 Set	0	OR-4 (a)	0	Reserved	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	AND-6 (a)	0	Latch 2 Reset	0	OR-4 (b)	0	Reserved	0	Plan 3	0	Gate Down	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	AND-6 (b)	0	NAND-3 (a)	0	OR-5 (a)	0	Reserved	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	Reserved		NAND-3 (b)	0	OR-5 (b)	0	Reserved	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	Reserved		NAND-4 (a)	0	OR-6 (a)	0	Reserved	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	Reserved		NAND-4 (b)	0	OR-6 (b)	0	Reserved	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Spec. Funct. 1	0	OR-7 (a)	0	EXTMR	0	Reserved	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Spec. Funct. 2	0	OR-7 (b)	0	Reserved		Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	Spec. Funct. 3	0	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	Spec. Funct. 4	0	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	Reserved		OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	Reserved		OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	Reserved		OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	Reserved		OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Reserved		Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Reserved		Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Reserved		Phase ON - 4	0	Sp Evnt Out 3	0	EXTMR	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Reserved		Phase ON - 5	0	Sp Evnt Out 4	0	One-Shot Timer	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Reserved		Phase ON - 6	0	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Reserved		Phase ON - 7	0	Sp Evnt Out 6	0	Latch 1	0	Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Reserved		Phase ON - 8	0	Sp Evnt Out 7	0	Latch 2	0	Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Flh Yell Arrow 1	0	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Green 1	0	Ph. Check - 2	0	Coord On	0	NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Flh Yell Arrow 3	0	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Green 3	0	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Flh Yell Arrow 5	0	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0	AND-5	0	C
D	Green 5	0	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0	AND-6	0	D
E	Flh Yell Arrow 7	0	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0	Reserved		E
F	Green 7	0	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0	Reserved		F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	28	0	0	0	19	0	27
2	Min Green	6	10	4	4	6	10	6	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	4.3	2.0	2.5	2.0	4.3	3.0	3.0
6	Max Gap	2.0	6.0	3.0	3.0	2.0	6.0	3.0	3.0
7	Min Gap	2.0	2.0	0.5	1.5	2.0	2.0	3.0	3.0
8	Max Limit	25	25	20	45	20	25	20	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	0	0	5	0	5
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.0	4.3	3.0	3.0	3.0	4.3	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	0	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	12345678	<C/5+F+0>

Local Alarm Disable

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123	0.0	0.0
1		40	45_7_	6	123	0.0	0.0
2		41	45_7_	4	123	1.0	0.0
3		42	45_7_	8	123	1.0	0.0
4		43	45_7_	2	123	0.0	0.0
5		44	45_7_	6	123	0.0	0.0
6		45	45_7_	4	123	1.0	0.0
7		46	45_7_	8	123	0.0	0.0
8		47	67_	2	123	0.0	0.0
9		48	67_	6	123	0.0	0.0
A		49	67_	4	123	5.0	0.0
B		50	67_	8	123	0.0	0.0
C		55	45_7_	5	123	0.0	0.0
D		56	45_7_	1	123	0.0	0.0
E		57	45_7_	7	123	0.0	0.0
F		58	45_7_	3	123	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123	0.0	0.0
1		60	45_7_	1	123	0.0	0.0
2		61	45_7_	7	123	0.0	0.0
3		62	45_7_	3	123	0.0	0.0
4		63	45_7_	2	123	0.0	0.0
5		64	45_7_	6	123	0.0	0.0
6		65	45_7_	4	123	0.0	0.0
7		66	45_7_	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45_7_	2	123	0.0	0.0
D		77	45_7_	6	123	0.0	0.0
E		78	45_7_	4	123	0.0	0.0
F		79	45_7_	8	123	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20 <D/0+0+1>
Max ON (minutes)	7 <D/0+0+2>
Chatter Fail Time	0 <D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0.0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select: October = A, November = B, December = C

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel		<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters
<F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

Headway Schedule <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Whitewood & Keller

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **111**

N/S Street Name: **Not Assigned**
E/W Street Name: **Not Assigned**

Last Database Change: **11/15/2017 15:28**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	20	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	85	<C/0+0+3>
QuicNet Channel	COM6:	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	20	<F/1+0+E>
Red Revert	2.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---> / Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	32	0	25	0	32	0	25
2	Min Green	6	10	6	10	6	10	6	10
3	Type 3 Disconnect	0	99	0	99	0	99	0	99
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.3	2.0	3.9	2.0	4.3	2.0	3.9
6	Max Gap	2.0	6.0	2.0	5.0	2.0	6.0	2.0	5.0
7	Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8	Max Limit	20	50	20	40	20	50	20	40
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	5	0	5	0	5
B	PE Min Ped FDW	0	32	0	25	0	32	0	25
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.6	4.8	3.6	4.4	3.6	4.8	3.6	4.4
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F		Row
Permit	12345678	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	_____	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_2_4_6_8	8
Max Recall	_____	9
Soft Recall	_2___6__	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	___4___8	E
First Phases	_2___6__	F

Phase Functions <C+0+F=1>

Row	Column Numbers —>	Overlap 1	2	3	4	5	6	7	8
	Overlap Name —>								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall	N	N	N	N	N	N	N	N
9	Queue Jump Phase								
A	Queue Jump Time	0	0	0	0	0	0	0	0
B	Minimum Green	0	0	0	0	0	0	0	0
C	Maximum Green	0	0	0	0	0	0	0	0
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers —>	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	2 4 6 8
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	2 4 6 8
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2
Phase 1	10
Phase 2	10
Phase 3	10
Phase 4	10
Phase 5	10
Phase 6	10
Phase 7	10
Phase 8	10

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	95	95	120	120	120	100	100	100	100	0
1	Phase 1 - ForceOff	48	48	65	77	70	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	12	16	15	20	20	20	20	3
4	Phase 4 - ForceOff	38	37	51	57	54	40	40	40	40	4
5	Phase 5 - ForceOff	48	48	61	71	70	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	20	42	40	20	20	20	20	7
8	Phase 8 - ForceOff	38	37	51	57	54	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	53	73	10	106	106	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	12	12	12	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Reserved	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
			0
	Plan 1 - Sync	_2___6_	1
	Plan 2 - Sync	_2___6_	2
	Plan 3 - Sync	_2___6_	3
	Plan 4 - Sync	_2___6_	4
	Plan 5 - Sync	_2___6_	5
	Plan 6 - Sync	_2___6_	6
	Plan 7 - Sync	_2___6_	7
	Plan 8 - Sync	_2___6_	8
	Plan 9 - Sync	_2___6_	9
	NEMA Sync	_____	A
	NEMA Hold	_____	B
			C
			D
			E
			F

Sync Phases <C+0+C=1>

Row											Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
			0
	Free Lag	_2_4_6_8	1
	Plan 1 - Lag	_2_4_6_8	2
	Plan 2 - Lag	_2_4_6_8	3
	Plan 3 - Lag	_2_4_6_8	4
	Plan 4 - Lag	_2_4_6_8	5
	Plan 5 - Lag	_2_4_6_8	6
	Plan 6 - Lag	_2_4_6_8	7
	Plan 7 - Lag	_2_4_6_8	8
	Plan 8 - Lag	_2_4_6_8	9
	Plan 9 - Lag	_2_4_6_8	A
	External Lag	_____	B
	Lag Hold	_____	C
			D
			E
			F

Lag Phases <C+0+C=1>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	One-Shot Timer	0	Latch 1 Set	0	NOT-3	0	Max 2	0	Pretimed	0	Set DOW	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	AND-5 (a)	0	Latch 1 Reset	0	NOT-4	0	Reserved	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	AND-5 (b)	0	Latch 2 Set	0	OR-4 (a)	0	Reserved	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	AND-6 (a)	0	Latch 2 Reset	0	OR-4 (b)	0	Reserved	0	Plan 3	0	Gate Down	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	AND-6 (b)	0	NAND-3 (a)	0	OR-5 (a)	0	Reserved	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	Reserved		NAND-3 (b)	0	OR-5 (b)	0	Reserved	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	Reserved		NAND-4 (a)	0	OR-6 (a)	0	Reserved	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	Reserved		NAND-4 (b)	0	OR-6 (b)	0	Reserved	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Spec. Funct. 1	0	OR-7 (a)	0	EXTMR	0	Reserved	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Spec. Funct. 2	0	OR-7 (b)	0	Reserved		Max Inhibit (nema)	200	Plan 9	0	External Alarm	75	NOT-2	0	External Lag	0	9
A	Spec. Funct. 3	0	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	Spec. Funct. 4	0	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	Reserved		OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	Reserved		OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	Reserved		OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	Reserved		OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Reserved		Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Reserved		Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Reserved		Phase ON - 4	0	Sp Evnt Out 3	0	EXTMR	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Reserved		Phase ON - 5	0	Sp Evnt Out 4	0	One-Shot Timer	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Reserved		Phase ON - 6	0	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Reserved		Phase ON - 7	0	Sp Evnt Out 6	0	Latch 1	0	Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Reserved		Phase ON - 8	0	Sp Evnt Out 7	0	Latch 2	0	Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Flh Yell Arrow 1	0	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Green 1	0	Ph. Check - 2	0	Coord On	0	NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Flh Yell Arrow 3	0	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Green 3	0	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Flh Yell Arrow 5	0	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0	AND-5	0	C
D	Green 5	0	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0	AND-6	0	D
E	Flh Yell Arrow 7	0	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0	Reserved		E
F	Green 7	0	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0	Reserved		F

Assignable Outputs <C+0+E=127>

		Phase							
	Column Numbers ---->	1	2	3	4	5	6	7	8
Row	Phase Names ---->								
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	28	0	0	0	19	0	27
2	Min Green	6	10	4	4	6	10	6	6
3	Type 3 Disconnect	0	99	0	0	0	99	0	0
4	Added per Vehicle	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0
5	Veh Extension	2.0	4.3	2.0	2.5	2.0	4.3	3.0	3.0
6	Max Gap	2.0	6.0	3.0	3.0	2.0	6.0	3.0	3.0
7	Min Gap	2.0	2.0	0.5	1.5	2.0	2.0	3.0	3.0
8	Max Limit	25	25	20	45	20	25	20	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	5	0	0	0	5	0	5
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.0	4.3	3.0	3.0	3.0	4.3	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	0	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	12345678	<C/5+F+0>

Local Alarm Disable

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7	2	123	0.0	0.0
1		40	45_7	6	123	0.0	0.0
2		41	45_7	4	123	1.0	0.0
3		42	45_7	8	123	1.0	0.0
4		43	45_7	2	123	0.0	0.0
5		44	45_7	6	123	0.0	0.0
6		45	45_7	4	123	0.0	0.0
7		46	45_7	8	123	0.0	0.0
8		47	67	2	123	0.0	0.0
9		48	67	6	123	0.0	0.0
A		49	67	4	123	0.0	0.0
B		50	67	8	123	0.0	0.0
C		55	45_7	5	123	0.0	0.0
D		56	45_7	1	123	0.0	0.0
E		57	45_7	7	123	0.0	0.0
F		58	45_7	3	123	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123	0.0	0.0
1		60	45_7	1	123	0.0	0.0
2		61	45_7	7	123	0.0	0.0
3		62	45_7	3	123	0.0	0.0
4		63	45_7	2	123	0.0	0.0
5		64	45_7	6	123	0.0	0.0
6		65	45_7	4	123	0.0	0.0
7		66	45_7	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45_7	2	123	0.0	0.0
D		77	45_7	6	123	0.0	0.0
E		78	45_7	4	123	0.0	0.0
F		79	45_7	8	123	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0.0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select: October = A, November = B, Decmber = C

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel	_____	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters
<F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway Schedule <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel		<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters
<F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway Schedule <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

POLE AND EQUIPMENT SCHEDULE

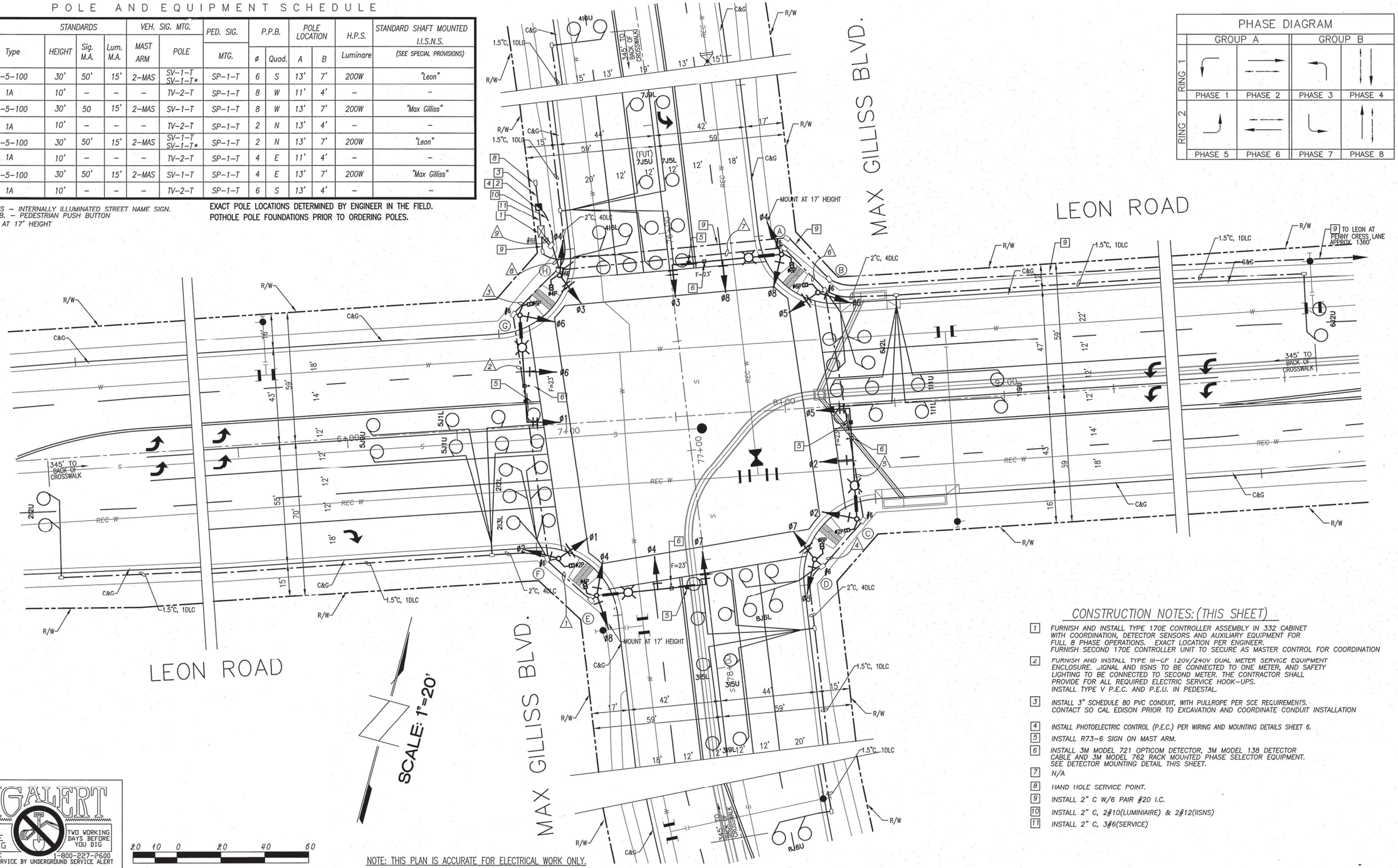
No.	STANDARDS				VEH. SIG. MTG.		PED. SIG.	P.P.B.		POLE LOCATION		H.P.S.	STANDARD SHAFT MOUNTED I.I.S.N.S.
	Type	HEIGHT	Sig. M.A.	Lum. M.A.	MAST ARM	POLE	MTG.	ø	Quad.	A	B	Luminare	(SEE SPECIAL PROVISIONS)
(A)	29-5-100	30'	50'	15'	2-MAS	SV-1-T SV-1-T*	SP-1-T	6	S	13'	7'	200W	"Leon"
(B)	1A	10'	–	–	–	TV-2-T	SP-1-T	8	W	11'	4'	–	–
(C)	29-5-100	30'	50	15'	2-MAS	SV-1-T	SP-1-T	8	W	13'	7'	200W	"Max Gilliss"
(D)	1A	10'	–	–	–	TV-2-T	SP-1-T	2	N	13'	4'	–	–
(E)	29-5-100	30'	50'	15'	2-MAS	SV-1-T SV-1-T*	SP-1-T	2	N	13'	7'	200W	"Leon"
(F)	1A	10'	–	–	–	TV-2-T	SP-1-T	4	E	11'	4'	–	–
(G)	29-5-100	30'	50'	15'	2-MAS	SV-1-T	SP-1-T	4	E	13'	7'	200W	"Max Gilliss"
(H)	1A	10'	–	–	–	TV-2-T	SP-1-T	6	S	13'	4'	–	–

IISNS – INTERNALLY ILLUMINATED STREET NAME SIGN.
P.P.B. – PEDESTRIAN PUSH BUTTON
* – AT 17' HEIGHT

EXACT POLE LOCATIONS DETERMINED BY ENGINEER IN THE FIELD.
POTHOLE POLE FOUNDATIONS PRIOR TO ORDERING POLES.

PHASE DIAGRAM

	GROUP A		GROUP B	
RING 1	PHASE 1	PHASE 2	PHASE 3	PHASE 4
RING 2	PHASE 5	PHASE 6	PHASE 7	PHASE 8



CONSTRUCTION NOTES: (THIS SHEET)

1. FURNISH AND INSTALL TYPE 170E CONTROLLER ASSEMBLY IN 332 CABINET WITH COORDINATION, DETECTOR SENSORS AND AUXILIARY EQUIPMENT FOR FULL 8 PHASE OPERATIONS. EXACT LOCATION PER ENGINEER. FURNISH SECOND 170E CONTROLLER UNIT TO SECURE AS MASTER CONTROL FOR COORDINATION
2. FURNISH AND INSTALL TYPE III-CF 120V/240V DUAL METER SERVICE EQUIPMENT ENCLOSURE. SIGNAL AND IISNS TO BE CONNECTED TO ONE METER, AND SAFETY LIGHTING TO BE CONNECTED TO SECOND METER. THE CONTRACTOR SHALL PROVIDE FOR ALL REQUIRED ELECTRIC SERVICE HOOK-UPS. INSTALL TYPE V P.E.C. AND P.E.U. IN PEDESTAL.
3. INSTALL 3" SCHEDULE 80 PVC CONDUIT, WITH PULLROPE PER SCE REQUIREMENTS. CONTACT SO CAL EDISON PRIOR TO EXCAVATION AND COORDINATE CONDUIT INSTALLATION
4. INSTALL PHOTOELECTRIC CONTROL (P.E.C.) PER WIRING AND MOUNTING DETAILS SHEET 6.
5. INSTALL R73-6 SIGN ON MAST ARM.
6. INSTALL 3M MODEL 721 OPTICOM DETECTOR, 3M MODEL 138 DETECTOR CABLE AND 3M MODEL 762 RACK MOUNTED PHASE SELECTOR EQUIPMENT. SEE DETECTOR MOUNTING DETAIL THIS SHEET.
7. N/A
8. HAND HOLE SERVICE POINT.
9. INSTALL 2" C W/6 PAIR #20 I.C.
10. INSTALL 2" C, 2#10(LUMINIAIRE) & 2#12(IISNS)
11. INSTALL 2" C, 3#6(SERVICE)

DIGALERT
DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG
TOLL FREE 1-800-227-2600
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

20 10 0 20 40 60

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

DATE	BY	MARK		APPR.	DATE
	ENGINEER			COUNTY	

SEAL — REGISTERED PROFESSIONAL ENGINEER — ALAN D FRENCH — No. 45702 Exp. 12/31/08 CIVIL — STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY: Alan French 3-27-07
ALAN D. FRENCH, DEPT. OF TRANSPORTATION — DATE
RECOMMENDED BY: 3/21/07 — DATE

SEAL — REGISTERED PROFESSIONAL ENGINEER — CARLETON WATERS — No. 52916 Exp. 12/31/08 CIVIL — STATE OF CALIFORNIA

URBAN CROSSROADS
5411 Avenida Encinas, Suite 100, Carlsbad, CA 92008, Phone: (760) 931-0684, Fax: (760) 931-1741
CARLETON WATERS R.C.E. No. 52916
EXP. DATE 12/31/08 FILE NO. ____
PREPARED BY: R.C.E. NO. 52916 DATE 3/15/07

SERVICE ADDRESS: 35753' MAX GILLISS BLVD
SIGNAL ENERGIZED: ____
SG: 1428

MS 3932 — I.P. NO. 030182
COUNTY OF RIVERSIDE
TRAFFIC SIGNAL AND LIGHTING PLAN
LEON ROAD AT MAX GILLISS BLVD

SHEET NO. 2 OF 12 SHTS

FOR: LENNAR HOMES | W.O. 03145 | COUNTY FILE NO. 947C

03145 - VERSION LVSHTZLDWG - 01/04/07 - RH

Location: MAX GILLIS/THOMPSON RD @ WINCHESTER RD (Rte 79)
Designed By:
System: **District:** **Installed By:**
Master At: **I/C:** **Service Info:**

Timing Change:	Date Start:	Date End:	Designed:	Installed:
8/27/2018	2/6/2004			4/17/1996

PHASE		FLASH
	1) E/B WINCHESTER RD (Rte 79)---LEFT	[ ]
	2) N/B WINCHESTER RD	[ ]
	3) W/B THOMPSON RD ---LEFT TURN	[ ]
	4) E/B MAX GILLIS BLVD	[ ]
	5) N/B WINCHESTER RD (Rte 79)--LEFT	[ ]
	6) S/B WINCHESTER RD (Rte 79)	[ ]
	7) E/B MAX GILLIS BLVD --LEFT TURN	[ ]
	8) W/B THOMPSON RD	[ ]

OVERLAP		
	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:
INSTALLED TSCP 2.21, BUILD 2

RAM Checksum

Page 2: DF86	Page 8: 85AF
Page 3: B505	Page 9: D2FD
Page 4: F29E	Page 10: 5829
Page 5: 191A	Page 11: 7F74
Page 6: 191A	Page 12: D68F
Page 7: D4AE	Page 13: 86F7

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	1 2 3 4 5 6 7 8
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . .
Vehicle Calls	1 2 3 4 5 6 7 8
Pedestrian Calls	. 2 . 4 . 6 . .
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. . . . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . 4 . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . 5 . . .	. . . . .	. . . . .	. . 3 4 . 6 . 8
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	7	0	5	0	0
Flash Don't Walk	0	25	0	35	0	36	0	0
Minimum Green	5	5	5	5	5	5	5	5
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	25	60	25	30	30	60	25	30
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Maximum Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.1	5.5	4.1	4.8	4.1	5.5	4.1	4.8
All-Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.8	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor			.....											
Plan 2	Green Factor			.....											
Plan 3	Green Factor			.....											
Plan 4	Green Factor			.....											
Plan 5	Green Factor			.....											
Plan 6	Green Factor			.....											
Plan 7	Green Factor			.....											
Plan 8	Green Factor			.....											
Plan 9	Green Factor			.....											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	.....
11-19	.....
21-29	.....

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	.....
Veh Min	Veh Max
. 2 . . . 6 . .	.....
Ped	Bike
.....	.....
Cond	Cond Grn
.....	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	.....	.....	.....	.....	.....	.....	.....	.....
Plan 2	.....	.....	.....	.....	.....	.....	.....	.....
Plan 3	.....	.....	.....	.....	.....	.....	.....	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)				Slot
Det	Type	Phases	Lock	
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	CALL+EXTEND	. 2	NO	I3L
7	CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	CALL+EXTEND	. . . 4 . . .	NO	I7L
15	CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	CALL+EXTEND	 8	NO	J7L
35	CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. . . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)				
Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	9
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27009
Type	STATIC
Central Access	6
Field Access	0

IP Address	192	.	168	.	0	.	109
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	255
Gateway	192	.	168	.	0	.	1

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . .	. . . .	. . . .	. . . .	. 2 . 4 . 6 . 8	. . . . . .	. . . . . .	. . . . . .
Clear 2		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Clear 3		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Hold		. . . .	. . . .	1 2 3 4 5 6 7 8	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . .	. . . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)

Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . .	. . . .	. . . .	. . . .	. 2 . 4 . 6 . 8	. . . . . .	. . . . . .	. . . . . .
Clear 2		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Clear 3		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Hold		1 2 3 . . 6 . .	. . . .	. . . .	. 2 . . . 6 . .	. . . .	. . . 4 . . . 8	. . . . . .	. . . . . .	. . . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . .	. . . . . .	. . . 4 . . 7 .	. . . .

Configuration (3-2-6)

Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. 2 . . 5 . . .	. . . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. . . 4 . . 7 .	. . . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	1 . . . . 6 . .	. . . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
10	30	30	. . 3 8	. . . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

\+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

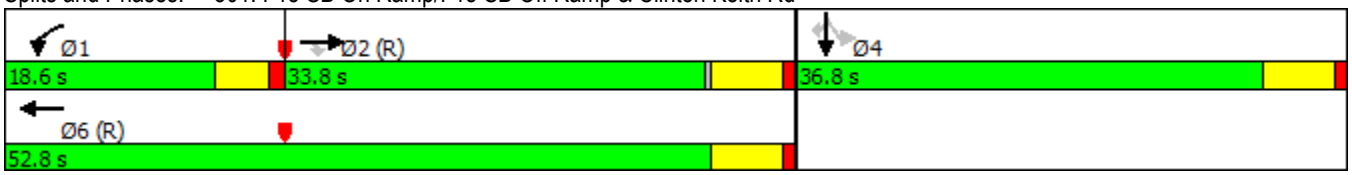
Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

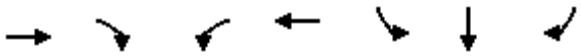
Signal Timings & Phasings from Synchro - Existing PM

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	898	423	246	1165	622	0	420
Future Volume (vph)	898	423	246	1165	622	0	420
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	33.8	33.8	18.6	52.8	36.8	36.8	36.8
Total Split (%)	37.7%	37.7%	20.8%	58.9%	41.1%	41.1%	41.1%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	38.3	38.3	11.1	54.0	24.0	24.0	24.0
Actuated g/C Ratio	0.43	0.43	0.12	0.60	0.27	0.27	0.27
v/c Ratio	0.44	0.48	0.62	0.40	0.74	0.74	0.55
Control Delay	20.5	4.3	42.3	12.8	39.2	39.2	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	4.3	42.3	12.8	39.2	39.2	23.9
LOS	C	A	D	B	D	D	C
Approach Delay	15.3			18.0		33.0	
Approach LOS	B			B		C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 77.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 301: I-15 SB On Ramp/I-15 SB Off Ramp & Clinton Keith Rd





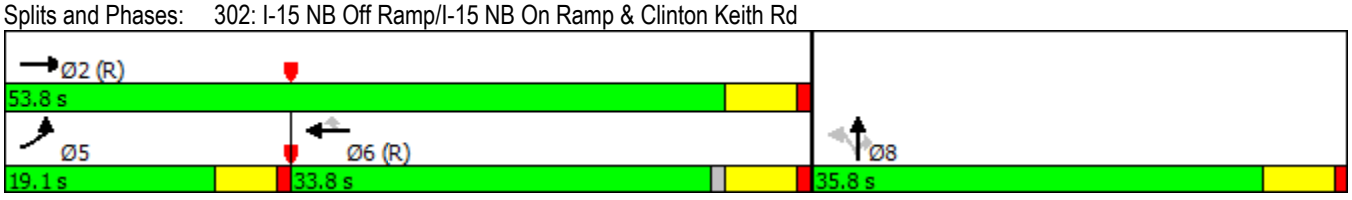
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	33.8	33.8	18.6	52.8	36.8	36.8	36.8
Total Split (%)	37.7%	37.7%	20.8%	58.9%	41.1%	41.1%	41.1%
Maximum Green (s)	28.0	28.0	14.0	47.0	31.0	31.0	31.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Walk Time (s)	7.0	7.0		7.0			
Flash Dont Walk (s)	23.0	23.0		28.0			
Pedestrian Calls (#/hr)	0	0		2			
90th %ile Green (s)	28.4	28.4	14.0	47.0	31.0	31.0	31.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max	Max
70th %ile Green (s)	32.0	32.0	12.5	49.1	28.9	28.9	28.9
70th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
50th %ile Green (s)	37.7	37.7	11.2	53.5	24.5	24.5	24.5
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
30th %ile Green (s)	43.0	43.0	9.8	57.4	20.6	20.6	20.6
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
10th %ile Green (s)	50.5	50.5	7.8	62.9	15.1	15.1	15.1
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap

Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	322	1186	818	536	609	0	421
Future Volume (vph)	322	1186	818	536	609	0	421
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	19.1	53.8	33.8	33.8	35.8	35.8	35.8
Total Split (%)	21.3%	60.0%	37.7%	37.7%	40.0%	40.0%	40.0%
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	12.5	52.3	34.6	34.6	25.7	25.7	25.7
Actuated g/C Ratio	0.14	0.58	0.39	0.39	0.29	0.29	0.29
v/c Ratio	0.73	0.43	0.45	0.61	0.81	0.74	0.70
Control Delay	41.0	7.8	22.6	5.2	43.0	29.8	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	7.8	22.6	5.2	43.0	29.8	27.5
LOS	D	A	C	A	D	C	C
Approach Delay		14.9	15.7			33.7	
Approach LOS		B	B			C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 77.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 302: I-15 NB Off Ramp/I-15 NB On Ramp & Clinton Keith Rd



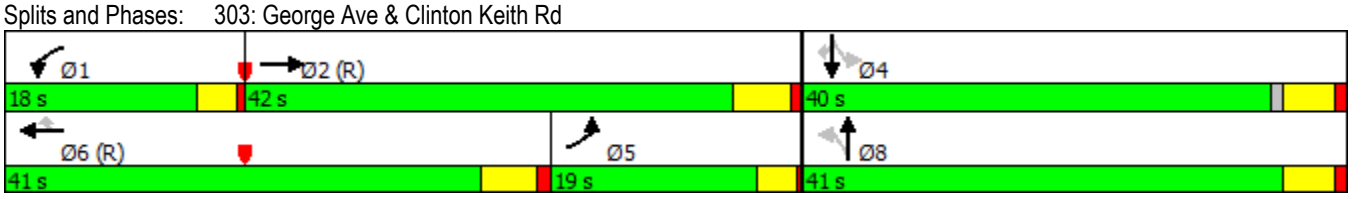
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	19.1	53.8	33.8	33.8	35.8	35.8	35.8
Total Split (%)	21.3%	60.0%	37.7%	37.7%	40.0%	40.0%	40.0%
Maximum Green (s)	14.0	48.0	28.0	28.0	30.0	30.0	30.0
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Walk Time (s)		7.0	7.0	7.0			
Flash Dont Walk (s)		23.0	23.0	23.0			
Pedestrian Calls (#/hr)		0	0	0			
90th %ile Green (s)	14.0	48.0	28.9	28.9	30.0	30.0	30.0
90th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
70th %ile Green (s)	14.0	47.8	28.7	28.7	30.2	30.2	30.2
70th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
50th %ile Green (s)	13.4	50.6	32.1	32.1	27.4	27.4	27.4
50th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	11.8	54.6	37.7	37.7	23.4	23.4	23.4
30th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	9.5	60.4	45.8	45.8	17.6	17.6	17.6
10th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap

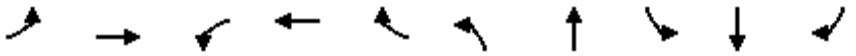
Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	162	1167	125	923	51	70	28	46	21	93
Future Volume (vph)	162	1167	125	923	51	70	28	46	21	93
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	19.0	42.0	18.0	41.0	41.0	41.0	41.0	40.0	40.0	40.0
Total Split (%)	18.8%	41.6%	17.8%	40.6%	40.6%	40.6%	40.6%	39.6%	39.6%	39.6%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.3	3.5	5.3	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	15.5	59.9	12.2	56.6	56.6	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.15	0.59	0.12	0.56	0.56	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.61	0.41	0.60	0.48	0.06	0.34	0.39	0.28	0.07	0.28
Control Delay	50.4	13.7	53.9	16.3	2.4	39.7	13.6	38.5	32.3	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	13.7	53.9	16.3	2.4	39.7	13.6	38.5	32.3	4.9
LOS	D	B	D	B	A	D	B	D	C	A
Approach Delay		18.0		20.0			22.9		18.1	
Approach LOS		B		B			C		B	

Intersection Summary	
Cycle Length: 101	
Actuated Cycle Length: 101	
Offset: 37 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 303: George Ave & Clinton Keith Rd





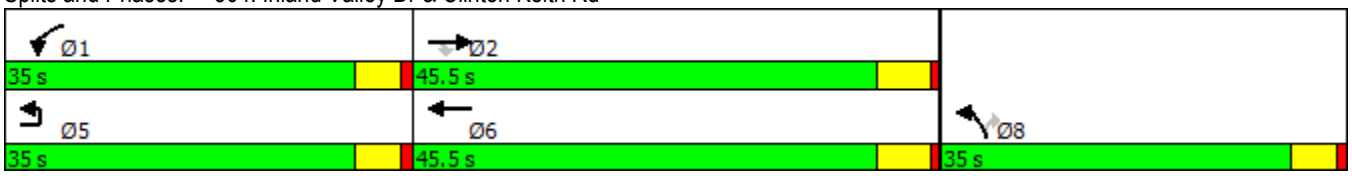
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	19.0	42.0	18.0	41.0	41.0	41.0	41.0	40.0	40.0	40.0
Total Split (%)	18.8%	41.6%	17.8%	40.6%	40.6%	40.6%	40.6%	39.6%	39.6%	39.6%
Maximum Green (s)	15.5	36.7	14.5	35.7	35.7	36.1	36.1	35.1	35.1	35.1
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	4.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0		19.0	19.0	27.0	27.0	28.0	28.0	28.0
Pedestrian Calls (#/hr)		1		0	0	1	1	1	1	1
90th %ile Green (s)	15.5	36.7	15.6	36.8	36.8	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Hold	Hold	Ped	Ped	Ped
70th %ile Green (s)	15.5	61.2	13.6	59.3	59.3	12.5	12.5	12.5	12.5	12.5
70th %ile Term Code	Max	Coord	Gap	Coord	Coord	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	15.5	65.1	11.6	61.2	61.2	10.6	10.6	10.6	10.6	10.6
50th %ile Term Code	Hold	Coord	Gap	Coord	Coord	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	15.5	68.3	10.0	62.8	62.8	9.0	9.0	9.0	9.0	9.0
30th %ile Term Code	Hold	Coord	Min	Coord	Coord	Min	Min	Hold	Hold	Hold
10th %ile Green (s)	15.5	68.3	10.0	62.8	62.8	9.0	9.0	9.0	9.0	9.0
10th %ile Term Code	Hold	Coord	Min	Coord	Coord	Min	Min	Hold	Hold	Hold

Intersection Summary
Cycle Length: 101
Actuated Cycle Length: 101
Offset: 37 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	5	937	332	45	701	450	96
Future Volume (vph)	5	937	332	45	701	450	96
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Detector Phase	5	2	2	1	6	8	8
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	6.0	6.0
Minimum Split (s)	10.0	25.5	25.5	10.0	22.5	22.5	22.5
Total Split (s)	35.0	45.5	45.5	35.0	45.5	35.0	35.0
Total Split (%)	30.3%	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%
Yellow Time (s)	4.0	4.5	4.5	4.0	4.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.5	5.5	5.0	5.5	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	Min	Min	None	Min	None	None
Act Effct Green (s)	5.0	38.8	38.8	6.6	44.1	30.1	30.1
Actuated g/C Ratio	0.06	0.45	0.45	0.08	0.51	0.35	0.35
v/c Ratio	0.05	0.64	0.40	0.36	0.80	0.79	0.18
Control Delay	42.8	21.8	3.5	47.0	26.0	37.7	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	21.8	3.5	47.0	26.0	37.7	17.3
LOS	D	C	A	D	C	D	B
Approach Delay		17.1			27.3	34.1	
Approach LOS		B			C	C	

Intersection Summary	
Cycle Length: 115.5	
Actuated Cycle Length: 86.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 71.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 304: Inland Valley Dr & Clinton Keith Rd



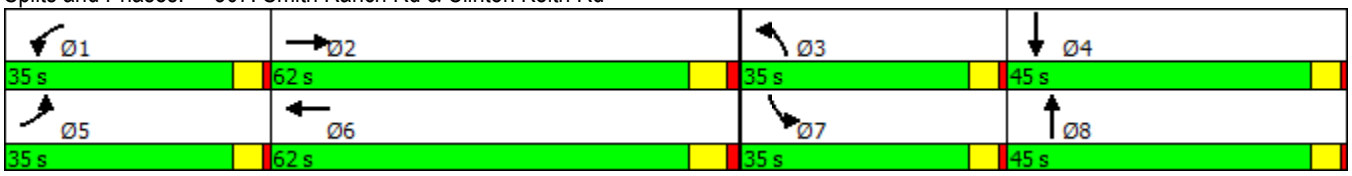
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	6.0	6.0
Minimum Split (s)	10.0	25.5	25.5	10.0	22.5	22.5	22.5
Total Split (s)	35.0	45.5	45.5	35.0	45.5	35.0	35.0
Total Split (%)	30.3%	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%
Maximum Green (s)	30.0	40.0	40.0	30.0	40.0	30.0	30.0
Yellow Time (s)	4.0	4.5	4.5	4.0	4.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5	3.5	3.5
Minimum Gap (s)	1.5	2.5	2.5	1.5	2.5	3.5	3.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	None
Walk Time (s)		8.0	8.0				
Flash Dont Walk (s)		12.0	12.0				
Pedestrian Calls (#/hr)		0	0				
90th %ile Green (s)	5.1	40.0	40.0	9.1	44.0	30.0	30.0
90th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Max
70th %ile Green (s)	0.0	39.1	39.1	7.5	51.6	30.0	30.0
70th %ile Term Code	Skip	Gap	Gap	Gap	Hold	Max	Max
50th %ile Green (s)	0.0	33.7	33.7	6.4	45.1	30.0	30.0
50th %ile Term Code	Skip	Gap	Gap	Gap	Hold	Max	Max
30th %ile Green (s)	0.0	40.0	40.0	0.0	40.0	30.0	30.0
30th %ile Term Code	Skip	Hold	Hold	Skip	Max	Max	Max
10th %ile Green (s)	0.0	40.0	40.0	0.0	40.0	30.0	30.0
10th %ile Term Code	Skip	Hold	Hold	Skip	Max	Max	Max

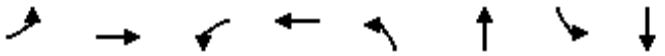
Intersection Summary
Cycle Length: 115.5
Actuated Cycle Length: 86.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 94.6
70th %ile Actuated Cycle: 92.1
50th %ile Actuated Cycle: 85.6
30th %ile Actuated Cycle: 80.5
10th %ile Actuated Cycle: 80.5

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	939	14	631	27	1	47	1
Future Volume (vph)	55	939	14	631	27	1	47	1
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	5.0	7.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	7.8	45.0	6.2	33.3	6.6	9.2	9.2	9.5
Actuated g/C Ratio	0.13	0.73	0.10	0.54	0.11	0.15	0.15	0.15
v/c Ratio	0.27	0.40	0.09	0.39	0.15	0.02	0.19	0.18
Control Delay	36.9	10.8	40.1	15.3	39.0	23.5	33.8	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	10.8	40.1	15.3	39.0	23.5	33.8	12.0
LOS	D	B	D	B	D	C	C	B
Approach Delay		12.2		15.8		37.1		23.0
Approach LOS		B		B		D		C

Intersection Summary	
Cycle Length: 177	
Actuated Cycle Length: 61.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 307: Smith Ranch Rd & Clinton Keith Rd





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Maximum Green (s)	30.0	55.0	30.0	55.0	30.0	40.0	30.0	40.0
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	1.5	3.5	1.5	2.5	1.5	2.5
Minimum Gap (s)	1.5	3.0	1.5	3.0	1.5	2.5	1.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None
Walk Time (s)		7.0		7.0				12.0
Flash Dont Walk (s)		8.0		8.0				16.0
Pedestrian Calls (#/hr)		0		0				1
90th %ile Green (s)	11.0	51.5	6.5	47.0	8.1	25.8	10.3	28.0
90th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Hold	Gap	Ped
70th %ile Green (s)	8.0	36.6	0.0	23.6	6.2	0.0	17.3	6.1
70th %ile Term Code	Gap	Hold	Skip	Gap	Gap	Skip	Hold	Gap
50th %ile Green (s)	6.7	32.9	0.0	21.2	0.0	0.0	6.0	6.0
50th %ile Term Code	Gap	Hold	Skip	Gap	Skip	Skip	Gap	Min
30th %ile Green (s)	5.6	29.9	0.0	19.3	0.0	0.0	0.0	0.0
30th %ile Term Code	Gap	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip
10th %ile Green (s)	0.0	31.5	0.0	31.5	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip

Intersection Summary
Cycle Length: 177
Actuated Cycle Length: 61.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 116.1
70th %ile Actuated Cycle: 65.9
50th %ile Actuated Cycle: 50.9
30th %ile Actuated Cycle: 36.9
10th %ile Actuated Cycle: 38.5

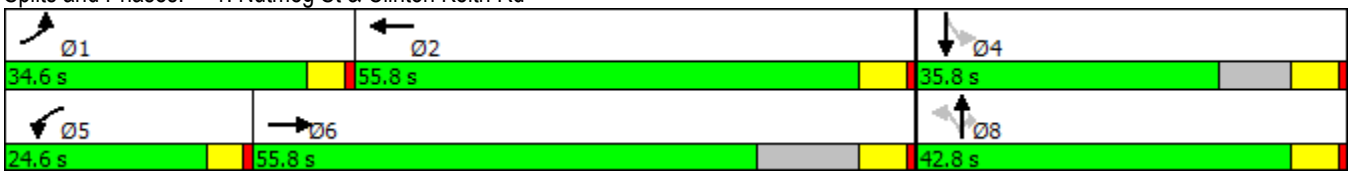
Timings
1: Nutmeg St & Clinton Keith Rd

01/11/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	719	332	661	60	45	313	98	44
Future Volume (vph)	40	719	332	661	60	45	313	98	44
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	34.6	55.8	24.6	55.8	42.8	42.8	42.8	35.8	35.8
Total Split (%)	26.0%	41.9%	18.5%	41.9%	32.1%	32.1%	32.1%	26.9%	26.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	7.3	28.9	20.9	47.7	14.9	14.9	14.9	14.9	14.9
Actuated g/C Ratio	0.09	0.35	0.26	0.58	0.18	0.18	0.18	0.18	0.18
v/c Ratio	0.27	0.70	0.81	0.42	0.27	0.14	0.61	0.44	0.21
Control Delay	45.0	26.5	48.2	12.9	32.0	29.3	8.4	36.0	30.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	26.5	48.2	12.9	32.0	29.3	8.4	36.0	30.3
LOS	D	C	D	B	C	C	A	D	C
Approach Delay		27.4		23.4		14.0			33.7
Approach LOS		C		C		B			C

Intersection Summary	
Cycle Length: 133.2	
Actuated Cycle Length: 81.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Nutmeg St & Clinton Keith Rd



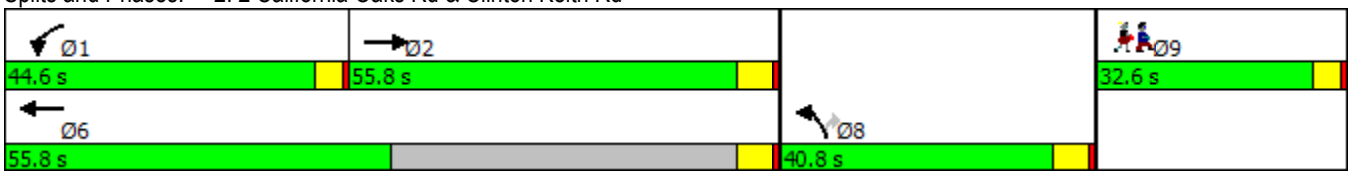
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	34.6	55.8	24.6	55.8	42.8	42.8	42.8	35.8	35.8
Total Split (%)	26.0%	41.9%	18.5%	41.9%	32.1%	32.1%	32.1%	26.9%	26.9%
Maximum Green (s)	30.0	50.0	20.0	50.0	37.0	37.0	37.0	30.0	30.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	3.9	2.0	3.9	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		22.0		21.0	30.0	30.0	30.0		
Pedestrian Calls (#/hr)		4		0	2	2	2		
90th %ile Green (s)	10.3	44.6	20.0	54.3	37.0	37.0	37.0	37.0	37.0
90th %ile Term Code	Gap	Gap	Max	Hold	Ped	Ped	Ped	Hold	Hold
70th %ile Green (s)	7.7	31.2	20.0	43.5	14.5	14.5	14.5	14.5	14.5
70th %ile Term Code	Gap	Gap	Max	Hold	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.5	27.0	20.0	40.5	12.1	12.1	12.1	12.1	12.1
50th %ile Term Code	Gap	Gap	Max	Hold	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	0.0	24.1	20.0	48.7	10.0	10.0	10.0	10.0	10.0
30th %ile Term Code	Skip	Gap	Max	Hold	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	19.5	20.0	44.1	7.5	7.5	7.5	7.5	7.5
10th %ile Term Code	Skip	Gap	Max	Hold	Hold	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 133.2
Actuated Cycle Length: 81.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 117.8
70th %ile Actuated Cycle: 81.9
50th %ile Actuated Cycle: 75.3
30th %ile Actuated Cycle: 70.3
10th %ile Actuated Cycle: 63.2

Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Lane Configurations						
Traffic Volume (vph)	997	414	906	162	736	
Future Volume (vph)	997	414	906	162	736	
Turn Type	NA	Prot	NA	Prot	Perm	
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Detector Phase	2	1	6	8	8	
Switch Phase						
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	55.8	44.6	55.8	40.8	40.8	32.6
Total Split (%)	32.1%	25.7%	32.1%	23.5%	23.5%	19%
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	4.6	5.8	5.8	5.8	
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	50.9	40.7	96.3	19.4	19.4	
Actuated g/C Ratio	0.38	0.31	0.73	0.15	0.15	
v/c Ratio	0.93	0.83	0.39	0.81	0.73	
Control Delay	52.5	57.9	10.1	36.1	13.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	52.5	57.9	10.1	36.1	13.3	
LOS	D	E	B	D	B	
Approach Delay	52.5		25.1	26.7		
Approach LOS	D		C	C		

Intersection Summary	
Cycle Length: 173.8	
Actuated Cycle Length: 132.5	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 34.7	Intersection LOS: C
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: 2 California Oaks Rd & Clinton Keith Rd



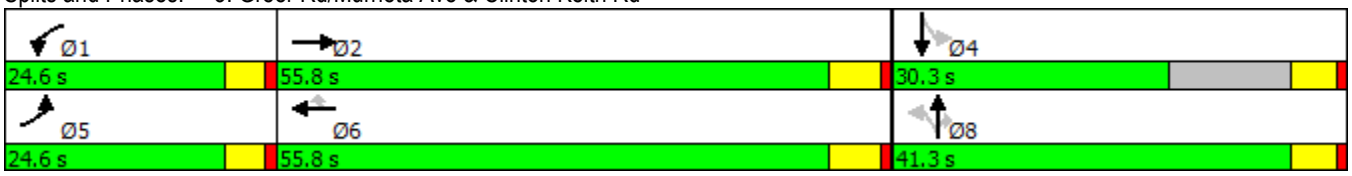
Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	55.8	44.6	55.8	40.8	40.8	32.6
Total Split (%)	32.1%	25.7%	32.1%	23.5%	23.5%	19%
Maximum Green (s)	50.0	40.0	50.0	35.0	35.0	28.0
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Vehicle Extension (s)	3.8	3.0	3.8	3.8	3.8	0.2
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	0.2
Time Before Reduce (s)	1.0	0.0	1.0	1.0	1.0	0.0
Time To Reduce (s)	0.1	0.0	0.1	0.1	0.1	0.0
Recall Mode	Min	None	Min	None	None	None
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	20.0					21.0
Pedestrian Calls (#/hr)	3					2
90th %ile Green (s)	50.0	40.0	94.6	31.7	31.7	28.0
90th %ile Term Code	Max	Max	Hold	Gap	Gap	Ped
70th %ile Green (s)	50.0	40.0	94.6	21.9	21.9	0.0
70th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
50th %ile Green (s)	50.0	40.0	94.6	18.1	18.1	0.0
50th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
30th %ile Green (s)	50.0	40.0	94.6	15.5	15.5	0.0
30th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
10th %ile Green (s)	50.0	40.0	94.6	11.9	11.9	0.0
10th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip

Intersection Summary
Cycle Length: 173.8
Actuated Cycle Length: 132.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 170.5
70th %ile Actuated Cycle: 128.1
50th %ile Actuated Cycle: 124.3
30th %ile Actuated Cycle: 121.7
10th %ile Actuated Cycle: 118.1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	69	1610	40	1294	111	37	1	27	124	0
Future Volume (vph)	69	1610	40	1294	111	37	1	27	124	0
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6			8			4
Permitted Phases					6	8		8	4	
Detector Phase	5	2	1	6	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	41.3	23.3	23.3
Total Split (s)	24.6	55.8	24.6	55.8	55.8	41.3	41.3	41.3	30.3	30.3
Total Split (%)	20.2%	45.9%	20.2%	45.9%	45.9%	33.9%	33.9%	33.9%	24.9%	24.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.3	5.3	5.3	5.3	5.3
Lead/Lag	Lead	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	8.4	56.9	7.1	53.3	53.3	13.7	13.7	13.7	13.7	13.7
Actuated g/C Ratio	0.09	0.64	0.08	0.60	0.60	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.45	0.81	0.30	0.66	0.13	0.19	0.00	0.10	0.62	0.08
Control Delay	47.3	18.3	45.5	15.6	6.0	34.6	31.0	1.6	47.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	18.3	45.5	15.6	6.0	34.6	31.0	1.6	47.7	0.3
LOS	D	B	D	B	A	C	C	A	D	A
Approach Delay		19.5		15.7			20.9			36.6
Approach LOS		B		B			C			D

Intersection Summary	
Cycle Length: 121.7	
Actuated Cycle Length: 88.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 78.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Greer Rd/Murrieta Ave & Clinton Keith Rd



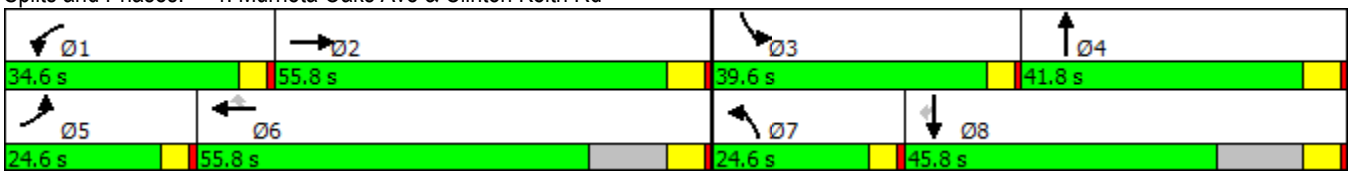
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	5	2	1	6			8			4
Permitted Phases					6	8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	41.3	23.3	23.3
Total Split (s)	24.6	55.8	24.6	55.8	55.8	41.3	41.3	41.3	30.3	30.3
Total Split (%)	20.2%	45.9%	20.2%	45.9%	45.9%	33.9%	33.9%	33.9%	24.9%	24.9%
Maximum Green (s)	20.0	50.0	20.0	50.0	50.0	36.0	36.0	36.0	25.0	25.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		18.0		21.0	21.0	29.0	29.0	29.0		
Pedestrian Calls (#/hr)		1		1	1	0	0	0		
90th %ile Green (s)	11.9	52.5	9.4	50.0	50.0	20.0	20.0	20.0	20.0	20.0
90th %ile Term Code	Gap	Hold	Gap	Max	Max	Hold	Hold	Hold	Gap	Gap
70th %ile Green (s)	9.6	52.0	7.6	50.0	50.0	16.0	16.0	16.0	16.0	16.0
70th %ile Term Code	Gap	Hold	Gap	Max	Max	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	8.1	51.6	6.5	50.0	50.0	13.5	13.5	13.5	13.5	13.5
50th %ile Term Code	Gap	Hold	Gap	Max	Max	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.8	61.4	0.0	50.0	50.0	11.3	11.3	11.3	11.3	11.3
30th %ile Term Code	Gap	Hold	Skip	Max	Max	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	65.0	0.0	65.0	65.0	8.5	8.5	8.5	8.5	8.5
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Dwell	Hold	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 121.7
Actuated Cycle Length: 88.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 97.6
70th %ile Actuated Cycle: 91.3
50th %ile Actuated Cycle: 87.3
30th %ile Actuated Cycle: 83.8
10th %ile Actuated Cycle: 84.6

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	1742	135	1442	3	21	2	6	1	7
Future Volume (vph)	13	1742	135	1442	3	21	2	6	1	7
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Detector Phase	5	2	1	6	6	7	4	3	8	8
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	24.6	55.8	34.6	55.8	55.8	24.6	41.8	39.6	45.8	45.8
Total Split (%)	14.3%	32.5%	20.1%	32.5%	32.5%	14.3%	24.3%	23.1%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.4	52.1	12.5	67.8	67.8	7.6	13.1	6.3	12.1	12.1
Actuated g/C Ratio	0.07	0.54	0.13	0.71	0.71	0.08	0.14	0.07	0.13	0.13
v/c Ratio	0.12	1.00	0.62	0.43	0.00	0.16	0.37	0.03	0.00	0.03
Control Delay	53.0	43.8	54.4	10.4	0.0	50.9	10.5	52.3	37.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	43.8	54.4	10.4	0.0	50.9	10.5	52.3	37.0	0.1
LOS	D	D	D	B	A	D	B	D	D	A
Approach Delay		43.9		14.2			17.1		23.5	
Approach LOS		D		B			B		C	

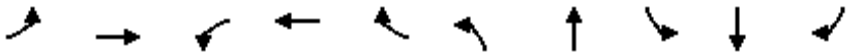
Intersection Summary	
Cycle Length: 171.8	
Actuated Cycle Length: 96.1	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 78.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Murrieta Oaks Ave & Clinton Keith Rd



Phasings
4: Murrieta Oaks Ave & Clinton Keith Rd

01/11/2019



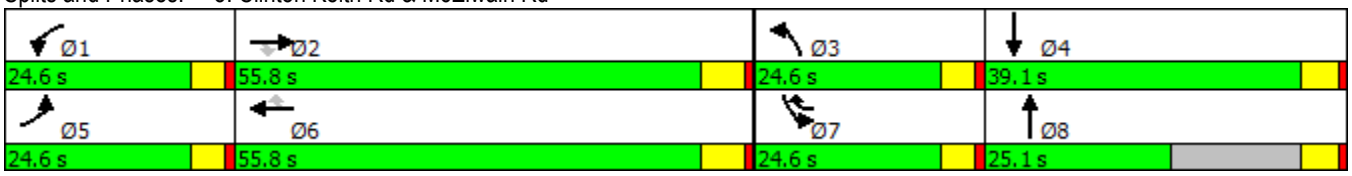
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	24.6	55.8	34.6	55.8	55.8	24.6	41.8	39.6	45.8	45.8
Total Split (%)	14.3%	32.5%	20.1%	32.5%	32.5%	14.3%	24.3%	23.1%	26.7%	26.7%
Maximum Green (s)	20.0	50.0	30.0	50.0	50.0	20.0	36.0	35.0	40.0	40.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	2.0	5.2	3.0	3.2	3.2
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.2	3.2
Time Before Reduce (s)	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		13.0		26.0	26.0		29.0		33.0	33.0
Pedestrian Calls (#/hr)		1		2	2		0		2	2
90th %ile Green (s)	7.3	50.0	21.3	64.0	64.0	8.5	42.2	6.3	40.0	40.0
90th %ile Term Code	Gap	Max	Gap	Hold	Hold	Gap	Hold	Gap	Ped	Ped
70th %ile Green (s)	0.0	50.0	13.8	68.4	68.4	10.5	9.3	0.0	0.0	0.0
70th %ile Term Code	Skip	Max	Gap	Hold	Hold	Hold	Gap	Skip	Skip	Skip
50th %ile Green (s)	0.0	50.0	11.2	65.8	65.8	0.0	7.8	0.0	7.8	7.8
50th %ile Term Code	Skip	Max	Gap	Hold	Hold	Skip	Gap	Skip	Hold	Hold
30th %ile Green (s)	0.0	50.0	9.8	64.4	64.4	0.0	7.7	0.0	7.7	7.7
30th %ile Term Code	Skip	Max	Gap	Hold	Hold	Skip	Gap	Skip	Hold	Hold
10th %ile Green (s)	0.0	50.0	7.8	62.4	62.4	0.0	7.7	0.0	7.7	7.7
10th %ile Term Code	Skip	Max	Gap	Hold	Hold	Skip	Gap	Skip	Hold	Hold

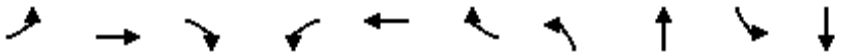
Intersection Summary
Cycle Length: 171.8
Actuated Cycle Length: 96.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 140.6
70th %ile Actuated Cycle: 89.3
50th %ile Actuated Cycle: 85.2
30th %ile Actuated Cycle: 83.7
10th %ile Actuated Cycle: 81.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	348	1504	27	24	1238	217	15	10	352	17
Future Volume (vph)	348	1504	27	24	1238	217	15	10	352	17
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	16.7	54.0	54.0	7.2	38.4	61.7	7.2	14.6	17.0	27.4
Actuated g/C Ratio	0.16	0.52	0.52	0.07	0.37	0.60	0.07	0.14	0.16	0.26
v/c Ratio	0.69	0.63	0.04	0.22	0.73	0.23	0.13	0.20	0.69	0.55
Control Delay	51.7	22.2	0.1	59.2	32.2	4.0	57.9	19.8	51.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.7	22.2	0.1	59.2	32.2	4.0	57.9	19.8	51.7	8.4
LOS	D	C	A	E	C	A	E	B	D	A
Approach Delay		27.3			28.5			28.9		30.6
Approach LOS		C			C			C		C

Intersection Summary	
Cycle Length: 144.1	
Actuated Cycle Length: 103.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Clinton Keith Rd & McElwain Rd





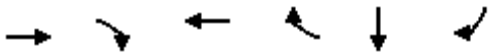
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Maximum Green (s)	20.0	50.0	50.0	20.0	50.0	20.0	20.0	20.0	20.0	34.0
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	5.2	2.0	5.2	2.0	3.0	3.0	2.0	3.6
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		15.0	15.0		22.0					27.0
Pedestrian Calls (#/hr)		13	13		0					16
90th %ile Green (s)	20.0	61.2	61.2	8.8	50.0	20.0	8.5	22.5	20.0	34.0
90th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Gap	Hold	Max	Ped
70th %ile Green (s)	20.0	58.5	58.5	7.4	45.9	20.0	7.4	21.4	20.0	34.0
70th %ile Term Code	Max	Hold	Hold	Gap	Gap	Max	Gap	Hold	Max	Ped
50th %ile Green (s)	17.3	48.7	48.7	6.2	37.6	17.7	0.0	10.0	17.7	32.3
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Skip	Min	Gap	Hold
30th %ile Green (s)	14.9	53.6	53.6	0.0	34.1	15.2	0.0	10.0	15.2	29.8
30th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Skip	Min	Gap	Hold
10th %ile Green (s)	10.5	38.6	38.6	0.0	23.5	10.8	0.0	0.0	10.8	10.3
10th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Skip	Skip	Gap	Hold

Intersection Summary
Cycle Length: 144.1
Actuated Cycle Length: 103.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 132.6
70th %ile Actuated Cycle: 127.4
50th %ile Actuated Cycle: 102.7
30th %ile Actuated Cycle: 94.3
10th %ile Actuated Cycle: 59.8

Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1462	438	975	301	1	652
Future Volume (vph)	1462	438	975	301	1	652
Turn Type	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	64.0	64.0	64.0	64.0	31.0	31.0
Total Split (%)	67.4%	67.4%	67.4%	67.4%	32.6%	32.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	62.3	62.3	62.3	62.3	21.1	21.1
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.22	0.22
v/c Ratio	0.46	0.45	0.30	0.30	0.65	0.86
Control Delay	9.1	10.5	5.1	5.6	40.9	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	10.5	5.1	5.6	40.9	35.3
LOS	A	B	A	A	D	D
Approach Delay	9.4		5.2		36.8	
Approach LOS	A		A		D	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 15 (16%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 51.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: I-215 SB Ramps & Clinton Keith Rd



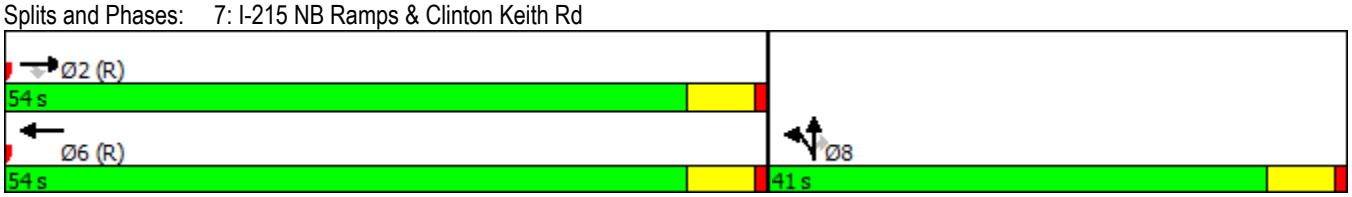
Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	64.0	64.0	64.0	64.0	31.0	31.0
Total Split (%)	67.4%	67.4%	67.4%	67.4%	32.6%	32.6%
Maximum Green (s)	58.2	58.2	58.2	58.2	25.2	25.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0				
Flash Dont Walk (s)	20.0	20.0				
Pedestrian Calls (#/hr)	7	7				
90th %ile Green (s)	58.2	58.2	58.2	58.2	25.2	25.2
90th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	58.2	58.2	58.2	58.2	25.2	25.2
70th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	61.4	61.4	61.4	61.4	22.0	22.0
50th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	64.3	64.3	64.3	64.3	19.1	19.1
30th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	69.6	69.6	69.6	69.6	13.8	13.8
10th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 15 (16%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	NBT	NBR
Lane Configurations					
Traffic Volume (vph)	1058	610	872	0	512
Future Volume (vph)	1058	610	872	0	512
Turn Type	NA	Perm	NA	NA	Perm
Protected Phases	2		6	8	
Permitted Phases		2			8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	54.0	54.0	54.0	41.0	41.0
Total Split (%)	56.8%	56.8%	56.8%	43.2%	43.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	50.9	50.9	50.9	32.5	32.5
Actuated g/C Ratio	0.54	0.54	0.54	0.34	0.34
v/c Ratio	0.42	0.59	0.39	0.89	0.87
Control Delay	9.1	3.2	13.5	46.2	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	3.2	13.5	46.2	43.6
LOS	A	A	B	D	D
Approach Delay	6.9		13.5	44.9	
Approach LOS	A		B	D	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 20 (21%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 74.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: I-215 NB Ramps & Clinton Keith Rd



Lane Group	EBT	EBR	WBT	NBT	NBR
Protected Phases	2		6	8	
Permitted Phases		2			8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	54.0	54.0	54.0	41.0	41.0
Total Split (%)	56.8%	56.8%	56.8%	43.2%	43.2%
Maximum Green (s)	48.2	48.2	48.2	35.2	35.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.5	2.5
Minimum Gap (s)	2.0	2.0	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			
Flash Dont Walk (s)	31.0	31.0			
Pedestrian Calls (#/hr)	14	14			
90th %ile Green (s)	48.2	48.2	48.2	35.2	35.2
90th %ile Term Code	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	48.2	48.2	48.2	35.2	35.2
70th %ile Term Code	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	48.2	48.2	48.2	35.2	35.2
50th %ile Term Code	Coord	Coord	Coord	Max	Max
30th %ile Green (s)	51.7	51.7	51.7	31.7	31.7
30th %ile Term Code	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	58.3	58.3	58.3	25.1	25.1
10th %ile Term Code	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 20 (21%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	8	1501	79	35	942	52	24
Future Volume (vph)	8	1501	79	35	942	52	24
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Detector Phase	5	2	2	1	6	8	8
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	6.0	6.0
Minimum Split (s)	29.4	29.4	29.4	10.6	15.4	10.6	10.6
Total Split (s)	29.4	45.4	45.4	24.6	45.4	29.6	29.6
Total Split (%)	28.2%	43.5%	43.5%	23.6%	43.5%	28.4%	28.4%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	Min	Min	Min	None	None	Min	Min
Act Effct Green (s)	10.2	35.5	35.5	6.6	25.9	7.3	7.3
Actuated g/C Ratio	0.17	0.60	0.60	0.11	0.44	0.12	0.12
v/c Ratio	0.03	0.54	0.09	0.20	0.47	0.26	0.13
Control Delay	25.6	9.0	2.2	30.1	12.1	29.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	9.0	2.2	30.1	12.1	29.8	13.3
LOS	C	A	A	C	B	C	B
Approach Delay		8.7			12.8	24.5	
Approach LOS		A			B	C	

Intersection Summary	
Cycle Length: 104.4	
Actuated Cycle Length: 59.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 44.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd

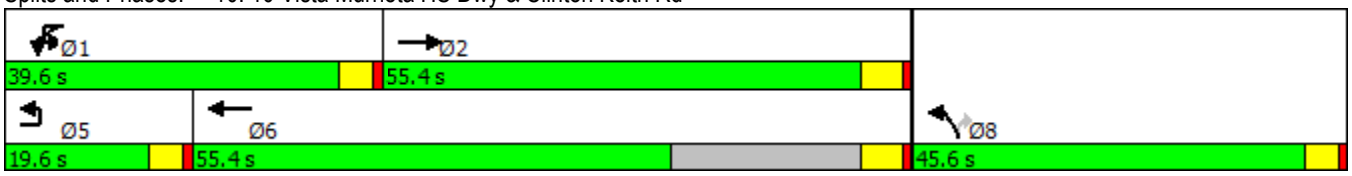
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	6.0	6.0
Minimum Split (s)	29.4	29.4	29.4	10.6	15.4	10.6	10.6
Total Split (s)	29.4	45.4	45.4	24.6	45.4	29.6	29.6
Total Split (%)	28.2%	43.5%	43.5%	23.6%	43.5%	28.4%	28.4%
Maximum Green (s)	24.0	40.0	40.0	20.0	40.0	25.0	25.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	2.5	2.5
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	2.5	2.5
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	Min	Min	None	None	Min	Min
Walk Time (s)	7.0	7.0	7.0				
Flash Dont Walk (s)	17.0	17.0	17.0				
Pedestrian Calls (#/hr)	0	11	11				
90th %ile Green (s)	10.0	40.0	40.0	8.0	37.2	9.6	9.6
90th %ile Term Code	Min	Max	Max	Gap	Hold	Gap	Gap
70th %ile Green (s)	10.0	37.4	37.4	6.8	33.4	8.0	8.0
70th %ile Term Code	Min	Gap	Gap	Gap	Hold	Gap	Gap
50th %ile Green (s)	10.0	31.5	31.5	6.0	26.7	7.1	7.1
50th %ile Term Code	Min	Gap	Gap	Min	Hold	Gap	Gap
30th %ile Green (s)	10.0	34.9	34.9	0.0	19.5	6.1	6.1
30th %ile Term Code	Min	Hold	Hold	Skip	Gap	Gap	Gap
10th %ile Green (s)	10.0	31.4	31.4	0.0	16.0	6.0	6.0
10th %ile Term Code	Min	Hold	Hold	Skip	Gap	Min	Min

Intersection Summary
Cycle Length: 104.4
Actuated Cycle Length: 59.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 72.2
70th %ile Actuated Cycle: 66.8
50th %ile Actuated Cycle: 59.2
30th %ile Actuated Cycle: 51
10th %ile Actuated Cycle: 47.4

Lane Group	EBU	EBT	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	15	1387	137	861	114	75
Future Volume (vph)	15	1387	137	861	114	75
Turn Type	Prot	NA	Prot	NA	Prot	Perm
Protected Phases	5	2	1	6	8	
Permitted Phases						8
Detector Phase	5	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0
Minimum Split (s)	10.6	38.4	10.6	15.4	45.6	45.6
Total Split (s)	19.6	55.4	39.6	55.4	45.6	45.6
Total Split (%)	13.9%	39.4%	28.2%	39.4%	32.4%	32.4%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Recall Mode	None	Min	None	Min	None	None
Act Effct Green (s)	6.3	39.2	13.5	55.5	8.7	8.7
Actuated g/C Ratio	0.08	0.51	0.18	0.73	0.11	0.11
v/c Ratio	0.12	0.62	0.60	0.25	0.32	0.32
Control Delay	40.2	14.5	39.4	4.0	36.5	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	14.5	39.4	4.0	36.5	13.0
LOS	D	B	D	A	D	B
Approach Delay		14.8		10.0	27.1	
Approach LOS		B		B	C	

Intersection Summary	
Cycle Length: 140.6	
Actuated Cycle Length: 76.3	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: 10 Vista Murrieta HS Dwy & Clinton Keith Rd



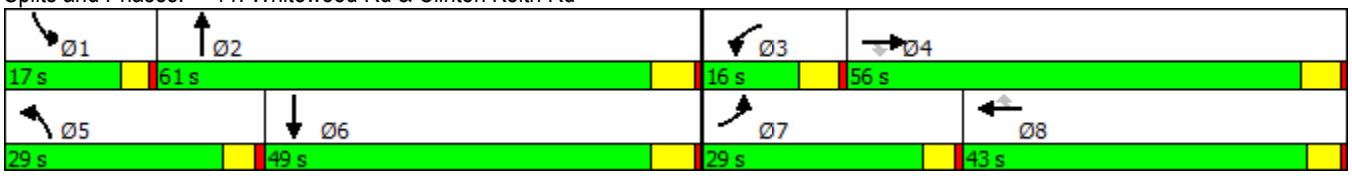
Lane Group	EBU	EBT	WBL	WBT	NBL	NBR
Protected Phases	5	2	1	6	8	
Permitted Phases						8
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0
Minimum Split (s)	10.6	38.4	10.6	15.4	45.6	45.6
Total Split (s)	19.6	55.4	39.6	55.4	45.6	45.6
Total Split (%)	13.9%	39.4%	28.2%	39.4%	32.4%	32.4%
Maximum Green (s)	15.0	50.0	35.0	50.0	41.0	41.0
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	2.0	6.9	2.0	3.9	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	3.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None
Walk Time (s)		7.0			7.0	7.0
Flash Dont Walk (s)		26.0			34.0	34.0
Pedestrian Calls (#/hr)		2			0	0
90th %ile Green (s)	6.9	50.0	18.9	62.0	10.9	10.9
90th %ile Term Code	Gap	Max	Gap	Hold	Gap	Gap
70th %ile Green (s)	0.0	45.0	15.6	65.2	9.5	9.5
70th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Gap
50th %ile Green (s)	0.0	39.0	13.5	57.1	8.6	8.6
50th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Gap
30th %ile Green (s)	0.0	34.5	11.5	50.6	7.7	7.7
30th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Gap
10th %ile Green (s)	0.0	28.4	8.8	41.8	6.6	6.6
10th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Gap

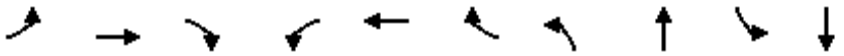
Intersection Summary
Cycle Length: 140.6
Actuated Cycle Length: 76.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 94.4
70th %ile Actuated Cycle: 84.7
50th %ile Actuated Cycle: 75.7
30th %ile Actuated Cycle: 68.3
10th %ile Actuated Cycle: 58.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	467	704	250	110	460	49	192	333	80	233
Future Volume (vph)	467	704	250	110	460	49	192	333	80	233
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	41.6	41.6	10.6	48.8	10.0	48.8
Total Split (s)	29.0	56.0	56.0	16.0	43.0	43.0	29.0	61.0	17.0	49.0
Total Split (%)	19.3%	37.3%	37.3%	10.7%	28.7%	28.7%	19.3%	40.7%	11.3%	32.7%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6	4.6	4.6	5.8	4.0	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.9	37.0	37.0	9.3	27.1	27.1	18.3	38.9	10.0	30.0
Actuated g/C Ratio	0.18	0.32	0.32	0.08	0.23	0.23	0.16	0.33	0.09	0.26
v/c Ratio	0.83	0.68	0.40	0.43	0.42	0.11	0.75	0.80	0.57	0.62
Control Delay	60.4	39.2	6.0	61.7	41.0	0.4	67.7	46.0	71.9	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	39.2	6.0	61.7	41.0	0.4	67.7	46.0	71.9	26.3
LOS	E	D	A	E	D	A	E	D	E	C
Approach Delay		40.3			41.4			52.5		31.8
Approach LOS		D			D			D		C

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 116.7	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 41.2	Intersection LOS: D
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Whitewood Rd & Clinton Keith Rd





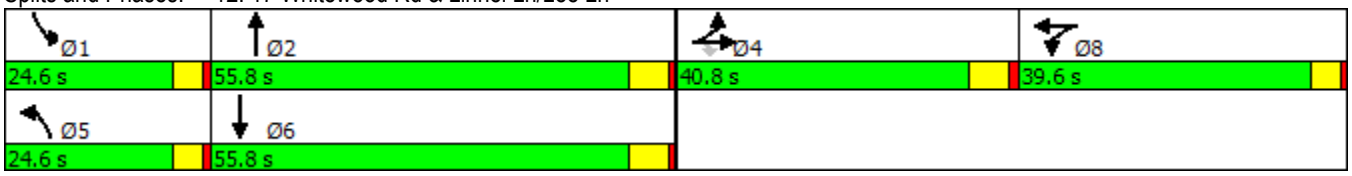
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	41.6	41.6	10.6	48.8	10.0	48.8
Total Split (s)	29.0	56.0	56.0	16.0	43.0	43.0	29.0	61.0	17.0	49.0
Total Split (%)	19.3%	37.3%	37.3%	10.7%	28.7%	28.7%	19.3%	40.7%	11.3%	32.7%
Maximum Green (s)	24.4	50.6	50.6	10.6	38.4	38.4	24.4	55.2	13.0	43.2
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	0.5	6.9	6.9	3.0	0.5	0.5	2.0	6.1	2.0	6.1
Minimum Gap (s)	0.5	3.0	3.0	3.0	0.5	0.5	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		19.0	19.0		30.0	30.0		36.0		36.0
Pedestrian Calls (#/hr)		0	0		1	1		0		1
90th %ile Green (s)	24.4	50.6	50.6	10.6	38.4	38.4	24.4	55.2	13.0	43.2
90th %ile Term Code	Max	Max	Max	Max	Hold	Hold	Max	Max	Max	Hold
70th %ile Green (s)	24.4	42.7	42.7	10.6	30.5	30.5	23.4	46.6	12.9	35.5
70th %ile Term Code	Max	Gap	Gap	Max	Hold	Hold	Gap	Gap	Gap	Hold
50th %ile Green (s)	22.8	36.5	36.5	9.7	25.0	25.0	19.0	39.0	10.5	29.9
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap	Hold
30th %ile Green (s)	18.6	31.6	31.6	8.4	23.0	23.0	15.3	32.3	8.4	24.8
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap	Hold
10th %ile Green (s)	14.1	24.9	24.9	6.8	19.2	19.2	10.9	24.3	6.0	18.8
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Min	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 116.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 133.4
50th %ile Actuated Cycle: 116.3
30th %ile Actuated Cycle: 101.3
10th %ile Actuated Cycle: 82.6

Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	68	71	1	35	688	2	521
Future Volume (vph)	68	71	1	35	688	2	521
Turn Type	Split	Perm	NA	Prot	NA	Prot	NA
Protected Phases	4		8	5	2	1	6
Permitted Phases		4					
Detector Phase	4	4	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Yellow Time (s)	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	12.7	12.7	6.3	6.8	26.2	6.3	23.7
Actuated g/C Ratio	0.24	0.24	0.12	0.13	0.49	0.12	0.44
v/c Ratio	0.18	0.09	0.03	0.17	0.43	0.01	0.39
Control Delay	20.6	0.2	25.2	27.2	11.6	28.5	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	0.2	25.2	27.2	11.6	28.5	13.4
LOS	C	A	C	C	B	C	B
Approach Delay			25.2		12.4		13.5
Approach LOS			C		B		B

Intersection Summary	
Cycle Length: 160.8	
Actuated Cycle Length: 54	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 45.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: 17 Whitewood Rd & Linnel Ln/Lee Ln



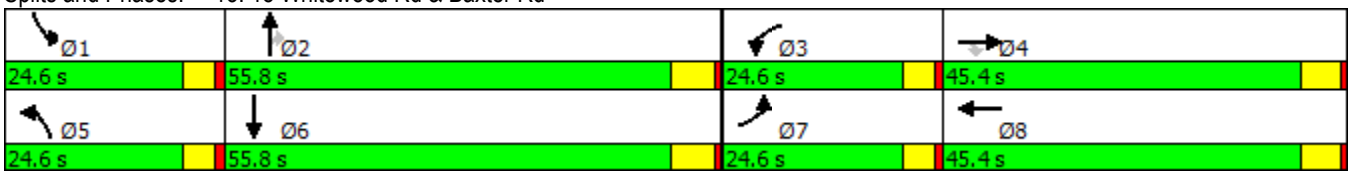
Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Protected Phases	4		8	5	2	1	6
Permitted Phases		4					
Minimum Initial (s)	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Maximum Green (s)	35.0	35.0	35.0	20.0	50.0	20.0	50.0
Yellow Time (s)	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Vehicle Extension (s)	6.9	6.9	2.0	2.0	6.1	3.0	6.1
Minimum Gap (s)	5.0	5.0	2.0	2.0	3.0	3.0	3.0
Time Before Reduce (s)	0.1	0.1	0.0	0.0	0.1	0.0	0.1
Time To Reduce (s)	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Recall Mode	None	None	None	None	Min	None	Min
Walk Time (s)	7.0	7.0			7.0		7.0
Flash Dont Walk (s)	19.0	19.0			10.0		15.0
Pedestrian Calls (#/hr)	0	0			0		1
90th %ile Green (s)	15.8	15.8	6.0	8.5	29.1	6.0	26.6
90th %ile Term Code	Gap	Gap	Min	Gap	Gap	Min	Gap
70th %ile Green (s)	13.0	13.0	0.0	6.6	32.0	0.0	20.8
70th %ile Term Code	Gap	Gap	Skip	Gap	Hold	Skip	Gap
50th %ile Green (s)	11.9	11.9	0.0	0.0	18.1	0.0	18.1
50th %ile Term Code	Gap	Gap	Skip	Skip	Hold	Skip	Gap
30th %ile Green (s)	11.0	11.0	0.0	0.0	20.6	0.0	20.6
30th %ile Term Code	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	10.1	10.1	0.0	0.0	29.3	0.0	29.3
10th %ile Term Code	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell

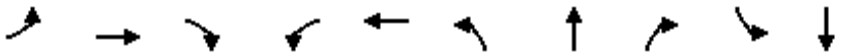
Intersection Summary
Cycle Length: 160.8
Actuated Cycle Length: 54
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 77.7
70th %ile Actuated Cycle: 56.6
50th %ile Actuated Cycle: 41.6
30th %ile Actuated Cycle: 43.2
10th %ile Actuated Cycle: 51

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	16	3	157	7	10	191	512	10	1	412
Future Volume (vph)	16	3	157	7	10	191	512	10	1	412
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	4.6	5.4	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.9	14.1	14.1	6.7	14.0	14.7	36.2	36.2	6.7	17.5
Actuated g/C Ratio	0.11	0.22	0.22	0.10	0.21	0.23	0.56	0.56	0.10	0.27
v/c Ratio	0.09	0.01	0.36	0.04	0.02	0.51	0.52	0.01	0.01	0.48
Control Delay	38.3	24.3	7.1	38.9	20.1	31.8	14.8	0.0	40.0	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	24.3	7.1	38.9	20.1	31.8	14.8	0.0	40.0	23.0
LOS	D	C	A	D	C	C	B	A	D	C
Approach Delay		10.2			26.1		19.1			23.1
Approach LOS		B			C		B			C

Intersection Summary	
Cycle Length: 150.4	
Actuated Cycle Length: 65.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 19.3	Intersection LOS: B
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: 18 Whitewood Rd & Baxter Rd





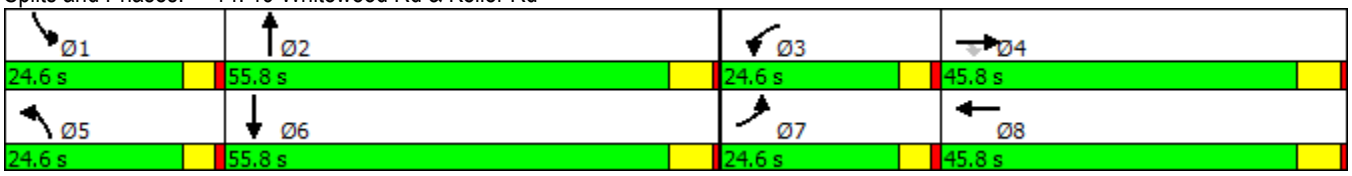
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		28.0	28.0		28.0		25.0	25.0		25.0
Pedestrian Calls (#/hr)		0	0		4		0	0		3
90th %ile Green (s)	7.2	36.1	36.1	6.1	35.0	20.0	49.3	49.3	6.0	35.3
90th %ile Term Code	Gap	Hold	Hold	Gap	Ped	Max	Gap	Gap	Min	Hold
70th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	16.0	37.3	37.3	0.0	16.7
70th %ile Term Code	Skip	Min	Min	Skip	Min	Gap	Hold	Hold	Skip	Gap
50th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	13.4	31.8	31.8	0.0	13.8
50th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap
30th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	11.4	28.9	28.9	0.0	12.9
30th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap
10th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	9.4	25.1	25.1	0.0	11.1
10th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap

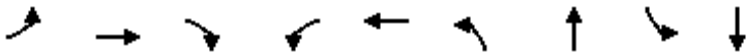
Intersection Summary
Cycle Length: 150.4
Actuated Cycle Length: 65.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 117.9
70th %ile Actuated Cycle: 58.5
50th %ile Actuated Cycle: 53
30th %ile Actuated Cycle: 50.1
10th %ile Actuated Cycle: 46.3

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	15	44	9	9	41	459	11	336
Future Volume (vph)	50	15	44	9	9	41	459	11	336
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.5	17.7	17.7	7.9	15.2	8.4	33.3	7.9	31.0
Actuated g/C Ratio	0.16	0.34	0.34	0.15	0.29	0.16	0.63	0.15	0.59
v/c Ratio	0.19	0.03	0.08	0.04	0.02	0.16	0.24	0.04	0.20
Control Delay	32.0	18.3	1.5	35.9	17.2	32.5	12.2	35.6	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	18.3	1.5	35.9	17.2	32.5	12.2	35.6	14.8
LOS	C	B	A	D	B	C	B	D	B
Approach Delay		17.8			23.4		13.8		15.4
Approach LOS		B			C		B		B

Intersection Summary	
Cycle Length: 150.8	
Actuated Cycle Length: 52.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.24	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 43.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: 19 Whitewood Rd & Keller Rd





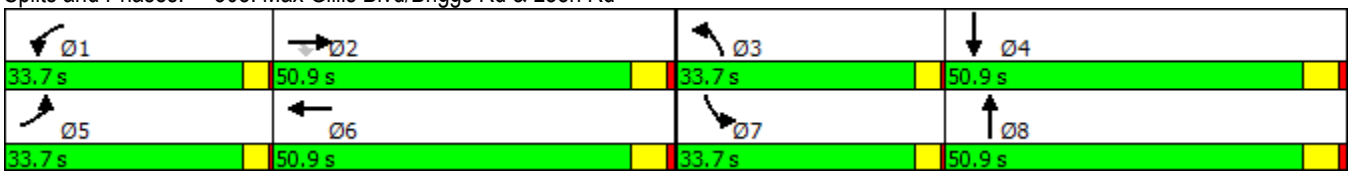
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		32.0		32.0
Pedestrian Calls (#/hr)		2	2		2		1		3
90th %ile Green (s)	10.7	36.4	36.4	6.3	32.0	9.9	42.3	6.6	39.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Ped	Gap	Hold	Gap	Ped
70th %ile Green (s)	7.3	21.9	21.9	0.0	10.0	6.8	26.0	0.0	14.6
70th %ile Term Code	Gap	Hold	Hold	Skip	Min	Gap	Hold	Skip	Gap
50th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	0.0	11.5	0.0	11.5
50th %ile Term Code	Skip	Min	Min	Skip	Hold	Skip	Hold	Skip	Gap
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0	22.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell

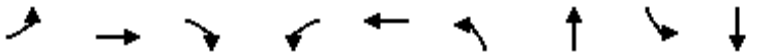
Intersection Summary
Cycle Length: 150.8
Actuated Cycle Length: 52.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 112.4
70th %ile Actuated Cycle: 59.5
50th %ile Actuated Cycle: 33.1
30th %ile Actuated Cycle: 27.8
10th %ile Actuated Cycle: 30.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	314	535	110	148	424	362	10	267
Future Volume (vph)	107	314	535	110	148	424	362	10	267
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.7	5.9	5.9	3.7	5.9	3.7	5.9	3.7	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Act Effct Green (s)	7.5	19.2	19.2	7.6	19.3	16.5	36.0	5.3	16.7
Actuated g/C Ratio	0.09	0.24	0.24	0.09	0.24	0.20	0.45	0.07	0.21
v/c Ratio	0.37	0.41	0.74	0.37	0.20	0.66	0.34	0.05	0.54
Control Delay	42.7	28.8	10.6	42.6	26.4	36.4	15.7	46.0	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	28.8	10.6	42.6	26.4	36.4	15.7	46.0	30.9
LOS	D	C	B	D	C	D	B	D	C
Approach Delay		20.2			33.1		25.4		31.3
Approach LOS		C			C		C		C

Intersection Summary	
Cycle Length: 169.2	
Actuated Cycle Length: 80.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 25.1	Intersection LOS: C
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 308: Max Gillis Blvd/Briggs Rd & Leon Rd





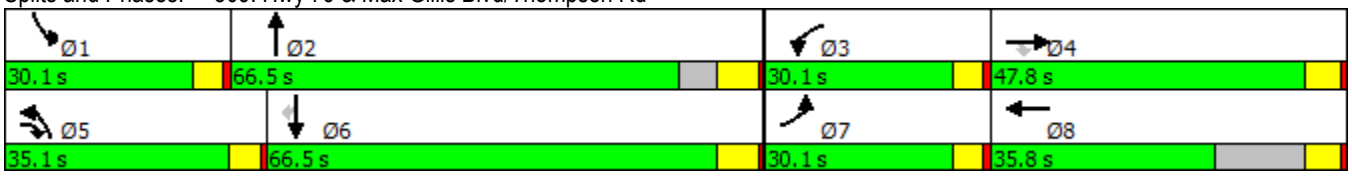
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Maximum Green (s)	30.0	45.0	45.0	30.0	45.0	30.0	45.0	30.0	45.0
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	1.5	3.0	1.5	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		23.0	23.0		23.0		23.0		23.0
Pedestrian Calls (#/hr)		1	1		0		0		2
90th %ile Green (s)	10.8	32.9	32.9	10.9	33.0	25.7	50.6	5.1	30.0
90th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Gap	Ped
70th %ile Green (s)	8.3	20.9	20.9	8.5	21.1	18.4	39.7	0.0	17.6
70th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
50th %ile Green (s)	7.2	17.8	17.8	7.3	17.9	15.7	34.5	0.0	15.1
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
30th %ile Green (s)	6.3	15.1	15.1	6.3	15.1	13.3	30.0	0.0	13.0
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
10th %ile Green (s)	5.1	11.9	11.9	5.2	12.0	10.5	24.7	0.0	10.5
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap

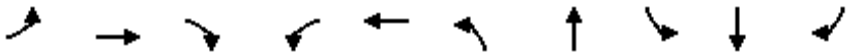
Intersection Summary
Cycle Length: 169.2
Actuated Cycle Length: 80.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 118.7
70th %ile Actuated Cycle: 84.6
50th %ile Actuated Cycle: 75.1
30th %ile Actuated Cycle: 66.9
10th %ile Actuated Cycle: 57.3

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	151	319	582	99	292	574	1327	43	779	123
Future Volume (vph)	151	319	582	99	292	574	1327	43	779	123
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Detector Phase	7	4	5	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.1	5.1	5.8	5.1	6.5	5.1	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	16.9	31.4	62.8	12.8	27.3	30.7	64.2	8.2	39.2	39.2
Actuated g/C Ratio	0.12	0.23	0.46	0.09	0.20	0.22	0.47	0.06	0.29	0.29
v/c Ratio	0.72	0.78	0.76	0.62	0.88	1.51	0.92	0.43	0.80	0.25
Control Delay	79.1	64.4	28.8	79.8	78.9	279.3	45.8	80.2	52.8	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.1	64.4	28.8	79.8	78.9	279.3	45.8	80.2	52.8	17.7
LOS	E	E	C	E	E	F	D	F	D	B
Approach Delay		46.8			79.2		112.2		49.5	
Approach LOS		D			E		F		D	

Intersection Summary	
Cycle Length: 179.5	
Actuated Cycle Length: 137.1	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay: 80.2	Intersection LOS: F
Intersection Capacity Utilization 97.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 309: Hwy 79 & Max Gillis Blvd/Thompson Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Maximum Green (s)	25.0	42.0	30.0	25.0	30.0	30.0	60.0	25.0	60.0	60.0
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0					7.0		5.0	5.0
Flash Dont Walk (s)		35.0					25.0		36.0	36.0
Pedestrian Calls (#/hr)		3					0		0	0
90th %ile Green (s)	25.0	42.0	30.0	19.6	36.6	30.0	70.6	12.4	53.0	53.0
90th %ile Term Code	Max	Max	Max	Gap	Hold	Max	Hold	Gap	Gap	Gap
70th %ile Green (s)	20.4	34.9	30.0	15.5	30.0	30.0	64.4	9.8	44.2	44.2
70th %ile Term Code	Gap	Hold	Max	Gap	Max	Max	Hold	Gap	Gap	Gap
50th %ile Green (s)	16.9	33.5	30.0	12.7	29.3	30.0	60.0	8.1	38.1	38.1
50th %ile Term Code	Gap	Hold	Max	Gap	Gap	Max	Max	Gap	Hold	Hold
30th %ile Green (s)	14.1	27.9	30.0	10.5	24.3	30.0	60.0	6.7	36.7	36.7
30th %ile Term Code	Gap	Hold	Max	Gap	Gap	Max	Max	Gap	Hold	Hold
10th %ile Green (s)	10.1	20.6	30.0	7.5	18.0	30.0	61.2	0.0	26.1	26.1
10th %ile Term Code	Gap	Hold	Max	Gap	Gap	Max	Hold	Skip	Gap	Gap

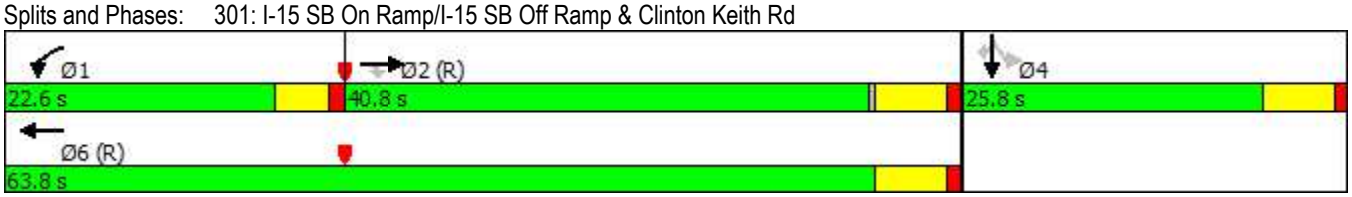
Intersection Summary
Cycle Length: 179.5
Actuated Cycle Length: 137.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 167.1
70th %ile Actuated Cycle: 147.1
50th %ile Actuated Cycle: 136.8
30th %ile Actuated Cycle: 127.6
10th %ile Actuated Cycle: 106.7

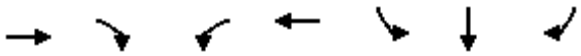
Signal Timings & Phasings from Synchro - Existing Saturday Midday

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	800	512	251	967	342	1	351
Future Volume (vph)	800	512	251	967	342	1	351
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	40.8	40.8	22.6	63.8	25.8	25.8	25.8
Total Split (%)	45.5%	45.5%	25.2%	71.2%	28.8%	28.8%	28.8%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	47.4	47.4	11.2	63.2	14.8	14.8	14.8
Actuated g/C Ratio	0.53	0.53	0.12	0.71	0.17	0.17	0.17
v/c Ratio	0.31	0.49	0.61	0.28	0.64	0.64	0.55
Control Delay	13.5	3.3	42.9	9.3	44.7	44.7	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	3.3	42.9	9.3	44.7	44.7	13.8
LOS	B	A	D	A	D	D	B
Approach Delay	9.5			16.2		29.1	
Approach LOS	A			B		C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 301: I-15 SB On Ramp/I-15 SB Off Ramp & Clinton Keith Rd





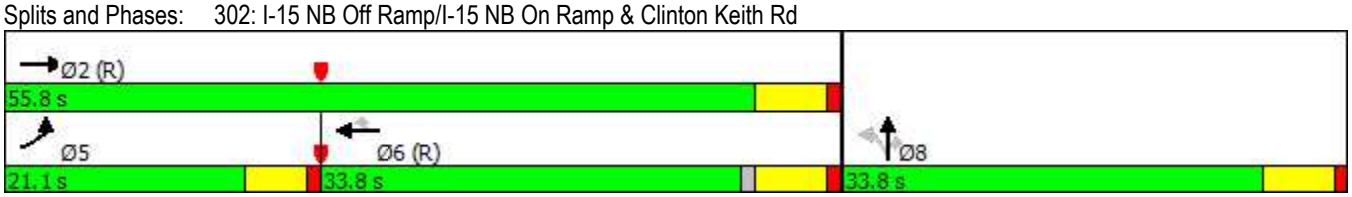
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	40.8	40.8	22.6	63.8	25.8	25.8	25.8
Total Split (%)	45.5%	45.5%	25.2%	71.2%	28.8%	28.8%	28.8%
Maximum Green (s)	35.0	35.0	18.0	58.0	20.0	20.0	20.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Walk Time (s)	7.0	7.0		7.0			
Flash Dont Walk (s)	23.0	23.0		28.0			
Pedestrian Calls (#/hr)	0	0		2			
90th %ile Green (s)	37.1	37.1	14.5	56.2	21.8	21.8	21.8
90th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
70th %ile Green (s)	42.9	42.9	12.6	60.1	17.9	17.9	17.9
70th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
50th %ile Green (s)	47.5	47.5	11.2	63.3	14.7	14.7	14.7
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
30th %ile Green (s)	52.1	52.1	9.8	66.5	11.5	11.5	11.5
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
10th %ile Green (s)	57.5	57.5	7.8	69.9	8.1	8.1	8.1
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap

Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	327	881	681	441	429	5	315
Future Volume (vph)	327	881	681	441	429	5	315
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	21.1	55.8	33.8	33.8	33.8	33.8	33.8
Total Split (%)	23.5%	62.3%	37.7%	37.7%	37.7%	37.7%	37.7%
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	13.1	58.2	40.0	40.0	19.8	19.8	19.8
Actuated g/C Ratio	0.15	0.65	0.45	0.45	0.22	0.22	0.22
v/c Ratio	0.67	0.27	0.31	0.48	0.71	0.72	0.57
Control Delay	34.8	4.2	18.1	4.2	42.3	39.5	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	4.2	18.1	4.2	42.3	39.5	19.1
LOS	C	A	B	A	D	D	B
Approach Delay		12.5	12.7			34.0	
Approach LOS		B	B			C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 302: I-15 NB Off Ramp/I-15 NB On Ramp & Clinton Keith Rd



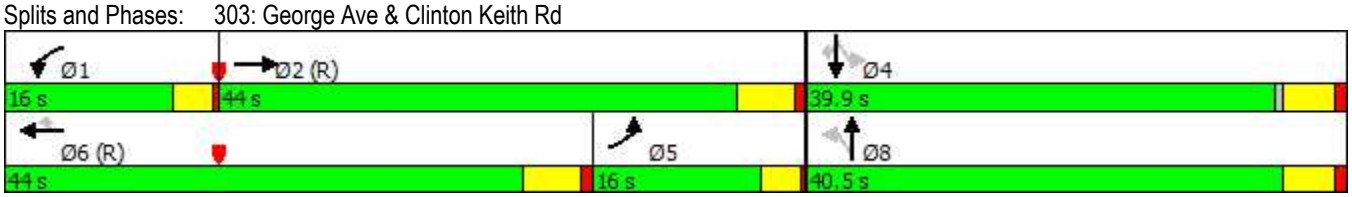
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	21.1	55.8	33.8	33.8	33.8	33.8	33.8
Total Split (%)	23.5%	62.3%	37.7%	37.7%	37.7%	37.7%	37.7%
Maximum Green (s)	16.0	50.0	28.0	28.0	28.0	28.0	28.0
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Walk Time (s)		7.0	7.0	7.0			
Flash Dont Walk (s)		23.0	23.0	23.0			
Pedestrian Calls (#/hr)		0	0	0			
90th %ile Green (s)	16.8	49.5	27.6	27.6	28.5	28.5	28.5
90th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	14.6	55.0	35.3	35.3	23.0	23.0	23.0
70th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	13.1	58.6	40.4	40.4	19.4	19.4	19.4
50th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	11.5	61.4	44.8	44.8	16.6	16.6	16.6
30th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	9.3	66.5	52.1	52.1	11.5	11.5	11.5
10th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap

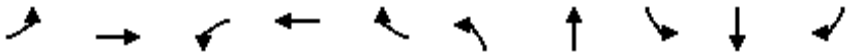
Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	110	772	105	681	29	71	18	38	26	90
Future Volume (vph)	110	772	105	681	29	71	18	38	26	90
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	16.0	44.0	16.0	44.0	44.0	40.5	40.5	39.9	39.9	39.9
Total Split (%)	15.9%	43.8%	15.9%	43.8%	43.8%	40.3%	40.3%	39.7%	39.7%	39.7%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.3	3.5	5.3	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	12.5	60.2	11.2	59.0	59.0	15.3	15.3	15.3	15.3	15.3
Actuated g/C Ratio	0.12	0.60	0.11	0.59	0.59	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.53	0.28	0.56	0.35	0.03	0.36	0.32	0.21	0.10	0.28
Control Delay	50.7	11.8	53.5	13.2	0.1	39.9	12.4	35.7	32.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	11.8	53.5	13.2	0.1	39.9	12.4	35.7	32.5	4.9
LOS	D	B	D	B	A	D	B	D	C	A
Approach Delay		16.5		17.9			24.0		17.1	
Approach LOS		B		B			C		B	

Intersection Summary	
Cycle Length: 100.5	
Actuated Cycle Length: 100.5	
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 303: George Ave & Clinton Keith Rd





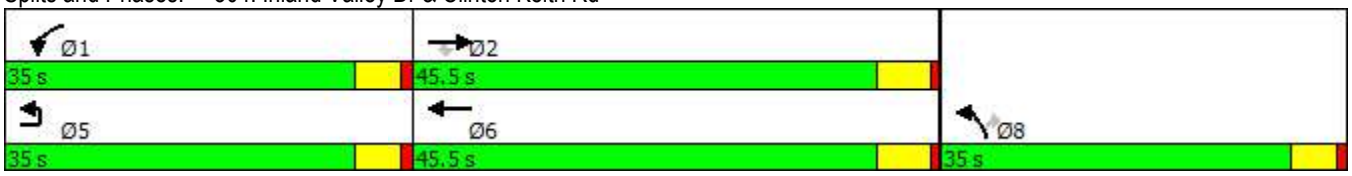
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	16.0	44.0	16.0	44.0	44.0	40.5	40.5	39.9	39.9	39.9
Total Split (%)	15.9%	43.8%	15.9%	43.8%	43.8%	40.3%	40.3%	39.7%	39.7%	39.7%
Maximum Green (s)	12.5	38.7	12.5	38.7	38.7	35.6	35.6	35.0	35.0	35.0
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	4.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0		19.0	19.0	27.0	27.0	28.0	28.0	28.0
Pedestrian Calls (#/hr)		1		0	0	1	1	1	1	1
90th %ile Green (s)	12.5	38.7	13.1	39.3	39.3	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Hold	Hold	Ped	Ped	Ped
70th %ile Green (s)	12.5	61.5	12.5	61.5	61.5	12.8	12.8	12.8	12.8	12.8
70th %ile Term Code	Max	Coord	Gap	Coord	Coord	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	12.5	65.3	10.6	63.4	63.4	10.9	10.9	10.9	10.9	10.9
50th %ile Term Code	Hold	Coord	Gap	Coord	Coord	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	12.5	67.8	10.0	65.3	65.3	9.0	9.0	9.0	9.0	9.0
30th %ile Term Code	Hold	Coord	Min	Coord	Coord	Min	Min	Hold	Hold	Hold
10th %ile Green (s)	12.5	67.8	10.0	65.3	65.3	9.0	9.0	9.0	9.0	9.0
10th %ile Term Code	Hold	Coord	Min	Coord	Coord	Min	Min	Hold	Hold	Hold

Intersection Summary
Cycle Length: 100.5
Actuated Cycle Length: 100.5
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø5
Lane Configurations							
Traffic Volume (vph)	677	212	18	593	208	18	
Future Volume (vph)	677	212	18	593	208	18	
Turn Type	NA	Perm	Prot	NA	Prot	Perm	
Protected Phases	2		1	6	8		5
Permitted Phases		2				8	
Detector Phase	2	2	1	6	8	8	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	6.0	6.0	5.0
Minimum Split (s)	25.5	25.5	10.0	22.5	22.5	22.5	10.0
Total Split (s)	45.5	45.5	35.0	45.5	35.0	35.0	35.0
Total Split (%)	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%	30%
Yellow Time (s)	4.5	4.5	4.0	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.0	5.5	5.0	5.0	
Lead/Lag	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes
Recall Mode	Min	Min	None	Min	None	None	None
Act Effct Green (s)	27.0	27.0	5.4	28.7	13.6	13.6	
Actuated g/C Ratio	0.51	0.51	0.10	0.54	0.26	0.26	
v/c Ratio	0.39	0.25	0.11	0.61	0.47	0.05	
Control Delay	10.2	2.8	27.1	11.9	21.4	12.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	10.2	2.8	27.1	11.9	21.4	12.1	
LOS	B	A	C	B	C	B	
Approach Delay	8.4			12.3	20.6		
Approach LOS	A			B	C		

Intersection Summary	
Cycle Length: 115.5	
Actuated Cycle Length: 53.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 51.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 304: Inland Valley Dr & Clinton Keith Rd



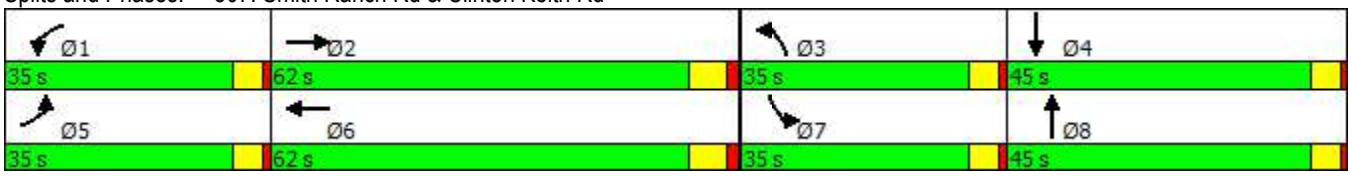
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø5
Protected Phases	2		1	6	8		5
Permitted Phases		2				8	
Minimum Initial (s)	10.0	10.0	5.0	10.0	6.0	6.0	5.0
Minimum Split (s)	25.5	25.5	10.0	22.5	22.5	22.5	10.0
Total Split (s)	45.5	45.5	35.0	45.5	35.0	35.0	35.0
Total Split (%)	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%	30%
Maximum Green (s)	40.0	40.0	30.0	40.0	30.0	30.0	30.0
Yellow Time (s)	4.5	4.5	4.0	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes
Vehicle Extension (s)	2.5	2.5	1.5	2.5	3.5	3.5	1.5
Minimum Gap (s)	2.5	2.5	1.5	2.5	3.5	3.5	1.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	Min	None	Min	None	None	None
Walk Time (s)	8.0	8.0					
Flash Dont Walk (s)	12.0	12.0					
Pedestrian Calls (#/hr)	0	0					
90th %ile Green (s)	27.6	27.6	6.3	38.9	19.5	19.5	0.0
90th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Skip
70th %ile Green (s)	29.1	29.1	0.0	29.1	15.2	15.2	0.0
70th %ile Term Code	Hold	Hold	Skip	Gap	Gap	Gap	Skip
50th %ile Green (s)	26.7	26.7	0.0	26.7	13.2	13.2	0.0
50th %ile Term Code	Hold	Hold	Skip	Gap	Gap	Gap	Skip
30th %ile Green (s)	23.9	23.9	0.0	23.9	11.6	11.6	0.0
30th %ile Term Code	Hold	Hold	Skip	Gap	Gap	Gap	Skip
10th %ile Green (s)	25.6	25.6	0.0	25.6	9.5	9.5	0.0
10th %ile Term Code	Dwell	Dwell	Skip	Dwell	Gap	Gap	Skip

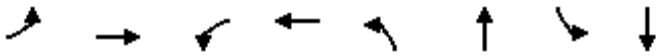
Intersection Summary
Cycle Length: 115.5
Actuated Cycle Length: 53.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 68.9
70th %ile Actuated Cycle: 54.8
50th %ile Actuated Cycle: 50.4
30th %ile Actuated Cycle: 46
10th %ile Actuated Cycle: 45.6

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	43	587	20	571	29	2	32	0
Future Volume (vph)	43	587	20	571	29	2	32	0
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	5.0	7.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	7.0	40.1	6.2	32.6	6.5	9.5	8.4	9.5
Actuated g/C Ratio	0.13	0.77	0.12	0.63	0.12	0.18	0.16	0.18
v/c Ratio	0.19	0.23	0.10	0.29	0.14	0.02	0.12	0.04
Control Delay	30.9	10.1	32.8	13.9	32.0	18.8	28.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	10.1	32.8	13.9	32.0	18.8	28.4	0.1
LOS	C	B	C	B	C	B	C	A
Approach Delay		11.4		14.5		30.1		14.7
Approach LOS		B		B		C		B

Intersection Summary	
Cycle Length: 177	
Actuated Cycle Length: 52.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 43.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 307: Smith Ranch Rd & Clinton Keith Rd





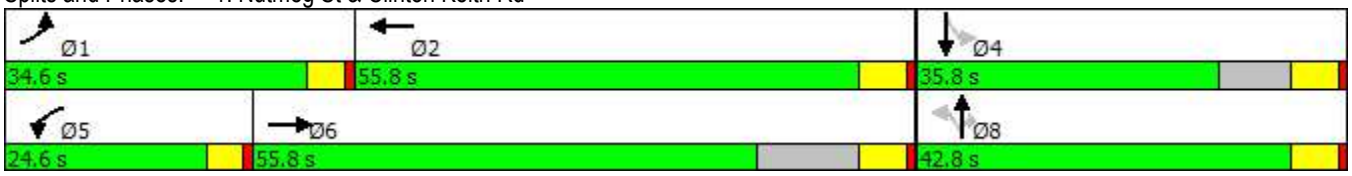
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Maximum Green (s)	30.0	55.0	30.0	55.0	30.0	40.0	30.0	40.0
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	1.5	3.5	1.5	2.5	1.5	2.5
Minimum Gap (s)	1.5	3.0	1.5	3.0	1.5	2.5	1.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None
Walk Time (s)		7.0		7.0				12.0
Flash Dont Walk (s)		8.0		8.0				16.0
Pedestrian Calls (#/hr)		0		0				1
90th %ile Green (s)	9.2	32.1	6.9	29.8	7.9	27.8	8.1	28.0
90th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Hold	Gap	Ped
70th %ile Green (s)	6.7	31.3	0.0	19.6	5.9	0.0	16.9	6.0
70th %ile Term Code	Gap	Hold	Skip	Gap	Gap	Skip	Hold	Min
50th %ile Green (s)	5.8	28.6	0.0	17.8	0.0	0.0	0.0	0.0
50th %ile Term Code	Gap	Hold	Skip	Gap	Skip	Skip	Skip	Skip
30th %ile Green (s)	0.0	30.2	0.0	30.2	0.0	0.0	0.0	0.0
30th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip
10th %ile Green (s)	0.0	23.6	0.0	23.6	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip

Intersection Summary
Cycle Length: 177
Actuated Cycle Length: 52.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 96.9
70th %ile Actuated Cycle: 60.2
50th %ile Actuated Cycle: 35.6
30th %ile Actuated Cycle: 37.2
10th %ile Actuated Cycle: 30.6

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	27	536	177	497	59	41	196	61	30
Future Volume (vph)	27	536	177	497	59	41	196	61	30
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	34.6	55.8	24.6	55.8	42.8	42.8	42.8	35.8	35.8
Total Split (%)	26.0%	41.9%	18.5%	41.9%	32.1%	32.1%	32.1%	26.9%	26.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	7.0	20.9	13.0	35.1	12.4	12.4	12.4	12.4	12.4
Actuated g/C Ratio	0.11	0.33	0.20	0.55	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.16	0.58	0.55	0.33	0.25	0.13	0.46	0.27	0.16
Control Delay	36.3	21.7	33.0	11.4	25.5	23.2	7.1	25.8	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	21.7	33.0	11.4	25.5	23.2	7.1	25.8	23.7
LOS	D	C	C	B	C	C	A	C	C
Approach Delay		22.3		16.5		12.9			24.9
Approach LOS		C		B		B			C

Intersection Summary	
Cycle Length: 133.2	
Actuated Cycle Length: 64	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 50.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Nutmeg St & Clinton Keith Rd



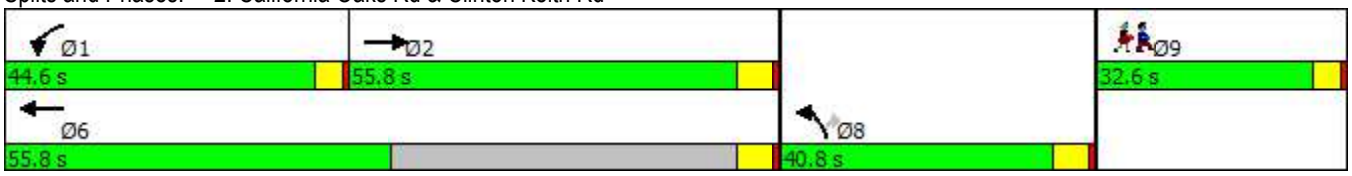
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	34.6	55.8	24.6	55.8	42.8	42.8	42.8	35.8	35.8
Total Split (%)	26.0%	41.9%	18.5%	41.9%	32.1%	32.1%	32.1%	26.9%	26.9%
Maximum Green (s)	30.0	50.0	20.0	50.0	37.0	37.0	37.0	30.0	30.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	3.9	2.0	3.9	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		22.0		21.0	30.0	30.0	30.0		
Pedestrian Calls (#/hr)		0		0	1	1	1		
90th %ile Green (s)	8.6	32.8	20.0	44.2	37.0	37.0	37.0	37.0	37.0
90th %ile Term Code	Gap	Gap	Max	Hold	Ped	Ped	Ped	Hold	Hold
70th %ile Green (s)	6.5	22.0	14.6	30.1	10.6	10.6	10.6	10.6	10.6
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	0.0	19.7	12.2	36.5	9.1	9.1	9.1	9.1	9.1
50th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	0.0	16.2	10.1	30.9	7.6	7.6	7.6	7.6	7.6
30th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	13.4	7.8	25.8	6.0	6.0	6.0	6.0	6.0
10th %ile Term Code	Skip	Gap	Gap	Hold	Min	Min	Min	Hold	Hold

Intersection Summary
Cycle Length: 133.2
Actuated Cycle Length: 64
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 106
70th %ile Actuated Cycle: 63.4
50th %ile Actuated Cycle: 57.2
30th %ile Actuated Cycle: 50.1
10th %ile Actuated Cycle: 43.4

Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Lane Configurations						
Traffic Volume (vph)	675	342	617	111	440	
Future Volume (vph)	675	342	617	111	440	
Turn Type	NA	Prot	NA	Prot	Perm	
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Detector Phase	2	1	6	8	8	
Switch Phase						
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	55.8	44.6	55.8	40.8	40.8	32.6
Total Split (%)	32.1%	25.7%	32.1%	23.5%	23.5%	19%
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	4.6	5.8	5.8	5.8	
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	28.7	27.3	60.8	10.5	10.5	
Actuated g/C Ratio	0.34	0.33	0.73	0.13	0.13	
v/c Ratio	0.69	0.62	0.25	0.58	0.60	
Control Delay	27.5	30.3	4.0	17.5	12.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	27.5	30.3	4.0	17.5	12.8	
LOS	C	C	A	B	B	
Approach Delay	27.5		13.4	15.6		
Approach LOS	C		B	B		

Intersection Summary	
Cycle Length: 173.8	
Actuated Cycle Length: 83.4	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: California Oaks Rd & Clinton Keith Rd



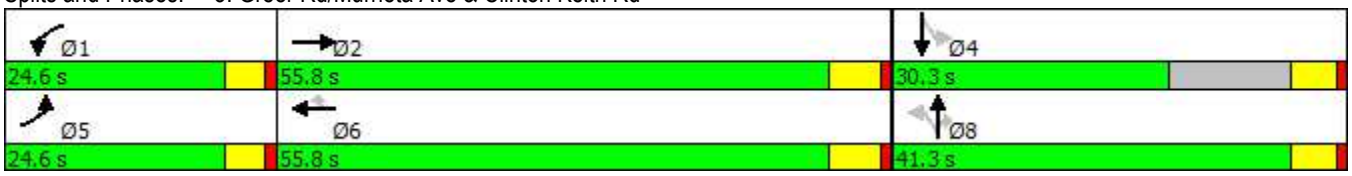
Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	55.8	44.6	55.8	40.8	40.8	32.6
Total Split (%)	32.1%	25.7%	32.1%	23.5%	23.5%	19%
Maximum Green (s)	50.0	40.0	50.0	35.0	35.0	28.0
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Vehicle Extension (s)	3.8	3.0	3.8	3.8	3.8	0.2
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	0.2
Time Before Reduce (s)	1.0	0.0	1.0	1.0	1.0	0.0
Time To Reduce (s)	0.1	0.0	0.1	0.1	0.1	0.0
Recall Mode	Min	None	Min	None	None	None
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	20.0					21.0
Pedestrian Calls (#/hr)	1					0
90th %ile Green (s)	38.7	36.8	80.1	15.2	15.2	0.0
90th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip
70th %ile Green (s)	32.4	32.2	69.2	12.5	12.5	0.0
70th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip
50th %ile Green (s)	29.1	27.7	61.4	10.6	10.6	0.0
50th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip
30th %ile Green (s)	25.4	23.2	53.2	8.7	8.7	0.0
30th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip
10th %ile Green (s)	19.1	17.9	41.6	6.5	6.5	0.0
10th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip

Intersection Summary
Cycle Length: 173.8
Actuated Cycle Length: 83.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 106.9
70th %ile Actuated Cycle: 93.3
50th %ile Actuated Cycle: 83.6
30th %ile Actuated Cycle: 73.5
10th %ile Actuated Cycle: 59.7

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	43	1095	30	922	119	31	30	112	0
Future Volume (vph)	43	1095	30	922	119	31	30	112	0
Turn Type	Prot	NA	Prot	NA	Perm	Perm	Perm	Perm	NA
Protected Phases	5	2	1	6					4
Permitted Phases					6	8	8	4	
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	23.3	23.3
Total Split (s)	24.6	55.8	24.6	55.8	55.8	41.3	41.3	30.3	30.3
Total Split (%)	20.2%	45.9%	20.2%	45.9%	45.9%	33.9%	33.9%	24.9%	24.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.3	5.3	5.3	5.3
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	7.2	38.1	6.9	37.8	37.8	12.3	12.3	12.3	12.3
Actuated g/C Ratio	0.11	0.56	0.10	0.55	0.55	0.18	0.18	0.18	0.18
v/c Ratio	0.24	0.62	0.18	0.50	0.14	0.13	0.06	0.47	0.05
Control Delay	37.2	13.1	37.6	11.8	4.7	29.4	0.2	35.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	13.1	37.6	11.8	4.7	29.4	0.2	35.0	0.2
LOS	D	B	D	B	A	C	A	D	A
Approach Delay		14.0		11.8					28.1
Approach LOS		B		B					C

Intersection Summary	
Cycle Length: 121.7	
Actuated Cycle Length: 68.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 57.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Greer Rd/Murrieta Ave & Clinton Keith Rd



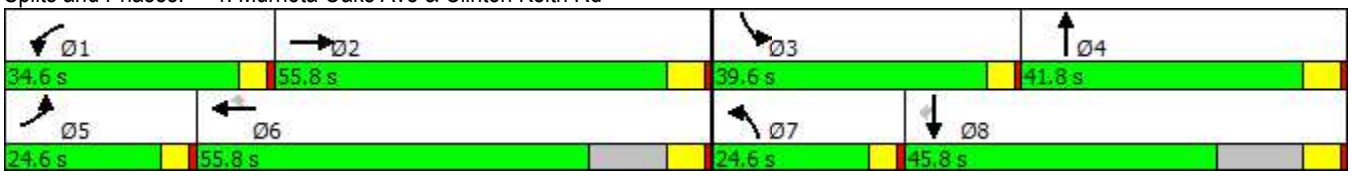
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Protected Phases	5	2	1	6					4
Permitted Phases					6	8	8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	23.3	23.3
Total Split (s)	24.6	55.8	24.6	55.8	55.8	41.3	41.3	30.3	30.3
Total Split (%)	20.2%	45.9%	20.2%	45.9%	45.9%	33.9%	33.9%	24.9%	24.9%
Maximum Green (s)	20.0	50.0	20.0	50.0	50.0	36.0	36.0	25.0	25.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		18.0		21.0	21.0	29.0	29.0		
Pedestrian Calls (#/hr)		2		2	2	0	0		
90th %ile Green (s)	9.3	51.0	8.3	50.0	50.0	17.9	17.9	17.9	17.9
90th %ile Term Code	Gap	Hold	Gap	Max	Max	Hold	Hold	Gap	Gap
70th %ile Green (s)	7.6	41.3	6.9	40.6	40.6	14.5	14.5	14.5	14.5
70th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.6	34.6	6.0	34.0	34.0	12.3	12.3	12.3	12.3
50th %ile Term Code	Gap	Hold	Min	Gap	Gap	Hold	Hold	Gap	Gap
30th %ile Green (s)	0.0	27.9	0.0	27.9	27.9	9.8	9.8	9.8	9.8
30th %ile Term Code	Skip	Hold	Skip	Gap	Gap	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	33.8	0.0	33.8	33.8	7.5	7.5	7.5	7.5
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Dwell	Hold	Hold	Gap	Gap

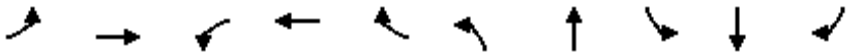
Intersection Summary
Cycle Length: 121.7
Actuated Cycle Length: 68.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 92.9
70th %ile Actuated Cycle: 78.4
50th %ile Actuated Cycle: 68.6
30th %ile Actuated Cycle: 48.8
10th %ile Actuated Cycle: 52.4

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	14	1212	108	1047	5	20	3	3	1	12
Future Volume (vph)	14	1212	108	1047	5	20	3	3	1	12
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Detector Phase	5	2	1	6	6	7	4	3	8	8
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	24.6	55.8	34.6	55.8	55.8	24.6	41.8	39.6	45.8	45.8
Total Split (%)	14.3%	32.5%	20.1%	32.5%	32.5%	14.3%	24.3%	23.1%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.4	53.7	10.7	67.5	67.5	6.6	14.8	6.2	12.2	12.2
Actuated g/C Ratio	0.07	0.55	0.11	0.69	0.69	0.07	0.15	0.06	0.13	0.13
v/c Ratio	0.13	0.67	0.58	0.31	0.00	0.18	0.28	0.02	0.00	0.05
Control Delay	52.9	21.9	55.8	9.9	0.0	53.2	10.4	52.7	37.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	21.9	55.8	9.9	0.0	53.2	10.4	52.7	37.0	0.3
LOS	D	C	E	A	A	D	B	D	D	A
Approach Delay		22.2		14.1			18.7		11.7	
Approach LOS		C		B			B		B	

Intersection Summary	
Cycle Length: 171.8	
Actuated Cycle Length: 97.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Murrieta Oaks Ave & Clinton Keith Rd





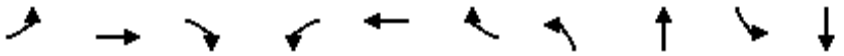
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	24.6	55.8	34.6	55.8	55.8	24.6	41.8	39.6	45.8	45.8
Total Split (%)	14.3%	32.5%	20.1%	32.5%	32.5%	14.3%	24.3%	23.1%	26.7%	26.7%
Maximum Green (s)	20.0	50.0	30.0	50.0	50.0	20.0	36.0	35.0	40.0	40.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	2.0	5.2	3.0	3.2	3.2
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.2	3.2
Time Before Reduce (s)	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		13.0		26.0	26.0		29.0		33.0	33.0
Pedestrian Calls (#/hr)		0		7	7		5		3	3
90th %ile Green (s)	7.3	50.0	17.8	60.5	60.5	8.3	42.2	6.1	40.0	40.0
90th %ile Term Code	Gap	Max	Gap	Hold	Hold	Gap	Hold	Gap	Ped	Ped
70th %ile Green (s)	0.0	50.0	11.8	66.4	66.4	6.3	16.9	0.0	6.0	6.0
70th %ile Term Code	Skip	Max	Gap	Hold	Hold	Gap	Hold	Skip	Min	Min
50th %ile Green (s)	0.0	50.0	9.7	64.3	64.3	0.0	7.8	0.0	7.8	7.8
50th %ile Term Code	Skip	Max	Gap	Hold	Hold	Skip	Gap	Skip	Hold	Hold
30th %ile Green (s)	0.0	50.0	8.4	63.0	63.0	0.0	7.7	0.0	7.7	7.7
30th %ile Term Code	Skip	Max	Gap	Hold	Hold	Skip	Gap	Skip	Hold	Hold
10th %ile Green (s)	0.0	58.8	7.0	70.4	70.4	0.0	7.7	0.0	7.7	7.7
10th %ile Term Code	Skip	Dwell	Gap	Dwell	Dwell	Skip	Gap	Skip	Hold	Hold

Intersection Summary
Cycle Length: 171.8
Actuated Cycle Length: 97.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 136.9
70th %ile Actuated Cycle: 94.9
50th %ile Actuated Cycle: 83.7
30th %ile Actuated Cycle: 82.3
10th %ile Actuated Cycle: 89.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	276	1034	13	25	894	234	10	6	409	12
Future Volume (vph)	276	1034	13	25	894	234	10	6	409	12
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	12.3	38.0	38.0	7.0	24.5	42.2	6.9	12.5	16.4	23.3
Actuated g/C Ratio	0.16	0.48	0.48	0.09	0.31	0.54	0.09	0.16	0.21	0.30
v/c Ratio	0.54	0.44	0.02	0.16	0.59	0.26	0.07	0.10	0.60	0.43
Control Delay	38.5	17.7	0.1	45.5	26.7	2.4	45.3	19.2	35.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	17.7	0.1	45.5	26.7	2.4	45.3	19.2	35.5	6.3
LOS	D	B	A	D	C	A	D	B	D	A
Approach Delay		21.8			22.2			26.4		24.0
Approach LOS		C			C			C		C

Intersection Summary	
Cycle Length: 144.1	
Actuated Cycle Length: 78.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 59.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Clinton Keith Rd & McElwain Rd



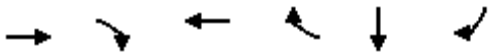
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Maximum Green (s)	20.0	50.0	50.0	20.0	50.0	20.0	20.0	20.0	20.0	34.0
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	5.2	2.0	5.2	2.0	3.0	3.0	2.0	3.6
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		15.0	15.0		22.0					27.0
Pedestrian Calls (#/hr)		3	3		8					3
90th %ile Green (s)	17.8	43.1	43.1	8.3	33.6	20.0	7.5	21.5	20.0	34.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Max	Gap	Hold	Max	Ped
70th %ile Green (s)	13.8	34.4	34.4	6.6	27.2	19.2	0.0	10.0	19.2	33.8
70th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Skip	Min	Gap	Hold
50th %ile Green (s)	12.1	40.8	40.8	0.0	24.1	17.1	0.0	10.0	17.1	31.7
50th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Skip	Min	Gap	Hold
30th %ile Green (s)	9.5	33.2	33.2	0.0	19.1	13.1	0.0	0.0	13.1	12.6
30th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Skip	Skip	Gap	Hold
10th %ile Green (s)	7.8	29.0	29.0	0.0	16.6	10.8	0.0	0.0	10.8	10.3
10th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Skip	Skip	Gap	Hold

Intersection Summary
Cycle Length: 144.1
Actuated Cycle Length: 78.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 113
70th %ile Actuated Cycle: 90.3
50th %ile Actuated Cycle: 83.4
30th %ile Actuated Cycle: 56.7
10th %ile Actuated Cycle: 50.2

Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1016	424	761	260	0	524
Future Volume (vph)	1016	424	761	260	0	524
Turn Type	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	64.0	64.0	64.0	64.0	31.0	31.0
Total Split (%)	67.4%	67.4%	67.4%	67.4%	32.6%	32.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	70.1	70.1	70.1	70.1	13.3	13.3
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.14	0.14
v/c Ratio	0.27	0.37	0.20	0.23	0.64	0.75
Control Delay	4.7	6.2	2.7	3.3	50.5	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.7	6.2	2.7	3.3	50.5	18.1
LOS	A	A	A	A	D	B
Approach Delay	5.1		2.9		25.3	
Approach LOS	A		A		C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 12 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 44.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: I-215 SB Ramps & Clinton Keith Rd



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	64.0	64.0	64.0	64.0	31.0	31.0
Total Split (%)	67.4%	67.4%	67.4%	67.4%	32.6%	32.6%
Maximum Green (s)	58.2	58.2	58.2	58.2	25.2	25.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0				
Flash Dont Walk (s)	20.0	20.0				
Pedestrian Calls (#/hr)	8	8				
90th %ile Green (s)	64.2	64.2	64.2	64.2	19.2	19.2
90th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
70th %ile Green (s)	67.3	67.3	67.3	67.3	16.1	16.1
70th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
50th %ile Green (s)	70.4	70.4	70.4	70.4	13.0	13.0
50th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	72.7	72.7	72.7	72.7	10.7	10.7
30th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	75.9	75.9	75.9	75.9	7.5	7.5
10th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 12 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	650	512	669	367	310
Future Volume (vph)	650	512	669	367	310
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	2		6	8	
Permitted Phases		2			8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	54.0	54.0	54.0	41.0	41.0
Total Split (%)	56.8%	56.8%	56.8%	43.2%	43.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	58.3	58.3	58.3	25.1	25.1
Actuated g/C Ratio	0.61	0.61	0.61	0.26	0.26
v/c Ratio	0.21	0.45	0.26	0.79	0.56
Control Delay	6.9	2.9	8.9	44.7	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.9	8.9	44.7	14.5
LOS	A	A	A	D	B
Approach Delay	5.2		8.9		
Approach LOS	A		A		

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 24 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 60.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: I-215 NB Ramps & Clinton Keith Rd

Lane Group	EBT	EBR	WBT	NBL	NBR
Protected Phases	2		6	8	
Permitted Phases		2			8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	54.0	54.0	54.0	41.0	41.0
Total Split (%)	56.8%	56.8%	56.8%	43.2%	43.2%
Maximum Green (s)	48.2	48.2	48.2	35.2	35.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.5	2.5
Minimum Gap (s)	2.0	2.0	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			
Flash Dont Walk (s)	31.0	31.0			
Pedestrian Calls (#/hr)	7	7			
90th %ile Green (s)	50.1	50.1	50.1	33.3	33.3
90th %ile Term Code	Coord	Coord	Coord	Gap	Gap
70th %ile Green (s)	55.0	55.0	55.0	28.4	28.4
70th %ile Term Code	Coord	Coord	Coord	Gap	Gap
50th %ile Green (s)	58.3	58.3	58.3	25.1	25.1
50th %ile Term Code	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	61.7	61.7	61.7	21.7	21.7
30th %ile Term Code	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	66.6	66.6	66.6	16.8	16.8
10th %ile Term Code	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 24 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	8	896	51	7	742	50	11
Future Volume (vph)	8	896	51	7	742	50	11
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Detector Phase	5	2	2	1	6	8	8
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	6.0	6.0
Minimum Split (s)	29.4	29.4	29.4	10.6	15.4	10.6	10.6
Total Split (s)	25.4	45.4	45.4	24.6	45.4	29.6	29.6
Total Split (%)	25.3%	45.2%	45.2%	24.5%	45.2%	29.5%	29.5%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	Min	Min	Min	None	None	Min	Min
Act Effct Green (s)	10.1	30.1	30.1	6.1	16.4	6.9	6.9
Actuated g/C Ratio	0.21	0.62	0.62	0.12	0.34	0.14	0.14
v/c Ratio	0.02	0.30	0.05	0.04	0.46	0.21	0.06
Control Delay	18.1	5.5	2.5	21.7	13.6	22.1	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	5.5	2.5	21.7	13.6	22.1	12.3
LOS	B	A	A	C	B	C	B
Approach Delay		5.5			13.7	20.3	
Approach LOS		A			B	C	

Intersection Summary	
Cycle Length: 100.4	
Actuated Cycle Length: 48.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 30.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd

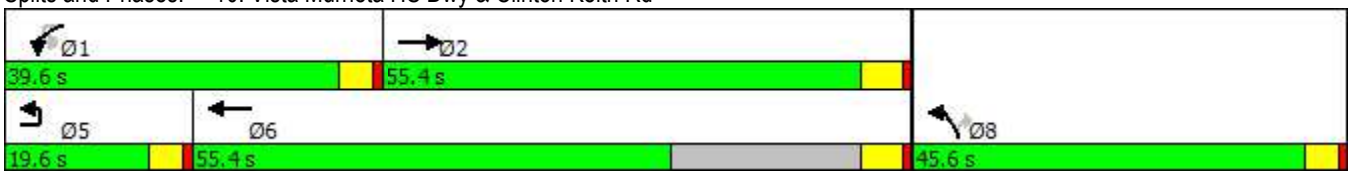
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	6.0	6.0
Minimum Split (s)	29.4	29.4	29.4	10.6	15.4	10.6	10.6
Total Split (s)	25.4	45.4	45.4	24.6	45.4	29.6	29.6
Total Split (%)	25.3%	45.2%	45.2%	24.5%	45.2%	29.5%	29.5%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	25.0	25.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	2.5	2.5
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	2.5	2.5
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	Min	Min	None	None	Min	Min
Walk Time (s)	7.0	7.0	7.0				
Flash Dont Walk (s)	17.0	17.0	17.0				
Pedestrian Calls (#/hr)	0	1	1				
90th %ile Green (s)	10.0	26.9	26.9	6.0	22.1	8.6	8.6
90th %ile Term Code	Min	Hold	Hold	Min	Gap	Gap	Gap
70th %ile Green (s)	10.0	33.7	33.7	0.0	18.3	7.3	7.3
70th %ile Term Code	Min	Hold	Hold	Skip	Gap	Gap	Gap
50th %ile Green (s)	10.0	31.6	31.6	0.0	16.2	6.5	6.5
50th %ile Term Code	Min	Hold	Hold	Skip	Gap	Gap	Gap
30th %ile Green (s)	10.0	29.6	29.6	0.0	14.2	6.0	6.0
30th %ile Term Code	Min	Hold	Hold	Skip	Gap	Min	Min
10th %ile Green (s)	10.0	27.5	27.5	0.0	12.1	6.0	6.0
10th %ile Term Code	Min	Hold	Hold	Skip	Gap	Min	Min

Intersection Summary
Cycle Length: 100.4
Actuated Cycle Length: 48.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 56.1
70th %ile Actuated Cycle: 51
50th %ile Actuated Cycle: 48.1
30th %ile Actuated Cycle: 45.6
10th %ile Actuated Cycle: 43.5

Lane Group	EBU	EBT	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	1	864	17	18	667	58	9
Future Volume (vph)	1	864	17	18	667	58	9
Turn Type	Prot	NA	custom	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			1				8
Detector Phase	5	2	1	1	6	8	8
Switch Phase							
Minimum Initial (s)	6.0	10.0	6.0	6.0	10.0	6.0	6.0
Minimum Split (s)	10.6	38.4	10.6	10.6	15.4	45.6	45.6
Total Split (s)	19.6	55.4	39.6	39.6	55.4	45.6	45.6
Total Split (%)	13.9%	39.4%	28.2%	28.2%	39.4%	32.4%	32.4%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4		4.6	5.4	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	Min	None	None	None	Min	Min
Act Effct Green (s)	7.0	25.6		24.1	46.5	7.9	7.9
Actuated g/C Ratio	0.10	0.38		0.36	0.69	0.12	0.12
v/c Ratio	0.01	0.50		0.28	0.20	0.15	0.05
Control Delay	38.0	19.6		24.6	3.6	35.3	20.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	38.0	19.6		24.6	3.6	35.3	20.6
LOS	D	B		C	A	D	C
Approach Delay		19.6			4.7	33.3	
Approach LOS		B			A	C	

Intersection Summary	
Cycle Length: 140.6	
Actuated Cycle Length: 67.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 41.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Vista Murrieta HS Dwy & Clinton Keith Rd



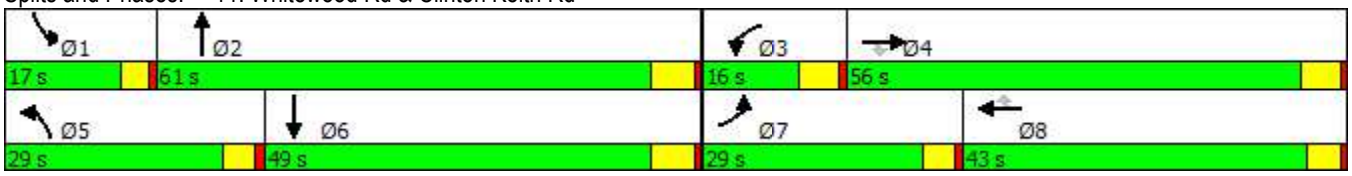
Lane Group	EBU	EBT	WBU	WBL	WBT	NBL	NBR
Protected Phases	5	2		1	6	8	
Permitted Phases			1				8
Minimum Initial (s)	6.0	10.0	6.0	6.0	10.0	6.0	6.0
Minimum Split (s)	10.6	38.4	10.6	10.6	15.4	45.6	45.6
Total Split (s)	19.6	55.4	39.6	39.6	55.4	45.6	45.6
Total Split (%)	13.9%	39.4%	28.2%	28.2%	39.4%	32.4%	32.4%
Maximum Green (s)	15.0	50.0	35.0	35.0	50.0	41.0	41.0
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	2.0	6.9	2.0	2.0	3.9	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	3.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	None	None	Min	Min
Walk Time (s)		7.0				7.0	7.0
Flash Dont Walk (s)		26.0				34.0	34.0
Pedestrian Calls (#/hr)		2				0	0
90th %ile Green (s)	6.0	33.0	35.0	35.0	62.0	8.6	8.6
90th %ile Term Code	Min	Ped	Max	Max	Hold	Gap	Gap
70th %ile Green (s)	0.0	27.9	32.3	32.3	64.8	7.6	7.6
70th %ile Term Code	Skip	Gap	Gap	Gap	Hold	Gap	Gap
50th %ile Green (s)	0.0	26.2	25.5	25.5	56.3	7.0	7.0
50th %ile Term Code	Skip	Gap	Gap	Gap	Hold	Gap	Gap
30th %ile Green (s)	0.0	21.4	18.0	18.0	44.0	6.3	6.3
30th %ile Term Code	Skip	Gap	Gap	Gap	Hold	Gap	Gap
10th %ile Green (s)	0.0	14.6	0.0	0.0	14.6	6.0	6.0
10th %ile Term Code	Skip	Gap	Skip	Skip	Hold	Min	Min

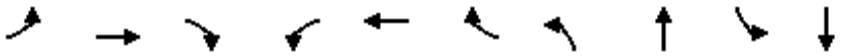
Intersection Summary
Cycle Length: 140.6
Actuated Cycle Length: 67.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 91.2
70th %ile Actuated Cycle: 82.4
50th %ile Actuated Cycle: 73.3
30th %ile Actuated Cycle: 60.3
10th %ile Actuated Cycle: 30.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	292	420	165	109	325	29	111	141	53	213
Future Volume (vph)	292	420	165	109	325	29	111	141	53	213
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	7.6	7.6	10.6	48.8	10.0	48.8
Total Split (s)	29.0	56.0	56.0	16.0	43.0	43.0	29.0	61.0	17.0	49.0
Total Split (%)	19.3%	37.3%	37.3%	10.7%	28.7%	28.7%	19.3%	40.7%	11.3%	32.7%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6	4.6	4.6	5.8	4.0	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.7	20.3	20.3	8.5	19.7	19.7	10.3	24.8	7.7	18.9
Actuated g/C Ratio	0.13	0.25	0.25	0.11	0.25	0.25	0.13	0.31	0.10	0.24
v/c Ratio	0.66	0.48	0.33	0.31	0.27	0.06	0.51	0.43	0.32	0.49
Control Delay	42.9	29.5	7.2	40.9	28.2	0.2	45.1	23.7	45.2	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	29.5	7.2	40.9	28.2	0.2	45.1	23.7	45.2	18.0
LOS	D	C	A	D	C	A	D	C	D	B
Approach Delay		29.8			29.4			30.7		21.0
Approach LOS		C			C			C		C

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 80.4	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 27.9	Intersection LOS: C
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Whitewood Rd & Clinton Keith Rd





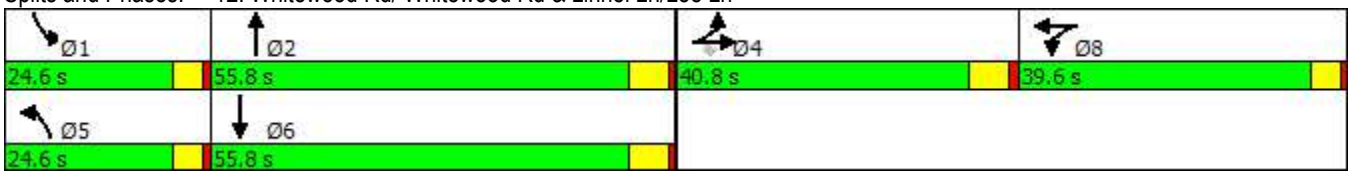
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	7.6	7.6	10.6	48.8	10.0	48.8
Total Split (s)	29.0	56.0	56.0	16.0	43.0	43.0	29.0	61.0	17.0	49.0
Total Split (%)	19.3%	37.3%	37.3%	10.7%	28.7%	28.7%	19.3%	40.7%	11.3%	32.7%
Maximum Green (s)	24.4	50.6	50.6	10.6	38.4	38.4	24.4	55.2	13.0	43.2
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	0.5	6.9	6.9	3.0	0.5	0.5	2.0	6.1	2.0	6.1
Minimum Gap (s)	0.5	3.0	3.0	3.0	0.5	0.5	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0					7.0		7.0
Flash Dont Walk (s)		19.0	19.0					36.0		36.0
Pedestrian Calls (#/hr)		0	0					0		2
90th %ile Green (s)	17.4	29.4	29.4	10.6	24.2	24.2	16.8	49.1	11.3	43.0
90th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Hold	Gap	Ped
70th %ile Green (s)	12.0	21.6	21.6	9.1	20.3	20.3	11.6	21.5	8.2	17.5
70th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Gap	Gap
50th %ile Green (s)	10.2	19.5	19.5	8.2	19.1	19.1	9.8	18.9	7.0	15.5
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Gap	Gap
30th %ile Green (s)	8.5	16.6	16.6	7.3	17.0	17.0	8.1	16.2	6.0	13.5
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Min	Gap
10th %ile Green (s)	6.6	14.3	14.3	6.3	15.6	15.6	6.2	22.1	0.0	11.3
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Skip	Gap

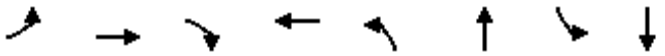
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 80.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 121
70th %ile Actuated Cycle: 81
50th %ile Actuated Cycle: 74.2
30th %ile Actuated Cycle: 66.7
10th %ile Actuated Cycle: 59.3

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	2	75	2	34	328	2	390
Future Volume (vph)	54	2	75	2	34	328	2	390
Turn Type	Split	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases	4	4		8	5	2	1	6
Permitted Phases			4					
Detector Phase	4	4	4	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Yellow Time (s)	4.8	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.6	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	12.0	12.0	12.0	6.5	6.8	25.0	6.5	22.8
Actuated g/C Ratio	0.26	0.26	0.26	0.14	0.15	0.54	0.14	0.49
v/c Ratio	0.13	0.01	0.17	0.02	0.14	0.19	0.01	0.26
Control Delay	18.4	19.0	7.1	24.8	23.9	10.1	25.0	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	19.0	7.1	24.8	23.9	10.1	25.0	12.5
LOS	B	B	A	C	C	B	C	B
Approach Delay		11.9		24.8		11.4		12.6
Approach LOS		B		C		B		B

Intersection Summary	
Cycle Length: 160.8	
Actuated Cycle Length: 46.1	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 35.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Whitewood Rd/ Whitewood Rd & Linnel Ln/Lee Ln





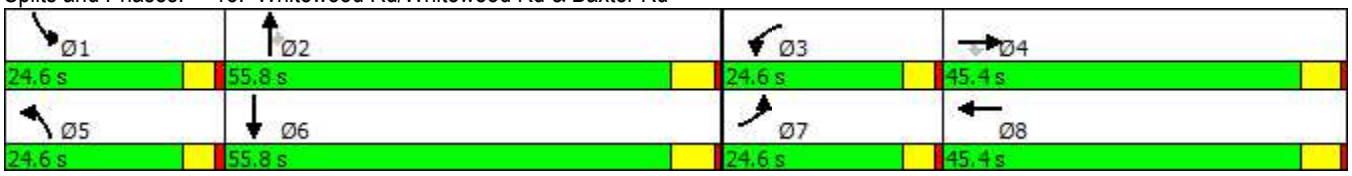
Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Protected Phases	4	4		8	5	2	1	6
Permitted Phases			4					
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Maximum Green (s)	35.0	35.0	35.0	35.0	20.0	50.0	20.0	50.0
Yellow Time (s)	4.8	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	6.9	6.9	6.9	2.0	2.0	6.1	3.0	6.1
Minimum Gap (s)	5.0	5.0	5.0	2.0	2.0	3.0	3.0	3.0
Time Before Reduce (s)	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1
Time To Reduce (s)	1.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Recall Mode	None	None	None	None	None	Min	None	Min
Walk Time (s)	7.0	7.0	7.0			7.0		7.0
Flash Dont Walk (s)	19.0	19.0	19.0			10.0		15.0
Pedestrian Calls (#/hr)	0	0	0			0		0
90th %ile Green (s)	14.0	14.0	14.0	6.0	7.8	22.8	6.0	21.0
90th %ile Term Code	Gap	Gap	Gap	Min	Gap	Hold	Min	Gap
70th %ile Green (s)	12.0	12.0	12.0	0.0	6.3	27.6	0.0	16.7
70th %ile Term Code	Gap	Gap	Gap	Skip	Gap	Hold	Skip	Gap
50th %ile Green (s)	11.1	11.1	11.1	0.0	0.0	14.5	0.0	14.5
50th %ile Term Code	Gap	Gap	Gap	Skip	Skip	Hold	Skip	Gap
30th %ile Green (s)	10.5	10.5	10.5	0.0	0.0	18.6	0.0	18.6
30th %ile Term Code	Gap	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	26.0	0.0	26.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell

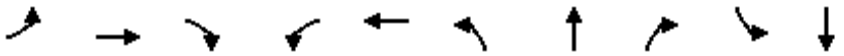
Intersection Summary
Cycle Length: 160.8
Actuated Cycle Length: 46.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 69.6
70th %ile Actuated Cycle: 51.2
50th %ile Actuated Cycle: 37.2
30th %ile Actuated Cycle: 40.7
10th %ile Actuated Cycle: 31.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	4	3	52	7	6	56	310	5	8	355
Future Volume (vph)	4	3	52	7	6	56	310	5	8	355
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	4.6	5.4	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	7.3	14.6	14.6	7.3	14.6	8.0	34.6	34.6	7.3	28.9
Actuated g/C Ratio	0.14	0.29	0.29	0.14	0.29	0.16	0.68	0.68	0.14	0.57
v/c Ratio	0.02	0.01	0.11	0.03	0.02	0.22	0.26	0.00	0.03	0.19
Control Delay	32.8	18.7	2.8	32.1	13.3	29.5	12.2	0.0	32.1	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	18.7	2.8	32.1	13.3	29.5	12.2	0.0	32.1	15.1
LOS	C	B	A	C	B	C	B	A	C	B
Approach Delay		5.4			19.8		14.6			15.5
Approach LOS		A			B		B			B

Intersection Summary	
Cycle Length: 150.4	
Actuated Cycle Length: 51	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 43.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: Whitewood Rd/Whitewood Rd & Baxter Rd





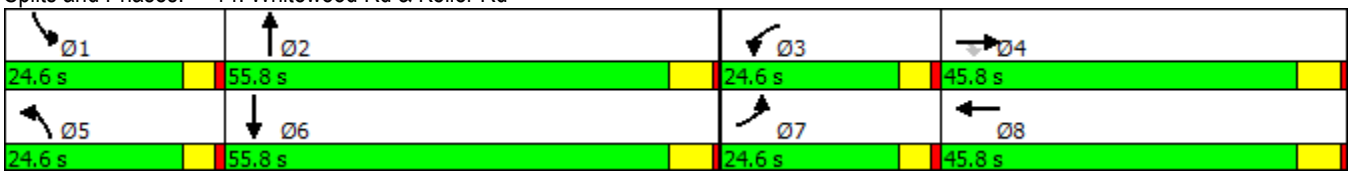
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		28.0	28.0		28.0		25.0	25.0		25.0
Pedestrian Calls (#/hr)		0	0		1		0	0		1
90th %ile Green (s)	6.0	35.0	35.0	6.0	35.0	10.9	36.8	36.8	6.1	32.0
90th %ile Term Code	Min	Hold	Hold	Min	Ped	Gap	Hold	Hold	Gap	Ped
70th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	6.9	23.6	23.6	0.0	12.1
70th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap
50th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	6.2	22.1	22.1	0.0	11.3
50th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.9	25.9	0.0	25.9
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Dwell	Skip	Dwell

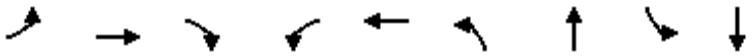
Intersection Summary
Cycle Length: 150.4
Actuated Cycle Length: 51
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 104.3
70th %ile Actuated Cycle: 44.8
50th %ile Actuated Cycle: 43.3
30th %ile Actuated Cycle: 31.7
10th %ile Actuated Cycle: 30.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	10	16	13	10	24	235	7	286
Future Volume (vph)	21	10	16	13	10	24	235	7	286
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.9	14.9	14.9	7.8	14.8	8.0	34.3	7.8	34.2
Actuated g/C Ratio	0.17	0.33	0.33	0.17	0.32	0.18	0.75	0.17	0.75
v/c Ratio	0.08	0.02	0.03	0.05	0.02	0.09	0.10	0.03	0.13
Control Delay	27.9	16.9	0.1	28.5	13.4	27.6	9.0	29.3	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	16.9	0.1	28.5	13.4	27.6	9.0	29.3	9.4
LOS	C	B	A	C	B	C	A	C	A
Approach Delay		16.2			19.9		10.7		9.8
Approach LOS		B			B		B		A

Intersection Summary	
Cycle Length: 150.8	
Actuated Cycle Length: 45.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.13	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 36.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Whitewood Rd & Keller Rd





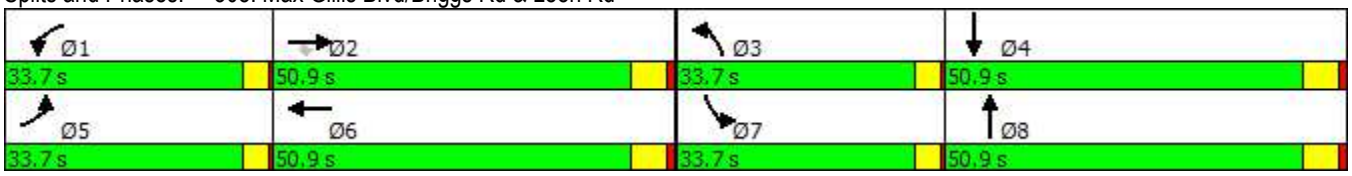
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		32.0		32.0
Pedestrian Calls (#/hr)		1	1		0		0		1
90th %ile Green (s)	7.8	32.0	32.0	6.7	30.9	8.1	41.1	6.0	39.0
90th %ile Term Code	Gap	Ped	Ped	Gap	Hold	Gap	Hold	Min	Ped
70th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	0.0	12.8	0.0	12.8
70th %ile Term Code	Skip	Min	Min	Skip	Hold	Skip	Hold	Skip	Gap
50th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	20.1	0.0	20.1
50th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell

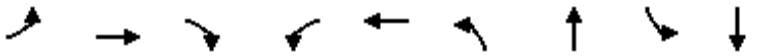
Intersection Summary
Cycle Length: 150.8
Actuated Cycle Length: 45.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 106.6
70th %ile Actuated Cycle: 34.4
50th %ile Actuated Cycle: 25.9
30th %ile Actuated Cycle: 30.8
10th %ile Actuated Cycle: 30.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	61	159	438	111	115	314	212	7	287
Future Volume (vph)	61	159	438	111	115	314	212	7	287
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.7	5.9	5.9	3.7	5.9	3.7	5.9	3.7	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Act Effct Green (s)	6.0	12.6	12.6	7.1	16.0	11.6	29.5	5.4	15.0
Actuated g/C Ratio	0.09	0.19	0.19	0.11	0.24	0.17	0.44	0.08	0.22
v/c Ratio	0.21	0.25	0.69	0.32	0.14	0.56	0.22	0.03	0.48
Control Delay	36.2	25.4	8.9	35.3	23.5	31.9	11.6	38.9	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	25.4	8.9	35.3	23.5	31.9	11.6	38.9	24.8
LOS	D	C	A	D	C	C	B	D	C
Approach Delay		15.4			29.3		21.7		25.1
Approach LOS		B			C		C		C

Intersection Summary	
Cycle Length: 169.2	
Actuated Cycle Length: 66.9	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 54.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 308: Max Gillis Blvd/Briggs Rd & Leon Rd





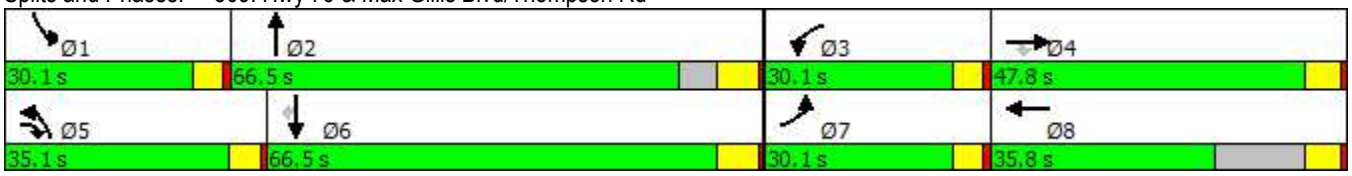
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Maximum Green (s)	30.0	45.0	45.0	30.0	45.0	30.0	45.0	30.0	45.0
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	1.5	3.0	1.5	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		23.0	23.0		23.0		23.0		23.0
Pedestrian Calls (#/hr)		1	1		0		0		2
90th %ile Green (s)	7.6	30.0	30.0	9.9	32.3	17.7	42.7	5.0	30.0
90th %ile Term Code	Gap	Ped	Ped	Gap	Hold	Gap	Hold	Min	Ped
70th %ile Green (s)	6.0	11.9	11.9	7.5	13.4	12.5	30.9	0.0	14.7
70th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
50th %ile Green (s)	5.4	9.9	9.9	6.6	11.1	10.7	27.2	0.0	12.8
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
30th %ile Green (s)	5.0	9.0	9.0	5.8	9.8	9.4	24.4	0.0	11.3
30th %ile Term Code	Min	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
10th %ile Green (s)	0.0	7.0	7.0	5.0	15.7	7.6	20.7	0.0	9.4
10th %ile Term Code	Skip	Gap	Gap	Min	Hold	Gap	Hold	Skip	Gap

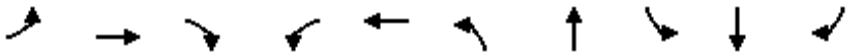
Intersection Summary
Cycle Length: 169.2
Actuated Cycle Length: 66.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 106.8
70th %ile Actuated Cycle: 65.8
50th %ile Actuated Cycle: 59.2
30th %ile Actuated Cycle: 54.7
10th %ile Actuated Cycle: 48.2

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	76	232	481	132	189	385	905	28	997	78
Future Volume (vph)	76	232	481	132	189	385	905	28	997	78
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Detector Phase	7	4	5	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.1	5.1	5.8	5.1	6.5	5.1	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	11.3	25.2	56.7	16.3	30.1	30.9	77.8	7.2	49.1	49.1
Actuated g/C Ratio	0.08	0.17	0.39	0.11	0.21	0.21	0.54	0.05	0.34	0.34
v/c Ratio	0.58	0.75	0.75	0.70	0.57	1.07	0.59	0.33	0.87	0.14
Control Delay	85.6	73.2	37.1	83.5	57.8	120.1	27.4	84.1	54.7	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.6	73.2	37.1	83.5	57.8	120.1	27.4	84.1	54.7	8.6
LOS	F	E	D	F	E	F	C	F	D	A
Approach Delay		52.4			67.7		52.3		52.1	
Approach LOS		D			E		D		D	

Intersection Summary	
Cycle Length: 179.5	
Actuated Cycle Length: 144.5	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 53.7	Intersection LOS: D
Intersection Capacity Utilization 90.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 309: Hwy 79 & Max Gillis Blvd/Thompson Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Maximum Green (s)	25.0	42.0	30.0	25.0	30.0	30.0	60.0	25.0	60.0	60.0
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0					7.0		5.0	5.0
Flash Dont Walk (s)		35.0					25.0		36.0	36.0
Pedestrian Calls (#/hr)		3					0		0	0
90th %ile Green (s)	17.6	42.0	30.0	25.0	49.4	30.0	79.5	10.5	60.0	60.0
90th %ile Term Code	Gap	Ped	Max	Max	Hold	Max	Hold	Gap	Max	Max
70th %ile Green (s)	13.6	28.6	30.0	19.5	34.5	30.0	80.1	8.3	58.4	58.4
70th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Gap	Gap	Gap
50th %ile Green (s)	11.4	24.5	30.0	16.4	29.5	30.0	73.8	7.0	50.8	50.8
50th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Gap	Gap	Gap
30th %ile Green (s)	9.2	20.0	30.0	13.3	24.1	30.0	78.4	0.0	43.3	43.3
30th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Skip	Gap	Gap
10th %ile Green (s)	6.5	14.6	30.0	9.4	17.5	30.0	69.2	0.0	34.1	34.1
10th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Skip	Gap	Gap

Intersection Summary
Cycle Length: 179.5
Actuated Cycle Length: 144.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 179.5
70th %ile Actuated Cycle: 159
50th %ile Actuated Cycle: 144.2
30th %ile Actuated Cycle: 129.1
10th %ile Actuated Cycle: 110.6

2021 Project Completion PM with Creighton Avenue Access

Timings
1: Nutmeg St & Clinton Keith Rd

11/05/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	42	805	381	748	64	48	359	116	47
Future Volume (vph)	42	805	381	748	64	48	359	116	47
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	13.6	47.3	43.0	76.7	42.9	42.9	42.9	42.9	42.9
Total Split (%)	10.2%	35.5%	32.3%	57.6%	32.2%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	7.5	36.0	29.0	60.7	17.4	17.4	17.4	17.4	17.4
Actuated g/C Ratio	0.08	0.36	0.29	0.61	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.34	0.77	0.82	0.46	0.30	0.16	0.66	0.54	0.24
Control Delay	58.5	34.7	49.3	12.9	41.6	38.2	9.6	48.5	39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.5	34.7	49.3	12.9	41.6	38.2	9.6	48.5	39.5
LOS	E	C	D	B	D	D	A	D	D
Approach Delay		35.8		23.9		16.9			45.1
Approach LOS		D		C		B			D

Intersection Summary	
Cycle Length: 133.2	
Actuated Cycle Length: 99.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 27.9	Intersection LOS: C
Intersection Capacity Utilization 72.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Nutmeg St & Clinton Keith Rd

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	13.6	47.3	43.0	76.7	42.9	42.9	42.9	42.9	42.9
Total Split (%)	10.2%	35.5%	32.3%	57.6%	32.2%	32.2%	32.2%	32.2%	32.2%
Maximum Green (s)	9.0	41.5	38.4	70.9	37.1	37.1	37.1	37.1	37.1
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	3.9	2.0	3.9	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		22.0		21.0	30.0	30.0	30.0		
Pedestrian Calls (#/hr)		4		0	2	2	2		
90th %ile Green (s)	9.0	41.5	38.4	70.9	37.0	37.0	37.0	37.0	37.0
90th %ile Term Code	Max	Max	Max	Hold	Ped	Ped	Ped	Hold	Hold
70th %ile Green (s)	8.5	41.5	35.1	68.1	18.6	18.6	18.6	18.6	18.6
70th %ile Term Code	Gap	Max	Gap	Hold	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.2	38.7	29.6	61.1	15.5	15.5	15.5	15.5	15.5
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.0	32.7	24.8	51.5	12.5	12.5	12.5	12.5	12.5
30th %ile Term Code	Min	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	24.0	17.9	46.5	8.6	8.6	8.6	8.6	8.6
10th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 133.2
Actuated Cycle Length: 99.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 133.1
70th %ile Actuated Cycle: 111.4
50th %ile Actuated Cycle: 100
30th %ile Actuated Cycle: 86.2
10th %ile Actuated Cycle: 66.7

Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Lane Configurations						
Traffic Volume (vph)	1138	458	1051	172	798	
Future Volume (vph)	1138	458	1051	172	798	
Turn Type	NA	Prot	NA	Prot	Perm	
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Detector Phase	2	1	6	8	8	
Switch Phase						
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	64.4	43.0	107.4	33.8	33.8	32.6
Total Split (%)	37.1%	24.7%	61.8%	19.4%	19.4%	19%
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	4.6	5.8	5.8	5.8	
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	59.3	38.9	102.8	21.7	21.7	
Actuated g/C Ratio	0.42	0.27	0.73	0.15	0.15	
v/c Ratio	0.97	1.03	0.45	0.90dr	0.74	
Control Delay	57.1	97.6	10.7	43.5	13.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.1	97.6	10.7	43.5	13.4	
LOS	E	F	B	D	B	
Approach Delay	57.1		37.1	31.1		
Approach LOS	E		D	C		

Intersection Summary	
Cycle Length: 173.8	
Actuated Cycle Length: 141.6	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 42.3	Intersection LOS: D
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 2: 2 California Oaks Rd & Clinton Keith Rd

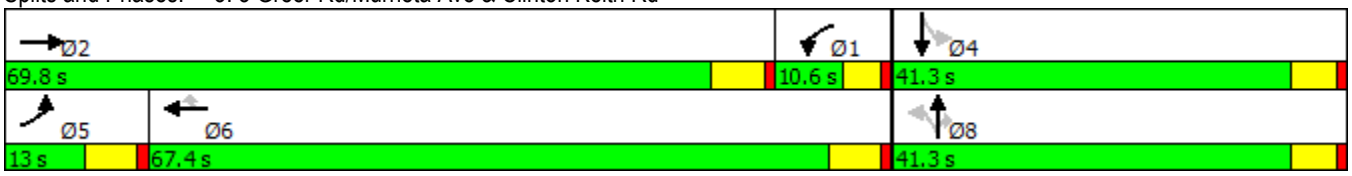
Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	64.4	43.0	107.4	33.8	33.8	32.6
Total Split (%)	37.1%	24.7%	61.8%	19.4%	19.4%	19%
Maximum Green (s)	58.6	38.4	101.6	28.0	28.0	28.0
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Vehicle Extension (s)	3.8	3.0	3.8	3.8	3.8	0.2
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	0.2
Time Before Reduce (s)	1.0	0.0	1.0	1.0	1.0	0.0
Time To Reduce (s)	0.1	0.0	0.1	0.1	0.1	0.0
Recall Mode	Min	None	Min	None	None	None
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	20.0					21.0
Pedestrian Calls (#/hr)	3					2
90th %ile Green (s)	58.6	38.4	101.6	28.0	28.0	28.0
90th %ile Term Code	Max	Max	Hold	Max	Max	Ped
70th %ile Green (s)	58.6	38.4	101.6	26.0	26.0	0.0
70th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
50th %ile Green (s)	58.6	38.4	101.6	21.9	21.9	0.0
50th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
30th %ile Green (s)	58.6	38.4	101.6	18.8	18.8	0.0
30th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
10th %ile Green (s)	58.6	38.4	101.6	14.7	14.7	0.0
10th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip

Intersection Summary
Cycle Length: 173.8
Actuated Cycle Length: 141.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 173.8
70th %ile Actuated Cycle: 139.2
50th %ile Actuated Cycle: 135.1
30th %ile Actuated Cycle: 132
10th %ile Actuated Cycle: 127.9

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	73	1806	57	1481	131	39	1	41	145	0
Future Volume (vph)	73	1806	57	1481	131	39	1	41	145	0
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6			8			4
Permitted Phases					6	8		8	4	
Detector Phase	5	2	1	6	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.8	30.8	10.6	33.8	33.8	41.3	41.3	41.3	23.3	23.3
Total Split (s)	13.0	69.8	10.6	67.4	67.4	41.3	41.3	41.3	41.3	41.3
Total Split (%)	10.7%	57.4%	8.7%	55.4%	55.4%	33.9%	33.9%	33.9%	33.9%	33.9%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.3	5.3	5.3	5.3	5.3
Lead/Lag	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	7.0	66.6	6.0	62.2	62.2	16.6	16.6	16.6	16.6	16.6
Actuated g/C Ratio	0.07	0.65	0.06	0.61	0.61	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.65	0.89	0.59	0.74	0.15	0.19	0.00	0.12	0.69	0.12
Control Delay	73.1	23.1	71.8	18.1	5.5	38.5	34.0	0.7	56.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.1	23.1	71.8	18.1	5.5	38.5	34.0	0.7	56.2	0.7
LOS	E	C	E	B	A	D	C	A	E	A
Approach Delay		25.0		19.0			19.1			44.3
Approach LOS		C		B			B			D

Intersection Summary	
Cycle Length: 121.7	
Actuated Cycle Length: 102.7	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.2	Intersection LOS: C
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: 3 Greer Rd/Murrieta Ave & Clinton Keith Rd



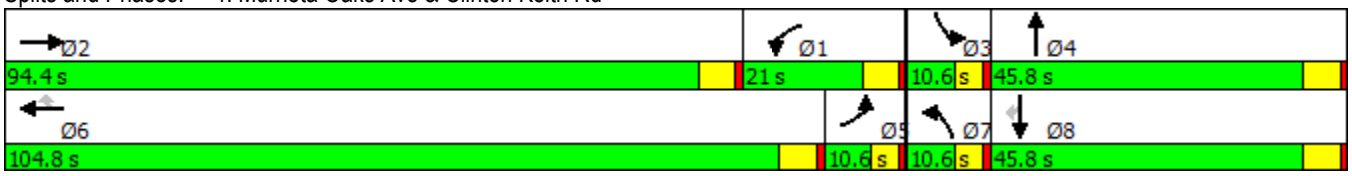
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	5	2	1	6			8			4
Permitted Phases					6	8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.8	30.8	10.6	33.8	33.8	41.3	41.3	41.3	23.3	23.3
Total Split (s)	13.0	69.8	10.6	67.4	67.4	41.3	41.3	41.3	41.3	41.3
Total Split (%)	10.7%	57.4%	8.7%	55.4%	55.4%	33.9%	33.9%	33.9%	33.9%	33.9%
Maximum Green (s)	7.2	64.0	6.0	61.6	61.6	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		18.0		21.0	21.0	29.0	29.0	29.0		
Pedestrian Calls (#/hr)		1		1	1	0	0	0		
90th %ile Green (s)	7.2	64.0	6.0	61.6	61.6	23.9	23.9	23.9	23.9	23.9
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
70th %ile Green (s)	7.2	64.0	6.0	61.6	61.6	19.4	19.4	19.4	19.4	19.4
70th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.2	64.0	6.0	61.6	61.6	16.5	16.5	16.5	16.5	16.5
50th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.2	64.0	6.0	61.6	61.6	13.7	13.7	13.7	13.7	13.7
30th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	6.1	75.9	0.0	64.0	64.0	10.1	10.1	10.1	10.1	10.1
10th %ile Term Code	Gap	Dwell	Skip	Dwell	Dwell	Hold	Hold	Hold	Gap	Gap

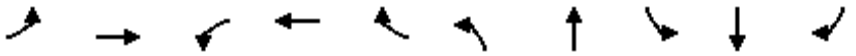
Intersection Summary
Cycle Length: 121.7
Actuated Cycle Length: 102.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 109.6
70th %ile Actuated Cycle: 105.1
50th %ile Actuated Cycle: 102.2
30th %ile Actuated Cycle: 99.4
10th %ile Actuated Cycle: 97.1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	14	1972	167	1666	3	22	2	7	1	7
Future Volume (vph)	14	1972	167	1666	3	22	2	7	1	7
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Detector Phase	5	2	1	6	6	7	4	3	8	8
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	11.8	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	10.6	94.4	21.0	104.8	104.8	10.6	45.8	10.6	45.8	45.8
Total Split (%)	6.2%	54.9%	12.2%	61.0%	61.0%	6.2%	26.7%	6.2%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.1	89.7	15.4	107.1	107.1	6.7	14.9	6.1	12.3	12.3
Actuated g/C Ratio	0.04	0.64	0.11	0.77	0.77	0.05	0.11	0.04	0.09	0.09
v/c Ratio	0.19	0.95	0.91	0.45	0.00	0.28	0.49	0.05	0.01	0.03
Control Delay	76.4	34.3	105.9	9.3	0.0	77.9	13.7	72.0	56.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.4	34.3	105.9	9.3	0.0	77.9	13.7	72.0	56.0	0.3
LOS	E	C	F	A	A	E	B	E	E	A
Approach Delay		34.6		18.1			22.7		37.3	
Approach LOS		C		B			C		D	

Intersection Summary	
Cycle Length: 171.8	
Actuated Cycle Length: 139.3	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 26.6	Intersection LOS: C
Intersection Capacity Utilization 87.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Murrieta Oaks Ave & Clinton Keith Rd





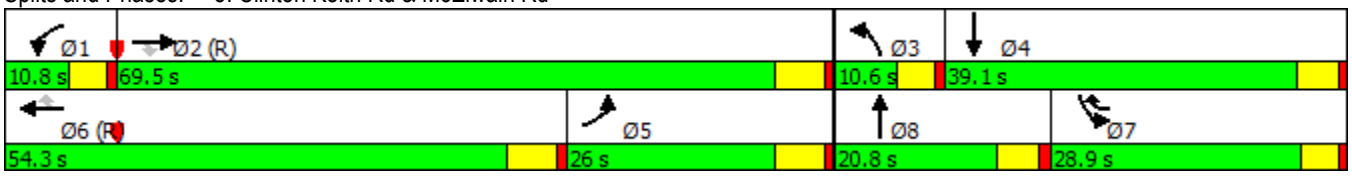
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	11.8	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	10.6	94.4	21.0	104.8	104.8	10.6	45.8	10.6	45.8	45.8
Total Split (%)	6.2%	54.9%	12.2%	61.0%	61.0%	6.2%	26.7%	6.2%	26.7%	26.7%
Maximum Green (s)	6.0	88.6	15.2	99.0	99.0	6.0	40.0	6.0	40.0	40.0
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	2.0	5.2	3.0	3.2	3.2
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.2	3.2
Time Before Reduce (s)	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		13.0		26.0	26.0		29.0		33.0	33.0
Pedestrian Calls (#/hr)		1		2	2		0		2	2
90th %ile Green (s)	6.0	88.6	15.2	99.0	99.0	6.0	40.0	6.0	40.0	40.0
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Max	Hold	Max	Ped	Ped
70th %ile Green (s)	6.0	88.6	15.2	99.0	99.0	6.0	16.6	0.0	6.0	6.0
70th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Max	Hold	Skip	Min	Min
50th %ile Green (s)	0.0	88.6	15.2	109.6	109.6	9.0	7.8	0.0	0.0	0.0
50th %ile Term Code	Skip	MaxR	Max	Hold	Hold	Hold	Gap	Skip	Skip	Skip
30th %ile Green (s)	0.0	88.6	15.2	109.6	109.6	0.0	7.7	0.0	7.7	7.7
30th %ile Term Code	Skip	MaxR	Max	Hold	Hold	Skip	Gap	Skip	Hold	Hold
10th %ile Green (s)	0.0	88.6	15.2	109.6	109.6	0.0	7.7	0.0	7.7	7.7
10th %ile Term Code	Skip	MaxR	Max	Hold	Hold	Skip	Gap	Skip	Hold	Hold

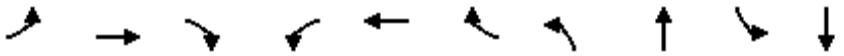
Intersection Summary
Cycle Length: 171.8
Actuated Cycle Length: 139.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 171.8
70th %ile Actuated Cycle: 137.8
50th %ile Actuated Cycle: 129
30th %ile Actuated Cycle: 128.9
10th %ile Actuated Cycle: 128.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	369	1741	29	25	1474	255	16	11	395	18
Future Volume (vph)	369	1741	29	25	1474	255	16	11	395	18
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	11.8	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	26.0	69.5	69.5	10.8	54.3	28.9	10.6	20.8	28.9	39.1
Total Split (%)	20.0%	53.5%	53.5%	8.3%	41.8%	22.2%	8.2%	16.0%	22.2%	30.1%
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	20.2	78.0	78.0	6.2	58.5	87.2	6.0	10.1	22.9	30.4
Actuated g/C Ratio	0.16	0.60	0.60	0.05	0.45	0.67	0.05	0.08	0.18	0.23
v/c Ratio	0.76	0.63	0.03	0.33	0.72	0.25	0.22	0.34	0.73	0.60
Control Delay	62.8	20.9	0.1	72.9	22.8	1.9	66.2	26.6	57.2	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	20.9	0.1	72.9	22.9	1.9	66.2	26.6	57.2	9.1
LOS	E	C	A	E	C	A	E	C	E	A
Approach Delay		27.9			20.6			36.0		34.5
Approach LOS		C			C			D		C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Clinton Keith Rd & McElwain Rd





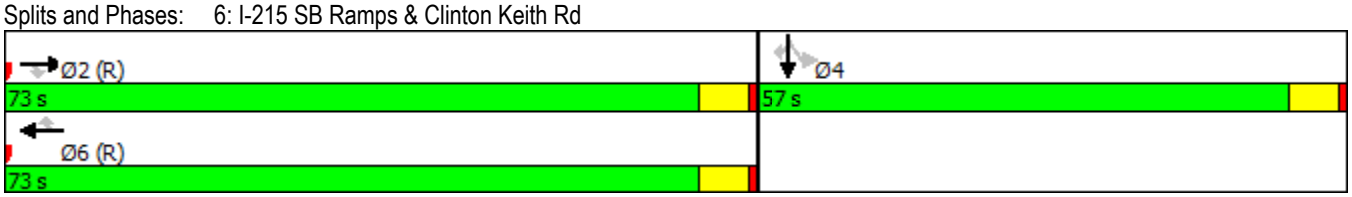
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	11.8	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	26.0	69.5	69.5	10.8	54.3	28.9	10.6	20.8	28.9	39.1
Total Split (%)	20.0%	53.5%	53.5%	8.3%	41.8%	22.2%	8.2%	16.0%	22.2%	30.1%
Maximum Green (s)	20.2	63.7	63.7	6.2	48.5	24.3	6.0	15.7	24.3	34.0
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	5.2	2.0	5.2	2.0	3.0	3.0	2.0	3.6
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		15.0	15.0		22.0					27.0
Pedestrian Calls (#/hr)		13	13		0					16
90th %ile Green (s)	20.2	63.7	63.7	6.2	48.5	29.5	6.0	10.5	29.5	34.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Hold	Max	Gap	Hold	Ped
70th %ile Green (s)	20.2	63.7	63.7	6.2	48.5	30.0	6.0	10.0	30.0	34.0
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Hold	Max	Min	Hold	Ped
50th %ile Green (s)	20.2	72.6	72.6	6.4	57.6	20.9	0.0	10.0	20.9	35.5
50th %ile Term Code	Hold	Coord	Coord	Gap	Coord	Gap	Skip	Min	Gap	Hold
30th %ile Green (s)	20.2	85.8	85.8	0.0	59.8	18.7	0.0	10.0	18.7	33.3
30th %ile Term Code	Hold	Coord	Coord	Skip	Coord	Gap	Skip	Min	Gap	Hold
10th %ile Green (s)	20.2	104.0	104.0	0.0	78.0	15.6	0.0	0.0	15.6	15.1
10th %ile Term Code	Hold	Coord	Coord	Skip	Coord	Gap	Skip	Skip	Gap	Hold

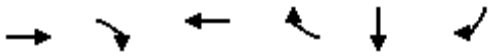
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1718	464	1219	392	1	691
Future Volume (vph)	1718	464	1219	392	1	691
Turn Type	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	73.0	73.0	73.0	73.0	57.0	57.0
Total Split (%)	56.2%	56.2%	56.2%	56.2%	43.8%	43.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	80.6	80.6	80.6	80.6	37.8	37.8
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.29	0.29
v/c Ratio	0.57	0.50	0.40	0.41	0.79	0.83
Control Delay	8.7	8.8	8.8	9.7	53.2	47.0
Queue Delay	0.1	0.3	0.0	0.0	0.0	0.0
Total Delay	8.8	9.0	8.8	9.7	53.2	47.0
LOS	A	A	A	A	D	D
Approach Delay	8.9		9.0		49.3	
Approach LOS	A		A		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 128 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 17.9	Intersection LOS: B
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: I-215 SB Ramps & Clinton Keith Rd





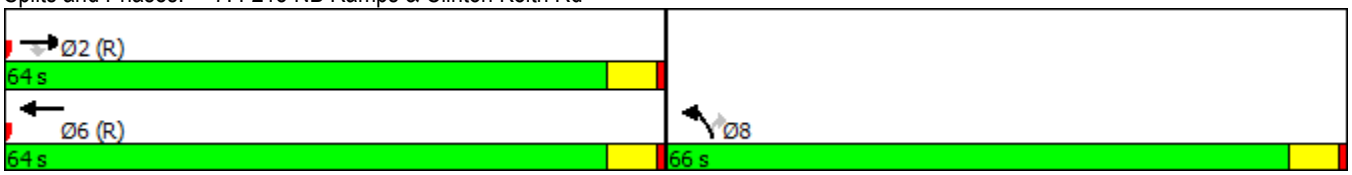
Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	73.0	73.0	73.0	73.0	57.0	57.0
Total Split (%)	56.2%	56.2%	56.2%	56.2%	43.8%	43.8%
Maximum Green (s)	67.2	67.2	67.2	67.2	51.2	51.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0				
Flash Dont Walk (s)	20.0	20.0				
Pedestrian Calls (#/hr)	6	6				
90th %ile Green (s)	71.1	71.1	71.1	71.1	47.3	47.3
90th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
70th %ile Green (s)	76.6	76.6	76.6	76.6	41.8	41.8
70th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
50th %ile Green (s)	80.7	80.7	80.7	80.7	37.7	37.7
50th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	84.2	84.2	84.2	84.2	34.2	34.2
30th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	90.2	90.2	90.2	90.2	28.2	28.2
10th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 128 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1423	647	1183	440	609
Future Volume (vph)	1423	647	1183	440	609
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	2		6	8	
Permitted Phases		2			8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	64.0	64.0	64.0	66.0	66.0
Total Split (%)	49.2%	49.2%	49.2%	50.8%	50.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	66.4	66.4	66.4	52.0	52.0
Actuated g/C Ratio	0.51	0.51	0.51	0.40	0.40
v/c Ratio	0.59	0.63	0.49	0.85	0.89
Control Delay	15.8	3.8	6.2	46.1	52.4
Queue Delay	0.1	0.2	0.1	0.0	0.0
Total Delay	15.9	4.0	6.3	46.1	52.4
LOS	B	A	A	D	D
Approach Delay	12.2		6.3	49.1	
Approach LOS	B		A	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 118 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 19.6	Intersection LOS: B
Intersection Capacity Utilization 78.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: I-215 NB Ramps & Clinton Keith Rd



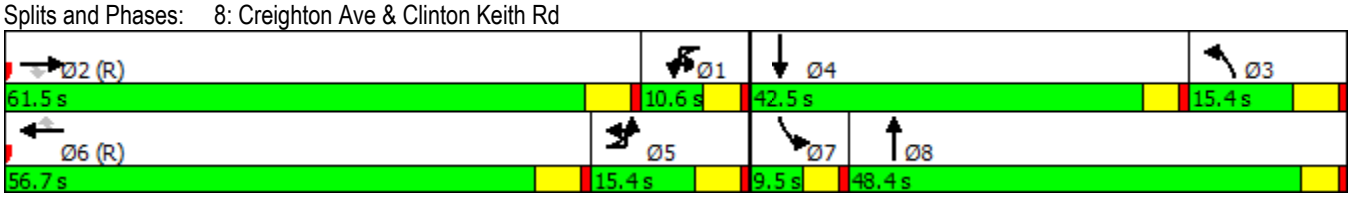
Lane Group	EBT	EBR	WBT	NBL	NBR
Protected Phases	2		6	8	
Permitted Phases		2			8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	64.0	64.0	64.0	66.0	66.0
Total Split (%)	49.2%	49.2%	49.2%	50.8%	50.8%
Maximum Green (s)	58.2	58.2	58.2	60.2	60.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.5	2.5
Minimum Gap (s)	2.0	2.0	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			
Flash Dont Walk (s)	31.0	31.0			
Pedestrian Calls (#/hr)	20	20			
90th %ile Green (s)	58.2	58.2	58.2	60.2	60.2
90th %ile Term Code	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	60.2	60.2	60.2	58.2	58.2
70th %ile Term Code	Coord	Coord	Coord	Gap	Gap
50th %ile Green (s)	64.8	64.8	64.8	53.6	53.6
50th %ile Term Code	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	70.0	70.0	70.0	48.4	48.4
30th %ile Term Code	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	79.0	79.0	79.0	39.4	39.4
10th %ile Term Code	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 118 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø7
Lane Configurations									
Traffic Volume (vph)	43	1924	84	39	1365	55	0	0	
Future Volume (vph)	43	1924	84	39	1365	55	0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	NA	
Protected Phases	5	2		1	6	3	8	4	7
Permitted Phases			2						
Detector Phase	5	2	2	1	6	3	8	4	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	15.4	46.6	42.5	9.5
Total Split (s)	15.4	61.5	61.5	10.6	56.7	15.4	48.4	42.5	9.5
Total Split (%)	11.8%	47.3%	47.3%	8.2%	43.6%	11.8%	37.2%	32.7%	7%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4	4.6	4.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	10.0	90.1	90.1	6.0	86.3	10.3	21.7	12.0	
Actuated g/C Ratio	0.08	0.69	0.69	0.05	0.66	0.08	0.17	0.09	
v/c Ratio	0.35	0.60	0.09	0.52	0.45	0.44	0.07	0.15	
Control Delay	53.1	11.0	0.2	68.9	6.3	67.3	0.4	1.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.1	11.0	0.2	68.9	6.3	67.3	0.4	1.1	
LOS	D	B	A	E	A	E	A	A	
Approach Delay		11.5			8.1		46.3	1.1	
Approach LOS		B			A		D	A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 116 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd



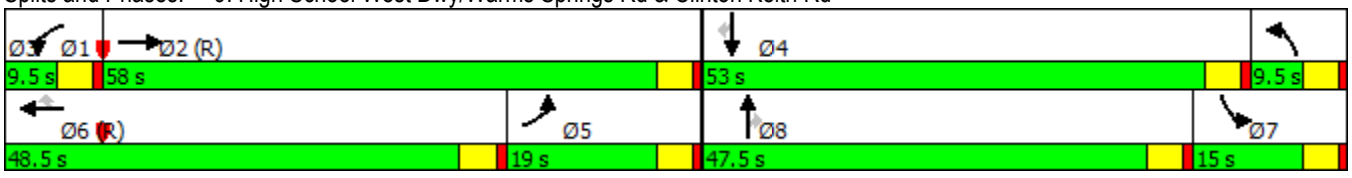
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø7
Protected Phases	5	2		1	6	3	8	4	7
Permitted Phases			2						
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	15.4	46.6	42.5	9.5
Total Split (s)	15.4	61.5	61.5	10.6	56.7	15.4	48.4	42.5	9.5
Total Split (%)	11.8%	47.3%	47.3%	8.2%	43.6%	11.8%	37.2%	32.7%	7%
Maximum Green (s)	10.0	56.1	56.1	6.0	51.3	10.0	43.8	38.0	5.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	3.0	2.5	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	3.0	2.5	3.0	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None
Walk Time (s)		7.0	7.0		7.0		7.0	7.0	
Flash Dont Walk (s)		16.0	16.0		16.0		35.0	31.0	
Pedestrian Calls (#/hr)		17	17		2		2	2	
90th %ile Green (s)	10.0	56.1	56.1	6.0	51.3	10.0	53.3	38.0	0.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Max	Hold	Ped	Skip
70th %ile Green (s)	10.0	87.2	87.2	6.0	82.4	11.4	22.2	5.5	0.0
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Gap	Hold	Gap	Skip
50th %ile Green (s)	10.0	88.6	88.6	6.0	83.8	10.0	20.8	5.5	0.0
50th %ile Term Code	Max	Coord	Coord	Max	Coord	Min	Hold	Gap	Skip
30th %ile Green (s)	10.0	88.6	88.6	6.0	83.8	10.0	0.0	5.5	0.0
30th %ile Term Code	Max	Coord	Coord	Max	Coord	Min	Skip	Gap	Skip
10th %ile Green (s)	0.0	124.6	124.6	0.0	124.6	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Coord	Coord	Skip	Coord	Skip	Skip	Skip	Skip

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 116 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Lane Configurations									
Traffic Volume (vph)	485	1415	967	227	21	326	434		
Future Volume (vph)	485	1415	967	227	21	326	434		
Turn Type	Prot	NA	NA	Perm	Perm	Prot	Perm		
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Detector Phase	5	2	6	6	8	7	4		
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Act Effct Green (s)	14.5	80.9	61.9	61.9	12.4	23.2	40.1		
Actuated g/C Ratio	0.11	0.62	0.48	0.48	0.10	0.18	0.31		
v/c Ratio	1.41	0.52	0.45	0.29	0.08	0.59	0.37		
Control Delay	230.5	2.4	18.0	1.7	0.5	54.4	0.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	230.5	2.4	18.0	1.7	0.5	54.4	0.8		
LOS	F	A	B	A	A	D	A		
Approach Delay		59.1	14.9						
Approach LOS		E	B						

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.41	
Intersection Signal Delay: 38.5	Intersection LOS: D
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: High School West Dwy/Warms Springs Rd & Clinton Keith Rd



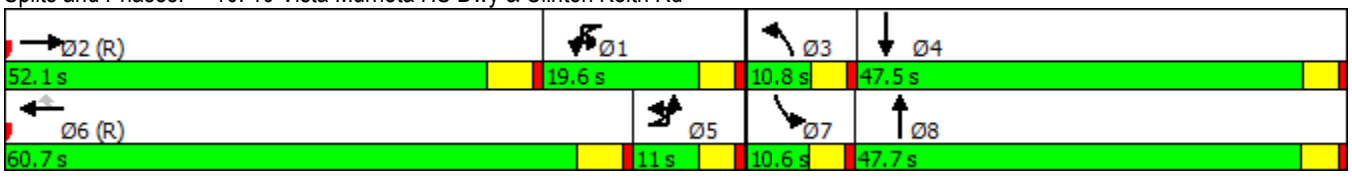
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Maximum Green (s)	14.5	53.5	44.0	44.0	43.0	10.5	48.5	5.0	5.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Walk Time (s)		7.0	7.0	7.0	7.0		7.0		
Flash Dont Walk (s)		24.0	31.0	31.0	33.0		30.0		
Pedestrian Calls (#/hr)		2	2	2	2		2		
90th %ile Green (s)	14.5	63.0	44.0	44.0	40.0	13.5	58.0	0.0	0.0
90th %ile Term Code	Max	Coord	Coord	Coord	Ped	Max	Hold	Skip	Skip
70th %ile Green (s)	14.5	88.4	69.4	69.4	5.5	22.6	32.6	0.0	0.0
70th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
50th %ile Green (s)	14.5	87.9	68.9	68.9	5.5	23.1	33.1	0.0	0.0
50th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
30th %ile Green (s)	14.5	85.9	66.9	66.9	5.5	25.1	35.1	0.0	0.0
30th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
10th %ile Green (s)	14.5	79.1	60.1	60.1	5.5	31.9	41.9	0.0	0.0
10th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	27	1631	181	1056	25	121	0	24	0
Future Volume (vph)	27	1631	181	1056	25	121	0	24	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	5.0
Minimum Split (s)	10.6	38.4	10.6	48.4	48.4	10.6	45.6	10.6	47.5
Total Split (s)	11.0	52.1	19.6	60.7	60.7	10.8	47.7	10.6	47.5
Total Split (%)	8.5%	40.1%	15.1%	46.7%	46.7%	8.3%	36.7%	8.2%	36.5%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.6	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	4.6	4.6	4.5
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	6.2	81.2	15.0	94.2	94.2	6.2	12.9	6.0	12.5
Actuated g/C Ratio	0.05	0.62	0.12	0.72	0.72	0.05	0.10	0.05	0.10
v/c Ratio	0.34	0.59	0.95	0.31	0.02	0.80	0.25	0.31	0.06
Control Delay	56.4	12.7	107.0	10.0	0.0	93.4	1.7	70.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	12.7	107.0	10.0	0.0	93.4	1.7	70.2	0.4
LOS	E	B	F	B	A	F	A	E	A
Approach Delay		13.4		23.7			57.0		41.6
Approach LOS		B		C			E		D

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 126 (97%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 20.4	Intersection LOS: C
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: 10 Vista Murrieta HS Dwy & Clinton Keith Rd



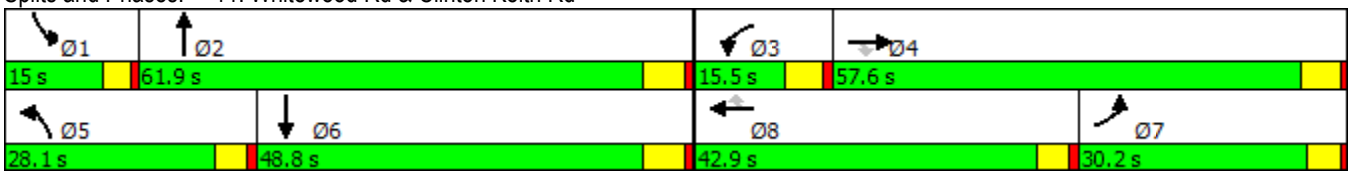
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	5.0
Minimum Split (s)	10.6	38.4	10.6	48.4	48.4	10.6	45.6	10.6	47.5
Total Split (s)	11.0	52.1	19.6	60.7	60.7	10.8	47.7	10.6	47.5
Total Split (%)	8.5%	40.1%	15.1%	46.7%	46.7%	8.3%	36.7%	8.2%	36.5%
Maximum Green (s)	6.4	46.7	15.0	55.3	55.3	6.2	43.1	6.0	43.0
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.6	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.9	2.0	3.9	3.9	2.0	3.0	2.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0		15.0	15.0		33.0		30.0
Pedestrian Calls (#/hr)		2		2	2		2		2
90th %ile Green (s)	6.4	49.8	15.0	58.4	58.4	6.2	40.0	6.0	39.9
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Max	Ped	Max	Hold
70th %ile Green (s)	6.4	83.8	15.0	92.4	92.4	6.2	6.0	6.0	5.9
70th %ile Term Code	Max	Coord	Max	Coord	Coord	Max	Min	Max	Hold
50th %ile Green (s)	6.4	83.8	15.0	92.4	92.4	6.2	6.0	6.0	5.9
50th %ile Term Code	Max	Coord	Max	Coord	Coord	Max	Min	Max	Hold
30th %ile Green (s)	0.0	94.2	15.0	113.8	113.8	6.2	6.2	0.0	0.0
30th %ile Term Code	Skip	Coord	Max	Coord	Coord	Max	Hold	Skip	Skip
10th %ile Green (s)	0.0	94.2	15.0	113.8	113.8	6.2	6.2	0.0	0.0
10th %ile Term Code	Skip	Coord	Max	Coord	Coord	Max	Hold	Skip	Skip

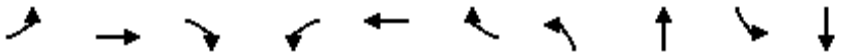
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 126 (97%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	545	823	324	117	557	52	257	353	85	247
Future Volume (vph)	545	823	324	117	557	52	257	353	85	247
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	41.6	41.6	10.6	48.8	10.0	48.8
Total Split (s)	30.2	57.6	57.6	15.5	42.9	42.9	28.1	61.9	15.0	48.8
Total Split (%)	20.1%	38.4%	38.4%	10.3%	28.6%	28.6%	18.7%	41.3%	10.0%	32.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6	4.6	4.6	5.8	4.0	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	33.4	43.2	43.2	9.3	20.8	20.8	24.0	45.5	9.8	30.8
Actuated g/C Ratio	0.26	0.34	0.34	0.07	0.16	0.16	0.19	0.35	0.08	0.24
v/c Ratio	0.67	0.75	0.48	0.51	0.73	0.16	0.85	0.80	0.68	0.73
Control Delay	48.9	43.1	8.7	68.8	57.4	0.9	76.2	48.0	85.8	31.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	43.1	8.7	68.8	57.4	0.9	76.2	48.0	85.8	31.9
LOS	D	D	A	E	E	A	E	D	F	C
Approach Delay		38.4			55.2			57.9		38.0
Approach LOS		D			E			E		D

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 128.9	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 45.1	Intersection LOS: D
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Whitewood Rd & Clinton Keith Rd





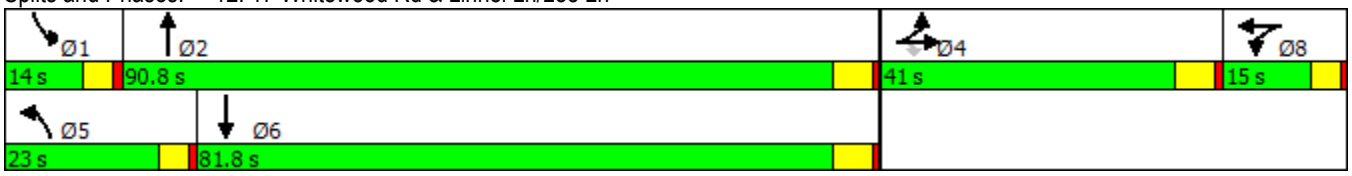
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	41.6	41.6	10.6	48.8	10.0	48.8
Total Split (s)	30.2	57.6	57.6	15.5	42.9	42.9	28.1	61.9	15.0	48.8
Total Split (%)	20.1%	38.4%	38.4%	10.3%	28.6%	28.6%	18.7%	41.3%	10.0%	32.5%
Maximum Green (s)	25.6	52.2	52.2	10.1	38.3	38.3	23.5	56.1	11.0	43.0
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	0.5	6.9	6.9	3.0	0.5	0.5	2.0	6.1	2.0	6.1
Minimum Gap (s)	0.5	3.0	3.0	3.0	0.5	0.5	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		19.0	19.0		30.0	30.0		36.0		36.0
Pedestrian Calls (#/hr)		2	2		2	2		2		2
90th %ile Green (s)	26.9	52.2	52.2	10.1	37.0	37.0	23.5	56.1	11.0	43.0
90th %ile Term Code	Hold	Max	Max	Max	Ped	Ped	Max	Max	Max	Ped
70th %ile Green (s)	41.0	51.7	51.7	10.1	22.4	22.4	23.5	53.3	11.0	40.2
70th %ile Term Code	Hold	Gap	Gap	Max	Gap	Gap	Max	Gap	Max	Hold
50th %ile Green (s)	37.2	44.5	44.5	10.1	19.0	19.0	23.5	44.3	11.0	31.2
50th %ile Term Code	Hold	Gap	Gap	Max	Gap	Gap	Max	Gap	Max	Hold
30th %ile Green (s)	32.6	38.1	38.1	8.9	16.0	16.0	23.5	38.6	9.5	24.0
30th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Max	Hold	Gap	Gap
10th %ile Green (s)	27.3	31.0	31.0	7.2	12.5	12.5	23.5	36.2	6.8	18.9
10th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Max	Hold	Gap	Gap

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 128.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 146.7
50th %ile Actuated Cycle: 130.5
30th %ile Actuated Cycle: 115.7
10th %ile Actuated Cycle: 101.8

Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	72	81	1	43	772	2	592
Future Volume (vph)	72	81	1	43	772	2	592
Turn Type	Split	Perm	NA	Prot	NA	Prot	NA
Protected Phases	4		8	5	2	1	6
Permitted Phases		4					
Detector Phase	4	4	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	41.0	41.0	15.0	23.0	90.8	14.0	81.8
Total Split (%)	25.5%	25.5%	9.3%	14.3%	56.5%	8.7%	50.9%
Yellow Time (s)	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	12.6	12.6	6.3	6.9	30.3	6.3	25.4
Actuated g/C Ratio	0.22	0.22	0.11	0.12	0.52	0.11	0.44
v/c Ratio	0.20	0.13	0.03	0.21	0.44	0.01	0.45
Control Delay	23.4	0.4	27.0	30.1	11.1	30.5	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	0.4	27.0	30.1	11.1	30.5	14.6
LOS	C	A	C	C	B	C	B
Approach Delay			27.0		12.1		14.6
Approach LOS			C		B		B

Intersection Summary	
Cycle Length: 160.8	
Actuated Cycle Length: 58.1	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 48.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: 17 Whitewood Rd & Linnel Ln/Lee Ln



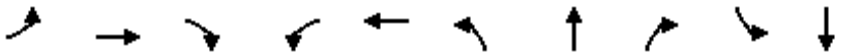
Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Protected Phases	4		8	5	2	1	6
Permitted Phases		4					
Minimum Initial (s)	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	41.0	41.0	15.0	23.0	90.8	14.0	81.8
Total Split (%)	25.5%	25.5%	9.3%	14.3%	56.5%	8.7%	50.9%
Maximum Green (s)	35.2	35.2	10.4	18.4	85.0	9.4	76.0
Yellow Time (s)	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Vehicle Extension (s)	6.9	6.9	2.0	2.0	6.1	3.0	6.1
Minimum Gap (s)	5.0	5.0	2.0	2.0	3.0	3.0	3.0
Time Before Reduce (s)	0.1	0.1	0.0	0.0	0.1	0.0	0.1
Time To Reduce (s)	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Recall Mode	None	None	None	None	Min	None	Min
Walk Time (s)	7.0	7.0			7.0		7.0
Flash Dont Walk (s)	19.0	19.0			10.0		15.0
Pedestrian Calls (#/hr)	0	0			0		2
90th %ile Green (s)	15.7	15.7	6.0	8.9	33.6	6.0	30.7
90th %ile Term Code	Gap	Gap	Min	Gap	Hold	Min	Gap
70th %ile Green (s)	13.0	13.0	0.0	7.0	34.3	0.0	22.7
70th %ile Term Code	Gap	Gap	Skip	Gap	Hold	Skip	Gap
50th %ile Green (s)	12.0	12.0	0.0	6.2	31.5	0.0	20.7
50th %ile Term Code	Gap	Gap	Skip	Gap	Hold	Skip	Gap
30th %ile Green (s)	11.1	11.1	0.0	0.0	19.8	0.0	19.8
30th %ile Term Code	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	10.1	10.1	0.0	0.0	30.2	0.0	30.2
10th %ile Term Code	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell

Intersection Summary
Cycle Length: 160.8
Actuated Cycle Length: 58.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 82.1
70th %ile Actuated Cycle: 58.9
50th %ile Actuated Cycle: 55.1
30th %ile Actuated Cycle: 42.5
10th %ile Actuated Cycle: 51.9

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	17	3	172	7	11	208	580	11	1	471
Future Volume (vph)	17	3	172	7	11	208	580	11	1	471
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	12.0	43.0	43.0	11.0	42.0	39.0	85.4	85.4	11.0	57.4
Total Split (%)	8.0%	28.6%	28.6%	7.3%	27.9%	25.9%	56.8%	56.8%	7.3%	38.2%
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	4.6	5.4	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	7.0	14.2	14.2	6.9	14.1	14.8	38.4	38.4	6.8	19.6
Actuated g/C Ratio	0.10	0.21	0.21	0.10	0.21	0.22	0.57	0.57	0.10	0.29
v/c Ratio	0.10	0.01	0.39	0.04	0.03	0.57	0.58	0.01	0.01	0.51
Control Delay	40.9	27.0	7.5	41.4	22.2	34.0	15.2	0.0	43.0	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	27.0	7.5	41.4	22.2	34.0	15.2	0.0	43.0	23.6
LOS	D	C	A	D	C	C	B	A	D	C
Approach Delay		10.7			28.1		19.9			23.6
Approach LOS		B			C		B			C

Intersection Summary	
Cycle Length: 150.4	
Actuated Cycle Length: 67.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 59.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: 18 Whitewood Rd & Baxter Rd



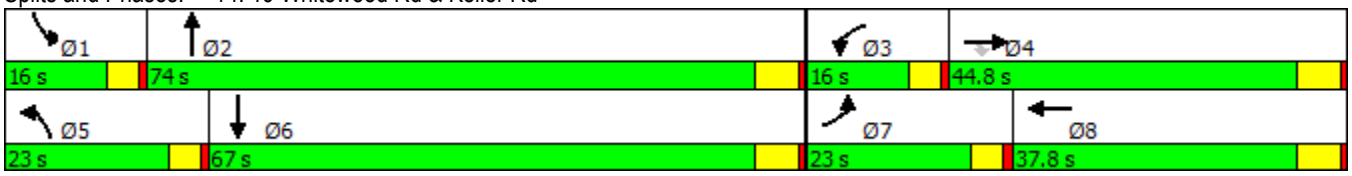
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	12.0	43.0	43.0	11.0	42.0	39.0	85.4	85.4	11.0	57.4
Total Split (%)	8.0%	28.6%	28.6%	7.3%	27.9%	25.9%	56.8%	56.8%	7.3%	38.2%
Maximum Green (s)	7.4	37.6	37.6	6.4	36.6	34.4	79.6	79.6	6.4	51.6
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		28.0	28.0		28.0		25.0	25.0		25.0
Pedestrian Calls (#/hr)		0	0		4		0	0		3
90th %ile Green (s)	7.4	36.1	36.1	6.3	35.0	26.1	57.5	57.5	6.0	37.4
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Gap	Gap	Gap	Min	Hold
70th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	15.8	39.6	39.6	0.0	19.2
70th %ile Term Code	Skip	Min	Min	Skip	Min	Gap	Hold	Hold	Skip	Gap
50th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	13.5	35.1	35.1	0.0	17.0
50th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap
30th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	10.3	28.5	28.5	0.0	13.6
30th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap
10th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	8.1	24.4	24.4	0.0	11.7
10th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap

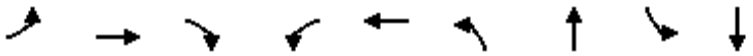
Intersection Summary
Cycle Length: 150.4
Actuated Cycle Length: 67.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 126.3
70th %ile Actuated Cycle: 60.8
50th %ile Actuated Cycle: 56.3
30th %ile Actuated Cycle: 49.7
10th %ile Actuated Cycle: 45.6

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	53	16	50	11	10	47	510	12	377
Future Volume (vph)	53	16	50	11	10	47	510	12	377
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	23.0	44.8	44.8	16.0	37.8	23.0	74.0	16.0	67.0
Total Split (%)	15.3%	29.7%	29.7%	10.6%	25.1%	15.3%	49.1%	10.6%	44.4%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.9	17.9	17.9	7.9	15.3	8.6	37.4	8.0	32.3
Actuated g/C Ratio	0.18	0.32	0.32	0.14	0.28	0.15	0.67	0.14	0.58
v/c Ratio	0.18	0.03	0.09	0.05	0.02	0.19	0.25	0.05	0.22
Control Delay	32.4	19.9	0.3	37.3	18.0	34.0	11.8	37.1	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	19.9	0.3	37.3	18.0	34.0	11.8	37.1	16.0
LOS	C	B	A	D	B	C	B	D	B
Approach Delay		17.2			24.8		13.6		16.6
Approach LOS		B			C		B		B

Intersection Summary	
Cycle Length: 150.8	
Actuated Cycle Length: 55.5	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.25	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 44.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: 19 Whitewood Rd & Keller Rd





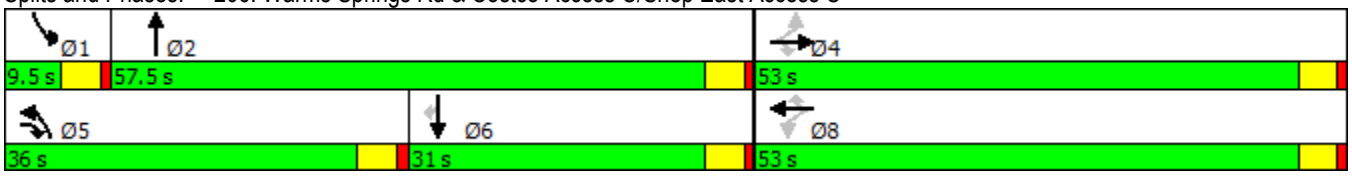
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	23.0	44.8	44.8	16.0	37.8	23.0	74.0	16.0	67.0
Total Split (%)	15.3%	29.7%	29.7%	10.6%	25.1%	15.3%	49.1%	10.6%	44.4%
Maximum Green (s)	18.4	39.0	39.0	11.4	32.0	18.4	68.2	11.4	61.2
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		32.0		32.0
Pedestrian Calls (#/hr)		2	2		2		1		3
90th %ile Green (s)	11.1	36.5	36.5	6.6	32.0	10.5	42.8	6.7	39.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Ped	Gap	Hold	Gap	Ped
70th %ile Green (s)	7.4	22.0	22.0	0.0	10.0	7.1	27.5	0.0	15.8
70th %ile Term Code	Gap	Hold	Hold	Skip	Min	Gap	Hold	Skip	Gap
50th %ile Green (s)	11.2	10.0	10.0	0.0	0.0	6.3	25.1	0.0	14.2
50th %ile Term Code	Hold	Min	Min	Skip	Skip	Gap	Hold	Skip	Gap
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	19.6	0.0	19.6
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell

Intersection Summary
Cycle Length: 150.8
Actuated Cycle Length: 55.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 113.4
70th %ile Actuated Cycle: 61.1
50th %ile Actuated Cycle: 46.7
30th %ile Actuated Cycle: 25.4
10th %ile Actuated Cycle: 30.8

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	425	215	351	162	119		
Future Volume (vph)	425	215	351	162	119		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	36.0	53.0	36.0	57.5	31.0	9.5	53.0
Total Split (%)	30.0%	44.2%	30.0%	47.9%	25.8%	8%	44%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	39.7	18.0	14.6	25.7	10.1		
Actuated g/C Ratio	0.73	0.33	0.27	0.47	0.19		
v/c Ratio	0.39	0.54	0.45	0.21	0.21		
Control Delay	1.5	21.8	21.6	5.1	23.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	1.5	21.8	21.6	5.1	23.7		
LOS	A	C	C	A	C		
Approach Delay				14.0	23.7		
Approach LOS				B	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 54.3	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 53.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 206: Warms Springs Rd & Costco Access C/Shop East Access C



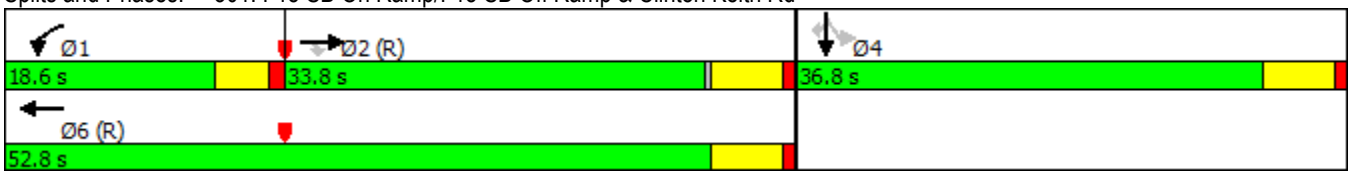
Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	36.0	53.0	36.0	57.5	31.0	9.5	53.0
Total Split (%)	30.0%	44.2%	30.0%	47.9%	25.8%	8%	44%
Maximum Green (s)	31.5	48.5	31.5	53.0	26.5	5.0	48.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	21.9	37.0	21.9	48.4	22.0	0.0	37.0
90th %ile Term Code	Gap	Ped	Gap	Hold	Ped	Skip	Hold
70th %ile Green (s)	15.7	18.4	15.7	28.9	8.7	0.0	18.4
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	12.9	15.1	12.9	25.2	7.8	0.0	15.1
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	11.4	12.6	11.4	22.9	7.0	0.0	12.6
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	8.6	9.5	8.6	8.6	0.0	0.0	9.5
10th %ile Term Code	Gap	Gap	Gap	Hold	Skip	Skip	Hold

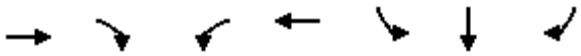
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 54.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 94.4
70th %ile Actuated Cycle: 56.3
50th %ile Actuated Cycle: 49.3
30th %ile Actuated Cycle: 44.5
10th %ile Actuated Cycle: 27.1

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	962	448	261	1246	666	0	445
Future Volume (vph)	962	448	261	1246	666	0	445
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	33.8	33.8	18.6	52.8	36.8	36.8	36.8
Total Split (%)	37.7%	37.7%	20.8%	58.9%	41.1%	41.1%	41.1%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	36.6	36.6	11.4	52.6	25.4	25.4	25.4
Actuated g/C Ratio	0.41	0.41	0.13	0.59	0.28	0.28	0.28
v/c Ratio	0.49	0.51	0.64	0.44	0.74	0.75	0.55
Control Delay	22.2	4.5	41.8	13.8	38.5	38.6	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	4.5	41.8	13.8	38.5	38.6	23.5
LOS	C	A	D	B	D	D	C
Approach Delay	16.6			18.7		32.6	
Approach LOS	B			B		C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 301: I-15 SB On Ramp/I-15 SB Off Ramp & Clinton Keith Rd





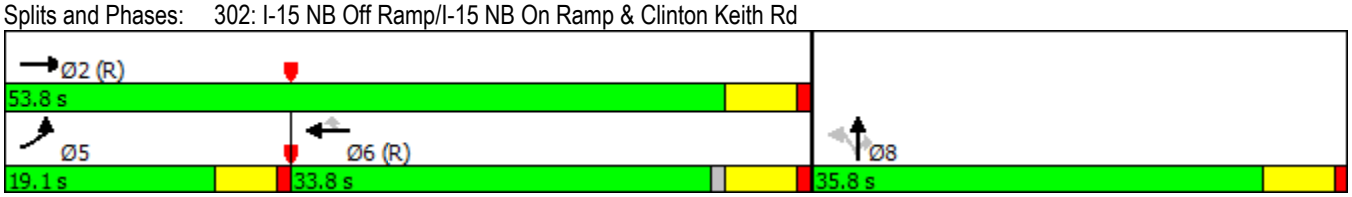
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	33.8	33.8	18.6	52.8	36.8	36.8	36.8
Total Split (%)	37.7%	37.7%	20.8%	58.9%	41.1%	41.1%	41.1%
Maximum Green (s)	28.0	28.0	14.0	47.0	31.0	31.0	31.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Walk Time (s)	7.0	7.0		7.0			
Flash Dont Walk (s)	23.0	23.0		28.0			
Pedestrian Calls (#/hr)	0	0		2			
90th %ile Green (s)	28.4	28.4	14.0	47.0	31.0	31.0	31.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max	Max
70th %ile Green (s)	29.6	29.6	13.0	47.2	30.8	30.8	30.8
70th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
50th %ile Green (s)	35.3	35.3	11.6	51.5	26.5	26.5	26.5
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
30th %ile Green (s)	40.7	40.7	10.2	55.5	22.5	22.5	22.5
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
10th %ile Green (s)	49.2	49.2	8.1	61.9	16.1	16.1	16.1
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap

Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	341	1275	879	576	646	0	446
Future Volume (vph)	341	1275	879	576	646	0	446
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	19.1	53.8	33.8	33.8	35.8	35.8	35.8
Total Split (%)	21.3%	60.0%	37.7%	37.7%	40.0%	40.0%	40.0%
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	12.8	51.3	33.3	33.3	26.7	26.7	26.7
Actuated g/C Ratio	0.14	0.57	0.37	0.37	0.30	0.30	0.30
v/c Ratio	0.76	0.48	0.50	0.64	0.83	0.76	0.72
Control Delay	43.6	8.4	24.0	5.6	43.6	30.7	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	8.4	24.0	5.6	43.6	30.7	28.3
LOS	D	A	C	A	D	C	C
Approach Delay		15.8	16.7			34.5	
Approach LOS		B	B			C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 21.0	Intersection LOS: C
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 302: I-15 NB Off Ramp/I-15 NB On Ramp & Clinton Keith Rd



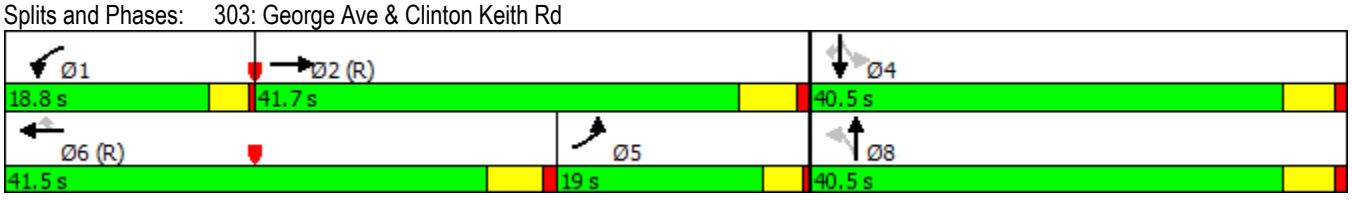
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	19.1	53.8	33.8	33.8	35.8	35.8	35.8
Total Split (%)	21.3%	60.0%	37.7%	37.7%	40.0%	40.0%	40.0%
Maximum Green (s)	14.0	48.0	28.0	28.0	30.0	30.0	30.0
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Walk Time (s)		7.0	7.0	7.0			
Flash Dont Walk (s)		23.0	23.0	23.0			
Pedestrian Calls (#/hr)		0	0	0			
90th %ile Green (s)	14.0	48.0	28.9	28.9	30.0	30.0	30.0
90th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
70th %ile Green (s)	14.0	48.0	28.9	28.9	30.0	30.0	30.0
70th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
50th %ile Green (s)	13.9	48.6	29.6	29.6	29.4	29.4	29.4
50th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	12.3	52.6	35.2	35.2	25.4	25.4	25.4
30th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	9.9	59.1	44.1	44.1	18.9	18.9	18.9
10th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap

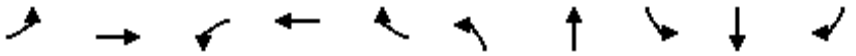
Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	172	1255	133	998	62	74	30	56	22	99
Future Volume (vph)	172	1255	133	998	62	74	30	56	22	99
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	19.0	41.7	18.8	41.5	41.5	40.5	40.5	40.5	40.5	40.5
Total Split (%)	18.8%	41.3%	18.6%	41.1%	41.1%	40.1%	40.1%	40.1%	40.1%	40.1%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.3	3.5	5.3	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	15.5	59.5	12.4	56.4	56.4	15.4	15.4	15.4	15.4	15.4
Actuated g/C Ratio	0.15	0.59	0.12	0.56	0.56	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.65	0.44	0.63	0.51	0.07	0.36	0.40	0.35	0.08	0.30
Control Delay	52.5	14.3	54.7	17.0	3.5	40.2	13.6	40.7	32.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	14.3	54.7	17.0	3.5	40.2	13.6	40.7	32.2	5.7
LOS	D	B	D	B	A	D	B	D	C	A
Approach Delay		18.8		20.5			23.1		20.0	
Approach LOS		B		C			C		C	

Intersection Summary	
Cycle Length: 101	
Actuated Cycle Length: 101	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 303: George Ave & Clinton Keith Rd





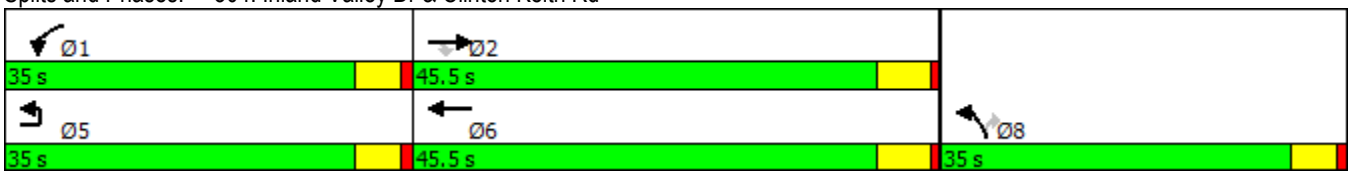
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	19.0	41.7	18.8	41.5	41.5	40.5	40.5	40.5	40.5	40.5
Total Split (%)	18.8%	41.3%	18.6%	41.1%	41.1%	40.1%	40.1%	40.1%	40.1%	40.1%
Maximum Green (s)	15.5	36.4	15.3	36.2	36.2	35.6	35.6	35.6	35.6	35.6
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	4.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0		19.0	19.0	27.0	27.0	28.0	28.0	28.0
Pedestrian Calls (#/hr)		1		0	0	1	1	1	1	1
90th %ile Green (s)	15.5	36.4	15.9	36.8	36.8	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Hold	Hold	Ped	Ped	Ped
70th %ile Green (s)	15.5	60.3	14.1	58.9	58.9	12.9	12.9	12.9	12.9	12.9
70th %ile Term Code	Max	Coord	Gap	Coord	Coord	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	15.5	64.3	12.1	60.9	60.9	10.9	10.9	10.9	10.9	10.9
50th %ile Term Code	Hold	Coord	Gap	Coord	Coord	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	15.5	68.3	10.0	62.8	62.8	9.0	9.0	9.0	9.0	9.0
30th %ile Term Code	Hold	Coord	Min	Coord	Coord	Min	Min	Hold	Hold	Hold
10th %ile Green (s)	15.5	68.3	10.0	62.8	62.8	9.0	9.0	9.0	9.0	9.0
10th %ile Term Code	Hold	Coord	Min	Coord	Coord	Min	Min	Hold	Hold	Hold

Intersection Summary
Cycle Length: 101
Actuated Cycle Length: 101
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	5	1018	352	52	770	477	105
Future Volume (vph)	5	1018	352	52	770	477	105
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Detector Phase	5	2	2	1	6	8	8
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	6.0	6.0
Minimum Split (s)	10.0	25.5	25.5	10.0	22.5	22.5	22.5
Total Split (s)	35.0	45.5	45.5	35.0	45.5	35.0	35.0
Total Split (%)	30.3%	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%
Yellow Time (s)	4.0	4.5	4.5	4.0	4.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.5	5.5	5.0	5.5	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	Min	Min	None	Min	None	None
Act Effct Green (s)	5.0	41.0	40.2	7.0	48.0	30.1	30.1
Actuated g/C Ratio	0.06	0.45	0.44	0.08	0.53	0.33	0.33
v/c Ratio	0.04	1.64	0.43	0.41	0.44	0.87	0.21
Control Delay	43.8	317.0	5.0	49.8	14.3	47.2	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	317.0	5.0	49.8	14.3	47.2	18.8
LOS	D	F	A	D	B	D	B
Approach Delay		236.5			16.6	42.1	
Approach LOS		F			B	D	

Intersection Summary	
Cycle Length: 115.5	
Actuated Cycle Length: 90.6	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.64	
Intersection Signal Delay: 130.7	Intersection LOS: F
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 304: Inland Valley Dr & Clinton Keith Rd



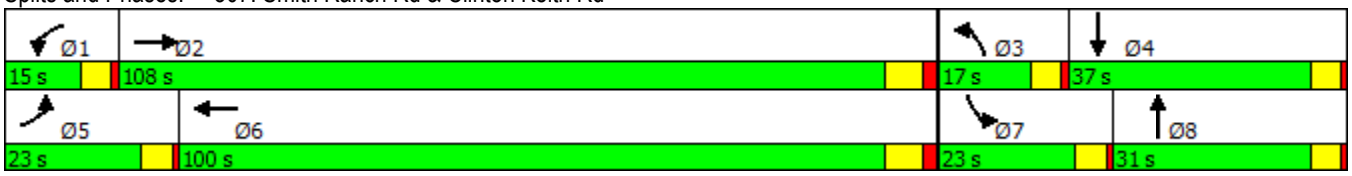
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	6.0	6.0
Minimum Split (s)	10.0	25.5	25.5	10.0	22.5	22.5	22.5
Total Split (s)	35.0	45.5	45.5	35.0	45.5	35.0	35.0
Total Split (%)	30.3%	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%
Maximum Green (s)	30.0	40.0	40.0	30.0	40.0	30.0	30.0
Yellow Time (s)	4.0	4.5	4.5	4.0	4.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5	3.5	3.5
Minimum Gap (s)	1.5	2.5	2.5	1.5	2.5	3.5	3.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	None
Walk Time (s)		8.0	8.0				
Flash Dont Walk (s)		12.0	12.0				
Pedestrian Calls (#/hr)		0	0				
90th %ile Green (s)	5.0	40.0	40.0	9.8	44.8	30.0	30.0
90th %ile Term Code	Min	Max	Max	Gap	Hold	Max	Max
70th %ile Green (s)	0.0	40.0	40.0	8.0	53.0	30.0	30.0
70th %ile Term Code	Skip	Max	Max	Gap	Hold	Max	Max
50th %ile Green (s)	0.0	40.0	40.0	6.8	51.8	30.0	30.0
50th %ile Term Code	Skip	Max	Max	Gap	Hold	Max	Max
30th %ile Green (s)	0.0	40.0	40.0	5.7	50.7	30.0	30.0
30th %ile Term Code	Skip	Max	Max	Gap	Hold	Max	Max
10th %ile Green (s)	0.0	40.0	40.0	0.0	40.0	30.0	30.0
10th %ile Term Code	Skip	Max	Max	Skip	Hold	Max	Max

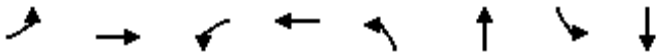
Intersection Summary
Cycle Length: 115.5
Actuated Cycle Length: 90.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 95.3
70th %ile Actuated Cycle: 93.5
50th %ile Actuated Cycle: 92.3
30th %ile Actuated Cycle: 91.2
10th %ile Actuated Cycle: 80.5

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	58	1024	15	700	29	1	57	1
Future Volume (vph)	58	1024	15	700	29	1	57	1
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	23.0	108.0	15.0	100.0	17.0	31.0	23.0	37.0
Total Split (%)	13.0%	61.0%	8.5%	56.5%	9.6%	17.5%	13.0%	20.9%
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	5.0	7.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	7.8	45.5	6.0	36.7	6.5	9.1	11.7	9.4
Actuated g/C Ratio	0.11	0.65	0.09	0.53	0.09	0.13	0.17	0.13
v/c Ratio	0.31	0.49	0.11	0.45	0.19	0.02	0.21	0.21
Control Delay	41.8	12.6	44.3	17.3	43.1	26.5	35.2	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	12.6	44.3	17.3	43.1	26.5	35.2	12.9
LOS	D	B	D	B	D	C	D	B
Approach Delay		14.1		17.8		41.2		24.7
Approach LOS		B		B		D		C

Intersection Summary	
Cycle Length: 177	
Actuated Cycle Length: 69.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 307: Smith Ranch Rd & Clinton Keith Rd





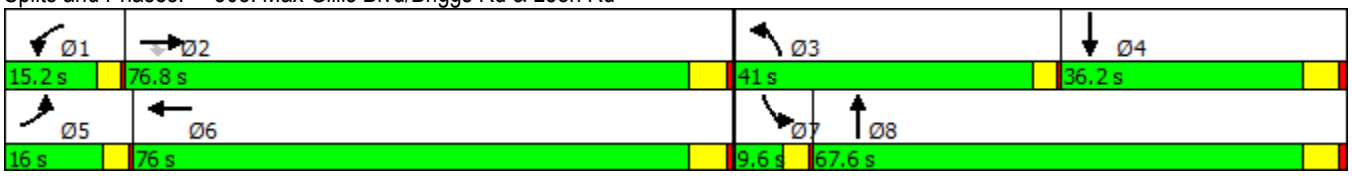
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	23.0	108.0	15.0	100.0	17.0	31.0	23.0	37.0
Total Split (%)	13.0%	61.0%	8.5%	56.5%	9.6%	17.5%	13.0%	20.9%
Maximum Green (s)	18.0	101.0	10.0	93.0	12.0	26.0	18.0	32.0
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	1.5	3.5	1.5	2.5	1.5	2.5
Minimum Gap (s)	1.5	3.0	1.5	3.0	1.5	2.5	1.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None
Walk Time (s)		7.0		7.0				12.0
Flash Dont Walk (s)		8.0		8.0				16.0
Pedestrian Calls (#/hr)		0		0				1
90th %ile Green (s)	11.7	59.2	6.8	54.3	8.5	24.9	11.6	28.0
90th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Hold	Gap	Ped
70th %ile Green (s)	8.3	40.7	0.0	27.4	6.3	0.0	17.4	6.1
70th %ile Term Code	Gap	Hold	Skip	Gap	Gap	Skip	Hold	Gap
50th %ile Green (s)	7.0	36.4	0.0	24.4	5.5	0.0	16.5	6.0
50th %ile Term Code	Gap	Hold	Skip	Gap	Gap	Skip	Hold	Min
30th %ile Green (s)	5.7	31.8	0.0	21.1	0.0	0.0	6.0	6.0
30th %ile Term Code	Gap	Hold	Skip	Gap	Skip	Skip	Hold	Min
10th %ile Green (s)	0.0	33.3	0.0	33.3	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip

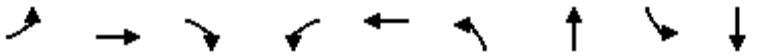
Intersection Summary
Cycle Length: 177
Actuated Cycle Length: 69.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 124.5
70th %ile Actuated Cycle: 70.1
50th %ile Actuated Cycle: 64.9
30th %ile Actuated Cycle: 49.8
10th %ile Actuated Cycle: 40.3

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	125	345	620	117	168	498	384	11	283
Future Volume (vph)	125	345	620	117	168	498	384	11	283
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	16.0	76.8	76.8	15.2	76.0	41.0	67.6	9.6	36.2
Total Split (%)	9.5%	45.4%	45.4%	9.0%	44.9%	24.2%	40.0%	5.7%	21.4%
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.7	5.9	5.9	3.7	5.9	3.7	5.9	3.7	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Act Effct Green (s)	8.7	27.6	27.6	8.4	27.3	21.1	41.4	5.5	18.9
Actuated g/C Ratio	0.09	0.28	0.28	0.09	0.28	0.22	0.43	0.06	0.19
v/c Ratio	0.45	0.38	0.82	0.44	0.20	0.73	0.38	0.06	0.62
Control Delay	53.7	29.2	16.3	54.1	27.3	44.5	21.6	59.2	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	29.2	16.3	54.1	27.3	44.5	21.6	59.2	40.9
LOS	D	C	B	D	C	D	C	E	D
Approach Delay		24.7			37.9		32.9		41.4
Approach LOS		C			D		C		D

Intersection Summary	
Cycle Length: 169.2	
Actuated Cycle Length: 97.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 31.4	Intersection LOS: C
Intersection Capacity Utilization 67.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 308: Max Gillis Blvd/Briggs Rd & Leon Rd





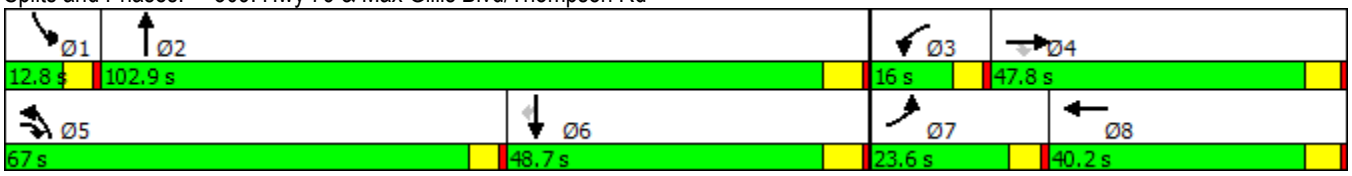
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	16.0	76.8	76.8	15.2	76.0	41.0	67.6	9.6	36.2
Total Split (%)	9.5%	45.4%	45.4%	9.0%	44.9%	24.2%	40.0%	5.7%	21.4%
Maximum Green (s)	12.3	70.9	70.9	11.5	70.1	37.3	61.7	5.9	30.3
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	1.5	3.0	1.5	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		23.0	23.0		23.0		23.0		23.0
Pedestrian Calls (#/hr)		1	1		0		0		2
90th %ile Green (s)	12.3	55.1	55.1	11.5	54.3	33.5	58.1	5.4	30.0
90th %ile Term Code	Max	Gap	Gap	Max	Hold	Gap	Hold	Gap	Ped
70th %ile Green (s)	10.0	35.7	35.7	9.7	35.4	25.0	42.3	5.0	22.3
70th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Min	Gap
50th %ile Green (s)	8.2	24.0	24.0	7.9	23.7	19.6	40.5	0.0	17.2
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
30th %ile Green (s)	6.9	17.6	17.6	6.7	17.4	16.0	34.0	0.0	14.3
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
10th %ile Green (s)	5.5	14.0	14.0	5.4	13.9	12.5	27.7	0.0	11.5
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap

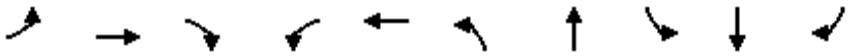
Intersection Summary
Cycle Length: 169.2
Actuated Cycle Length: 97.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 149.3
70th %ile Actuated Cycle: 111.9
50th %ile Actuated Cycle: 87.9
30th %ile Actuated Cycle: 73.8
10th %ile Actuated Cycle: 62.6

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	180	358	631	105	327	621	1407	46	826	148
Future Volume (vph)	180	358	631	105	327	621	1407	46	826	148
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Detector Phase	7	4	5	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	23.6	47.8	67.0	16.0	40.2	67.0	102.9	12.8	48.7	48.7
Total Split (%)	13.1%	26.6%	37.3%	8.9%	22.4%	37.3%	57.3%	7.1%	27.1%	27.1%
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.1	5.1	5.8	5.1	6.5	5.1	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	18.5	42.0	104.6	10.9	34.4	61.9	99.0	7.3	42.2	42.2
Actuated g/C Ratio	0.10	0.23	0.58	0.06	0.19	0.34	0.55	0.04	0.24	0.24
v/c Ratio	1.03	0.86	0.70	1.02	1.02	1.06	0.83	0.68	1.03	0.32
Control Delay	150.2	85.0	26.5	170.4	121.5	108.2	38.3	124.9	105.2	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	150.2	85.0	26.5	170.4	121.5	108.2	38.3	124.9	105.2	11.7
LOS	F	F	C	F	F	F	D	F	F	B
Approach Delay		63.5			132.8		58.5		92.6	
Approach LOS		E			F		E		F	

Intersection Summary	
Cycle Length: 179.5	
Actuated Cycle Length: 179.5	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 74.0	Intersection LOS: E
Intersection Capacity Utilization 104.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 309: Hwy 79 & Max Gillis Blvd/Thompson Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	23.6	47.8	67.0	16.0	40.2	67.0	102.9	12.8	48.7	48.7
Total Split (%)	13.1%	26.6%	37.3%	8.9%	22.4%	37.3%	57.3%	7.1%	27.1%	27.1%
Maximum Green (s)	18.5	42.0	61.9	10.9	34.4	61.9	96.4	7.7	42.2	42.2
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0					7.0		5.0	5.0
Flash Dont Walk (s)		35.0					25.0		36.0	36.0
Pedestrian Calls (#/hr)		3					0		0	0
90th %ile Green (s)	18.5	42.0	61.9	10.9	34.4	61.9	96.4	7.7	42.2	42.2
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	18.5	42.0	61.9	10.9	34.4	61.9	96.4	7.7	42.2	42.2
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Hold	Max	Max	Max
50th %ile Green (s)	18.5	42.0	61.9	10.9	34.4	61.9	96.4	7.7	42.2	42.2
50th %ile Term Code	Max	Hold	Max	Max	Max	Max	Hold	Max	Max	Max
30th %ile Green (s)	18.5	42.0	61.9	10.9	34.4	61.9	96.4	7.7	42.2	42.2
30th %ile Term Code	Max	Hold	Max	Max	Max	Max	Hold	Max	Max	Max
10th %ile Green (s)	18.5	42.0	61.9	10.9	34.4	61.9	109.2	0.0	42.2	42.2
10th %ile Term Code	Max	Hold	Max	Max	Max	Max	Hold	Skip	Max	Max

Intersection Summary
Cycle Length: 179.5
Actuated Cycle Length: 179.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 179.5
70th %ile Actuated Cycle: 179.5
50th %ile Actuated Cycle: 179.5
30th %ile Actuated Cycle: 179.5
10th %ile Actuated Cycle: 179.5

2021 Project Completion Saturday Midday with Creighton Avenue Access

Timings
1: 1 Nutmeg St & Clinton Keith Rd

11/05/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	29	635	227	590	63	43	250	85	32
Future Volume (vph)	29	635	227	590	63	43	250	85	32
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	12.0	51.2	37.0	76.2	45.0	45.0	45.0	45.0	45.0
Total Split (%)	9.0%	38.4%	27.8%	57.2%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	7.1	26.2	16.9	42.1	14.2	14.2	14.2	14.2	14.2
Actuated g/C Ratio	0.09	0.35	0.22	0.56	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.20	0.64	0.64	0.39	0.28	0.14	0.54	0.39	0.17
Control Delay	45.2	24.8	37.7	11.7	32.0	29.2	8.1	34.2	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	24.8	37.7	11.7	32.0	29.2	8.1	34.2	29.7
LOS	D	C	D	B	C	C	A	C	C
Approach Delay		25.7		18.2		14.9			32.5
Approach LOS		C		B		B			C

Intersection Summary	
Cycle Length: 133.2	
Actuated Cycle Length: 75.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: 1 Nutmeg St & Clinton Keith Rd

Phasings
1: 1 Nutmeg St & Clinton Keith Rd

11/05/2019

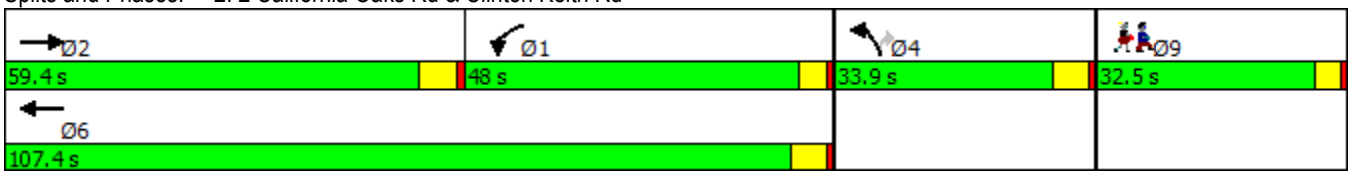
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	12.0	51.2	37.0	76.2	45.0	45.0	45.0	45.0	45.0
Total Split (%)	9.0%	38.4%	27.8%	57.2%	33.8%	33.8%	33.8%	33.8%	33.8%
Maximum Green (s)	7.4	45.4	32.4	70.4	39.2	39.2	39.2	39.2	39.2
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	3.9	2.0	3.9	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		22.0		21.0	30.0	30.0	30.0		
Pedestrian Calls (#/hr)		0		0	1	1	1		
90th %ile Green (s)	7.4	43.0	29.8	65.4	37.0	37.0	37.0	37.0	37.0
90th %ile Term Code	Max	Gap	Gap	Hold	Ped	Ped	Ped	Hold	Hold
70th %ile Green (s)	7.1	28.3	19.0	40.2	13.9	13.9	13.9	13.9	13.9
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.0	24.5	15.5	34.0	11.3	11.3	11.3	11.3	11.3
50th %ile Term Code	Min	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	0.0	20.2	12.5	37.3	9.2	9.2	9.2	9.2	9.2
30th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	15.4	9.2	29.2	6.8	6.8	6.8	6.8	6.8
10th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Hold	Hold

Intersection Summary
Cycle Length: 133.2
Actuated Cycle Length: 75.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 126
70th %ile Actuated Cycle: 77.4
50th %ile Actuated Cycle: 67.5
30th %ile Actuated Cycle: 58.1
10th %ile Actuated Cycle: 47.6

Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Lane Configurations						
Traffic Volume (vph)	845	389	776	118	494	
Future Volume (vph)	845	389	776	118	494	
Turn Type	NA	Prot	NA	Prot	Perm	
Protected Phases	2	1	6	4		9
Permitted Phases					4	
Detector Phase	2	1	6	4	4	
Switch Phase						
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	5.0
Minimum Split (s)	32.8	10.6	33.8	33.8	33.8	32.5
Total Split (s)	59.4	48.0	107.4	33.9	33.9	32.5
Total Split (%)	34.2%	27.6%	61.8%	19.5%	19.5%	19%
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	4.6	5.8	5.8	5.8	
Lead/Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	40.9	34.5	80.2	11.3	11.3	
Actuated g/C Ratio	0.40	0.33	0.77	0.11	0.11	
v/c Ratio	0.74	0.69	0.30	0.67	0.67	
Control Delay	31.1	38.5	3.8	22.2	15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	31.1	38.5	3.8	22.2	15.1	
LOS	C	D	A	C	B	
Approach Delay	31.1		15.4	19.3		
Approach LOS	C		B	B		

Intersection Summary	
Cycle Length: 173.8	
Actuated Cycle Length: 103.5	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: 2 California Oaks Rd & Clinton Keith Rd



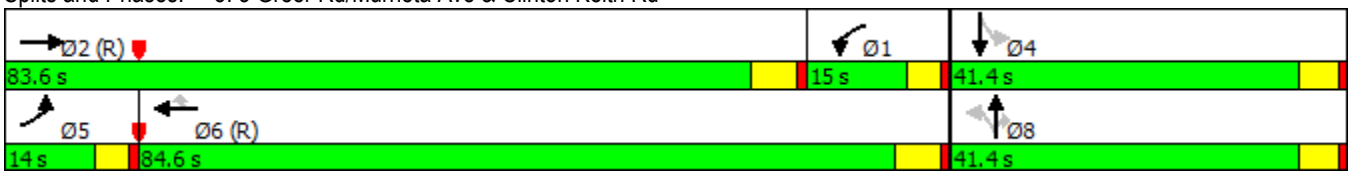
Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Protected Phases	2	1	6	4		9
Permitted Phases					4	
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	5.0
Minimum Split (s)	32.8	10.6	33.8	33.8	33.8	32.5
Total Split (s)	59.4	48.0	107.4	33.9	33.9	32.5
Total Split (%)	34.2%	27.6%	61.8%	19.5%	19.5%	19%
Maximum Green (s)	53.6	43.4	101.6	28.1	28.1	28.0
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes				
Vehicle Extension (s)	3.8	3.0	3.8	3.8	3.8	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	3.0
Time Before Reduce (s)	1.0	0.0	1.0	1.0	1.0	0.0
Time To Reduce (s)	0.1	0.0	0.1	0.1	0.1	0.0
Recall Mode	Min	None	Min	None	None	None
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	20.0					21.0
Pedestrian Calls (#/hr)	1					0
90th %ile Green (s)	51.1	43.4	99.1	16.7	16.7	0.0
90th %ile Term Code	Gap	Max	Hold	Gap	Gap	Skip
70th %ile Green (s)	45.7	39.0	89.3	13.6	13.6	0.0
70th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip
50th %ile Green (s)	42.1	35.6	82.3	11.5	11.5	0.0
50th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip
30th %ile Green (s)	37.0	31.1	72.7	9.5	9.5	0.0
30th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip
10th %ile Green (s)	29.3	24.3	58.2	6.7	6.7	0.0
10th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Skip

Intersection Summary
Cycle Length: 173.8
Actuated Cycle Length: 103.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 127.4
70th %ile Actuated Cycle: 114.5
50th %ile Actuated Cycle: 105.4
30th %ile Actuated Cycle: 93.8
10th %ile Actuated Cycle: 76.5

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	46	1318	51	1125	145	33	53	139	0
Future Volume (vph)	46	1318	51	1125	145	33	53	139	0
Turn Type	Prot	NA	Prot	NA	Perm	Perm	Perm	Perm	NA
Protected Phases	5	2	1	6					4
Permitted Phases					6	8	8	4	
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	23.3	23.3
Total Split (s)	14.0	83.6	15.0	84.6	84.6	41.4	41.4	41.4	41.4
Total Split (%)	10.0%	59.7%	10.7%	60.4%	60.4%	29.6%	29.6%	29.6%	29.6%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.3	5.3	5.3	5.3
Lead/Lag	Lead	Lead	Lag	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	8.4	96.9	9.5	98.0	98.0	20.0	20.0	20.0	20.0
Actuated g/C Ratio	0.06	0.69	0.07	0.70	0.70	0.14	0.14	0.14	0.14
v/c Ratio	0.45	0.60	0.47	0.48	0.14	0.18	0.16	0.73	0.09
Control Delay	76.1	14.2	51.9	4.0	0.5	52.3	0.9	77.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	14.2	51.9	4.0	0.5	52.3	0.9	77.4	0.5
LOS	E	B	D	A	A	D	A	E	A
Approach Delay		16.2		5.5					63.8
Approach LOS		B		A					E

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: 3 Greer Rd/Murrieta Ave & Clinton Keith Rd



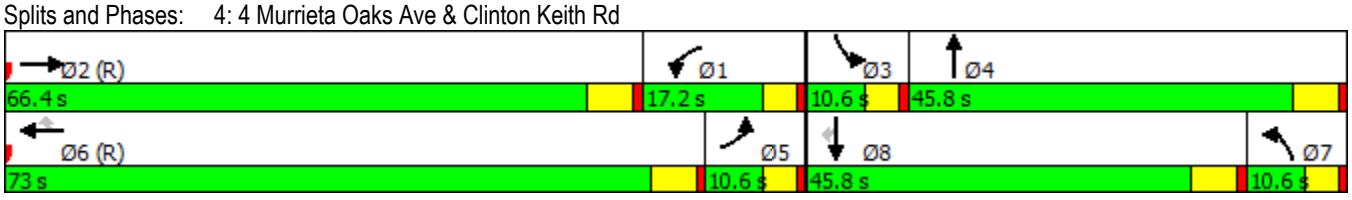
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Protected Phases	5	2	1	6					4
Permitted Phases					6	8	8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	23.3	23.3
Total Split (s)	14.0	83.6	15.0	84.6	84.6	41.4	41.4	41.4	41.4
Total Split (%)	10.0%	59.7%	10.7%	60.4%	60.4%	29.6%	29.6%	29.6%	29.6%
Maximum Green (s)	9.4	77.8	10.4	78.8	78.8	36.1	36.1	36.1	36.1
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		18.0		21.0	21.0	29.0	29.0		
Pedestrian Calls (#/hr)		2		2	2	0	0		
90th %ile Green (s)	11.7	86.2	10.4	84.9	84.9	27.7	27.7	27.7	27.7
90th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Hold	Gap	Gap
70th %ile Green (s)	9.6	90.7	10.4	91.5	91.5	23.2	23.2	23.2	23.2
70th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	8.2	93.9	10.4	96.1	96.1	20.0	20.0	20.0	20.0
50th %ile Term Code	Gap	Coord	Hold	Coord	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.7	97.0	10.4	100.7	100.7	16.9	16.9	16.9	16.9
30th %ile Term Code	Gap	Coord	Hold	Coord	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	116.7	0.0	116.7	116.7	12.2	12.2	12.2	12.2
10th %ile Term Code	Skip	Coord	Skip	Coord	Coord	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	15	1483	147	1295	5	21	3	4	1	13
Future Volume (vph)	15	1483	147	1295	5	21	3	4	1	13
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Detector Phase	5	2	1	6	6	7	4	3	8	8
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	10.6	66.4	17.2	73.0	73.0	10.6	45.8	10.6	45.8	45.8
Total Split (%)	7.6%	47.4%	12.3%	52.1%	52.1%	7.6%	32.7%	7.6%	32.7%	32.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	6.0	92.9	12.6	105.8	105.8	6.9	16.2	6.0	13.5	13.5
Actuated g/C Ratio	0.04	0.66	0.09	0.76	0.76	0.05	0.12	0.04	0.10	0.10
v/c Ratio	0.21	0.68	0.96	0.36	0.00	0.26	0.45	0.04	0.01	0.05
Control Delay	58.4	14.1	112.0	1.6	0.0	72.1	12.4	65.0	47.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.4	14.1	112.0	1.6	0.0	72.1	12.4	65.0	47.0	0.4
LOS	E	B	F	A	A	E	B	E	D	A
Approach Delay		14.6		12.8			21.1		16.4	
Approach LOS		B		B			C		B	

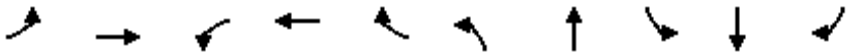
Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 74.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: 4 Murrieta Oaks Ave & Clinton Keith Rd



Phasings
4: 4 Murrieta Oaks Ave & Clinton Keith Rd

11/05/2019



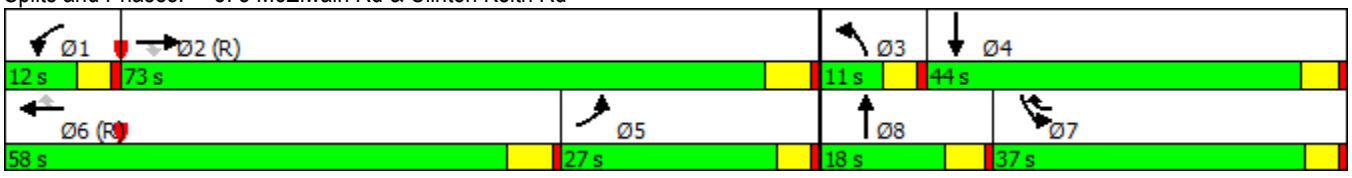
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	10.6	66.4	17.2	73.0	73.0	10.6	45.8	10.6	45.8	45.8
Total Split (%)	7.6%	47.4%	12.3%	52.1%	52.1%	7.6%	32.7%	7.6%	32.7%	32.7%
Maximum Green (s)	6.0	60.6	12.6	67.2	67.2	6.0	40.0	6.0	40.0	40.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	2.0	5.2	3.0	3.2	3.2
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.2	3.2
Time Before Reduce (s)	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		13.0		26.0	26.0		29.0		33.0	33.0
Pedestrian Calls (#/hr)		0		7	7		5		3	3
90th %ile Green (s)	6.0	60.6	12.6	67.2	67.2	6.0	40.0	6.0	40.0	40.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Max	Hold	Max	Ped	Ped
70th %ile Green (s)	6.0	93.4	12.6	100.0	100.0	7.2	17.8	0.0	6.0	6.0
70th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Skip	Min	Min
50th %ile Green (s)	0.0	103.3	12.6	120.5	120.5	9.1	7.9	0.0	0.0	0.0
50th %ile Term Code	Skip	Coord	Max	Coord	Coord	Hold	Gap	Skip	Skip	Skip
30th %ile Green (s)	0.0	103.5	12.6	120.7	120.7	0.0	7.7	0.0	7.7	7.7
30th %ile Term Code	Skip	Coord	Max	Coord	Coord	Skip	Gap	Skip	Hold	Hold
10th %ile Green (s)	0.0	103.5	12.6	120.7	120.7	0.0	7.7	0.0	7.7	7.7
10th %ile Term Code	Skip	Coord	Max	Coord	Coord	Skip	Gap	Skip	Hold	Hold

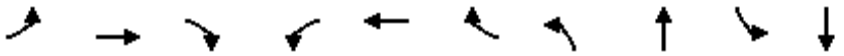
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	293	1330	14	26	1165	281	11	6	469	13
Future Volume (vph)	293	1330	14	26	1165	281	11	6	469	13
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	27.0	73.0	73.0	12.0	58.0	37.0	11.0	18.0	37.0	44.0
Total Split (%)	19.3%	52.1%	52.1%	8.6%	41.4%	26.4%	7.9%	12.9%	26.4%	31.4%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	22.4	88.7	88.7	7.0	69.1	94.7	6.2	10.0	24.5	28.6
Actuated g/C Ratio	0.16	0.63	0.63	0.05	0.49	0.68	0.04	0.07	0.18	0.20
v/c Ratio	0.56	0.43	0.01	0.30	0.48	0.26	0.15	0.21	0.82	0.54
Control Delay	37.6	3.8	0.0	62.4	24.5	1.2	68.6	30.6	66.7	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	3.8	0.0	62.4	24.5	1.2	68.6	30.6	66.7	9.8
LOS	D	A	A	E	C	A	E	C	E	A
Approach Delay		9.8			20.7			41.5		45.4
Approach LOS		A			C			D		D

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: 5 McElwain Rd & Clinton Keith Rd





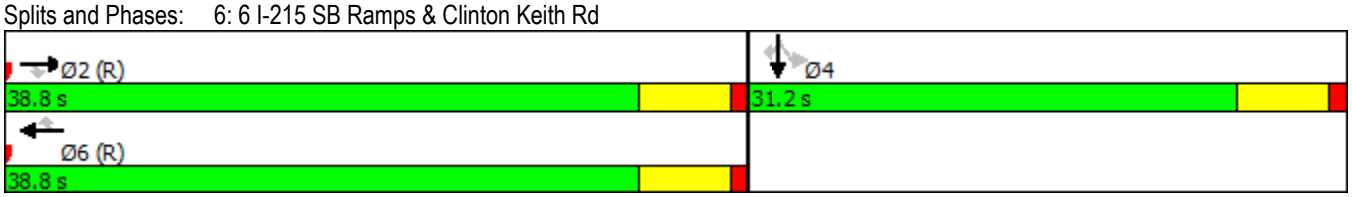
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	27.0	73.0	73.0	12.0	58.0	37.0	11.0	18.0	37.0	44.0
Total Split (%)	19.3%	52.1%	52.1%	8.6%	41.4%	26.4%	7.9%	12.9%	26.4%	31.4%
Maximum Green (s)	22.4	67.2	67.2	7.4	52.2	32.4	6.4	12.9	32.4	38.9
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	5.2	2.0	5.2	2.0	3.0	3.0	2.0	3.6
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		15.0	15.0		22.0					27.0
Pedestrian Calls (#/hr)		3	3		8					3
90th %ile Green (s)	22.4	70.1	70.1	9.1	56.8	30.7	6.4	10.0	30.7	34.3
90th %ile Term Code	Hold	Coord	Coord	Gap	Coord	Gap	Max	Min	Gap	Hold
70th %ile Green (s)	22.4	75.6	75.6	7.6	60.8	26.7	6.4	10.0	26.7	30.3
70th %ile Term Code	Hold	Coord	Coord	Gap	Coord	Gap	Max	Min	Gap	Hold
50th %ile Green (s)	22.4	79.0	79.0	6.5	63.1	24.4	0.0	10.0	24.4	39.0
50th %ile Term Code	Hold	Coord	Coord	Gap	Coord	Gap	Skip	Min	Gap	Hold
30th %ile Green (s)	22.4	107.6	107.6	0.0	80.6	22.0	0.0	0.0	22.0	21.5
30th %ile Term Code	Hold	Coord	Coord	Skip	Coord	Gap	Skip	Skip	Gap	Hold
10th %ile Green (s)	22.4	111.0	111.0	0.0	84.0	18.6	0.0	0.0	18.6	18.1
10th %ile Term Code	Hold	Coord	Coord	Skip	Coord	Gap	Skip	Skip	Gap	Hold

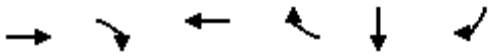
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1346	449	1056	374	0	555
Future Volume (vph)	1346	449	1056	374	0	555
Turn Type	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	38.8	38.8	38.8	38.8	31.2	31.2
Total Split (%)	55.4%	55.4%	55.4%	55.4%	44.6%	44.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	38.3	38.3	38.3	38.3	20.1	20.1
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.29	0.29
v/c Ratio	0.49	0.53	0.38	0.44	0.77	0.65
Control Delay	8.2	10.4	9.7	11.8	33.4	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	10.4	9.7	11.8	33.4	21.1
LOS	A	B	A	B	C	C
Approach Delay	8.8		10.2		26.0	
Approach LOS	A		B		C	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 36 (51%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 13.1	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: 6 I-215 SB Ramps & Clinton Keith Rd





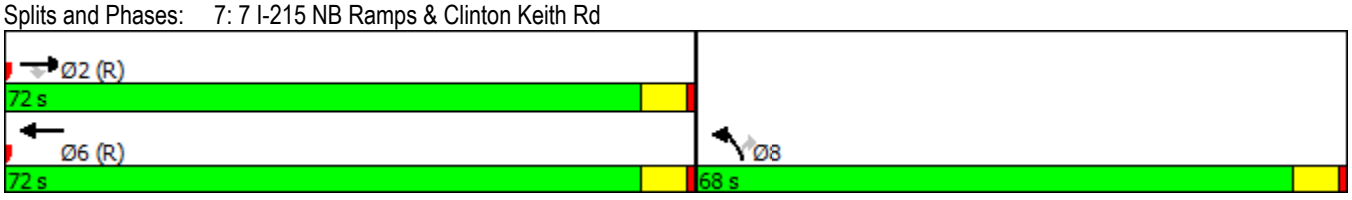
Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	38.8	38.8	38.8	38.8	31.2	31.2
Total Split (%)	55.4%	55.4%	55.4%	55.4%	44.6%	44.6%
Maximum Green (s)	33.0	33.0	33.0	33.0	25.4	25.4
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0				
Flash Dont Walk (s)	20.0	20.0				
Pedestrian Calls (#/hr)	8	8				
90th %ile Green (s)	33.0	33.0	33.0	33.0	25.4	25.4
90th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	34.3	34.3	34.3	34.3	24.1	24.1
70th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
50th %ile Green (s)	37.7	37.7	37.7	37.7	20.7	20.7
50th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	40.6	40.6	40.6	40.6	17.8	17.8
30th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	45.9	45.9	45.9	45.9	12.5	12.5
10th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 36 (51%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1169	543	1057	389	434
Future Volume (vph)	1169	543	1057	389	434
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	2		6	8	
Permitted Phases		2			8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	72.0	72.0	72.0	68.0	68.0
Total Split (%)	51.4%	51.4%	51.4%	48.6%	48.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	86.7	86.7	86.7	41.7	41.7
Actuated g/C Ratio	0.62	0.62	0.62	0.30	0.30
v/c Ratio	0.38	0.48	0.34	0.83	0.83
Control Delay	17.0	7.7	7.4	58.2	56.4
Queue Delay	0.0	0.3	0.0	0.0	0.0
Total Delay	17.0	8.0	7.4	58.2	56.4
LOS	B	A	A	E	E
Approach Delay	14.1		7.4	57.3	
Approach LOS	B		A	E	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 104 (74%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 22.1	Intersection LOS: C
Intersection Capacity Utilization 71.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: 7 I-215 NB Ramps & Clinton Keith Rd



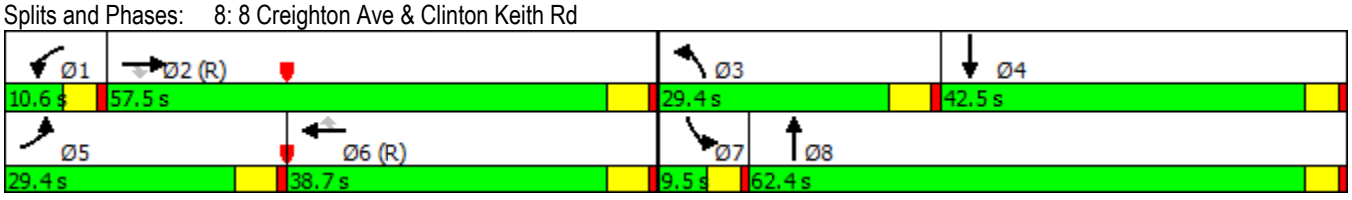
Lane Group	EBT	EBR	WBT	NBL	NBR
Protected Phases	2		6	8	
Permitted Phases		2			8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	72.0	72.0	72.0	68.0	68.0
Total Split (%)	51.4%	51.4%	51.4%	48.6%	48.6%
Maximum Green (s)	66.2	66.2	66.2	62.2	62.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.5	2.5
Minimum Gap (s)	2.0	2.0	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			
Flash Dont Walk (s)	31.0	31.0			
Pedestrian Calls (#/hr)	7	7			
90th %ile Green (s)	74.3	74.3	74.3	54.1	54.1
90th %ile Term Code	Coord	Coord	Coord	Gap	Gap
70th %ile Green (s)	81.4	81.4	81.4	47.0	47.0
70th %ile Term Code	Coord	Coord	Coord	Gap	Gap
50th %ile Green (s)	87.0	87.0	87.0	41.4	41.4
50th %ile Term Code	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	91.8	91.8	91.8	36.6	36.6
30th %ile Term Code	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	98.8	98.8	98.8	29.6	29.6
10th %ile Term Code	Coord	Coord	Coord	Gap	Gap

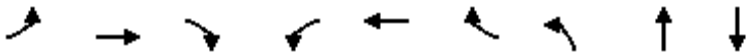
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 104 (74%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Lane Configurations										
Traffic Volume (vph)	64	1480	54	7	1279	1	53	0	0	
Future Volume (vph)	64	1480	54	7	1279	1	53	0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	NA	
Protected Phases	5	2		1	6		3	8	4	7
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	6	3	8	4	
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	29.4	29.4	29.4	10.6	28.4	28.4	29.4	46.6	42.5	9.5
Total Split (s)	29.4	57.5	57.5	10.6	38.7	38.7	29.4	62.4	42.5	9.5
Total Split (%)	21.0%	41.1%	41.1%	7.6%	27.6%	27.6%	21.0%	44.6%	30.4%	7%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4	5.4	4.6	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Max	C-Max	None	C-Max	C-Max	Min	Min	None	None
Act Effct Green (s)	11.5	101.5	101.5	6.1	86.8	86.8	11.0	26.3	12.0	
Actuated g/C Ratio	0.08	0.72	0.72	0.04	0.62	0.62	0.08	0.19	0.09	
v/c Ratio	0.46	0.43	0.05	0.10	0.43	0.00	0.40	0.03	0.10	
Control Delay	80.5	5.6	0.1	67.4	17.4	0.0	69.8	0.1	0.3	
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	80.5	5.7	0.1	67.4	17.4	0.0	69.8	0.1	0.3	
LOS	F	A	A	E	B	A	E	A	A	
Approach Delay		8.5			17.6			56.7	0.3	
Approach LOS		A			B			E	A	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 114 (81%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: 8 Creighton Ave & Clinton Keith Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Protected Phases	5	2		1	6		3	8	4	7
Permitted Phases			2			6				
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	29.4	29.4	29.4	10.6	28.4	28.4	29.4	46.6	42.5	9.5
Total Split (s)	29.4	57.5	57.5	10.6	38.7	38.7	29.4	62.4	42.5	9.5
Total Split (%)	21.0%	41.1%	41.1%	7.6%	27.6%	27.6%	21.0%	44.6%	30.4%	7%
Maximum Green (s)	24.0	52.1	52.1	6.0	33.3	33.3	24.0	57.8	38.0	5.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	C-Max	C-Max	None	C-Max	C-Max	Min	Min	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		16.0	16.0		16.0	16.0		35.0	31.0	
Pedestrian Calls (#/hr)		2	2		2	2		2	2	
90th %ile Green (s)	14.8	62.1	62.1	6.5	53.0	53.0	13.5	56.8	38.0	0.0
90th %ile Term Code	Gap	Coord	Coord	Gap	Coord	Coord	Gap	Hold	Ped	Skip
70th %ile Green (s)	12.3	107.9	107.9	0.0	90.2	90.2	11.3	22.1	5.5	0.0
70th %ile Term Code	Gap	Coord	Coord	Skip	Coord	Coord	Gap	Hold	Gap	Skip
50th %ile Green (s)	10.6	109.2	109.2	0.0	93.2	93.2	10.0	20.8	5.5	0.0
50th %ile Term Code	Gap	Coord	Coord	Skip	Coord	Coord	Min	Hold	Gap	Skip
30th %ile Green (s)	10.0	109.2	109.2	0.0	93.8	93.8	10.0	20.8	5.5	0.0
30th %ile Term Code	Min	Coord	Coord	Skip	Coord	Coord	Min	Hold	Gap	Skip
10th %ile Green (s)	10.0	119.2	119.2	0.0	103.8	103.8	10.0	10.8	0.0	0.0
10th %ile Term Code	Min	Coord	Coord	Skip	Coord	Coord	Min	Hold	Skip	Skip

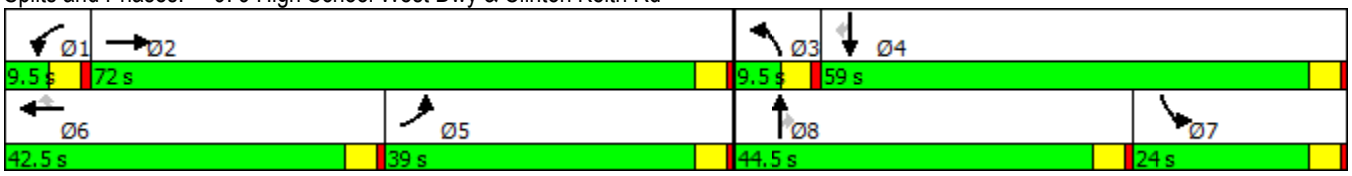
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 114 (81%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

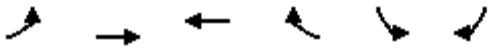
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	719	772	686	333	426	575			
Future Volume (vph)	719	772	686	333	426	575			
Turn Type	Prot	NA	NA	Perm	Prot	Perm			
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Detector Phase	5	2	6	6	7	4			
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	36.0	66.1	25.4	25.4	20.4	26.4			
Actuated g/C Ratio	0.35	0.65	0.25	0.25	0.20	0.26			
v/c Ratio	0.70	0.28	0.65	0.58	0.73	0.46			
Control Delay	34.8	9.9	38.0	7.3	47.3	1.0			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	34.8	9.9	38.0	7.3	47.3	1.0			
LOS	C	A	D	A	D	A			
Approach Delay		21.9	27.9						
Approach LOS		C	C						

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 101.9
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 23.3 Intersection LOS: C
Intersection Capacity Utilization 57.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: 9 High School West Dwy & Clinton Keith Rd





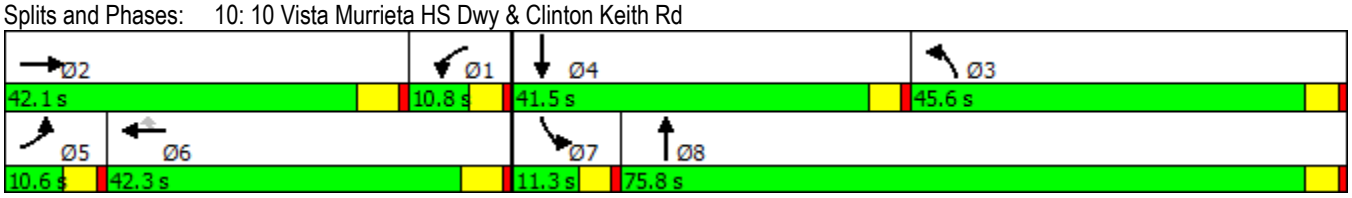
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Maximum Green (s)	34.5	67.5	38.0	38.0	19.5	54.5	5.0	5.0	40.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0	7.0		7.0			7.0
Flash Dont Walk (s)		24.0	31.0	31.0		30.0			33.0
Pedestrian Calls (#/hr)		3	2	2		2			2
90th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	64.0	0.0	0.0	40.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Ped
70th %ile Green (s)	34.5	65.5	26.5	26.5	19.5	19.5	0.0	0.0	0.0
70th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
50th %ile Green (s)	34.5	63.0	24.0	24.0	19.5	19.5	0.0	0.0	0.0
50th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
30th %ile Green (s)	34.5	60.6	21.6	21.6	19.5	19.5	0.0	0.0	0.0
30th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
10th %ile Green (s)	34.5	56.6	17.6	17.6	19.5	19.5	0.0	0.0	0.0
10th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 101.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 94
50th %ile Actuated Cycle: 91.5
30th %ile Actuated Cycle: 89.1
10th %ile Actuated Cycle: 85.1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	1133	36	934	39	61	0	32	0
Future Volume (vph)	21	1133	36	934	39	61	0	32	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	5.0	5.0
Minimum Split (s)	10.6	38.4	10.6	27.4	27.4	45.6	45.6	9.5	41.5
Total Split (s)	10.6	42.1	10.8	42.3	42.3	45.6	75.8	11.3	41.5
Total Split (%)	7.6%	30.1%	7.7%	30.2%	30.2%	32.6%	54.1%	8.1%	29.6%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	4.6	4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	6.9	37.7	6.9	40.1	40.1	7.8	10.9	9.0	10.0
Actuated g/C Ratio	0.11	0.59	0.11	0.63	0.63	0.12	0.17	0.14	0.16
v/c Ratio	0.12	0.42	0.20	0.31	0.04	0.15	0.03	0.13	0.04
Control Delay	39.3	14.7	39.3	12.6	0.1	34.3	0.1	34.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	14.7	39.3	12.6	0.1	34.3	0.1	34.9	0.1
LOS	D	B	D	B	A	C	A	C	A
Approach Delay		15.1		13.1			29.5		20.1
Approach LOS		B		B			C		C

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 63.7	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: 10 Vista Murrieta HS Dwy & Clinton Keith Rd



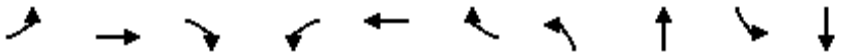
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	5.0	5.0
Minimum Split (s)	10.6	38.4	10.6	27.4	27.4	45.6	45.6	9.5	41.5
Total Split (s)	10.6	42.1	10.8	42.3	42.3	45.6	75.8	11.3	41.5
Total Split (%)	7.6%	30.1%	7.7%	30.2%	30.2%	32.6%	54.1%	8.1%	29.6%
Maximum Green (s)	6.0	36.7	6.2	36.9	36.9	41.0	71.2	6.8	37.0
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.9	2.0	3.9	3.9	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0		15.0	15.0		33.0		30.0
Pedestrian Calls (#/hr)		2		2	2		2		2
90th %ile Green (s)	6.0	36.7	6.2	36.9	36.9	9.8	40.0	6.8	37.0
90th %ile Term Code	Max	Max	Max	Hold	Hold	Hold	Ped	Max	Ped
70th %ile Green (s)	6.0	31.8	6.2	32.0	32.0	7.3	0.0	17.4	5.5
70th %ile Term Code	Max	Gap	Max	Hold	Hold	Gap	Skip	Hold	Gap
50th %ile Green (s)	0.0	29.9	6.0	40.5	40.5	6.8	0.0	0.0	0.0
50th %ile Term Code	Skip	Gap	Min	Hold	Hold	Gap	Skip	Skip	Skip
30th %ile Green (s)	0.0	29.2	0.0	29.2	29.2	6.3	0.0	0.0	0.0
30th %ile Term Code	Skip	Dwell	Skip	Dwell	Dwell	Gap	Skip	Skip	Skip
10th %ile Green (s)	0.0	31.6	0.0	31.6	31.6	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Dwell	Skip	Skip	Skip	Skip

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 63.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 108.8
70th %ile Actuated Cycle: 69.9
50th %ile Actuated Cycle: 57.3
30th %ile Actuated Cycle: 45.5
10th %ile Actuated Cycle: 37

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	376	549	254	116	455	31	203	149	56	226
Future Volume (vph)	376	549	254	116	455	31	203	149	56	226
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	7.6	7.6	10.6	48.8	10.0	48.8
Total Split (s)	32.0	42.0	42.0	17.0	27.0	27.0	36.0	77.0	14.0	55.0
Total Split (%)	21.3%	28.0%	28.0%	11.3%	18.0%	18.0%	24.0%	51.3%	9.3%	36.7%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6	4.6	4.6	5.8	4.0	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	24.4	26.5	26.5	9.2	12.9	12.9	16.9	33.9	8.0	21.6
Actuated g/C Ratio	0.25	0.27	0.27	0.10	0.13	0.13	0.17	0.35	0.08	0.22
v/c Ratio	0.45	0.58	0.43	0.36	0.70	0.10	0.68	0.39	0.39	0.60
Control Delay	35.5	35.0	6.7	50.0	48.3	0.6	51.9	24.0	57.6	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	35.0	6.7	50.0	48.3	0.6	51.9	24.0	57.6	22.0
LOS	D	D	A	D	D	A	D	C	E	C
Approach Delay		29.1			46.2			36.7		25.5
Approach LOS		C			D			D		C

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 96.6	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 33.2	Intersection LOS: C
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: 11 Whitewood Rd & Clinton Keith Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	7.6	7.6	10.6	48.8	10.0	48.8
Total Split (s)	32.0	42.0	42.0	17.0	27.0	27.0	36.0	77.0	14.0	55.0
Total Split (%)	21.3%	28.0%	28.0%	11.3%	18.0%	18.0%	24.0%	51.3%	9.3%	36.7%
Maximum Green (s)	27.4	36.6	36.6	11.6	22.4	22.4	31.4	71.2	10.0	49.2
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	0.5	6.9	6.9	3.0	0.5	0.5	2.0	6.1	2.0	6.1
Minimum Gap (s)	0.5	3.0	3.0	3.0	0.5	0.5	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0					7.0		7.0
Flash Dont Walk (s)		19.0	19.0					36.0		36.0
Pedestrian Calls (#/hr)		0	0					0		2
90th %ile Green (s)	30.0	36.6	36.6	11.6	19.8	19.8	27.8	61.4	10.0	43.0
90th %ile Term Code	Hold	Max	Max	Max	Gap	Gap	Gap	Hold	Max	Ped
70th %ile Green (s)	27.2	30.1	30.1	10.3	14.8	14.8	19.9	34.1	9.4	23.0
70th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Gap	Gap
50th %ile Green (s)	23.7	25.5	25.5	9.0	12.4	12.4	16.2	27.7	7.7	18.6
50th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Gap	Gap
30th %ile Green (s)	20.7	21.6	21.6	7.9	10.4	10.4	13.1	23.1	6.4	15.8
30th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Gap	Gap
10th %ile Green (s)	18.3	18.2	18.2	6.6	8.1	8.1	9.6	26.8	0.0	12.6
10th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Skip	Gap

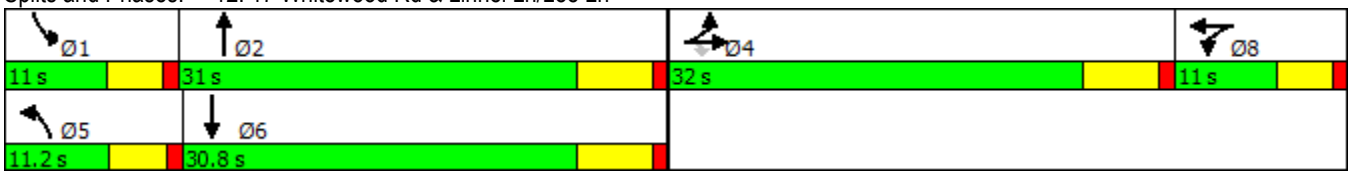
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 96.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 140.2
70th %ile Actuated Cycle: 104.5
50th %ile Actuated Cycle: 90.5
30th %ile Actuated Cycle: 79.6
10th %ile Actuated Cycle: 68.2

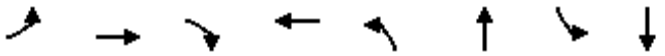
Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	57	2	88	2	44	406	2	475
Future Volume (vph)	57	2	88	2	44	406	2	475
Turn Type	Split	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases	4	4		8	5	2	1	6
Permitted Phases			4					
Detector Phase	4	4	4	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	32.0	32.0	32.0	11.0	11.2	31.0	11.0	30.8
Total Split (%)	37.6%	37.6%	37.6%	12.9%	13.2%	36.5%	12.9%	36.2%
Yellow Time (s)	4.8	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.6	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.9	11.9	11.9	6.5	6.7	26.2	6.5	24.1
Actuated g/C Ratio	0.25	0.25	0.25	0.14	0.14	0.56	0.14	0.51
v/c Ratio	0.14	0.01	0.18	0.02	0.19	0.22	0.01	0.30
Control Delay	19.3	20.0	2.3	25.6	25.7	9.9	26.0	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	20.0	2.3	25.6	25.7	9.9	26.0	12.1
LOS	B	B	A	C	C	A	C	B
Approach Delay		9.1		25.6		11.4		12.2
Approach LOS		A		C		B		B

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 47
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.30
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 38.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 12: 17 Whitewood Rd & Linnel Ln/Lee Ln





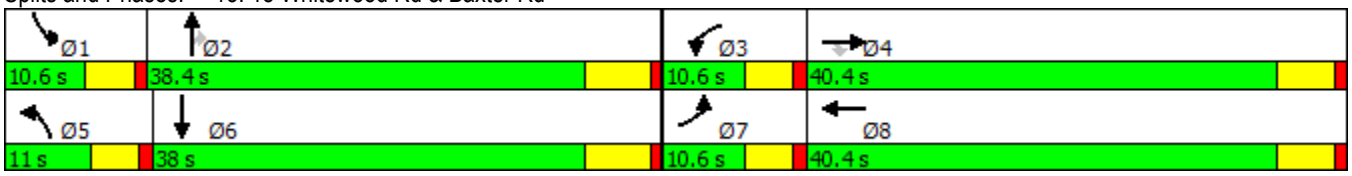
Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Protected Phases	4	4		8	5	2	1	6
Permitted Phases			4					
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	32.0	32.0	32.0	11.0	11.2	31.0	11.0	30.8
Total Split (%)	37.6%	37.6%	37.6%	12.9%	13.2%	36.5%	12.9%	36.2%
Maximum Green (s)	26.2	26.2	26.2	6.4	6.6	25.2	6.4	25.0
Yellow Time (s)	4.8	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	6.9	6.9	6.9	2.0	2.0	6.1	3.0	6.1
Minimum Gap (s)	5.0	5.0	5.0	2.0	2.0	3.0	3.0	3.0
Time Before Reduce (s)	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1
Time To Reduce (s)	1.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Recall Mode	None	None	None	None	None	Min	None	Min
Walk Time (s)	7.0	7.0	7.0			7.0		7.0
Flash Dont Walk (s)	19.0	19.0	19.0			10.0		15.0
Pedestrian Calls (#/hr)	0	0	0			0		0
90th %ile Green (s)	14.2	14.2	14.2	6.0	6.6	24.5	6.0	23.9
90th %ile Term Code	Gap	Gap	Gap	Min	Max	Hold	Min	Gap
70th %ile Green (s)	12.0	12.0	12.0	0.0	6.6	29.9	0.0	18.7
70th %ile Term Code	Gap	Gap	Gap	Skip	Max	Hold	Skip	Gap
50th %ile Green (s)	11.0	11.0	11.0	0.0	0.0	16.3	0.0	16.3
50th %ile Term Code	Gap	Gap	Gap	Skip	Skip	Hold	Skip	Gap
30th %ile Green (s)	10.1	10.1	10.1	0.0	0.0	18.7	0.0	18.7
30th %ile Term Code	Gap	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell

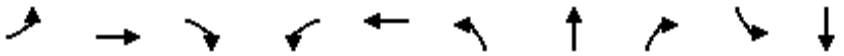
Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 47
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 71.5
70th %ile Actuated Cycle: 53.5
50th %ile Actuated Cycle: 38.9
30th %ile Actuated Cycle: 40.4
10th %ile Actuated Cycle: 30.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	4	3	64	7	6	67	379	5	8	430
Future Volume (vph)	4	3	64	7	6	67	379	5	8	430
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	10.6	40.4	40.4	10.6	40.4	11.0	38.4	38.4	10.6	38.0
Total Split (%)	10.6%	40.4%	40.4%	10.6%	40.4%	11.0%	38.4%	38.4%	10.6%	38.0%
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	4.6	5.4	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	7.1	14.3	14.3	7.1	14.3	7.3	34.6	34.6	7.1	24.9
Actuated g/C Ratio	0.14	0.28	0.28	0.14	0.28	0.14	0.67	0.67	0.14	0.49
v/c Ratio	0.02	0.01	0.14	0.03	0.02	0.29	0.32	0.00	0.04	0.27
Control Delay	31.8	17.7	0.7	31.4	12.7	32.5	13.1	0.0	31.2	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	17.7	0.7	31.4	12.7	32.5	13.1	0.0	31.2	15.2
LOS	C	B	A	C	B	C	B	A	C	B
Approach Delay		3.0			19.2		15.9			15.5
Approach LOS		A			B		B			B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 51.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 47.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: 18 Whitewood Rd & Baxter Rd





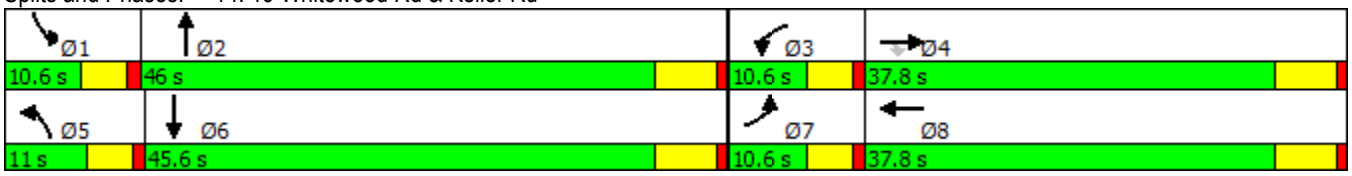
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	10.6	40.4	40.4	10.6	40.4	11.0	38.4	38.4	10.6	38.0
Total Split (%)	10.6%	40.4%	40.4%	10.6%	40.4%	11.0%	38.4%	38.4%	10.6%	38.0%
Maximum Green (s)	6.0	35.0	35.0	6.0	35.0	6.4	32.6	32.6	6.0	32.2
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		28.0	28.0		28.0		25.0	25.0		25.0
Pedestrian Calls (#/hr)		0	0		1		0	0		1
90th %ile Green (s)	6.0	35.0	35.0	6.0	35.0	6.4	32.6	32.6	6.0	32.2
90th %ile Term Code	Max	Hold	Hold	Max	Ped	Max	Max	Max	Max	Hold
70th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	6.4	23.8	23.8	0.0	12.8
70th %ile Term Code	Skip	Min	Min	Skip	Hold	Max	Hold	Hold	Skip	Gap
50th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	6.4	22.9	22.9	0.0	11.9
50th %ile Term Code	Skip	Min	Min	Skip	Hold	Max	Hold	Hold	Skip	Gap
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	6.2	31.0	31.0	0.0	20.2
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Gap	Dwell	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Dwell	Skip	Dwell

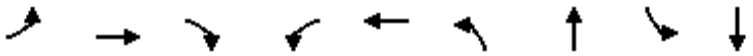
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 51.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 100
70th %ile Actuated Cycle: 45
50th %ile Actuated Cycle: 44.1
30th %ile Actuated Cycle: 36.8
10th %ile Actuated Cycle: 30.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	22	11	22	17	11	31	281	7	337
Future Volume (vph)	22	11	22	17	11	31	281	7	337
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	10.6	37.8	37.8	10.6	37.8	11.0	46.0	10.6	45.6
Total Split (%)	10.1%	36.0%	36.0%	10.1%	36.0%	10.5%	43.8%	10.1%	43.4%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.8	15.1	15.1	7.8	15.1	7.9	36.7	7.8	34.5
Actuated g/C Ratio	0.17	0.32	0.32	0.17	0.32	0.17	0.78	0.17	0.73
v/c Ratio	0.09	0.02	0.04	0.06	0.02	0.12	0.12	0.03	0.16
Control Delay	30.4	18.2	0.1	30.4	14.4	29.5	8.5	31.0	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	18.2	0.1	30.4	14.4	29.5	8.5	31.0	10.4
LOS	C	B	A	C	B	C	A	C	B
Approach Delay		15.9			21.8		10.5		10.8
Approach LOS		B			C		B		B

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 47	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.16	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: 19 Whitewood Rd & Keller Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	10.6	37.8	37.8	10.6	37.8	11.0	46.0	10.6	45.6
Total Split (%)	10.1%	36.0%	36.0%	10.1%	36.0%	10.5%	43.8%	10.1%	43.4%
Maximum Green (s)	6.0	32.0	32.0	6.0	32.0	6.4	40.2	6.0	39.8
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		32.0		32.0
Pedestrian Calls (#/hr)		1	1		0		0		1
90th %ile Green (s)	6.0	32.0	32.0	6.0	32.0	6.4	39.4	6.0	39.0
90th %ile Term Code	Max	Ped	Ped	Max	Hold	Max	Hold	Max	Ped
70th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	6.2	24.5	0.0	13.7
70th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Skip	Gap
50th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	17.5	0.0	17.5
50th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 47
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 104.2
70th %ile Actuated Cycle: 46.1
50th %ile Actuated Cycle: 23.3
30th %ile Actuated Cycle: 30.8
10th %ile Actuated Cycle: 30.8

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	554	291	502	234	156		
Future Volume (vph)	554	291	502	234	156		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	42.0	51.0	42.0	59.5	27.0	9.5	51.0
Total Split (%)	35.0%	42.5%	35.0%	49.6%	22.5%	8%	43%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag		Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	49.9	23.9	21.1	37.1	11.0		
Actuated g/C Ratio	0.70	0.34	0.30	0.52	0.16		
v/c Ratio	0.54	0.72	0.58	0.29	0.33		
Control Delay	4.2	31.6	25.3	5.6	31.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	4.2	31.6	25.3	5.6	31.7		
LOS	A	C	C	A	C		
Approach Delay				16.0	31.7		
Approach LOS				B	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 70.8	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 206: Warm Springs Pkwy & Driveway C

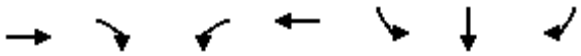
Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	42.0	51.0	42.0	59.5	27.0	9.5	51.0
Total Split (%)	35.0%	42.5%	35.0%	49.6%	22.5%	8%	43%
Maximum Green (s)	37.5	46.5	37.5	55.0	22.5	5.0	46.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag		Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	33.8	42.0	33.8	60.3	22.0	0.0	42.0
90th %ile Term Code	Gap	Gap	Gap	Hold	Ped	Skip	Hold
70th %ile Green (s)	23.5	27.6	23.5	38.8	10.8	0.0	27.6
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	20.2	22.4	20.2	34.1	9.4	0.0	22.4
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	16.5	17.9	16.5	29.2	8.2	0.0	17.9
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	12.4	12.9	12.4	23.7	6.8	0.0	12.9
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 70.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 111.3
70th %ile Actuated Cycle: 75.4
50th %ile Actuated Cycle: 65.5
30th %ile Actuated Cycle: 56.1
10th %ile Actuated Cycle: 45.6

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	865	543	266	1041	374	1	372
Future Volume (vph)	865	543	266	1041	374	1	372
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	40.8	40.8	22.6	63.8	25.8	25.8	25.8
Total Split (%)	45.5%	45.5%	25.2%	71.2%	28.8%	28.8%	28.8%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	46.0	46.0	11.6	62.2	15.8	15.8	15.8
Actuated g/C Ratio	0.51	0.51	0.13	0.69	0.18	0.18	0.18
v/c Ratio	0.35	0.52	0.63	0.31	0.66	0.66	0.58
Control Delay	14.7	3.5	42.7	9.8	44.2	44.2	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	3.5	42.7	9.8	44.2	44.2	17.9
LOS	B	A	D	A	D	D	B
Approach Delay	10.4			16.5		31.1	
Approach LOS	B			B		C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 301: I-15 SB Off & Clinton Keith Rd



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	40.8	40.8	22.6	63.8	25.8	25.8	25.8
Total Split (%)	45.5%	45.5%	25.2%	71.2%	28.8%	28.8%	28.8%
Maximum Green (s)	35.0	35.0	18.0	58.0	20.0	20.0	20.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Walk Time (s)	7.0	7.0		7.0			
Flash Dont Walk (s)	23.0	23.0		28.0			
Pedestrian Calls (#/hr)	0	0		2			
90th %ile Green (s)	35.6	35.6	15.0	55.2	22.8	22.8	22.8
90th %ile Term Code	Coord	Coord	Gap	Coord	Max	Max	Max
70th %ile Green (s)	41.6	41.6	13.0	59.2	18.8	18.8	18.8
70th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
50th %ile Green (s)	46.2	46.2	11.6	62.4	15.6	15.6	15.6
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
30th %ile Green (s)	50.0	50.0	10.2	64.8	13.2	13.2	13.2
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
10th %ile Green (s)	56.5	56.5	8.1	69.2	8.8	8.8	8.8
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap

Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	347	962	738	478	455	5	334
Future Volume (vph)	347	962	738	478	455	5	334
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	21.1	55.8	33.8	33.8	33.8	33.8	33.8
Total Split (%)	23.5%	62.3%	37.7%	37.7%	37.7%	37.7%	37.7%
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	13.3	57.3	38.9	38.9	20.7	20.7	20.7
Actuated g/C Ratio	0.15	0.64	0.43	0.43	0.23	0.23	0.23
v/c Ratio	0.70	0.31	0.34	0.52	0.72	0.73	0.61
Control Delay	36.0	4.5	19.0	4.4	42.0	39.6	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	4.5	19.0	4.4	42.0	39.6	23.6
LOS	D	A	B	A	D	D	C
Approach Delay		12.9	13.3			35.4	
Approach LOS		B	B			D	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 302: I-15 NB On & Clinton Keith Rd

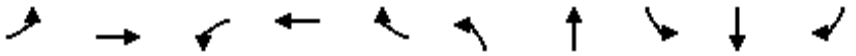
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	21.1	55.8	33.8	33.8	33.8	33.8	33.8
Total Split (%)	23.5%	62.3%	37.7%	37.7%	37.7%	37.7%	37.7%
Maximum Green (s)	16.0	50.0	28.0	28.0	28.0	28.0	28.0
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Walk Time (s)		7.0	7.0	7.0			
Flash Dont Walk (s)		23.0	23.0	23.0			
Pedestrian Calls (#/hr)		0	0	0			
90th %ile Green (s)	16.0	49.8	28.7	28.7	28.2	28.2	28.2
90th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
70th %ile Green (s)	15.2	53.3	33.0	33.0	24.7	24.7	24.7
70th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	13.6	56.9	38.2	38.2	21.1	21.1	21.1
50th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	12.0	60.7	43.6	43.6	17.3	17.3	17.3
30th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	9.7	65.8	51.0	51.0	12.2	12.2	12.2
10th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap

Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	117	846	111	748	41	75	19	51	28	95
Future Volume (vph)	117	846	111	748	41	75	19	51	28	95
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	29.0	66.0	29.0	66.0	66.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	20.7%	47.1%	20.7%	47.1%	47.1%	32.1%	32.1%	32.1%	32.1%	32.1%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.3	3.5	5.3	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	11.5	61.8	12.1	62.3	62.3	14.6	14.6	14.6	14.6	14.6
Actuated g/C Ratio	0.11	0.60	0.12	0.61	0.61	0.14	0.14	0.14	0.14	0.14
v/c Ratio	0.62	0.30	0.56	0.37	0.04	0.41	0.35	0.31	0.11	0.33
Control Delay	58.4	11.6	55.3	12.7	4.6	45.5	14.8	43.4	37.9	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.4	11.6	55.3	12.7	4.6	45.5	14.8	43.4	37.9	10.2
LOS	E	B	E	B	A	D	B	D	D	B
Approach Delay		17.1		17.6			27.8		24.4	
Approach LOS		B		B			C		C	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 102.3	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 52.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 303: George & Clinton Keith Rd



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	29.0	66.0	29.0	66.0	66.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	20.7%	47.1%	20.7%	47.1%	47.1%	32.1%	32.1%	32.1%	32.1%	32.1%
Maximum Green (s)	25.5	60.7	25.5	60.7	60.7	40.1	40.1	40.1	40.1	40.1
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	4.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0		19.0	19.0	27.0	27.0	28.0	28.0	28.0
Pedestrian Calls (#/hr)		1		0	0	1	1	1	1	1
90th %ile Green (s)	18.3	61.3	17.7	60.7	60.7	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	Hold	Hold	Ped	Ped	Ped
70th %ile Green (s)	13.0	61.1	12.6	60.7	60.7	13.0	13.0	13.0	13.0	13.0
70th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	11.1	61.0	10.8	60.7	60.7	11.0	11.0	11.0	11.0	11.0
50th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	9.3	60.7	10.0	61.4	61.4	9.1	9.1	9.1	9.1	9.1
30th %ile Term Code	Gap	MaxR	Min	Hold	Hold	Gap	Gap	Hold	Hold	Hold
10th %ile Green (s)	7.1	60.7	10.0	63.6	63.6	9.0	9.0	9.0	9.0	9.0
10th %ile Term Code	Gap	MaxR	Min	Hold	Hold	Min	Min	Hold	Hold	Hold

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 102.3
Control Type: Semi Act-Uncoord
90th %ile Actuated Cycle: 127.7
70th %ile Actuated Cycle: 100.4
50th %ile Actuated Cycle: 96.5
30th %ile Actuated Cycle: 93.5
10th %ile Actuated Cycle: 93.4

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø5
Lane Configurations							
Traffic Volume (vph)	756	225	24	665	220	25	
Future Volume (vph)	756	225	24	665	220	25	
Turn Type	NA	Perm	Prot	NA	Prot	Perm	
Protected Phases	2		1	6	8		5
Permitted Phases		2				8	
Detector Phase	2	2	1	6	8	8	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	6.0	6.0	5.0
Minimum Split (s)	25.5	25.5	10.0	22.5	22.5	22.5	10.0
Total Split (s)	45.5	45.5	35.0	45.5	35.0	35.0	35.0
Total Split (%)	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%	30%
Yellow Time (s)	4.5	4.5	4.0	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.0	5.5	5.0	5.0	
Lead/Lag	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes
Recall Mode	Min	Min	None	Min	None	None	None
Act Effct Green (s)	21.3	21.3	5.9	24.7	13.9	13.9	
Actuated g/C Ratio	0.43	0.43	0.12	0.49	0.28	0.28	
v/c Ratio	0.52	0.29	0.12	0.39	0.46	0.06	
Control Delay	13.4	3.4	28.6	8.5	21.0	12.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	13.4	3.4	28.6	8.5	21.0	12.9	
LOS	B	A	C	A	C	B	
Approach Delay	11.1			9.2	20.1		
Approach LOS	B			A	C		

Intersection Summary	
Cycle Length: 115.5	
Actuated Cycle Length: 50.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 41.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 304: Inland Valley & Clinton Keith Rd

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø5
Protected Phases	2		1	6	8		5
Permitted Phases		2				8	
Minimum Initial (s)	10.0	10.0	5.0	10.0	6.0	6.0	5.0
Minimum Split (s)	25.5	25.5	10.0	22.5	22.5	22.5	10.0
Total Split (s)	45.5	45.5	35.0	45.5	35.0	35.0	35.0
Total Split (%)	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%	30%
Maximum Green (s)	40.0	40.0	30.0	40.0	30.0	30.0	30.0
Yellow Time (s)	4.5	4.5	4.0	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes
Vehicle Extension (s)	2.5	2.5	1.5	2.5	3.5	3.5	1.5
Minimum Gap (s)	2.5	2.5	1.5	2.5	3.5	3.5	1.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	Min	None	Min	None	None	None
Walk Time (s)	8.0	8.0					
Flash Dont Walk (s)	12.0	12.0					
Pedestrian Calls (#/hr)	0	0					
90th %ile Green (s)	31.7	31.7	7.0	43.7	21.1	21.1	0.0
90th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Skip
70th %ile Green (s)	24.7	24.7	5.7	35.4	16.6	16.6	0.0
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Skip
50th %ile Green (s)	18.0	18.0	0.0	18.0	12.4	12.4	0.0
50th %ile Term Code	Gap	Gap	Skip	Hold	Gap	Gap	Skip
30th %ile Green (s)	15.1	15.1	0.0	15.1	10.6	10.6	0.0
30th %ile Term Code	Gap	Gap	Skip	Hold	Gap	Gap	Skip
10th %ile Green (s)	16.2	16.2	0.0	16.2	8.8	8.8	0.0
10th %ile Term Code	Dwell	Dwell	Skip	Dwell	Gap	Gap	Skip

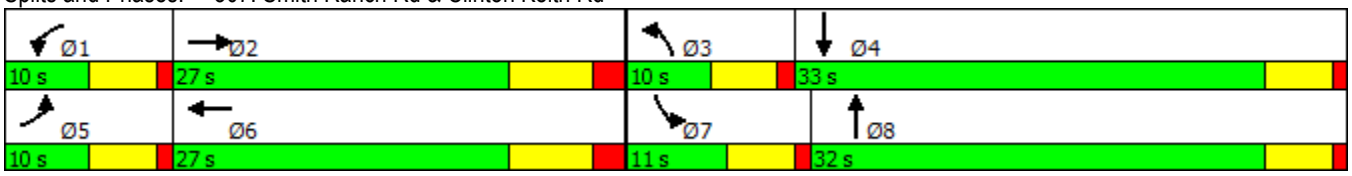
Intersection Summary
Cycle Length: 115.5
Actuated Cycle Length: 50.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 75.3
70th %ile Actuated Cycle: 62.5
50th %ile Actuated Cycle: 40.9
30th %ile Actuated Cycle: 36.2
10th %ile Actuated Cycle: 35.5

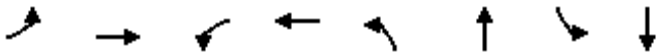
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	46	666	21	647	31	2	45	0
Future Volume (vph)	46	666	21	647	31	2	45	0
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	10.0	27.0	10.0	27.0	10.0	32.0	11.0	33.0
Total Split (%)	12.5%	33.8%	12.5%	33.8%	12.5%	40.0%	13.8%	41.3%
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	5.0	7.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	5.8	35.1	5.8	33.5	5.8	9.4	7.8	9.5
Actuated g/C Ratio	0.12	0.75	0.12	0.72	0.12	0.20	0.17	0.20
v/c Ratio	0.22	0.27	0.10	0.29	0.15	0.01	0.16	0.06
Control Delay	29.4	11.1	29.0	12.9	29.0	15.2	24.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	11.1	29.0	12.9	29.0	15.2	24.9	0.2
LOS	C	B	C	B	C	B	C	A
Approach Delay		12.2		13.4		27.1		14.7
Approach LOS		B		B		C		B

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 46.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 13.2 Intersection LOS: B
Intersection Capacity Utilization 47.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 307: Smith Ranch Rd & Clinton Keith Rd





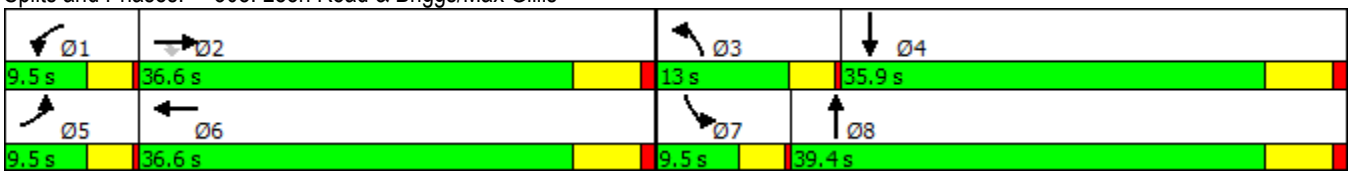
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	10.0	27.0	10.0	27.0	10.0	32.0	11.0	33.0
Total Split (%)	12.5%	33.8%	12.5%	33.8%	12.5%	40.0%	13.8%	41.3%
Maximum Green (s)	5.0	20.0	5.0	20.0	5.0	27.0	6.0	28.0
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	1.5	3.5	1.5	2.5	1.5	2.5
Minimum Gap (s)	1.5	3.0	1.5	3.0	1.5	2.5	1.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None
Walk Time (s)		7.0		7.0				12.0
Flash Dont Walk (s)		8.0		8.0				16.0
Pedestrian Calls (#/hr)		0		0				1
90th %ile Green (s)	5.0	20.0	5.0	20.0	5.0	27.0	6.0	28.0
90th %ile Term Code	Max	Max	Max	Max	Max	Hold	Max	Ped
70th %ile Green (s)	5.0	30.0	0.0	20.0	5.0	0.0	16.0	6.0
70th %ile Term Code	Max	Hold	Skip	Max	Max	Skip	Hold	Min
50th %ile Green (s)	0.0	23.8	0.0	23.8	0.0	0.0	0.0	0.0
50th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip
30th %ile Green (s)	0.0	25.8	0.0	25.8	0.0	0.0	0.0	0.0
30th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip
10th %ile Green (s)	0.0	24.2	0.0	24.2	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip

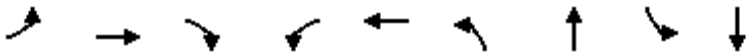
Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 46.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 80
70th %ile Actuated Cycle: 58
50th %ile Actuated Cycle: 30.8
30th %ile Actuated Cycle: 32.8
10th %ile Actuated Cycle: 31.2

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	81	184	536	118	139	410	225	7	304
Future Volume (vph)	81	184	536	118	139	410	225	7	304
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	9.5	36.6	36.6	9.5	36.6	13.0	39.4	9.5	35.9
Total Split (%)	10.0%	38.5%	38.5%	10.0%	38.5%	13.7%	41.5%	10.0%	37.8%
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.7	5.9	5.9	3.7	5.9	3.7	5.9	3.7	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Act Effct Green (s)	5.8	17.0	17.0	6.0	17.2	10.1	27.7	5.4	14.8
Actuated g/C Ratio	0.09	0.26	0.26	0.09	0.26	0.15	0.42	0.08	0.22
v/c Ratio	0.28	0.21	0.82	0.40	0.16	0.82	0.24	0.02	0.52
Control Delay	37.2	20.5	19.5	38.7	20.2	47.5	11.5	37.6	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	20.5	19.5	38.7	20.2	47.5	11.5	37.6	23.5
LOS	D	C	B	D	C	D	B	D	C
Approach Delay		21.5			28.7		31.2		23.8
Approach LOS		C			C		C		C

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 65.9	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 26.1	Intersection LOS: C
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 308: Leon Road & Briggs/Max Gillis





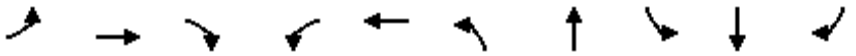
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	9.5	36.6	36.6	9.5	36.6	13.0	39.4	9.5	35.9
Total Split (%)	10.0%	38.5%	38.5%	10.0%	38.5%	13.7%	41.5%	10.0%	37.8%
Maximum Green (s)	5.8	30.7	30.7	5.8	30.7	9.3	33.5	5.8	30.0
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	1.5	3.0	1.5	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		23.0	23.0		23.0		23.0		23.0
Pedestrian Calls (#/hr)		1	1		0		0		2
90th %ile Green (s)	5.8	30.7	30.7	5.8	30.7	9.3	34.3	5.0	30.0
90th %ile Term Code	Max	Max	Max	Max	Hold	Max	Hold	Min	Ped
70th %ile Green (s)	5.8	23.6	23.6	5.8	23.6	9.3	29.1	0.0	16.1
70th %ile Term Code	Max	Gap	Gap	Max	Hold	Max	Hold	Skip	Gap
50th %ile Green (s)	5.6	17.0	17.0	5.8	17.2	9.3	25.5	0.0	12.5
50th %ile Term Code	Gap	Gap	Gap	Max	Hold	Max	Hold	Skip	Gap
30th %ile Green (s)	5.0	12.5	12.5	5.5	13.0	9.3	23.6	0.0	10.6
30th %ile Term Code	Min	Gap	Gap	Gap	Hold	Max	Hold	Skip	Gap
10th %ile Green (s)	0.0	6.6	6.6	0.0	6.6	9.3	21.4	0.0	8.4
10th %ile Term Code	Skip	Gap	Gap	Skip	Hold	Max	Hold	Skip	Gap

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 65.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 95
70th %ile Actuated Cycle: 74
50th %ile Actuated Cycle: 63.8
30th %ile Actuated Cycle: 57.1
10th %ile Actuated Cycle: 39.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	107	272	528	140	229	428	959	30	1057	111
Future Volume (vph)	107	272	528	140	229	428	959	30	1057	111
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Detector Phase	7	4	5	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	22.8	47.8	36.0	16.0	41.0	36.0	74.2	12.0	50.2	50.2
Total Split (%)	15.2%	31.9%	24.0%	10.7%	27.3%	24.0%	49.5%	8.0%	33.5%	33.5%
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.1	5.1	5.8	5.1	6.5	5.1	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	12.7	26.8	58.5	10.9	25.0	31.0	73.1	6.2	43.9	43.9
Actuated g/C Ratio	0.09	0.20	0.43	0.08	0.18	0.23	0.54	0.05	0.32	0.32
v/c Ratio	0.68	0.78	0.78	1.03	0.77	1.11	0.62	0.40	0.97	0.19
Control Delay	81.0	65.6	34.3	143.4	67.4	126.1	25.5	79.8	65.4	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	65.6	34.3	143.4	67.4	126.1	25.5	79.8	65.4	1.7
LOS	F	E	C	F	E	F	C	E	E	A
Approach Delay		49.2			94.6		53.5		59.9	
Approach LOS		D			F		D		E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 135.2	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 58.4	Intersection LOS: E
Intersection Capacity Utilization 96.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 309: Hwy 79 & Max Gillis/Thompson



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	22.8	47.8	36.0	16.0	41.0	36.0	74.2	12.0	50.2	50.2
Total Split (%)	15.2%	31.9%	24.0%	10.7%	27.3%	24.0%	49.5%	8.0%	33.5%	33.5%
Maximum Green (s)	17.7	42.0	30.9	10.9	35.2	30.9	67.7	6.9	43.7	43.7
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0					7.0		5.0	5.0
Flash Dont Walk (s)		35.0					25.0		36.0	36.0
Pedestrian Calls (#/hr)		3					0		0	0
90th %ile Green (s)	17.7	42.0	30.9	10.9	35.2	30.9	67.7	6.9	43.7	43.7
90th %ile Term Code	Max	Ped	Max	Max	Hold	Max	Hold	Max	Max	Max
70th %ile Green (s)	15.4	31.7	30.9	10.9	27.2	30.9	67.7	6.9	43.7	43.7
70th %ile Term Code	Gap	Hold	Max	Max	Gap	Max	Hold	Max	Max	Max
50th %ile Green (s)	12.9	25.1	30.9	10.9	23.1	30.9	67.8	6.8	43.7	43.7
50th %ile Term Code	Gap	Hold	Max	Max	Gap	Max	Hold	Gap	Max	Max
30th %ile Green (s)	10.6	21.0	30.9	10.9	21.3	30.9	79.7	0.0	43.7	43.7
30th %ile Term Code	Gap	Gap	Max	Max	Hold	Max	Hold	Skip	Max	Max
10th %ile Green (s)	7.6	16.3	30.9	10.9	19.6	30.9	79.7	0.0	43.7	43.7
10th %ile Term Code	Gap	Gap	Max	Max	Hold	Max	Hold	Skip	Max	Max

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 135.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 139.7
50th %ile Actuated Cycle: 133.1
30th %ile Actuated Cycle: 129
10th %ile Actuated Cycle: 124.3

2021 Project Completion PM without Creighton Avenue Access

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL
Lane Configurations						
Traffic Volume (vph)	8	1959	84	39	1404	55
Future Volume (vph)	8	1959	84	39	1404	55
Turn Type	Prot	NA	Perm	Prot	NA	Prot
Protected Phases	5	2		1	6	3
Permitted Phases			2			
Detector Phase	5	2	2	1	6	3
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	15.4
Total Split (s)	15.4	92.0	92.0	16.0	92.6	22.0
Total Split (%)	11.8%	70.8%	70.8%	12.3%	71.2%	16.9%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	10.0	94.5	94.5	10.3	104.2	11.9
Actuated g/C Ratio	0.08	0.73	0.73	0.08	0.80	0.09
v/c Ratio	0.07	0.58	0.08	0.30	0.38	0.52
Control Delay	63.5	5.9	0.5	53.1	1.6	57.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.5	6.0	0.5	53.1	1.6	57.4
LOS	E	A	A	D	A	E
Approach Delay		6.0			3.0	57.4
Approach LOS		A			A	E

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 101 (78%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd

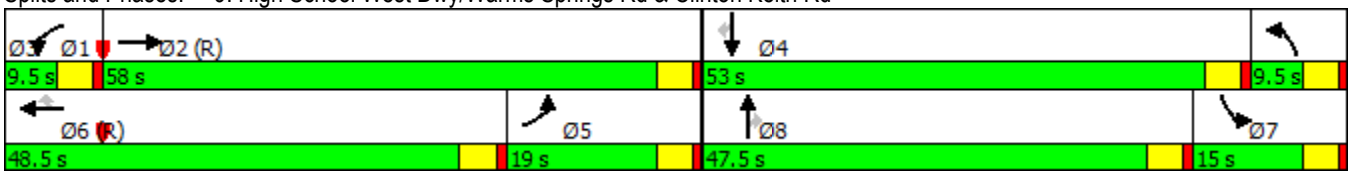
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL
Protected Phases	5	2		1	6	3
Permitted Phases			2			
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	15.4
Total Split (s)	15.4	92.0	92.0	16.0	92.6	22.0
Total Split (%)	11.8%	70.8%	70.8%	12.3%	71.2%	16.9%
Maximum Green (s)	10.0	86.6	86.6	11.4	87.2	16.6
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		16.0	16.0		16.0	
Pedestrian Calls (#/hr)		17	17		2	
90th %ile Green (s)	10.0	87.4	87.4	11.4	88.0	15.8
90th %ile Term Code	Min	Coord	Coord	Hold	Coord	Gap
70th %ile Green (s)	0.0	90.3	90.3	11.4	106.3	12.9
70th %ile Term Code	Skip	Coord	Coord	Hold	Coord	Gap
50th %ile Green (s)	0.0	92.2	92.2	11.4	108.2	11.0
50th %ile Term Code	Skip	Coord	Coord	Hold	Coord	Gap
30th %ile Green (s)	0.0	93.2	93.2	11.4	109.2	10.0
30th %ile Term Code	Skip	Coord	Coord	Hold	Coord	Min
10th %ile Green (s)	0.0	109.2	109.2	0.0	109.2	10.0
10th %ile Term Code	Skip	Coord	Coord	Skip	Coord	Min

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 101 (78%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Lane Configurations									
Traffic Volume (vph)	520	1415	967	227	21	326	471		
Future Volume (vph)	520	1415	967	227	21	326	471		
Turn Type	Prot	NA	NA	Perm	Perm	Prot	Perm		
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Detector Phase	5	2	6	6	8	7	4		
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Act Effct Green (s)	14.5	80.9	61.9	61.9	12.4	23.2	40.1		
Actuated g/C Ratio	0.11	0.62	0.48	0.48	0.10	0.18	0.31		
v/c Ratio	1.52	0.52	0.45	0.29	0.08	0.59	0.40		
Control Delay	275.6	4.6	17.9	1.7	0.5	54.4	1.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	275.6	4.6	17.9	1.7	0.5	54.4	1.2		
LOS	F	A	B	A	A	D	A		
Approach Delay		75.6	14.9						
Approach LOS		E	B						

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay: 46.6	Intersection LOS: D
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: High School West Dwy/Warms Springs Rd & Clinton Keith Rd



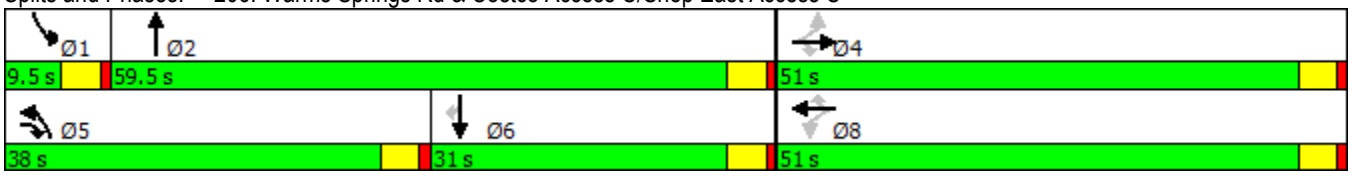
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Maximum Green (s)	14.5	53.5	44.0	44.0	43.0	10.5	48.5	5.0	5.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Walk Time (s)		7.0	7.0	7.0	7.0		7.0		
Flash Dont Walk (s)		24.0	31.0	31.0	33.0		30.0		
Pedestrian Calls (#/hr)		2	2	2	2		2		
90th %ile Green (s)	14.5	63.0	44.0	44.0	40.0	13.5	58.0	0.0	0.0
90th %ile Term Code	Max	Coord	Coord	Coord	Ped	Max	Hold	Skip	Skip
70th %ile Green (s)	14.5	88.4	69.4	69.4	5.5	22.6	32.6	0.0	0.0
70th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
50th %ile Green (s)	14.5	87.9	68.9	68.9	5.5	23.1	33.1	0.0	0.0
50th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
30th %ile Green (s)	14.5	85.9	66.9	66.9	5.5	25.1	35.1	0.0	0.0
30th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
10th %ile Green (s)	14.5	79.1	60.1	60.1	5.5	31.9	41.9	0.0	0.0
10th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	456	215	376	173	127		
Future Volume (vph)	456	215	376	173	127		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	38.0	51.0	38.0	59.5	31.0	9.5	51.0
Total Split (%)	31.7%	42.5%	31.7%	49.6%	25.8%	8%	43%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	37.7	17.8	14.9	29.9	10.0		
Actuated g/C Ratio	0.65	0.31	0.26	0.52	0.17		
v/c Ratio	0.45	0.58	0.50	0.20	0.24		
Control Delay	2.2	23.8	22.4	5.1	24.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	2.2	23.8	22.4	5.1	24.5		
LOS	A	C	C	A	C		
Approach Delay				14.6	24.5		
Approach LOS				B	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 57.6	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 206: Warms Springs Rd & Costco Access C/Shop East Access C



Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	38.0	51.0	38.0	59.5	31.0	9.5	51.0
Total Split (%)	31.7%	42.5%	31.7%	49.6%	25.8%	8%	43%
Maximum Green (s)	33.5	46.5	33.5	55.0	26.5	5.0	46.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	24.0	37.0	24.0	50.5	22.0	0.0	37.0
90th %ile Term Code	Gap	Ped	Gap	Hold	Ped	Skip	Hold
70th %ile Green (s)	16.5	18.7	16.5	30.0	9.0	0.0	18.7
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	13.5	15.4	13.5	26.0	8.0	0.0	15.4
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	11.8	12.7	11.8	23.5	7.2	0.0	12.7
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	8.9	9.6	8.9	19.6	6.2	0.0	9.6
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 57.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 96.5
70th %ile Actuated Cycle: 57.7
50th %ile Actuated Cycle: 50.4
30th %ile Actuated Cycle: 45.2
10th %ile Actuated Cycle: 38.2

2021 Project Completion Saturday Midday without Creighton Avenue Access

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL
Lane Configurations						
Traffic Volume (vph)	8	1535	54	7	1332	53
Future Volume (vph)	8	1535	54	7	1332	53
Turn Type	Prot	NA	Perm	Prot	NA	Prot
Protected Phases	5	2		1	6	3
Permitted Phases			2			
Detector Phase	5	2	2	1	6	3
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	9.5	29.4	29.4	10.6	28.4	29.4
Total Split (s)	12.0	92.0	92.0	14.0	94.0	34.0
Total Split (%)	8.6%	65.7%	65.7%	10.0%	67.1%	24.3%
Yellow Time (s)	3.5	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.4	5.4	4.6	5.4	5.4
Lead/Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	Min
Act Effct Green (s)	6.3	115.6	115.6	6.1	115.4	11.4
Actuated g/C Ratio	0.04	0.83	0.83	0.04	0.82	0.08
v/c Ratio	0.11	0.39	0.04	0.10	0.34	0.47
Control Delay	65.2	2.2	0.4	67.4	3.7	64.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	2.2	0.4	67.4	3.7	64.1
LOS	E	A	A	E	A	E
Approach Delay		2.5			4.0	64.1
Approach LOS		A			A	E

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 4.5	Intersection LOS: A
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: 8 Creighton Ave & Clinton Keith Rd

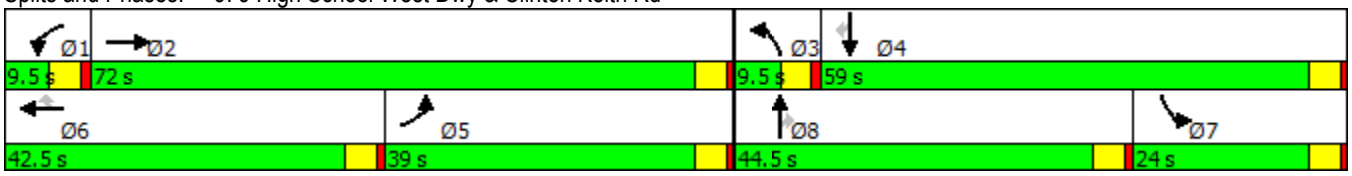
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL
Protected Phases	5	2		1	6	3
Permitted Phases			2			
Minimum Initial (s)	5.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	9.5	29.4	29.4	10.6	28.4	29.4
Total Split (s)	12.0	92.0	92.0	14.0	94.0	34.0
Total Split (%)	8.6%	65.7%	65.7%	10.0%	67.1%	24.3%
Maximum Green (s)	7.5	86.6	86.6	9.4	88.6	28.6
Yellow Time (s)	3.5	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	3.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	Min
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		16.0	16.0		16.0	
Pedestrian Calls (#/hr)		2	2		2	
90th %ile Green (s)	7.5	103.5	103.5	6.5	102.6	14.6
90th %ile Term Code	Max	Coord	Coord	Gap	Coord	Gap
70th %ile Green (s)	0.0	117.1	117.1	0.0	117.1	12.1
70th %ile Term Code	Skip	Coord	Coord	Skip	Coord	Gap
50th %ile Green (s)	0.0	118.9	118.9	0.0	118.9	10.3
50th %ile Term Code	Skip	Coord	Coord	Skip	Coord	Gap
30th %ile Green (s)	0.0	119.2	119.2	0.0	119.2	10.0
30th %ile Term Code	Skip	Coord	Coord	Skip	Coord	Min
10th %ile Green (s)	0.0	119.2	119.2	0.0	119.2	10.0
10th %ile Term Code	Skip	Coord	Coord	Skip	Coord	Min

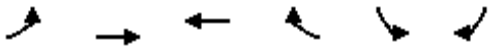
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	774	772	686	333	426	628			
Future Volume (vph)	774	772	686	333	426	628			
Turn Type	Prot	NA	NA	Perm	Prot	Perm			
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Detector Phase	5	2	6	6	7	4			
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	36.0	66.1	25.4	25.4	20.4	26.4			
Actuated g/C Ratio	0.35	0.65	0.25	0.25	0.20	0.26			
v/c Ratio	0.75	0.28	0.65	0.58	0.73	0.50			
Control Delay	36.2	9.9	38.0	7.3	47.3	1.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	36.2	9.9	38.0	7.3	47.3	1.2			
LOS	D	A	D	A	D	A			
Approach Delay		23.1	27.9						
Approach LOS		C	C						

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 101.9	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: 9 High School West Dwy & Clinton Keith Rd





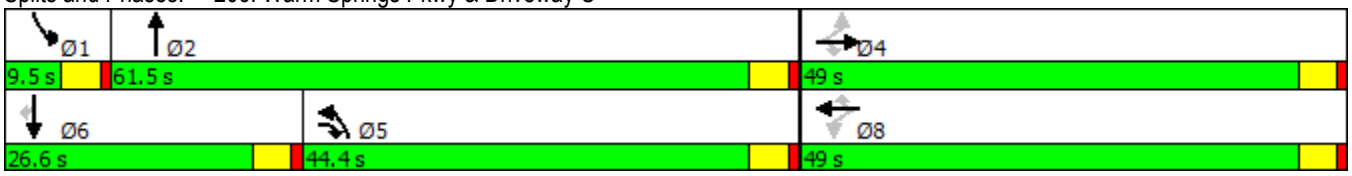
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Maximum Green (s)	34.5	67.5	38.0	38.0	19.5	54.5	5.0	5.0	40.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0	7.0		7.0			7.0
Flash Dont Walk (s)		24.0	31.0	31.0		30.0			33.0
Pedestrian Calls (#/hr)		3	2	2		2			2
90th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	64.0	0.0	0.0	40.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Ped
70th %ile Green (s)	34.5	65.5	26.5	26.5	19.5	19.5	0.0	0.0	0.0
70th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
50th %ile Green (s)	34.5	63.0	24.0	24.0	19.5	19.5	0.0	0.0	0.0
50th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
30th %ile Green (s)	34.5	60.6	21.6	21.6	19.5	19.5	0.0	0.0	0.0
30th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
10th %ile Green (s)	34.5	56.6	17.6	17.6	19.5	19.5	0.0	0.0	0.0
10th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 101.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 94
50th %ile Actuated Cycle: 91.5
30th %ile Actuated Cycle: 89.1
10th %ile Actuated Cycle: 85.1

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	596	291	541	251	166		
Future Volume (vph)	596	291	541	251	166		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	44.4	49.0	44.4	61.5	26.6	9.5	49.0
Total Split (%)	37.0%	40.8%	37.0%	51.3%	22.2%	8%	41%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag		Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	52.5	24.6	23.0	39.2	11.3		
Actuated g/C Ratio	0.71	0.33	0.31	0.53	0.15		
v/c Ratio	0.58	0.73	0.59	0.29	0.36		
Control Delay	5.0	33.3	25.6	6.0	33.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	5.0	33.3	25.6	6.0	33.5		
LOS	A	C	C	A	C		
Approach Delay				16.5	33.5		
Approach LOS				B	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 73.7	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 206: Warm Springs Pkwy & Driveway C



Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	44.4	49.0	44.4	61.5	26.6	9.5	49.0
Total Split (%)	37.0%	40.8%	37.0%	51.3%	22.2%	8%	41%
Maximum Green (s)	39.9	44.5	39.9	57.0	22.1	5.0	44.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag		Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	37.7	43.5	37.7	64.2	22.0	0.0	43.5
90th %ile Term Code	Gap	Gap	Gap	Hold	Ped	Skip	Hold
70th %ile Green (s)	26.2	28.6	26.2	42.0	11.3	0.0	28.6
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	21.6	22.9	21.6	35.8	9.7	0.0	22.9
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	17.6	18.3	17.6	30.5	8.4	0.0	18.3
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	13.2	13.1	13.2	24.7	7.0	0.0	13.1
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 73.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 116.7
70th %ile Actuated Cycle: 79.6
50th %ile Actuated Cycle: 67.7
30th %ile Actuated Cycle: 57.8
10th %ile Actuated Cycle: 46.8

2021 Cumulative PM with Creighton Avenue Access

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	46	890	416	822	72	48	397	130	47
Future Volume (vph)	46	890	416	822	72	48	397	130	47
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	14.0	49.2	41.2	76.4	42.8	42.8	42.8	42.8	42.8
Total Split (%)	10.5%	36.9%	30.9%	57.4%	32.1%	32.1%	32.1%	32.1%	32.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	7.6	40.8	33.9	69.9	19.0	19.0	19.0	19.0	19.0
Actuated g/C Ratio	0.07	0.37	0.31	0.63	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.41	0.83	0.85	0.49	0.34	0.16	0.69	0.62	0.26
Control Delay	64.2	39.4	53.4	13.4	45.1	40.5	10.0	55.1	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	39.4	53.4	13.4	45.1	40.5	10.0	55.1	42.2
LOS	E	D	D	B	D	D	A	E	D
Approach Delay		40.6		25.4		17.7			50.5
Approach LOS		D		C		B			D

Intersection Summary	
Cycle Length: 133.2	
Actuated Cycle Length: 110.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 77.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Nutmeg St & Clinton Keith Rd

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	14.0	49.2	41.2	76.4	42.8	42.8	42.8	42.8	42.8
Total Split (%)	10.5%	36.9%	30.9%	57.4%	32.1%	32.1%	32.1%	32.1%	32.1%
Maximum Green (s)	9.4	43.4	36.6	70.6	37.0	37.0	37.0	37.0	37.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	3.9	2.0	3.9	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		22.0		21.0	30.0	30.0	30.0		
Pedestrian Calls (#/hr)		4		0	2	2	2		
90th %ile Green (s)	9.4	43.4	36.6	70.6	37.0	37.0	37.0	37.0	37.0
90th %ile Term Code	Max	Max	Max	Hold	Ped	Ped	Ped	Hold	Hold
70th %ile Green (s)	8.9	43.4	36.6	71.1	20.3	20.3	20.3	20.3	20.3
70th %ile Term Code	Gap	Max	Max	Hold	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.6	43.4	36.6	72.4	17.2	17.2	17.2	17.2	17.2
50th %ile Term Code	Gap	Max	Max	Hold	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.4	40.7	33.3	67.6	14.3	14.3	14.3	14.3	14.3
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	32.0	25.9	62.5	10.0	10.0	10.0	10.0	10.0
10th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 133.2
Actuated Cycle Length: 110.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 133.2
70th %ile Actuated Cycle: 116.5
50th %ile Actuated Cycle: 113.4
30th %ile Actuated Cycle: 104.5
10th %ile Actuated Cycle: 84.1

Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Lane Configurations						
Traffic Volume (vph)	1269	481	1166	176	829	
Future Volume (vph)	1269	481	1166	176	829	
Turn Type	NA	Prot	NA	Prot	Perm	
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Detector Phase	2	1	6	8	8	
Switch Phase						
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	66.4	41.0	107.4	33.8	33.8	32.6
Total Split (%)	38.2%	23.6%	61.8%	19.4%	19.4%	19%
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	4.6	5.8	5.8	5.8	
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	61.3	36.8	102.7	23.0	23.0	
Actuated g/C Ratio	0.43	0.26	0.72	0.16	0.16	
v/c Ratio	1.04	1.15	0.50	0.91dr	0.74	
Control Delay	74.9	136.2	11.9	43.6	13.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	74.9	136.2	11.9	43.6	13.0	
LOS	E	F	B	D	B	
Approach Delay	74.9		48.2	31.0		
Approach LOS	E		D	C		

Intersection Summary	
Cycle Length: 173.8	
Actuated Cycle Length: 142.8	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 53.2	Intersection LOS: D
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 2: 2 California Oaks Rd & Clinton Keith Rd

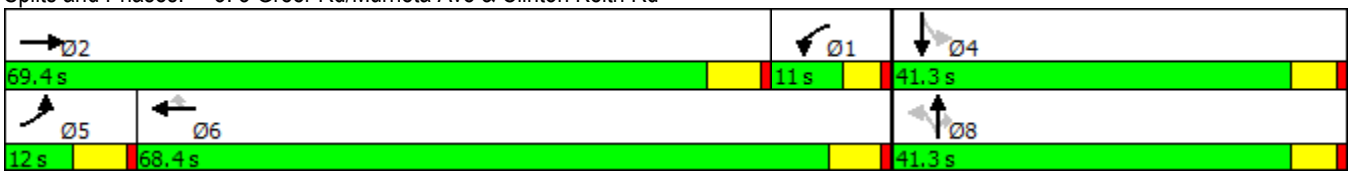
Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	66.4	41.0	107.4	33.8	33.8	32.6
Total Split (%)	38.2%	23.6%	61.8%	19.4%	19.4%	19%
Maximum Green (s)	60.6	36.4	101.6	28.0	28.0	28.0
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Vehicle Extension (s)	3.8	3.0	3.8	3.8	3.8	0.2
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	0.2
Time Before Reduce (s)	1.0	0.0	1.0	1.0	1.0	0.0
Time To Reduce (s)	0.1	0.0	0.1	0.1	0.1	0.0
Recall Mode	Min	None	Min	None	None	None
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	20.0					21.0
Pedestrian Calls (#/hr)	3					2
90th %ile Green (s)	60.6	36.4	101.6	28.0	28.0	28.0
90th %ile Term Code	Max	Max	Hold	Max	Max	Ped
70th %ile Green (s)	60.6	36.4	101.6	27.5	27.5	0.0
70th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
50th %ile Green (s)	60.6	36.4	101.6	24.2	24.2	0.0
50th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
30th %ile Green (s)	60.6	36.4	101.6	20.0	20.0	0.0
30th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
10th %ile Green (s)	60.6	36.4	101.6	15.8	15.8	0.0
10th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip

Intersection Summary
Cycle Length: 173.8
Actuated Cycle Length: 142.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 173.8
70th %ile Actuated Cycle: 140.7
50th %ile Actuated Cycle: 137.4
30th %ile Actuated Cycle: 133.2
10th %ile Actuated Cycle: 129

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	73	1975	90	1628	160	39	1	79	165	0
Future Volume (vph)	73	1975	90	1628	160	39	1	79	165	0
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6			8			4
Permitted Phases					6	8		8	4	
Detector Phase	5	2	1	6	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.8	30.8	10.6	33.8	33.8	41.3	41.3	41.3	23.3	23.3
Total Split (s)	12.0	69.4	11.0	68.4	68.4	41.3	41.3	41.3	41.3	41.3
Total Split (%)	9.9%	57.0%	9.0%	56.2%	56.2%	33.9%	33.9%	33.9%	33.9%	33.9%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.3	5.3	5.3	5.3	5.3
Lead/Lag	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.2	63.8	6.4	62.8	62.8	18.2	18.2	18.2	18.2	18.2
Actuated g/C Ratio	0.06	0.61	0.06	0.60	0.60	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.75	1.03	0.88	0.82	0.18	0.18	0.00	0.22	0.72	0.11
Control Delay	88.4	47.8	109.7	21.4	6.1	37.5	33.0	3.2	57.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	47.8	109.7	21.4	6.1	37.5	33.0	3.2	57.1	0.6
LOS	F	D	F	C	A	D	C	A	E	A
Approach Delay		49.2		24.3			14.6			46.1
Approach LOS		D		C			B			D

Intersection Summary	
Cycle Length: 121.7	
Actuated Cycle Length: 104.1	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 37.2	Intersection LOS: D
Intersection Capacity Utilization 90.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: 3 Greer Rd/Murrieta Ave & Clinton Keith Rd



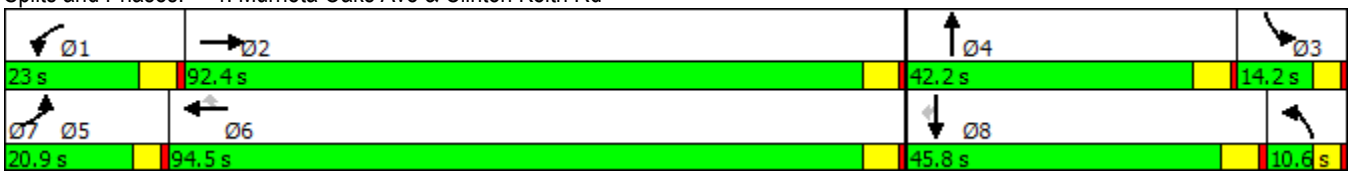
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	5	2	1	6			8			4
Permitted Phases					6	8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.8	30.8	10.6	33.8	33.8	41.3	41.3	41.3	23.3	23.3
Total Split (s)	12.0	69.4	11.0	68.4	68.4	41.3	41.3	41.3	41.3	41.3
Total Split (%)	9.9%	57.0%	9.0%	56.2%	56.2%	33.9%	33.9%	33.9%	33.9%	33.9%
Maximum Green (s)	6.2	63.6	6.4	62.6	62.6	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		18.0		21.0	21.0	29.0	29.0	29.0		
Pedestrian Calls (#/hr)		1		1	1	0	0	0		
90th %ile Green (s)	6.2	63.6	6.4	62.6	62.6	26.3	26.3	26.3	26.3	26.3
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
70th %ile Green (s)	6.2	63.6	6.4	62.6	62.6	21.3	21.3	21.3	21.3	21.3
70th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.2	63.6	6.4	62.6	62.6	18.1	18.1	18.1	18.1	18.1
50th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.2	63.6	6.4	62.6	62.6	15.1	15.1	15.1	15.1	15.1
30th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	6.2	63.6	6.4	62.6	62.6	11.1	11.1	11.1	11.1	11.1
10th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Hold	Hold	Hold	Gap	Gap

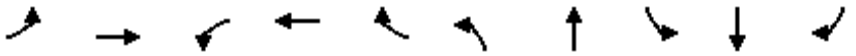
Intersection Summary
Cycle Length: 121.7
Actuated Cycle Length: 104.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 112
70th %ile Actuated Cycle: 107
50th %ile Actuated Cycle: 103.8
30th %ile Actuated Cycle: 100.8
10th %ile Actuated Cycle: 96.8

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	87	2124	220	1815	99	22	5	96	5	67
Future Volume (vph)	87	2124	220	1815	99	22	5	96	5	67
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Detector Phase	5	2	1	6	6	7	4	3	8	8
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	11.8	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	20.9	92.4	23.0	94.5	94.5	10.6	42.2	14.2	45.8	45.8
Total Split (%)	12.2%	53.8%	13.4%	55.0%	55.0%	6.2%	24.6%	8.3%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	11.8	87.1	17.3	93.8	93.8	10.2	12.5	11.4	18.3	18.3
Actuated g/C Ratio	0.08	0.58	0.12	0.62	0.62	0.07	0.08	0.08	0.12	0.12
v/c Ratio	0.67	1.14	1.16	0.61	0.10	0.20	0.72	0.39	0.02	0.28
Control Delay	91.3	98.2	167.7	20.2	5.8	73.6	29.9	70.6	59.2	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.3	98.2	167.7	20.2	5.8	73.6	29.9	70.6	59.2	12.9
LOS	F	F	F	C	A	E	C	E	E	B
Approach Delay		97.9		34.8			34.4		47.2	
Approach LOS		F		C			C		D	

Intersection Summary	
Cycle Length: 171.8	
Actuated Cycle Length: 150.4	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 65.0	Intersection LOS: E
Intersection Capacity Utilization 107.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Murrieta Oaks Ave & Clinton Keith Rd





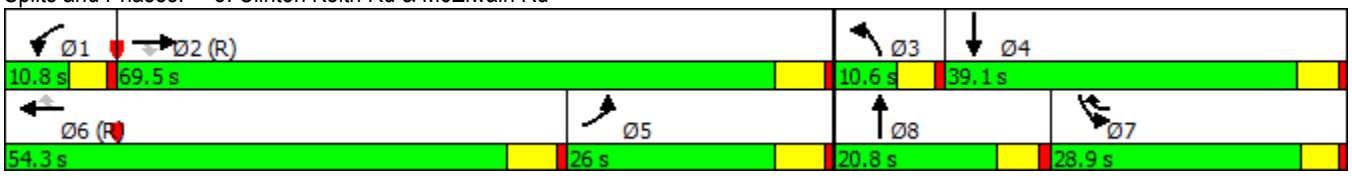
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	11.8	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	20.9	92.4	23.0	94.5	94.5	10.6	42.2	14.2	45.8	45.8
Total Split (%)	12.2%	53.8%	13.4%	55.0%	55.0%	6.2%	24.6%	8.3%	26.7%	26.7%
Maximum Green (s)	16.3	86.6	17.2	88.7	88.7	6.0	36.4	9.6	40.0	40.0
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	2.0	5.2	3.0	3.2	3.2
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.2	3.2
Time Before Reduce (s)	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		13.0		26.0	26.0		29.0		33.0	33.0
Pedestrian Calls (#/hr)		1		2	2		0		2	2
90th %ile Green (s)	16.3	86.6	17.2	88.7	88.7	6.0	22.0	24.0	40.0	40.0
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	Max	Gap	Hold	Ped	Ped
70th %ile Green (s)	14.0	86.6	17.2	91.0	91.0	17.4	15.0	9.6	7.2	7.2
70th %ile Term Code	Gap	MaxR	Max	Hold	Hold	Hold	Gap	Max	Gap	Gap
50th %ile Green (s)	11.9	86.6	17.2	93.1	93.1	15.0	11.4	9.6	6.0	6.0
50th %ile Term Code	Gap	MaxR	Max	Hold	Hold	Hold	Gap	Max	Min	Min
30th %ile Green (s)	10.0	86.6	17.2	95.0	95.0	0.0	7.9	8.6	21.1	21.1
30th %ile Term Code	Gap	MaxR	Max	Hold	Hold	Skip	Gap	Gap	Hold	Hold
10th %ile Green (s)	7.3	86.6	17.2	97.7	97.7	0.0	7.7	7.1	19.4	19.4
10th %ile Term Code	Gap	MaxR	Max	Hold	Hold	Skip	Gap	Gap	Hold	Hold

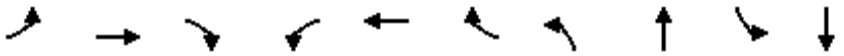
Intersection Summary
Cycle Length: 171.8
Actuated Cycle Length: 150.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 171.8
70th %ile Actuated Cycle: 150.4
50th %ile Actuated Cycle: 146.8
30th %ile Actuated Cycle: 142.3
10th %ile Actuated Cycle: 140.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	434	1959	29	25	1692	369	16	13	542	21
Future Volume (vph)	434	1959	29	25	1692	369	16	13	542	21
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	11.8	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	26.0	69.5	69.5	10.8	54.3	28.9	10.6	20.8	28.9	39.1
Total Split (%)	20.0%	53.5%	53.5%	8.3%	41.8%	22.2%	8.2%	16.0%	22.2%	30.1%
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	20.2	73.4	73.4	6.2	53.9	87.2	6.0	10.1	27.5	35.0
Actuated g/C Ratio	0.16	0.56	0.56	0.05	0.41	0.67	0.05	0.08	0.21	0.27
v/c Ratio	0.90	0.76	0.04	0.33	0.89	0.35	0.22	0.35	0.83	0.72
Control Delay	74.1	26.2	0.1	71.3	39.7	4.9	66.2	27.4	59.6	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.1	26.2	0.1	71.3	39.8	4.9	66.2	27.4	59.6	17.2
LOS	E	C	A	E	D	A	E	C	E	B
Approach Delay		34.5			34.0			36.4		40.3
Approach LOS		C			C			D		D

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 88.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Clinton Keith Rd & McElwain Rd





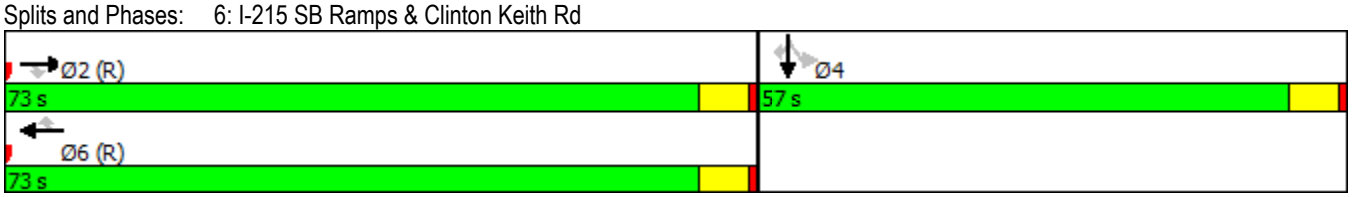
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	11.8	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	26.0	69.5	69.5	10.8	54.3	28.9	10.6	20.8	28.9	39.1
Total Split (%)	20.0%	53.5%	53.5%	8.3%	41.8%	22.2%	8.2%	16.0%	22.2%	30.1%
Maximum Green (s)	20.2	63.7	63.7	6.2	48.5	24.3	6.0	15.7	24.3	34.0
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	5.2	2.0	5.2	2.0	3.0	3.0	2.0	3.6
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		15.0	15.0		22.0					27.0
Pedestrian Calls (#/hr)		13	13		0					16
90th %ile Green (s)	20.2	63.7	63.7	6.2	48.5	29.3	6.0	10.7	29.3	34.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Max	Max	Gap	Max	Max
70th %ile Green (s)	20.2	63.7	63.7	6.2	48.5	30.0	6.0	10.0	30.0	34.0
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Max	Max	Min	Max	Ped
50th %ile Green (s)	20.2	64.8	64.8	6.4	49.8	28.7	0.0	10.0	28.7	43.3
50th %ile Term Code	Max	Coord	Coord	Gap	Coord	Gap	Skip	Min	Gap	Hold
30th %ile Green (s)	20.2	78.0	78.0	0.0	52.0	26.5	0.0	10.0	26.5	41.1
30th %ile Term Code	Max	Coord	Coord	Skip	Coord	Gap	Skip	Min	Gap	Hold
10th %ile Green (s)	20.2	96.6	96.6	0.0	70.6	23.0	0.0	0.0	23.0	22.5
10th %ile Term Code	Hold	Coord	Coord	Skip	Coord	Gap	Skip	Skip	Gap	Hold

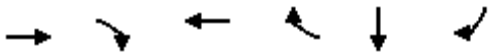
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1965	582	1522	533	1	783
Future Volume (vph)	1965	582	1522	533	1	783
Turn Type	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	73.0	73.0	73.0	73.0	57.0	57.0
Total Split (%)	56.2%	56.2%	56.2%	56.2%	43.8%	43.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	71.0	71.0	71.0	71.0	47.4	47.4
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.36	0.36
v/c Ratio	0.74	0.71	0.56	0.64	0.90	0.77
Control Delay	15.0	16.5	11.6	14.9	57.2	40.4
Queue Delay	0.4	0.8	0.0	0.0	0.0	0.0
Total Delay	15.4	17.3	11.6	14.9	57.2	40.4
LOS	B	B	B	B	E	D
Approach Delay	15.8		12.5		47.5	
Approach LOS	B		B		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 128 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 21.9	Intersection LOS: C
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: I-215 SB Ramps & Clinton Keith Rd





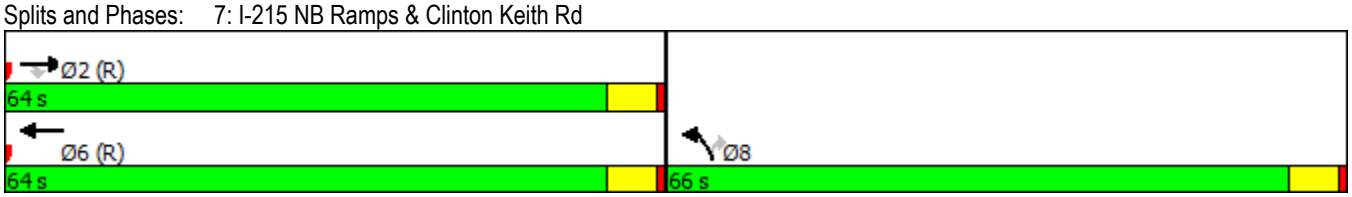
Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	73.0	73.0	73.0	73.0	57.0	57.0
Total Split (%)	56.2%	56.2%	56.2%	56.2%	43.8%	43.8%
Maximum Green (s)	67.2	67.2	67.2	67.2	51.2	51.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0				
Flash Dont Walk (s)	20.0	20.0				
Pedestrian Calls (#/hr)	6	6				
90th %ile Green (s)	67.2	67.2	67.2	67.2	51.2	51.2
90th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	67.2	67.2	67.2	67.2	51.2	51.2
70th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	68.5	68.5	68.5	68.5	49.9	49.9
50th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	72.5	72.5	72.5	72.5	45.9	45.9
30th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	79.8	79.8	79.8	79.8	38.6	38.6
10th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 128 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1796	697	1527	541	700
Future Volume (vph)	1796	697	1527	541	700
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	2		6	8	
Permitted Phases		2			8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	64.0	64.0	64.0	66.0	66.0
Total Split (%)	49.2%	49.2%	49.2%	50.8%	50.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	60.7	60.7	60.7	57.7	57.7
Actuated g/C Ratio	0.47	0.47	0.47	0.44	0.44
v/c Ratio	0.81	0.74	0.69	0.91	0.95
Control Delay	23.2	7.4	6.3	50.1	58.3
Queue Delay	0.7	0.3	0.2	3.7	7.3
Total Delay	23.9	7.7	6.5	53.7	65.6
LOS	C	A	A	D	E
Approach Delay	19.4		6.5	59.4	
Approach LOS	B		A	E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 118 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 25.1	Intersection LOS: C
Intersection Capacity Utilization 88.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: I-215 NB Ramps & Clinton Keith Rd



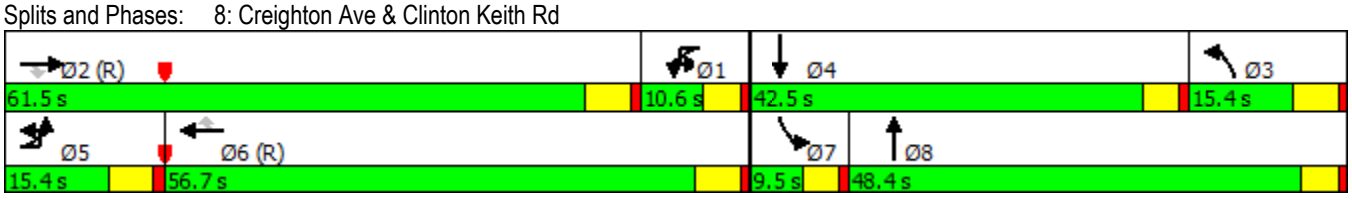
Lane Group	EBT	EBR	WBT	NBL	NBR
Protected Phases	2		6	8	
Permitted Phases		2			8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	64.0	64.0	64.0	66.0	66.0
Total Split (%)	49.2%	49.2%	49.2%	50.8%	50.8%
Maximum Green (s)	58.2	58.2	58.2	60.2	60.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.5	2.5
Minimum Gap (s)	2.0	2.0	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			
Flash Dont Walk (s)	31.0	31.0			
Pedestrian Calls (#/hr)	20	20			
90th %ile Green (s)	58.2	58.2	58.2	60.2	60.2
90th %ile Term Code	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	58.2	58.2	58.2	60.2	60.2
70th %ile Term Code	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	58.2	58.2	58.2	60.2	60.2
50th %ile Term Code	Coord	Coord	Coord	Max	Max
30th %ile Green (s)	60.7	60.7	60.7	57.7	57.7
30th %ile Term Code	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	68.0	68.0	68.0	50.4	50.4
10th %ile Term Code	Coord	Coord	Coord	Gap	Gap

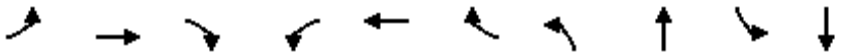
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 118 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	292	2138	84	39	1603	127	55	0	132	0
Future Volume (vph)	292	2138	84	39	1603	127	55	0	132	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	28.4	15.4	46.6	9.5	42.5
Total Split (s)	15.4	61.5	61.5	10.6	56.7	56.7	15.4	48.4	9.5	42.5
Total Split (%)	11.8%	47.3%	47.3%	8.2%	43.6%	43.6%	11.8%	37.2%	7.3%	32.7%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4	5.4	4.6	4.5	4.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	35.4	83.6	83.6	6.0	51.3	51.3	10.3	19.1	8.5	15.4
Actuated g/C Ratio	0.27	0.64	0.64	0.05	0.39	0.39	0.08	0.15	0.07	0.12
v/c Ratio	0.65	0.71	0.09	0.52	0.87	0.19	0.43	0.08	1.23	0.74
Control Delay	54.7	19.8	2.1	62.4	23.9	1.6	67.1	0.4	204.0	23.6
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	20.3	2.1	62.4	23.9	1.6	67.1	0.4	204.0	23.6
LOS	D	C	A	E	C	A	E	A	F	C
Approach Delay		23.7			23.1			46.4		83.9
Approach LOS		C			C			D		F

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 116 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 85.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd





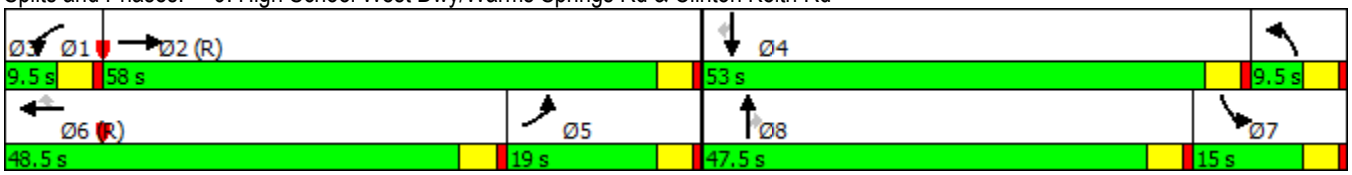
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	28.4	15.4	46.6	9.5	42.5
Total Split (s)	15.4	61.5	61.5	10.6	56.7	56.7	15.4	48.4	9.5	42.5
Total Split (%)	11.8%	47.3%	47.3%	8.2%	43.6%	43.6%	11.8%	37.2%	7.3%	32.7%
Maximum Green (s)	10.0	56.1	56.1	6.0	51.3	51.3	10.0	43.8	5.0	38.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		16.0	16.0		16.0	16.0		35.0		31.0
Pedestrian Calls (#/hr)		17	17		2	2		2		2
90th %ile Green (s)	10.0	56.1	56.1	6.0	51.3	51.3	10.0	43.8	5.0	38.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Max	Hold	Max	Ped
70th %ile Green (s)	31.1	77.2	77.2	6.0	51.3	51.3	11.3	22.7	5.0	15.6
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap
50th %ile Green (s)	36.8	82.9	82.9	6.0	51.3	51.3	10.0	17.0	5.0	11.2
50th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Min	Hold	Max	Gap
30th %ile Green (s)	41.2	87.3	87.3	6.0	51.3	51.3	10.0	0.0	22.2	6.8
30th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Min	Skip	Hold	Gap
10th %ile Green (s)	57.9	114.6	114.6	0.0	51.3	51.3	0.0	0.0	5.5	5.5
10th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Skip	Skip	Hold	Gap

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 116 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Lane Configurations									
Traffic Volume (vph)	531	1680	1281	227	21	348	484		
Future Volume (vph)	531	1680	1281	227	21	348	484		
Turn Type	Prot	NA	NA	Perm	Perm	Prot	Perm		
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Detector Phase	5	2	6	6	8	7	4		
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Act Effct Green (s)	14.5	78.9	59.9	59.9	12.4	25.2	42.1		
Actuated g/C Ratio	0.11	0.61	0.46	0.46	0.10	0.19	0.32		
v/c Ratio	1.55	0.63	0.62	0.30	0.08	0.58	0.41		
Control Delay	290.0	11.4	19.1	2.9	0.5	52.8	1.4		
Queue Delay	0.0	0.5	0.2	0.0	0.0	0.0	0.0		
Total Delay	290.0	11.9	19.2	2.9	0.5	52.8	1.4		
LOS	F	B	B	A	A	D	A		
Approach Delay		77.2	16.8						
Approach LOS		E	B						

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.55	
Intersection Signal Delay: 47.3	Intersection LOS: D
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: High School West Dwy/Warms Springs Rd & Clinton Keith Rd



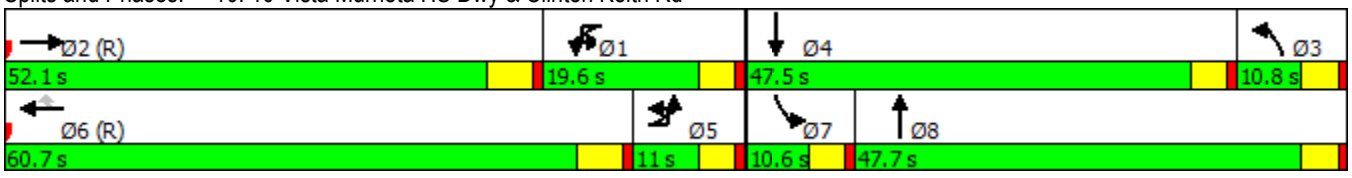
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Maximum Green (s)	14.5	53.5	44.0	44.0	43.0	10.5	48.5	5.0	5.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Walk Time (s)		7.0	7.0	7.0	7.0		7.0		
Flash Dont Walk (s)		24.0	31.0	31.0	33.0		30.0		
Pedestrian Calls (#/hr)		2	2	2	2		2		
90th %ile Green (s)	14.5	63.0	44.0	44.0	40.0	13.5	58.0	0.0	0.0
90th %ile Term Code	Max	Coord	Coord	Coord	Ped	Max	Hold	Skip	Skip
70th %ile Green (s)	14.5	87.2	68.2	68.2	5.5	23.8	33.8	0.0	0.0
70th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
50th %ile Green (s)	14.5	86.3	67.3	67.3	5.5	24.7	34.7	0.0	0.0
50th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
30th %ile Green (s)	14.5	83.6	64.6	64.6	5.5	27.4	37.4	0.0	0.0
30th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
10th %ile Green (s)	14.5	74.5	55.5	55.5	5.5	36.5	46.5	0.0	0.0
10th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	105	1875	181	1307	78	121	0	100	0
Future Volume (vph)	105	1875	181	1307	78	121	0	100	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	5.0
Minimum Split (s)	10.6	38.4	10.6	48.4	48.4	10.6	45.6	10.6	47.5
Total Split (s)	11.0	52.1	19.6	60.7	60.7	10.8	47.7	10.6	47.5
Total Split (%)	8.5%	40.1%	15.1%	46.7%	46.7%	8.3%	36.7%	8.2%	36.5%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.6	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	4.6	4.6	4.5
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	6.4	74.1	15.0	82.7	82.7	10.0	15.7	6.0	11.8
Actuated g/C Ratio	0.05	0.57	0.12	0.64	0.64	0.08	0.12	0.05	0.09
v/c Ratio	1.35	0.77	0.99	0.45	0.08	0.52	0.27	1.37	0.33
Control Delay	249.2	13.4	117.2	14.8	1.4	64.4	1.9	271.6	4.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	249.2	13.5	117.2	14.8	1.4	64.4	1.9	271.6	4.2
LOS	F	B	F	B	A	E	A	F	A
Approach Delay		25.4		26.0			39.6		152.2
Approach LOS		C		C			D		F

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 126 (97%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 32.0	Intersection LOS: C
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: 10 Vista Murrieta HS Dwy & Clinton Keith Rd



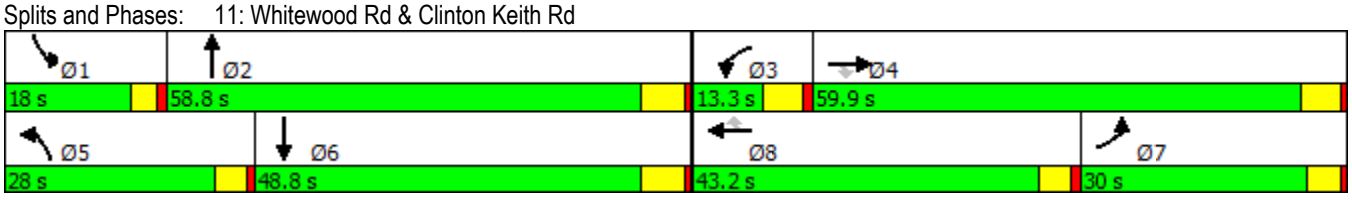
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	5.0
Minimum Split (s)	10.6	38.4	10.6	48.4	48.4	10.6	45.6	10.6	47.5
Total Split (s)	11.0	52.1	19.6	60.7	60.7	10.8	47.7	10.6	47.5
Total Split (%)	8.5%	40.1%	15.1%	46.7%	46.7%	8.3%	36.7%	8.2%	36.5%
Maximum Green (s)	6.4	46.7	15.0	55.3	55.3	6.2	43.1	6.0	43.0
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.6	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.9	2.0	3.9	3.9	2.0	3.0	2.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0		15.0	15.0		33.0		30.0
Pedestrian Calls (#/hr)		2		2	2		2		2
90th %ile Green (s)	6.4	46.7	15.0	55.3	55.3	12.2	43.1	6.0	37.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Max	Hold	Max	Ped
70th %ile Green (s)	6.4	79.2	15.0	87.8	87.8	11.2	10.6	6.0	5.5
70th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap
50th %ile Green (s)	6.4	80.1	15.0	88.7	88.7	10.3	9.7	6.0	5.5
50th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap
30th %ile Green (s)	6.4	81.3	15.0	89.9	89.9	9.1	8.5	6.0	5.5
30th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap
10th %ile Green (s)	6.4	83.1	15.0	91.7	91.7	7.3	6.7	6.0	5.5
10th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap

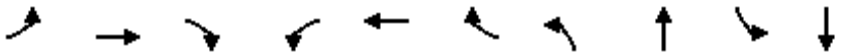
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 126 (97%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	673	962	384	117	687	75	316	389	112	292
Future Volume (vph)	673	962	384	117	687	75	316	389	112	292
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	41.6	41.6	10.6	48.8	10.0	48.8
Total Split (s)	30.0	59.9	59.9	13.3	43.2	43.2	28.0	58.8	18.0	48.8
Total Split (%)	20.0%	39.9%	39.9%	8.9%	28.8%	28.8%	18.7%	39.2%	12.0%	32.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6	4.6	4.6	5.8	4.0	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	34.4	50.0	50.0	7.9	25.1	25.1	23.6	49.1	12.4	37.3
Actuated g/C Ratio	0.25	0.36	0.36	0.06	0.18	0.18	0.17	0.35	0.09	0.27
v/c Ratio	0.87	0.82	0.55	0.65	0.81	0.21	1.16	0.86	0.77	0.89dr
Control Delay	63.4	47.7	12.0	83.1	63.0	3.1	151.4	56.7	94.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.4	47.7	12.0	83.1	63.0	3.1	151.4	56.7	94.1	39.4
LOS	E	D	B	F	E	A	F	E	F	D
Approach Delay		46.2			60.6			93.0		46.0
Approach LOS		D			E			F		D

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 140.2	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 57.1	Intersection LOS: E
Intersection Capacity Utilization 92.7%	ICU Level of Service F
Analysis Period (min) 15	
dr Defacto Right Lane. Recode with 1 though lane as a right lane.	

Splits and Phases: 11: Whitewood Rd & Clinton Keith Rd





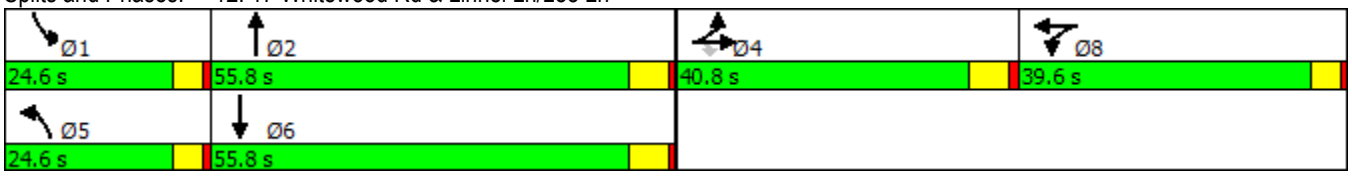
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	41.6	41.6	10.6	48.8	10.0	48.8
Total Split (s)	30.0	59.9	59.9	13.3	43.2	43.2	28.0	58.8	18.0	48.8
Total Split (%)	20.0%	39.9%	39.9%	8.9%	28.8%	28.8%	18.7%	39.2%	12.0%	32.5%
Maximum Green (s)	25.4	54.5	54.5	7.9	38.6	38.6	23.4	53.0	14.0	43.0
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	0.5	6.9	6.9	3.0	0.5	0.5	2.0	6.1	2.0	6.1
Minimum Gap (s)	0.5	3.0	3.0	3.0	0.5	0.5	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		19.0	19.0		30.0	30.0		36.0		36.0
Pedestrian Calls (#/hr)		2	2		2	2		2		2
90th %ile Green (s)	27.0	54.5	54.5	7.9	37.0	37.0	23.4	53.0	14.0	43.0
90th %ile Term Code	Hold	Max	Max	Max	Ped	Ped	Max	Max	Max	Max
70th %ile Green (s)	36.8	54.5	54.5	7.9	27.2	27.2	23.4	53.0	14.0	43.0
70th %ile Term Code	Hold	Max	Max	Max	Gap	Gap	Max	Max	Max	Max
50th %ile Green (s)	38.9	54.5	54.5	7.9	25.1	25.1	23.4	53.0	14.0	43.0
50th %ile Term Code	Hold	Max	Max	Max	Gap	Gap	Max	Max	Max	Hold
30th %ile Green (s)	36.6	48.4	48.4	7.9	21.3	21.3	23.4	45.5	12.1	33.6
30th %ile Term Code	Hold	Gap	Gap	Max	Gap	Gap	Max	Hold	Gap	Gap
10th %ile Green (s)	31.3	38.8	38.8	7.6	16.7	16.7	23.4	41.1	8.5	25.6
10th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Max	Hold	Gap	Gap

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 140.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 150
50th %ile Actuated Cycle: 150
30th %ile Actuated Cycle: 134.5
10th %ile Actuated Cycle: 116.6

Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	122	83	1	45	958	6	778
Future Volume (vph)	122	83	1	45	958	6	778
Turn Type	Split	Perm	NA	Prot	NA	Prot	NA
Protected Phases	4		8	5	2	1	6
Permitted Phases		4					
Detector Phase	4	4	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Yellow Time (s)	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	16.1	16.1	6.3	7.4	41.3	6.5	33.4
Actuated g/C Ratio	0.22	0.22	0.09	0.10	0.57	0.09	0.46
v/c Ratio	0.34	0.11	0.07	0.27	0.51	0.04	0.57
Control Delay	30.1	0.3	31.0	39.5	12.2	39.5	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	0.3	31.0	39.5	12.2	39.5	17.6
LOS	C	A	C	D	B	D	B
Approach Delay			31.0		13.4		17.7
Approach LOS			C		B		B

Intersection Summary	
Cycle Length: 160.8	
Actuated Cycle Length: 72.7	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: 17 Whitewood Rd & Linnel Ln/Lee Ln



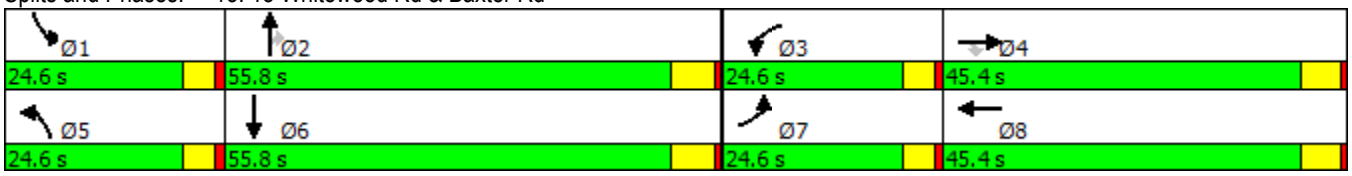
Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Protected Phases	4		8	5	2	1	6
Permitted Phases		4					
Minimum Initial (s)	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Maximum Green (s)	35.0	35.0	35.0	20.0	50.0	20.0	50.0
Yellow Time (s)	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Vehicle Extension (s)	6.9	6.9	2.0	2.0	6.1	3.0	6.1
Minimum Gap (s)	5.0	5.0	2.0	2.0	3.0	3.0	3.0
Time Before Reduce (s)	0.1	0.1	0.0	0.0	0.1	0.0	0.1
Time To Reduce (s)	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Recall Mode	None	None	None	None	Min	None	Min
Walk Time (s)	7.0	7.0			7.0		7.0
Flash Dont Walk (s)	19.0	19.0			10.0		15.0
Pedestrian Calls (#/hr)	0	0			0		2
90th %ile Green (s)	21.3	21.3	6.3	10.1	49.1	6.9	45.9
90th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Gap
70th %ile Green (s)	17.3	17.3	0.0	7.9	46.5	0.0	34.0
70th %ile Term Code	Gap	Gap	Skip	Gap	Hold	Skip	Gap
50th %ile Green (s)	15.6	15.6	0.0	6.9	41.0	0.0	29.5
50th %ile Term Code	Gap	Gap	Skip	Gap	Hold	Skip	Gap
30th %ile Green (s)	13.9	13.9	0.0	6.0	36.1	0.0	25.5
30th %ile Term Code	Gap	Gap	Skip	Min	Hold	Skip	Gap
10th %ile Green (s)	12.0	12.0	0.0	0.0	30.4	0.0	30.4
10th %ile Term Code	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell

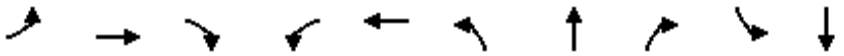
Intersection Summary
Cycle Length: 160.8
Actuated Cycle Length: 72.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 104.4
70th %ile Actuated Cycle: 75.4
50th %ile Actuated Cycle: 68.2
30th %ile Actuated Cycle: 61.6
10th %ile Actuated Cycle: 54

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	63	10	280	31	16	293	692	51	1	556
Future Volume (vph)	63	10	280	31	16	293	692	51	1	556
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	4.6	5.4	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	12.2	14.8	14.8	6.9	13.9	20.8	51.8	51.8	6.3	27.6
Actuated g/C Ratio	0.14	0.17	0.17	0.08	0.16	0.24	0.60	0.60	0.07	0.32
v/c Ratio	0.27	0.03	0.58	0.23	0.04	0.73	0.65	0.06	0.01	0.57
Control Delay	41.2	30.8	8.6	47.5	26.5	44.9	19.9	1.9	48.0	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	30.8	8.6	47.5	26.5	44.9	19.9	1.9	48.0	28.6
LOS	D	C	A	D	C	D	B	A	D	C
Approach Delay		15.1			38.9		26.1			28.6
Approach LOS		B			D		C			C

Intersection Summary	
Cycle Length: 150.4	
Actuated Cycle Length: 86.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: 18 Whitewood Rd & Baxter Rd





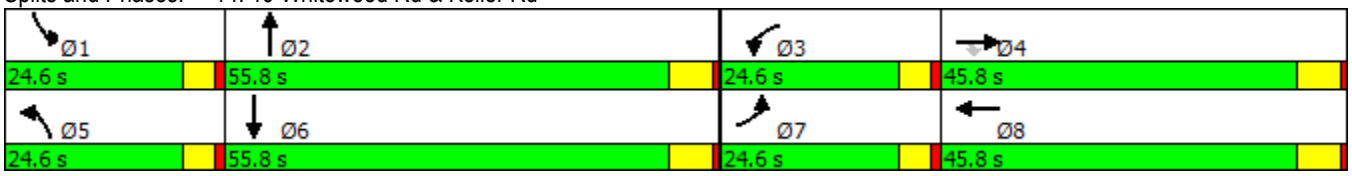
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		28.0	28.0		28.0		25.0	25.0		25.0
Pedestrian Calls (#/hr)		0	0		4		0	0		3
90th %ile Green (s)	12.7	38.5	38.5	9.2	35.0	20.0	50.0	50.0	6.0	36.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Ped	Max	Max	Max	Min	Hold
70th %ile Green (s)	8.9	12.0	12.0	6.9	10.0	20.0	48.5	48.5	0.0	23.9
70th %ile Term Code	Gap	Hold	Hold	Gap	Min	Max	Hold	Hold	Skip	Gap
50th %ile Green (s)	21.4	10.0	10.0	6.0	0.0	20.0	50.0	50.0	0.0	25.4
50th %ile Term Code	Hold	Min	Min	Min	Skip	Max	Max	Max	Skip	Hold
30th %ile Green (s)	10.8	10.0	10.0	0.0	0.0	20.0	50.0	50.0	0.0	25.4
30th %ile Term Code	Hold	Min	Min	Skip	Skip	Max	Max	Max	Skip	Hold
10th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	20.0	50.0	50.0	0.0	25.4
10th %ile Term Code	Skip	Min	Min	Skip	Hold	Max	Max	Max	Skip	Hold

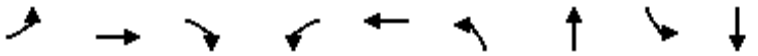
Intersection Summary
Cycle Length: 150.4
Actuated Cycle Length: 86.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 124.1
70th %ile Actuated Cycle: 83.2
50th %ile Actuated Cycle: 81.8
30th %ile Actuated Cycle: 71.2
10th %ile Actuated Cycle: 71.2

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	98	34	153	11	25	108	603	12	455
Future Volume (vph)	98	34	153	11	25	108	603	12	455
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.6	21.5	21.5	7.4	14.7	10.8	32.2	7.4	21.6
Actuated g/C Ratio	0.16	0.31	0.31	0.11	0.21	0.15	0.46	0.11	0.31
v/c Ratio	0.36	0.06	0.28	0.06	0.05	0.43	0.42	0.07	0.55
Control Delay	39.2	22.1	5.7	44.8	24.5	40.7	15.9	44.9	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	22.1	5.7	44.8	24.5	40.7	15.9	44.9	25.0
LOS	D	C	A	D	C	D	B	D	C
Approach Delay		19.2			29.3		19.5		25.4
Approach LOS		B			C		B		C

Intersection Summary	
Cycle Length: 150.8	
Actuated Cycle Length: 70.4	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 49.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: 19 Whitewood Rd & Keller Rd





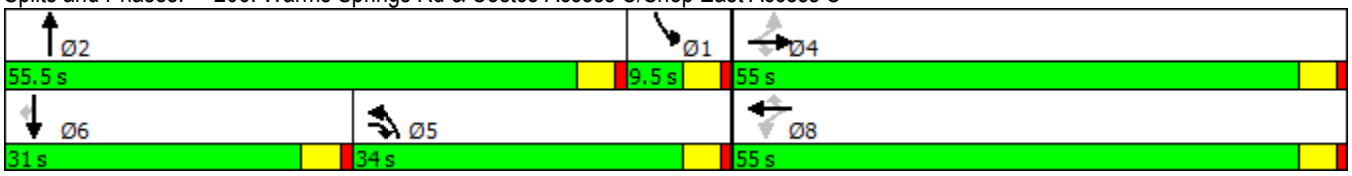
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		32.0		32.0
Pedestrian Calls (#/hr)		2	2		2		1		3
90th %ile Green (s)	16.6	41.7	41.7	6.9	32.0	17.5	49.5	7.0	39.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Ped	Gap	Hold	Gap	Ped
70th %ile Green (s)	11.0	25.6	25.6	0.0	10.0	11.5	38.5	0.0	22.4
70th %ile Term Code	Gap	Hold	Hold	Skip	Min	Gap	Hold	Skip	Gap
50th %ile Green (s)	9.3	23.9	23.9	0.0	10.0	9.7	34.0	0.0	19.7
50th %ile Term Code	Gap	Hold	Hold	Skip	Min	Gap	Hold	Skip	Gap
30th %ile Green (s)	11.2	10.0	10.0	0.0	0.0	7.3	25.6	0.0	13.7
30th %ile Term Code	Hold	Min	Min	Skip	Skip	Gap	Hold	Skip	Gap
10th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	0.0	11.9	0.0	11.9
10th %ile Term Code	Skip	Min	Min	Skip	Hold	Skip	Hold	Skip	Gap

Intersection Summary
Cycle Length: 150.8
Actuated Cycle Length: 70.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 125.9
70th %ile Actuated Cycle: 75.7
50th %ile Actuated Cycle: 69.5
30th %ile Actuated Cycle: 47.2
10th %ile Actuated Cycle: 33.5

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	425	255	361	162	119		
Future Volume (vph)	425	255	361	162	119		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	34.0	55.0	34.0	55.5	31.0	9.5	55.0
Total Split (%)	28.3%	45.8%	28.3%	46.3%	25.8%	8%	46%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag		Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	39.4	19.6	14.8	29.6	9.9		
Actuated g/C Ratio	0.67	0.33	0.25	0.50	0.17		
v/c Ratio	0.41	0.64	0.49	0.20	0.24		
Control Delay	1.7	25.0	23.2	5.3	25.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	1.7	25.0	23.2	5.3	25.3		
LOS	A	C	C	A	C		
Approach Delay				15.2	25.3		
Approach LOS				B	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 59.1	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 206: Warms Springs Rd & Costco Access C/Shop East Access C



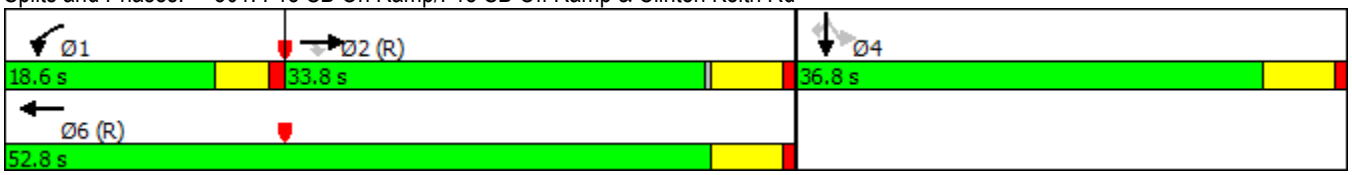
Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	34.0	55.0	34.0	55.5	31.0	9.5	55.0
Total Split (%)	28.3%	45.8%	28.3%	46.3%	25.8%	8%	46%
Maximum Green (s)	29.5	50.5	29.5	51.0	26.5	5.0	50.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag		Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	23.4	37.0	23.4	49.9	22.0	0.0	37.0
90th %ile Term Code	Gap	Ped	Gap	Hold	Ped	Skip	Hold
70th %ile Green (s)	16.6	21.7	16.6	30.1	9.0	0.0	21.7
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	13.6	17.6	13.6	26.0	7.9	0.0	17.6
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	11.9	14.5	11.9	23.5	7.1	0.0	14.5
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	8.9	10.8	8.9	19.6	6.2	0.0	10.8
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold

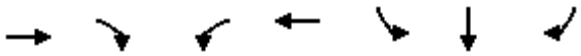
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 59.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 95.9
70th %ile Actuated Cycle: 60.8
50th %ile Actuated Cycle: 52.6
30th %ile Actuated Cycle: 47
10th %ile Actuated Cycle: 39.4

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1009	448	284	1289	705	0	445
Future Volume (vph)	1009	448	284	1289	705	0	445
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	33.8	33.8	18.6	52.8	36.8	36.8	36.8
Total Split (%)	37.7%	37.7%	20.8%	58.9%	41.1%	41.1%	41.1%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	35.6	35.6	11.8	52.0	26.0	26.0	26.0
Actuated g/C Ratio	0.40	0.40	0.13	0.58	0.29	0.29	0.29
v/c Ratio	0.53	0.52	0.67	0.46	0.77	0.77	0.54
Control Delay	23.3	4.6	41.2	14.4	39.7	39.7	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	4.6	41.2	14.4	39.7	39.7	23.0
LOS	C	A	D	B	D	D	C
Approach Delay	17.5			19.2		33.2	
Approach LOS	B			B		C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 301: I-15 SB On Ramp/I-15 SB Off Ramp & Clinton Keith Rd





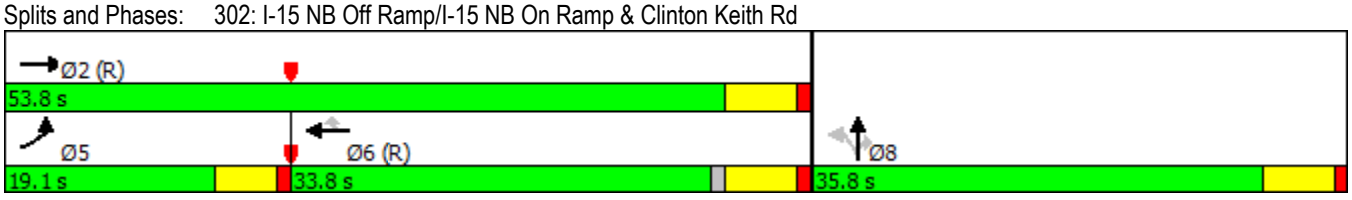
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	33.8	33.8	18.6	52.8	36.8	36.8	36.8
Total Split (%)	37.7%	37.7%	20.8%	58.9%	41.1%	41.1%	41.1%
Maximum Green (s)	28.0	28.0	14.0	47.0	31.0	31.0	31.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Walk Time (s)	7.0	7.0		7.0			
Flash Dont Walk (s)	23.0	23.0		28.0			
Pedestrian Calls (#/hr)	0	0		2			
90th %ile Green (s)	28.4	28.4	14.0	47.0	31.0	31.0	31.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max	Max
70th %ile Green (s)	28.8	28.8	13.6	47.0	31.0	31.0	31.0
70th %ile Term Code	Coord	Coord	Gap	Coord	Max	Max	Max
50th %ile Green (s)	33.8	33.8	12.2	50.6	27.4	27.4	27.4
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
30th %ile Green (s)	39.2	39.2	10.7	54.5	23.5	23.5	23.5
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
10th %ile Green (s)	47.8	47.8	8.6	61.0	17.0	17.0	17.0
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap

Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	341	1360	944	612	646	0	471
Future Volume (vph)	341	1360	944	612	646	0	471
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	19.1	53.8	33.8	33.8	35.8	35.8	35.8
Total Split (%)	21.3%	60.0%	37.7%	37.7%	40.0%	40.0%	40.0%
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	12.8	51.0	33.1	33.1	27.0	27.0	27.0
Actuated g/C Ratio	0.14	0.57	0.37	0.37	0.30	0.30	0.30
v/c Ratio	0.76	0.51	0.55	0.67	0.83	0.77	0.73
Control Delay	43.9	8.8	24.7	5.8	44.0	31.7	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	8.8	24.7	5.8	44.0	31.7	29.1
LOS	D	A	C	A	D	C	C
Approach Delay		15.8	17.3			35.2	
Approach LOS		B	B			D	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 21.3	Intersection LOS: C
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 302: I-15 NB Off Ramp/I-15 NB On Ramp & Clinton Keith Rd



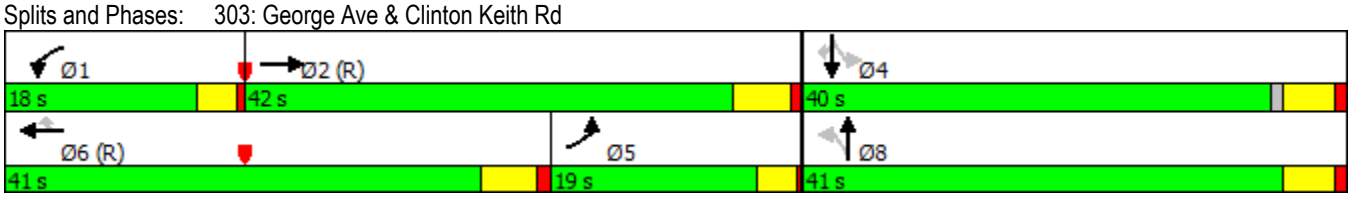
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	19.1	53.8	33.8	33.8	35.8	35.8	35.8
Total Split (%)	21.3%	60.0%	37.7%	37.7%	40.0%	40.0%	40.0%
Maximum Green (s)	14.0	48.0	28.0	28.0	30.0	30.0	30.0
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Walk Time (s)		7.0	7.0	7.0			
Flash Dont Walk (s)		23.0	23.0	23.0			
Pedestrian Calls (#/hr)		0	0	0			
90th %ile Green (s)	14.0	48.0	28.9	28.9	30.0	30.0	30.0
90th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
70th %ile Green (s)	14.0	48.0	28.9	28.9	30.0	30.0	30.0
70th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
50th %ile Green (s)	13.9	48.2	29.2	29.2	29.8	29.8	29.8
50th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	12.3	52.1	34.7	34.7	25.9	25.9	25.9
30th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	9.9	58.8	43.8	43.8	19.2	19.2	19.2
10th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap

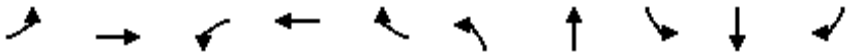
Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	288	1303	134	1146	65	74	38	181	29	128
Future Volume (vph)	288	1303	134	1146	65	74	38	181	29	128
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	19.0	42.0	18.0	41.0	41.0	41.0	41.0	40.0	40.0	40.0
Total Split (%)	18.8%	41.6%	17.8%	40.6%	40.6%	40.6%	40.6%	39.6%	39.6%	39.6%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.3	3.5	5.3	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	15.5	53.0	12.4	49.8	49.8	22.0	22.0	22.0	22.0	22.0
Actuated g/C Ratio	0.15	0.52	0.12	0.49	0.49	0.22	0.22	0.22	0.22	0.22
v/c Ratio	1.08	0.52	0.63	0.67	0.08	0.26	0.33	0.76	0.07	0.30
Control Delay	120.9	18.4	55.2	23.7	4.0	31.9	11.3	55.1	27.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	120.9	18.4	55.2	23.7	4.0	31.9	11.3	55.1	27.7	6.4
LOS	F	B	E	C	A	C	B	E	C	A
Approach Delay		36.5		25.9			18.4		34.3	
Approach LOS		D		C			B		C	

Intersection Summary	
Cycle Length: 101	
Actuated Cycle Length: 101	
Offset: 37 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 31.1	Intersection LOS: C
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 303: George Ave & Clinton Keith Rd





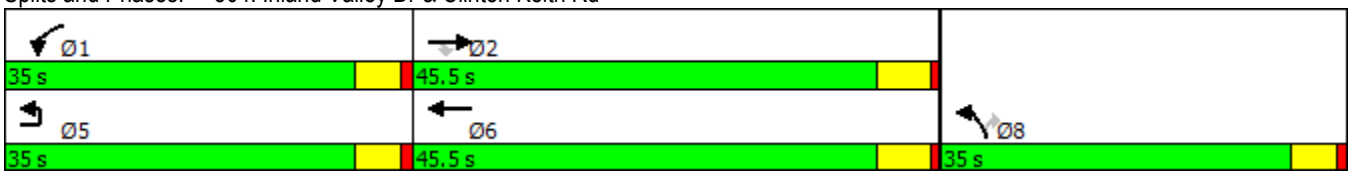
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	19.0	42.0	18.0	41.0	41.0	41.0	41.0	40.0	40.0	40.0
Total Split (%)	18.8%	41.6%	17.8%	40.6%	40.6%	40.6%	40.6%	39.6%	39.6%	39.6%
Maximum Green (s)	15.5	36.7	14.5	35.7	35.7	36.1	36.1	35.1	35.1	35.1
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	4.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0		19.0	19.0	27.0	27.0	28.0	28.0	28.0
Pedestrian Calls (#/hr)		1		0	0	1	1	1	1	1
90th %ile Green (s)	15.5	36.7	15.6	36.8	36.8	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Hold	Hold	Ped	Ped	Ped
70th %ile Green (s)	15.5	48.6	14.2	47.3	47.3	24.5	24.5	24.5	24.5	24.5
70th %ile Term Code	Max	Coord	Gap	Coord	Coord	Hold	Hold	Gap	Gap	Gap
50th %ile Green (s)	15.5	54.3	12.1	50.9	50.9	20.9	20.9	20.9	20.9	20.9
50th %ile Term Code	Max	Coord	Gap	Coord	Coord	Hold	Hold	Gap	Gap	Gap
30th %ile Green (s)	15.5	60.0	10.0	54.5	54.5	17.3	17.3	17.3	17.3	17.3
30th %ile Term Code	Max	Coord	Min	Coord	Coord	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	15.5	65.2	10.0	59.7	59.7	12.1	12.1	12.1	12.1	12.1
10th %ile Term Code	Max	Coord	Min	Coord	Coord	Hold	Hold	Gap	Gap	Gap

Intersection Summary
Cycle Length: 101
Actuated Cycle Length: 101
Offset: 37 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	5	1109	374	55	855	500	109
Future Volume (vph)	5	1109	374	55	855	500	109
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Detector Phase	5	2	2	1	6	8	8
Switch Phase							
Minimum Initial (s)	1.0	10.0	10.0	5.0	10.0	6.0	6.0
Minimum Split (s)	10.0	25.5	25.5	10.0	22.5	22.5	22.5
Total Split (s)	35.0	45.5	45.5	35.0	45.5	35.0	35.0
Total Split (%)	30.3%	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%
Yellow Time (s)	4.0	4.5	4.5	4.0	4.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.5	5.5	5.0	5.5	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	Min	Min	None	Min	None	None
Act Effct Green (s)	4.4	38.3	38.3	7.1	46.1	30.3	30.3
Actuated g/C Ratio	0.05	0.43	0.43	0.08	0.52	0.34	0.34
v/c Ratio	0.06	0.78	0.46	0.42	0.50	0.89	0.21
Control Delay	44.2	26.8	5.6	49.7	15.3	49.1	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	26.8	5.6	49.7	15.3	49.1	19.3
LOS	D	C	A	D	B	D	B
Approach Delay		21.5			17.3	43.8	
Approach LOS		C			B	D	

Intersection Summary	
Cycle Length: 115.5	
Actuated Cycle Length: 88.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 304: Inland Valley Dr & Clinton Keith Rd



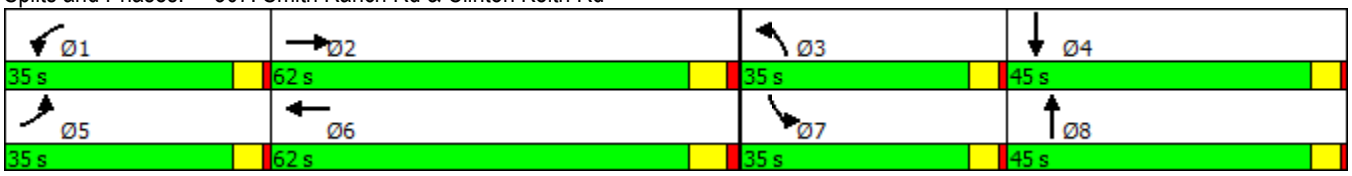
Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Minimum Initial (s)	1.0	10.0	10.0	5.0	10.0	6.0	6.0
Minimum Split (s)	10.0	25.5	25.5	10.0	22.5	22.5	22.5
Total Split (s)	35.0	45.5	45.5	35.0	45.5	35.0	35.0
Total Split (%)	30.3%	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%
Maximum Green (s)	30.0	40.0	40.0	30.0	40.0	30.0	30.0
Yellow Time (s)	4.0	4.5	4.5	4.0	4.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5	3.5	3.5
Minimum Gap (s)	1.5	2.5	2.5	1.5	2.5	3.5	3.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	None
Walk Time (s)		8.0	8.0				
Flash Dont Walk (s)		12.0	12.0				
Pedestrian Calls (#/hr)		0	0				
90th %ile Green (s)	5.1	40.0	40.0	10.0	44.9	30.0	30.0
90th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Max
70th %ile Green (s)	0.0	40.0	40.0	8.2	53.2	30.0	30.0
70th %ile Term Code	Skip	Max	Max	Gap	Hold	Max	Max
50th %ile Green (s)	0.0	40.0	40.0	7.0	52.0	30.0	30.0
50th %ile Term Code	Skip	Max	Max	Gap	Hold	Max	Max
30th %ile Green (s)	0.0	40.0	40.0	5.8	50.8	30.0	30.0
30th %ile Term Code	Skip	Max	Max	Gap	Hold	Max	Max
10th %ile Green (s)	0.0	31.2	31.2	0.0	31.2	30.0	30.0
10th %ile Term Code	Skip	Gap	Gap	Skip	Hold	Max	Max

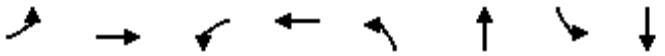
Intersection Summary
Cycle Length: 115.5
Actuated Cycle Length: 88.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 95.5
70th %ile Actuated Cycle: 93.7
50th %ile Actuated Cycle: 92.5
30th %ile Actuated Cycle: 91.3
10th %ile Actuated Cycle: 71.7

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	62	1112	15	780	32	1	61	1
Future Volume (vph)	62	1112	15	780	32	1	61	1
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	5.0	7.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	7.9	58.6	5.5	49.5	6.3	8.9	11.8	9.4
Actuated g/C Ratio	0.09	0.69	0.06	0.58	0.07	0.10	0.14	0.11
v/c Ratio	0.41	0.50	0.14	0.45	0.26	0.02	0.27	0.26
Control Delay	47.6	12.5	47.0	16.6	47.3	27.0	38.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	12.5	47.0	16.6	47.3	27.0	38.8	13.3
LOS	D	B	D	B	D	C	D	B
Approach Delay		14.3		17.1		45.1		26.8
Approach LOS		B		B		D		C

Intersection Summary	
Cycle Length: 177	
Actuated Cycle Length: 85	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 307: Smith Ranch Rd & Clinton Keith Rd





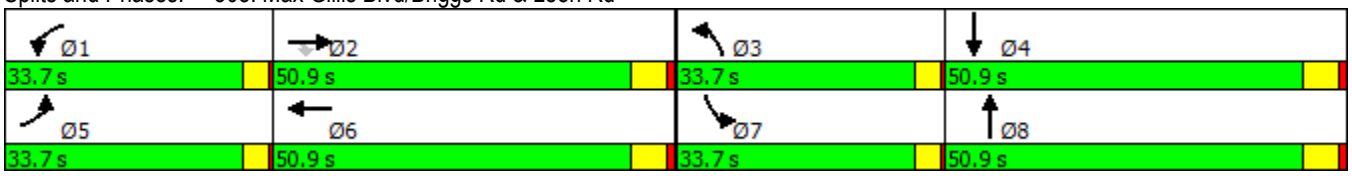
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Maximum Green (s)	30.0	55.0	30.0	55.0	30.0	40.0	30.0	40.0
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	1.5	3.5	1.5	2.5	1.5	2.5
Minimum Gap (s)	1.5	3.0	1.5	3.0	1.5	2.5	1.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None
Walk Time (s)		7.0		7.0				12.0
Flash Dont Walk (s)		8.0		8.0				16.0
Pedestrian Calls (#/hr)		0		0				1
90th %ile Green (s)	12.0	55.0	6.8	49.8	8.8	24.8	12.0	28.0
90th %ile Term Code	Gap	Max	Gap	Hold	Gap	Hold	Gap	Ped
70th %ile Green (s)	8.8	50.4	0.0	36.6	6.7	0.0	17.9	6.2
70th %ile Term Code	Gap	Gap	Skip	Hold	Gap	Skip	Hold	Gap
50th %ile Green (s)	7.6	46.3	0.0	33.7	5.8	0.0	16.8	6.0
50th %ile Term Code	Gap	Gap	Skip	Hold	Gap	Skip	Hold	Min
30th %ile Green (s)	6.3	54.1	0.0	42.8	0.0	0.0	6.1	6.1
30th %ile Term Code	Gap	Gap	Skip	Hold	Skip	Skip	Gap	Hold
10th %ile Green (s)	0.0	70.0	0.0	70.0	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip

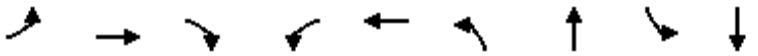
Intersection Summary
Cycle Length: 177
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 120.6
70th %ile Actuated Cycle: 80.3
50th %ile Actuated Cycle: 75.1
30th %ile Actuated Cycle: 72.2
10th %ile Actuated Cycle: 77

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	142	378	737	117	198	605	384	11	283
Future Volume (vph)	142	378	737	117	198	605	384	11	283
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.7	5.9	5.9	3.7	5.9	3.7	5.9	3.7	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Act Effct Green (s)	9.6	45.2	45.2	8.6	44.2	30.1	51.5	5.1	21.0
Actuated g/C Ratio	0.08	0.36	0.36	0.07	0.36	0.24	0.41	0.04	0.17
v/c Ratio	0.59	0.32	0.89	0.54	0.18	0.80	0.39	0.09	0.73
Control Delay	65.4	30.4	26.6	65.4	29.0	53.3	25.8	62.0	52.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.4	30.4	26.6	65.4	29.0	53.3	25.8	62.0	52.5
LOS	E	C	C	E	C	D	C	E	D
Approach Delay		32.1			42.1		40.7		52.7
Approach LOS		C			D		D		D

Intersection Summary	
Cycle Length: 169.2	
Actuated Cycle Length: 124.2	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 39.0	Intersection LOS: D
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 308: Max Gillis Blvd/Briggs Rd & Leon Rd





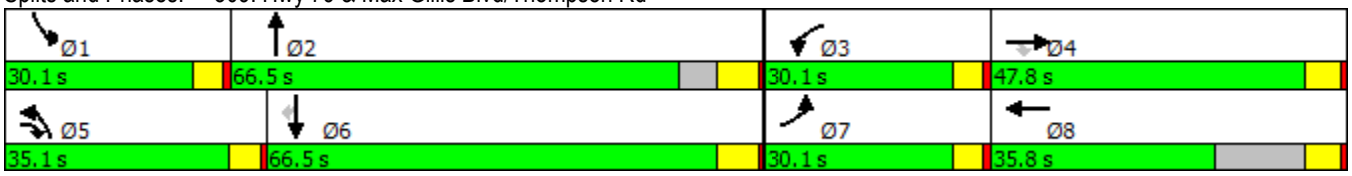
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Maximum Green (s)	30.0	45.0	45.0	30.0	45.0	30.0	45.0	30.0	45.0
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	1.5	3.0	1.5	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		23.0	23.0		23.0		23.0		23.0
Pedestrian Calls (#/hr)		1	1		0		0		2
90th %ile Green (s)	13.0	45.0	45.0	11.6	43.6	30.0	54.8	5.2	30.0
90th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Hold	Gap	Ped
70th %ile Green (s)	10.9	45.0	45.0	9.9	44.0	30.0	48.4	5.0	23.4
70th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Hold	Min	Gap
50th %ile Green (s)	9.6	45.0	45.0	8.6	44.0	30.0	53.8	0.0	20.1
50th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Hold	Skip	Gap
30th %ile Green (s)	8.4	45.0	45.0	7.5	44.1	30.0	51.6	0.0	17.9
30th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Hold	Skip	Gap
10th %ile Green (s)	6.7	45.0	45.0	6.0	44.3	30.0	48.6	0.0	14.9
10th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Hold	Skip	Gap

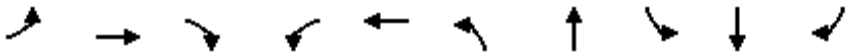
Intersection Summary
Cycle Length: 169.2
Actuated Cycle Length: 124.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 135.8
70th %ile Actuated Cycle: 127.5
50th %ile Actuated Cycle: 122.9
30th %ile Actuated Cycle: 119.6
10th %ile Actuated Cycle: 115.1

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	230	391	664	105	358	652	1407	46	826	194
Future Volume (vph)	230	391	664	105	358	652	1407	46	826	194
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Detector Phase	7	4	5	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.1	5.1	5.8	5.1	6.5	5.1	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	24.7	42.7	73.6	14.0	32.0	30.2	67.7	8.7	43.9	43.9
Actuated g/C Ratio	0.16	0.28	0.48	0.09	0.21	0.20	0.44	0.06	0.29	0.29
v/c Ratio	0.84	0.79	0.84	0.68	1.02	1.95	1.03	0.48	0.85	0.40
Control Delay	88.4	64.5	37.1	89.6	110.5	469.9	73.6	89.0	60.5	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	64.5	37.1	89.6	110.5	469.9	73.6	89.0	60.5	28.3
LOS	F	E	D	F	F	F	E	F	E	C
Approach Delay		54.6			106.0		191.9		55.9	
Approach LOS		D			F		F		E	

Intersection Summary	
Cycle Length: 179.5	
Actuated Cycle Length: 153.4	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.95	
Intersection Signal Delay: 119.6	Intersection LOS: F
Intersection Capacity Utilization 110.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 309: Hwy 79 & Max Gillis Blvd/Thompson Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Maximum Green (s)	25.0	42.0	30.0	25.0	30.0	30.0	60.0	25.0	60.0	60.0
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0					7.0		5.0	5.0
Flash Dont Walk (s)		35.0					25.0		36.0	36.0
Pedestrian Calls (#/hr)		3					0		0	0
90th %ile Green (s)	25.0	42.0	30.0	21.0	38.0	30.0	74.7	13.1	57.8	57.8
90th %ile Term Code	Max	Max	Max	Gap	Hold	Max	Hold	Gap	Gap	Gap
70th %ile Green (s)	25.0	42.0	30.0	16.6	33.6	30.0	68.8	10.3	49.1	49.1
70th %ile Term Code	Max	Max	Max	Gap	Hold	Max	Hold	Gap	Gap	Gap
50th %ile Green (s)	25.0	41.4	30.0	13.9	30.3	30.0	64.7	8.6	43.3	43.3
50th %ile Term Code	Max	Gap	Max	Gap	Hold	Max	Hold	Gap	Gap	Gap
30th %ile Green (s)	25.0	43.6	30.0	11.4	30.0	30.0	61.0	7.1	38.1	38.1
30th %ile Term Code	Max	Hold	Max	Gap	Max	Max	Hold	Gap	Gap	Gap
10th %ile Green (s)	23.0	42.9	30.0	8.4	28.3	30.0	68.3	0.0	33.2	33.2
10th %ile Term Code	Gap	Hold	Max	Gap	Gap	Max	Hold	Skip	Gap	Gap

Intersection Summary
Cycle Length: 179.5
Actuated Cycle Length: 153.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 173.3
70th %ile Actuated Cycle: 160.2
50th %ile Actuated Cycle: 151.1
30th %ile Actuated Cycle: 145.6
10th %ile Actuated Cycle: 137

2021 Cumulative Saturday Midday with Creighton Avenue Access

Timings
1: Nutmeg St & Clinton Keith Rd

11/05/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	34	730	269	680	73	43	295	101	32
Future Volume (vph)	34	730	269	680	73	43	295	101	32
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	11.9	50.9	39.2	78.2	43.1	43.1	43.1	43.1	43.1
Total Split (%)	8.9%	38.2%	29.4%	58.7%	32.4%	32.4%	32.4%	32.4%	32.4%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	7.1	31.2	20.6	50.7	15.8	15.8	15.8	15.8	15.8
Actuated g/C Ratio	0.08	0.37	0.24	0.59	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.26	0.70	0.70	0.43	0.33	0.14	0.59	0.46	0.20
Control Delay	51.8	28.3	41.9	11.8	37.2	33.2	8.7	40.5	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	28.3	41.9	11.8	37.2	33.2	8.7	40.5	34.0
LOS	D	C	D	B	D	C	A	D	C
Approach Delay		29.2		19.4		16.3			38.2
Approach LOS		C		B		B			D

Intersection Summary

Cycle Length: 133.2
Actuated Cycle Length: 85.3
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 23.4 — Intersection LOS: C
Intersection Capacity Utilization 62.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Nutmeg St & Clinton Keith Rd

Phasings
1: Nutmeg St & Clinton Keith Rd

11/05/2019

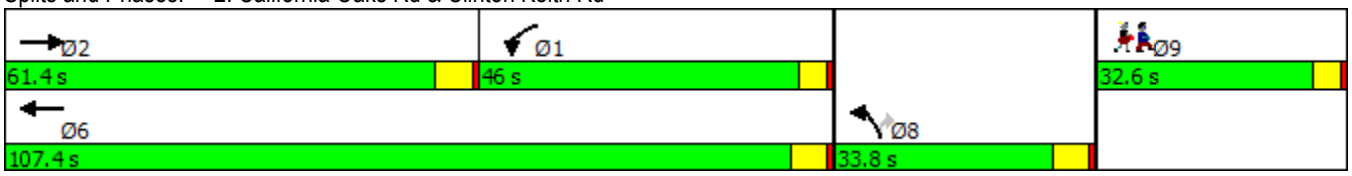
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	1	6	5	2		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	34.8	10.6	33.8	42.8	42.8	42.8	11.8	11.8
Total Split (s)	11.9	50.9	39.2	78.2	43.1	43.1	43.1	43.1	43.1
Total Split (%)	8.9%	38.2%	29.4%	58.7%	32.4%	32.4%	32.4%	32.4%	32.4%
Maximum Green (s)	7.3	45.1	34.6	72.4	37.3	37.3	37.3	37.3	37.3
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	3.9	2.0	3.9	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		22.0		21.0	30.0	30.0	30.0		
Pedestrian Calls (#/hr)		0		0	1	1	1		
90th %ile Green (s)	7.3	45.1	34.6	72.4	37.0	37.0	37.0	37.0	37.0
90th %ile Term Code	Max	Max	Max	Hold	Ped	Ped	Ped	Hold	Hold
70th %ile Green (s)	7.3	35.4	24.1	52.2	16.6	16.6	16.6	16.6	16.6
70th %ile Term Code	Max	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
50th %ile Green (s)	6.5	30.3	19.6	43.4	13.4	13.4	13.4	13.4	13.4
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
30th %ile Green (s)	0.0	25.0	15.7	45.3	10.6	10.6	10.6	10.6	10.6
30th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	19.1	11.2	34.9	7.6	7.6	7.6	7.6	7.6
10th %ile Term Code	Skip	Gap	Gap	Hold	Hold	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 133.2
Actuated Cycle Length: 85.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 132.9
70th %ile Actuated Cycle: 92.3
50th %ile Actuated Cycle: 79.5
30th %ile Actuated Cycle: 67.5
10th %ile Actuated Cycle: 54.1

Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Lane Configurations						
Traffic Volume (vph)	993	414	916	123	531	
Future Volume (vph)	993	414	916	123	531	
Turn Type	NA	Prot	NA	Prot	Perm	
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Detector Phase	2	1	6	8	8	
Switch Phase						
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	61.4	46.0	107.4	33.8	33.8	32.6
Total Split (%)	35.3%	26.5%	61.8%	19.4%	19.4%	19%
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	4.6	5.8	5.8	5.8	
Lead/Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	55.7	41.4	101.7	12.3	12.3	
Actuated g/C Ratio	0.44	0.33	0.81	0.10	0.10	
v/c Ratio	0.76	0.75	0.34	0.74	0.71	
Control Delay	33.6	47.2	3.7	27.5	16.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.6	47.2	3.7	27.5	16.5	
LOS	C	D	A	C	B	
Approach Delay	33.6		17.3	23.0		
Approach LOS	C		B	C		

Intersection Summary	
Cycle Length: 173.8	
Actuated Cycle Length: 125.6	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: California Oaks Rd & Clinton Keith Rd



Lane Group	EBT	WBL	WBT	NBL	NBR	Ø9
Protected Phases	2	1	6	8		9
Permitted Phases					8	
Minimum Initial (s)	10.0	6.0	10.0	6.0	6.0	1.0
Minimum Split (s)	32.8	10.6	23.8	33.8	33.8	32.6
Total Split (s)	61.4	46.0	107.4	33.8	33.8	32.6
Total Split (%)	35.3%	26.5%	61.8%	19.4%	19.4%	19%
Maximum Green (s)	55.6	41.4	101.6	28.0	28.0	28.0
Yellow Time (s)	4.8	3.6	4.8	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes				
Vehicle Extension (s)	3.8	3.0	3.8	3.8	3.8	0.2
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	0.2
Time Before Reduce (s)	1.0	0.0	1.0	1.0	1.0	0.0
Time To Reduce (s)	0.1	0.0	0.1	0.1	0.1	0.0
Recall Mode	Min	None	Min	None	None	None
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	20.0					21.0
Pedestrian Calls (#/hr)	1					0
90th %ile Green (s)	55.6	41.4	101.6	17.7	17.7	0.0
90th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
70th %ile Green (s)	55.6	41.4	101.6	14.4	14.4	0.0
70th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
50th %ile Green (s)	55.6	41.4	101.6	12.2	12.2	0.0
50th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
30th %ile Green (s)	55.6	41.4	101.6	10.2	10.2	0.0
30th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip
10th %ile Green (s)	55.6	41.4	101.6	7.3	7.3	0.0
10th %ile Term Code	Max	Max	Hold	Gap	Gap	Skip

Intersection Summary
Cycle Length: 173.8
Actuated Cycle Length: 125.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 130.9
70th %ile Actuated Cycle: 127.6
50th %ile Actuated Cycle: 125.4
30th %ile Actuated Cycle: 123.4
10th %ile Actuated Cycle: 120.5

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	46	1515	87	1301	176	33	93	157	0
Future Volume (vph)	46	1515	87	1301	176	33	93	157	0
Turn Type	Prot	NA	Prot	NA	Perm	Perm	Perm	Perm	NA
Protected Phases	5	2	1	6					4
Permitted Phases					6	8	8	4	
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	23.3	23.3
Total Split (s)	14.0	83.6	15.0	84.6	84.6	41.4	41.4	41.4	41.4
Total Split (%)	10.0%	59.7%	10.7%	60.4%	60.4%	29.6%	29.6%	29.6%	29.6%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.3	5.3	5.3	5.3
Lead/Lag	Lead	Lead	Lag	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	8.4	92.0	10.4	96.0	96.0	21.9	21.9	21.9	21.9
Actuated g/C Ratio	0.06	0.66	0.07	0.69	0.69	0.16	0.16	0.16	0.16
v/c Ratio	0.45	0.72	0.73	0.57	0.17	0.17	0.27	0.76	0.09
Control Delay	76.1	19.0	64.7	5.4	0.6	50.0	4.0	76.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	19.0	64.7	5.4	0.6	50.0	4.0	76.7	0.4
LOS	E	B	E	A	A	D	A	E	A
Approach Delay		20.6		8.2					64.6
Approach LOS		C		A					E

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 17.2 Intersection LOS: B
Intersection Capacity Utilization 76.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Greer Rd/Murrieta Ave & Clinton Keith Rd

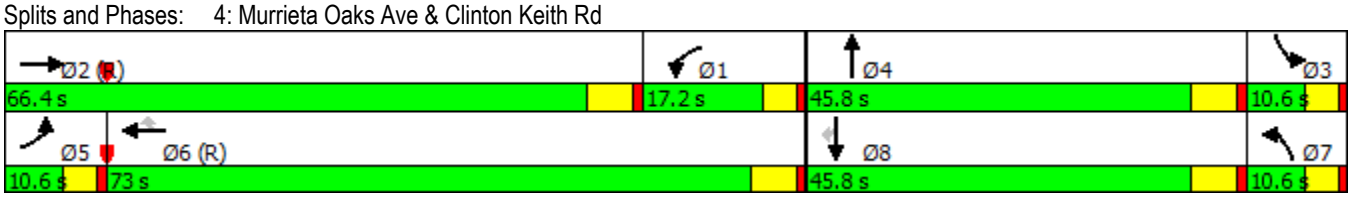
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Protected Phases	5	2	1	6					4
Permitted Phases					6	8	8	4	
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	30.8	10.6	33.8	33.8	41.3	41.3	23.3	23.3
Total Split (s)	14.0	83.6	15.0	84.6	84.6	41.4	41.4	41.4	41.4
Total Split (%)	10.0%	59.7%	10.7%	60.4%	60.4%	29.6%	29.6%	29.6%	29.6%
Maximum Green (s)	9.4	77.8	10.4	78.8	78.8	36.1	36.1	36.1	36.1
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0		
Flash Dont Walk (s)		18.0		21.0	21.0	29.0	29.0		
Pedestrian Calls (#/hr)		2		2	2	0	0		
90th %ile Green (s)	11.7	83.7	10.4	82.4	82.4	30.2	30.2	30.2	30.2
90th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Hold	Gap	Gap
70th %ile Green (s)	9.6	88.5	10.4	89.3	89.3	25.4	25.4	25.4	25.4
70th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	8.2	91.9	10.4	94.1	94.1	22.0	22.0	22.0	22.0
50th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.7	95.4	10.4	99.1	99.1	18.5	18.5	18.5	18.5
30th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	100.3	10.4	115.3	115.3	13.6	13.6	13.6	13.6
10th %ile Term Code	Skip	Coord	Hold	Coord	Coord	Hold	Hold	Gap	Gap

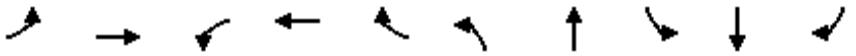
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	87	1665	203	1450	100	21	6	115	6	90
Future Volume (vph)	87	1665	203	1450	100	21	6	115	6	90
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Detector Phase	5	2	1	6	6	7	4	3	8	8
Switch Phase										
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	10.6	66.4	17.2	73.0	73.0	10.6	45.8	10.6	45.8	45.8
Total Split (%)	7.6%	47.4%	12.3%	52.1%	52.1%	7.6%	32.7%	7.6%	32.7%	32.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	13.4	78.4	12.6	77.6	77.6	11.4	15.0	13.2	21.0	21.0
Actuated g/C Ratio	0.10	0.56	0.09	0.55	0.55	0.08	0.11	0.09	0.15	0.15
v/c Ratio	0.54	0.91	1.33	0.54	0.12	0.16	0.61	0.49	0.02	0.28
Control Delay	77.3	29.3	213.3	9.0	1.2	61.8	18.4	67.8	49.2	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.3	29.3	213.3	9.0	1.2	61.8	18.4	67.8	49.2	3.7
LOS	E	C	F	A	A	E	B	E	D	A
Approach Delay		31.7		32.2			22.8		39.8	
Approach LOS		C		C			C		D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 31.9	Intersection LOS: C
Intersection Capacity Utilization 94.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Murrieta Oaks Ave & Clinton Keith Rd





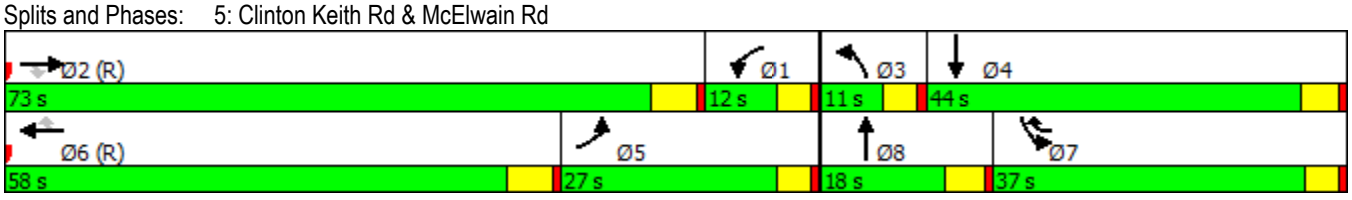
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6		7	4	3	8	
Permitted Phases					6					8
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.6	25.8	10.6	38.8	38.8	10.6	41.8	10.6	45.8	45.8
Total Split (s)	10.6	66.4	17.2	73.0	73.0	10.6	45.8	10.6	45.8	45.8
Total Split (%)	7.6%	47.4%	12.3%	52.1%	52.1%	7.6%	32.7%	7.6%	32.7%	32.7%
Maximum Green (s)	6.0	60.6	12.6	67.2	67.2	6.0	40.0	6.0	40.0	40.0
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	2.0	5.2	5.2	2.0	5.2	3.0	3.2	3.2
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.2	3.2
Time Before Reduce (s)	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)		13.0		26.0	26.0		29.0		33.0	33.0
Pedestrian Calls (#/hr)		0		7	7		5		3	3
90th %ile Green (s)	6.0	60.6	12.6	67.2	67.2	6.0	36.0	10.0	40.0	40.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Max	Ped	Max	Ped	Ped
70th %ile Green (s)	15.0	78.6	12.6	76.2	76.2	21.4	13.6	14.4	6.6	6.6
70th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Gap	Gap	Gap	Gap
50th %ile Green (s)	14.7	82.8	12.6	80.7	80.7	17.7	9.9	13.9	6.1	6.1
50th %ile Term Code	Gap	Coord	Max	Coord	Coord	Hold	Gap	Gap	Gap	Gap
30th %ile Green (s)	14.9	85.1	12.6	82.8	82.8	0.0	7.7	13.8	26.1	26.1
30th %ile Term Code	Gap	Coord	Max	Coord	Coord	Skip	Gap	Gap	Hold	Hold
10th %ile Green (s)	16.6	84.9	12.6	80.9	80.9	0.0	7.7	14.0	26.3	26.3
10th %ile Term Code	Gap	Coord	Max	Coord	Coord	Skip	Gap	Gap	Hold	Hold

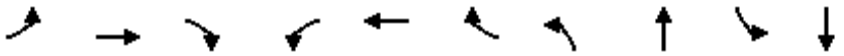
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	381	1585	14	26	1379	407	11	10	640	16
Future Volume (vph)	381	1585	14	26	1379	407	11	10	640	16
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	27.0	73.0	73.0	12.0	58.0	37.0	11.0	18.0	37.0	44.0
Total Split (%)	19.3%	52.1%	52.1%	8.6%	41.4%	26.4%	7.9%	12.9%	26.4%	31.4%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	20.0	79.0	79.0	6.7	61.4	94.1	6.2	10.0	31.5	38.6
Actuated g/C Ratio	0.14	0.56	0.56	0.05	0.44	0.67	0.04	0.07	0.22	0.28
v/c Ratio	0.82	0.58	0.02	0.32	0.64	0.37	0.15	0.24	0.87	0.63
Control Delay	61.9	9.6	0.0	75.1	28.9	1.5	68.6	34.1	64.3	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	9.6	0.0	75.1	29.0	1.5	68.6	34.1	64.3	15.3
LOS	E	A	A	E	C	A	E	C	E	B
Approach Delay		19.6			23.4			42.9		45.7
Approach LOS		B			C			D		D

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Clinton Keith Rd & McElwain Rd





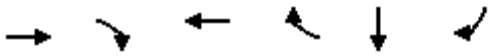
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	27.0	73.0	73.0	12.0	58.0	37.0	11.0	18.0	37.0	44.0
Total Split (%)	19.3%	52.1%	52.1%	8.6%	41.4%	26.4%	7.9%	12.9%	26.4%	31.4%
Maximum Green (s)	22.4	67.2	67.2	7.4	52.2	32.4	6.4	12.9	32.4	38.9
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	5.2	2.0	5.2	2.0	3.0	3.0	2.0	3.6
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		15.0	15.0		22.0					27.0
Pedestrian Calls (#/hr)		3	3		8					3
90th %ile Green (s)	22.4	67.2	67.2	7.4	52.2	35.3	6.4	10.0	35.3	38.9
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Max	Max	Min	Max	Hold
70th %ile Green (s)	22.4	67.3	67.3	7.4	52.3	35.2	6.4	10.0	35.2	38.8
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Gap	Max	Min	Gap	Hold
50th %ile Green (s)	21.5	70.9	70.9	6.5	55.9	32.5	0.0	10.0	32.5	47.1
50th %ile Term Code	Hold	Coord	Coord	Gap	Coord	Gap	Skip	Min	Gap	Hold
30th %ile Green (s)	18.5	85.4	85.4	0.0	62.3	29.1	0.0	10.0	29.1	43.7
30th %ile Term Code	Gap	Coord	Coord	Skip	Coord	Gap	Skip	Min	Gap	Hold
10th %ile Green (s)	15.4	104.4	104.4	0.0	84.4	25.2	0.0	0.0	25.2	24.7
10th %ile Term Code	Gap	Coord	Coord	Skip	Coord	Gap	Skip	Skip	Gap	Hold

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 14 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1643	582	1392	520	0	648
Future Volume (vph)	1643	582	1392	520	0	648
Turn Type	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	38.8	38.8	38.8	38.8	31.2	31.2
Total Split (%)	55.4%	55.4%	55.4%	55.4%	44.6%	44.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.4	33.4	33.4	33.4	25.0	25.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.36	0.36
v/c Ratio	0.72	0.83	0.61	0.74	0.95	0.68
Control Delay	19.8	32.4	13.8	19.3	50.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	32.4	13.8	19.3	50.6	21.8
LOS	B	C	B	B	D	C
Approach Delay	23.1		15.3		34.9	
Approach LOS	C		B		C	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 36 (51%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 76.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: I-215 SB Ramps & Clinton Keith Rd



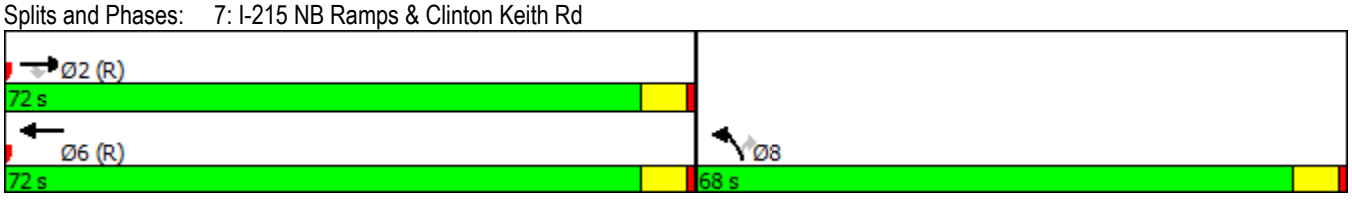
Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	38.8	38.8	38.8	38.8	31.2	31.2
Total Split (%)	55.4%	55.4%	55.4%	55.4%	44.6%	44.6%
Maximum Green (s)	33.0	33.0	33.0	33.0	25.4	25.4
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0				
Flash Dont Walk (s)	20.0	20.0				
Pedestrian Calls (#/hr)	8	8				
90th %ile Green (s)	33.0	33.0	33.0	33.0	25.4	25.4
90th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	33.0	33.0	33.0	33.0	25.4	25.4
70th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	33.0	33.0	33.0	33.0	25.4	25.4
50th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
30th %ile Green (s)	33.0	33.0	33.0	33.0	25.4	25.4
30th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
10th %ile Green (s)	34.8	34.8	34.8	34.8	23.6	23.6
10th %ile Term Code	Coord	Coord	Coord	Coord	Gap	Gap

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 36 (51%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1569	605	1426	511	554
Future Volume (vph)	1569	605	1426	511	554
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	2		6	8	
Permitted Phases		2			8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	72.0	72.0	72.0	68.0	68.0
Total Split (%)	51.4%	51.4%	51.4%	48.6%	48.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	72.5	72.5	72.5	55.9	55.9
Actuated g/C Ratio	0.52	0.52	0.52	0.40	0.40
v/c Ratio	0.66	0.63	0.60	0.89	0.91
Control Delay	32.9	14.3	22.7	53.7	58.6
Queue Delay	0.3	0.4	2.5	0.0	0.0
Total Delay	33.3	14.7	25.2	53.7	58.6
LOS	C	B	C	D	E
Approach Delay	28.1		25.2	56.0	
Approach LOS	C		C	E	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 104 (74%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 80.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: I-215 NB Ramps & Clinton Keith Rd



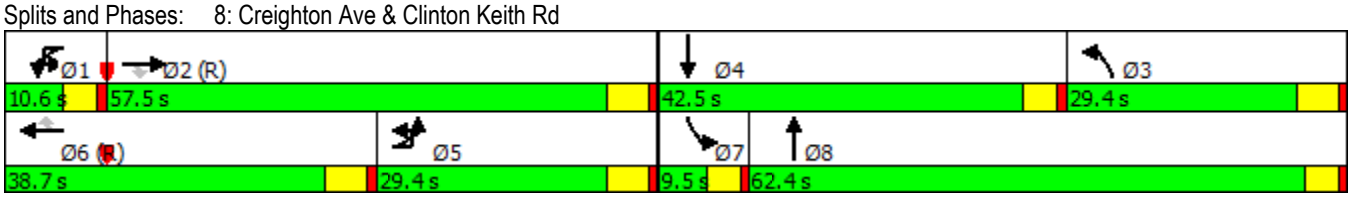
Lane Group	EBT	EBR	WBT	NBL	NBR
Protected Phases	2		6	8	
Permitted Phases		2			8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	72.0	72.0	72.0	68.0	68.0
Total Split (%)	51.4%	51.4%	51.4%	48.6%	48.6%
Maximum Green (s)	66.2	66.2	66.2	62.2	62.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.5	2.5
Minimum Gap (s)	2.0	2.0	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			
Flash Dont Walk (s)	31.0	31.0			
Pedestrian Calls (#/hr)	7	7			
90th %ile Green (s)	66.2	66.2	66.2	62.2	62.2
90th %ile Term Code	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	66.2	66.2	66.2	62.2	62.2
70th %ile Term Code	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	70.3	70.3	70.3	58.1	58.1
50th %ile Term Code	Coord	Coord	Coord	Gap	Gap
30th %ile Green (s)	75.4	75.4	75.4	53.0	53.0
30th %ile Term Code	Coord	Coord	Coord	Gap	Gap
10th %ile Green (s)	84.3	84.3	84.3	44.1	44.1
10th %ile Term Code	Coord	Coord	Coord	Gap	Gap

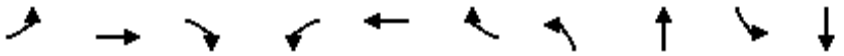
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 104 (74%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	341	1723	54	7	1533	139	53	0	133	0
Future Volume (vph)	341	1723	54	7	1533	139	53	0	133	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	29.4	29.4	29.4	10.6	28.4	28.4	29.4	46.6	9.5	42.5
Total Split (s)	29.4	57.5	57.5	10.6	38.7	38.7	29.4	62.4	9.5	42.5
Total Split (%)	21.0%	41.1%	41.1%	7.6%	27.6%	27.6%	21.0%	44.6%	6.8%	30.4%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4	5.4	4.6	4.5	4.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Max	C-Max	None	C-Max	C-Max	Min	Min	None	None
Act Effct Green (s)	24.0	99.4	99.4	6.1	72.2	72.2	11.1	18.9	5.0	12.0
Actuated g/C Ratio	0.17	0.71	0.71	0.04	0.52	0.52	0.08	0.14	0.04	0.09
v/c Ratio	1.25	0.53	0.05	0.11	0.65	0.17	0.42	0.04	2.35	0.49
Control Delay	169.1	6.4	0.1	67.7	27.9	6.7	70.3	0.2	680.3	2.6
Queue Delay	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	169.1	6.5	0.1	67.7	28.1	6.7	70.3	0.2	680.3	2.7
LOS	F	A	A	E	C	A	E	A	F	A
Approach Delay		32.5			26.5			57.6		217.9
Approach LOS		C			C			E		F

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 114 (81%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.35	
Intersection Signal Delay: 48.7	Intersection LOS: D
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	29.4	29.4	29.4	10.6	28.4	28.4	29.4	46.6	9.5	42.5
Total Split (s)	29.4	57.5	57.5	10.6	38.7	38.7	29.4	62.4	9.5	42.5
Total Split (%)	21.0%	41.1%	41.1%	7.6%	27.6%	27.6%	21.0%	44.6%	6.8%	30.4%
Maximum Green (s)	24.0	52.1	52.1	6.0	33.3	33.3	24.0	57.8	5.0	38.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	C-Max	C-Max	None	C-Max	C-Max	Min	Min	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		16.0	16.0		16.0	16.0		35.0		31.0
Pedestrian Calls (#/hr)		2	2		2	2		2		2
90th %ile Green (s)	24.0	61.5	61.5	6.7	43.4	43.4	13.9	47.7	5.0	38.0
90th %ile Term Code	Max	Coord	Coord	Gap	Coord	Coord	Gap	Hold	Max	Ped
70th %ile Green (s)	24.0	107.7	107.7	0.0	78.3	78.3	11.5	12.8	5.0	5.5
70th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Gap	Hold	Max	Gap
50th %ile Green (s)	24.0	109.2	109.2	0.0	79.8	79.8	10.0	11.3	5.0	5.5
50th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Min	Hold	Max	Gap
30th %ile Green (s)	24.0	109.2	109.2	0.0	79.8	79.8	10.0	11.3	5.0	5.5
30th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Min	Hold	Max	Gap
10th %ile Green (s)	24.0	109.2	109.2	0.0	79.8	79.8	10.0	11.3	5.0	5.5
10th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Min	Hold	Max	Gap

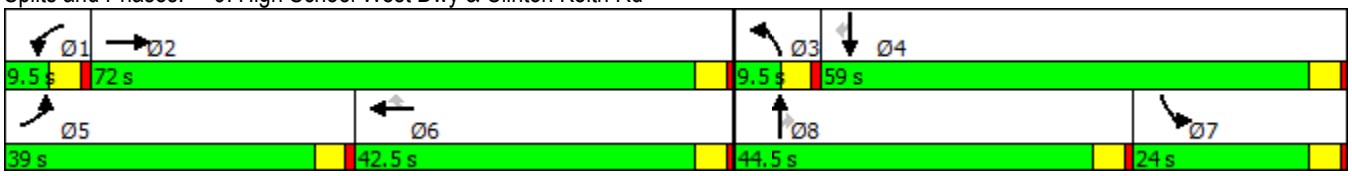
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 114 (81%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

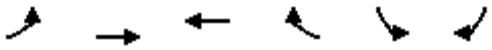
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	794	1045	1009	333	451	644			
Future Volume (vph)	794	1045	1009	333	451	644			
Turn Type	Prot	NA	NA	Perm	Prot	Perm			
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Detector Phase	5	2	6	6	7	4			
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	35.4	76.1	36.2	36.2	20.0	26.6			
Actuated g/C Ratio	0.32	0.68	0.32	0.32	0.18	0.24			
v/c Ratio	0.87	0.36	0.74	0.54	0.87	0.56			
Control Delay	46.7	10.2	38.4	11.1	61.1	1.9			
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0			
Total Delay	46.7	10.2	38.5	11.1	61.1	1.9			
LOS	D	B	D	B	E	A			
Approach Delay		26.0	31.7						
Approach LOS		C	C						

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 112
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 27.8 Intersection LOS: C
Intersection Capacity Utilization 66.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 9: High School West Dwy & Clinton Keith Rd





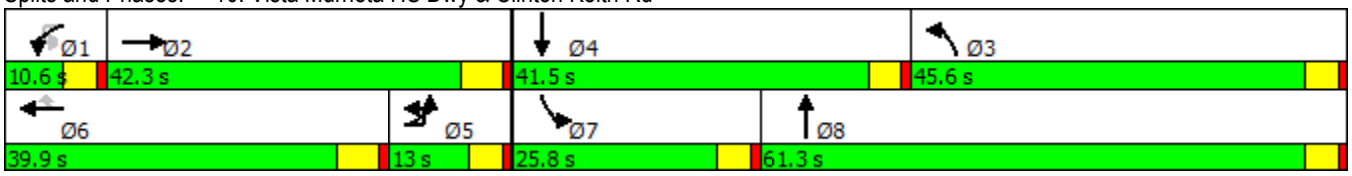
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Maximum Green (s)	34.5	67.5	38.0	38.0	19.5	54.5	5.0	5.0	40.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0	7.0		7.0			7.0
Flash Dont Walk (s)		24.0	31.0	31.0		30.0			33.0
Pedestrian Calls (#/hr)		3	2	2		2			2
90th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	64.0	0.0	0.0	40.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Ped
70th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	19.5	0.0	0.0	0.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Skip
50th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	19.5	0.0	0.0	0.0
50th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Skip
30th %ile Green (s)	34.5	73.4	34.4	34.4	19.5	19.5	0.0	0.0	0.0
30th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
10th %ile Green (s)	34.5	68.5	29.5	29.5	19.5	19.5	0.0	0.0	0.0
10th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 112
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 105.5
50th %ile Actuated Cycle: 105.5
30th %ile Actuated Cycle: 101.9
10th %ile Actuated Cycle: 97

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	145	1338	36	1168	125	61	0	136	0
Future Volume (vph)	145	1338	36	1168	125	61	0	136	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	5.0	5.0
Minimum Split (s)	10.6	38.4	10.6	27.4	27.4	45.6	45.6	9.5	41.5
Total Split (s)	13.0	42.3	10.6	39.9	39.9	45.6	61.3	25.8	41.5
Total Split (%)	9.3%	30.2%	7.6%	28.5%	28.5%	32.6%	43.8%	18.4%	29.6%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	4.6	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	9.5	43.8	6.3	35.5	35.5	9.3	10.8	16.2	10.6
Actuated g/C Ratio	0.12	0.53	0.08	0.43	0.43	0.11	0.13	0.20	0.13
v/c Ratio	0.83	0.59	0.31	0.62	0.19	0.18	0.03	0.46	0.20
Control Delay	70.4	19.8	48.8	23.3	7.1	36.0	0.1	36.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.4	19.8	48.8	23.3	7.1	36.0	0.1	36.7	0.7
LOS	E	B	D	C	A	D	A	D	A
Approach Delay		24.6		22.5			30.8		20.5
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 82.4	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Vista Murrieta HS Dwy & Clinton Keith Rd



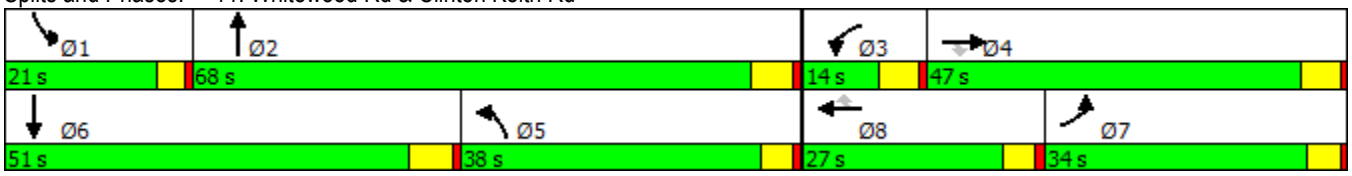
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	5.0	5.0
Minimum Split (s)	10.6	38.4	10.6	27.4	27.4	45.6	45.6	9.5	41.5
Total Split (s)	13.0	42.3	10.6	39.9	39.9	45.6	61.3	25.8	41.5
Total Split (%)	9.3%	30.2%	7.6%	28.5%	28.5%	32.6%	43.8%	18.4%	29.6%
Maximum Green (s)	8.4	36.9	6.0	34.5	34.5	41.0	56.7	21.3	37.0
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.9	2.0	3.9	3.9	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0		15.0	15.0		33.0		30.0
Pedestrian Calls (#/hr)		2		2	2		2		2
90th %ile Green (s)	8.4	36.9	6.0	34.5	34.5	24.3	40.0	21.3	37.0
90th %ile Term Code	Max	Max	Max	Max	Max	Hold	Ped	Max	Ped
70th %ile Green (s)	10.0	36.9	6.0	32.9	32.9	7.4	0.0	17.5	5.5
70th %ile Term Code	Hold	Max	Max	Gap	Gap	Gap	Skip	Hold	Gap
50th %ile Green (s)	10.0	36.9	6.0	32.9	32.9	6.9	0.0	17.0	5.5
50th %ile Term Code	Hold	Max	Max	Gap	Gap	Gap	Skip	Hold	Gap
30th %ile Green (s)	8.4	47.5	0.0	34.5	34.5	6.4	0.0	16.5	5.5
30th %ile Term Code	Max	Hold	Skip	Max	Max	Gap	Skip	Hold	Gap
10th %ile Green (s)	8.4	47.5	0.0	34.5	34.5	0.0	0.0	8.1	8.1
10th %ile Term Code	Max	Hold	Skip	Max	Max	Skip	Skip	Gap	Hold

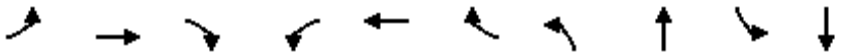
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 82.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 123.3
70th %ile Actuated Cycle: 74.9
50th %ile Actuated Cycle: 74.4
30th %ile Actuated Cycle: 73.9
10th %ile Actuated Cycle: 65.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	506	679	324	116	584	60	278	198	96	280
Future Volume (vph)	506	679	324	116	584	60	278	198	96	280
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	7.6	7.6	10.6	48.8	10.0	48.8
Total Split (s)	34.0	47.0	47.0	14.0	27.0	27.0	38.0	68.0	21.0	51.0
Total Split (%)	22.7%	31.3%	31.3%	9.3%	18.0%	18.0%	25.3%	45.3%	14.0%	34.0%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6	4.6	4.6	5.8	4.0	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	27.7	36.6	36.6	8.5	19.1	19.1	26.6	47.7	12.0	32.5
Actuated g/C Ratio	0.22	0.29	0.29	0.07	0.15	0.15	0.21	0.38	0.10	0.26
v/c Ratio	0.76	0.74	0.54	0.56	0.85	0.19	0.84	0.48	0.64	0.77
Control Delay	55.5	46.8	9.5	71.2	64.5	1.2	69.1	31.1	75.8	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	46.8	9.5	71.2	64.5	1.2	69.1	31.1	75.8	35.0
LOS	E	D	A	E	E	A	E	C	E	C
Approach Delay		41.7			60.6			49.7		39.9
Approach LOS		D			E			D		D

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 126.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 46.5	Intersection LOS: D
Intersection Capacity Utilization 79.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Whitewood Rd & Clinton Keith Rd





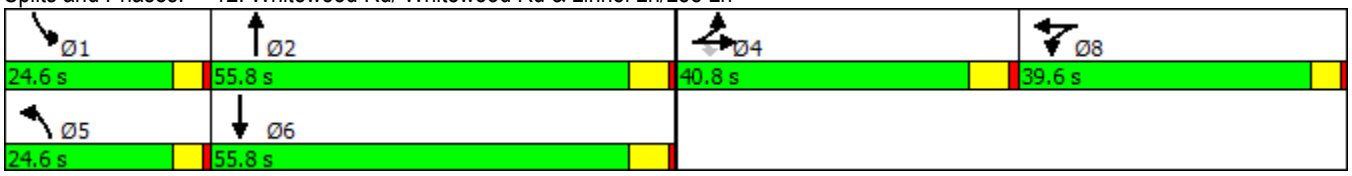
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Minimum Initial (s)	3.0	6.0	6.0	6.0	3.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	31.4	11.4	7.6	7.6	10.6	48.8	10.0	48.8
Total Split (s)	34.0	47.0	47.0	14.0	27.0	27.0	38.0	68.0	21.0	51.0
Total Split (%)	22.7%	31.3%	31.3%	9.3%	18.0%	18.0%	25.3%	45.3%	14.0%	34.0%
Maximum Green (s)	29.4	41.6	41.6	8.6	22.4	22.4	33.4	62.2	17.0	45.2
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	0.5	6.9	6.9	3.0	0.5	0.5	2.0	6.1	2.0	6.1
Minimum Gap (s)	0.5	3.0	3.0	3.0	0.5	0.5	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0					7.0		7.0
Flash Dont Walk (s)		19.0	19.0					36.0		36.0
Pedestrian Calls (#/hr)		0	0					0		2
90th %ile Green (s)	29.4	41.6	41.6	8.6	22.4	22.4	33.4	62.1	17.0	45.1
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Hold	Max	Gap
70th %ile Green (s)	29.4	41.6	41.6	8.6	22.4	22.4	33.4	56.9	15.0	37.9
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Hold	Gap	Gap
50th %ile Green (s)	29.5	39.7	39.7	8.6	20.4	20.4	28.4	49.8	12.5	33.3
50th %ile Term Code	Hold	Gap	Gap	Max	Gap	Gap	Gap	Hold	Gap	Gap
30th %ile Green (s)	26.4	33.5	33.5	8.6	17.3	17.3	23.1	41.1	10.0	27.4
30th %ile Term Code	Hold	Gap	Gap	Max	Gap	Gap	Gap	Hold	Gap	Gap
10th %ile Green (s)	22.1	26.5	26.5	7.3	13.3	13.3	16.7	31.5	6.9	21.1
10th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Gap	Gap

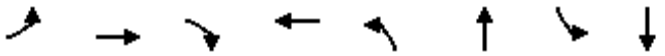
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 126.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 149.9
70th %ile Actuated Cycle: 142.7
50th %ile Actuated Cycle: 131.2
30th %ile Actuated Cycle: 113.8
10th %ile Actuated Cycle: 92.8

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	107	2	90	2	46	613	10	682
Future Volume (vph)	107	2	90	2	46	613	10	682
Turn Type	Split	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases	4	4		8	5	2	1	6
Permitted Phases			4					
Detector Phase	4	4	4	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Yellow Time (s)	4.8	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.6	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	15.0	15.0	15.0	6.4	7.4	33.0	6.6	28.0
Actuated g/C Ratio	0.24	0.24	0.24	0.10	0.12	0.52	0.10	0.44
v/c Ratio	0.27	0.01	0.21	0.05	0.23	0.35	0.06	0.51
Control Delay	25.7	25.0	8.0	29.1	33.9	11.0	34.4	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	25.0	8.0	29.1	33.9	11.0	34.4	16.2
LOS	C	C	A	C	C	B	C	B
Approach Delay		17.7		29.1		12.6		16.4
Approach LOS		B		C		B		B

Intersection Summary	
Cycle Length: 160.8	
Actuated Cycle Length: 63.4	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Whitewood Rd/ Whitewood Rd & Linnel Ln/Lee Ln





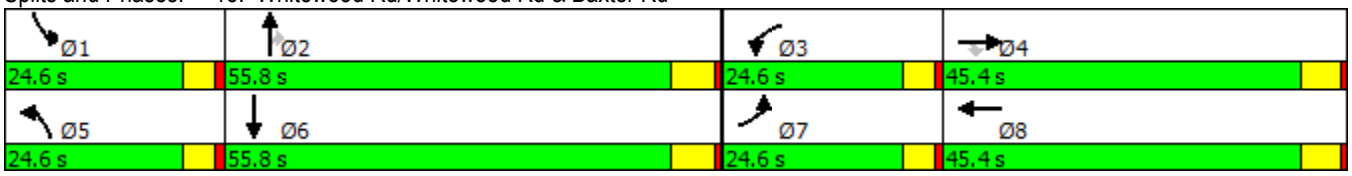
Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Protected Phases	4	4		8	5	2	1	6
Permitted Phases			4					
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	31.8	31.8	31.8	10.6	10.6	22.8	10.6	27.8
Total Split (s)	40.8	40.8	40.8	39.6	24.6	55.8	24.6	55.8
Total Split (%)	25.4%	25.4%	25.4%	24.6%	15.3%	34.7%	15.3%	34.7%
Maximum Green (s)	35.0	35.0	35.0	35.0	20.0	50.0	20.0	50.0
Yellow Time (s)	4.8	4.8	4.8	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	6.9	6.9	6.9	2.0	2.0	6.1	3.0	6.1
Minimum Gap (s)	5.0	5.0	5.0	2.0	2.0	3.0	3.0	3.0
Time Before Reduce (s)	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1
Time To Reduce (s)	1.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Recall Mode	None	None	None	None	None	Min	None	Min
Walk Time (s)	7.0	7.0	7.0			7.0		7.0
Flash Dont Walk (s)	19.0	19.0	19.0			10.0		15.0
Pedestrian Calls (#/hr)	0	0	0			0		0
90th %ile Green (s)	19.6	19.6	19.6	6.0	9.9	39.4	7.3	36.8
90th %ile Term Code	Gap	Gap	Gap	Min	Gap	Hold	Gap	Gap
70th %ile Green (s)	15.9	15.9	15.9	0.0	7.7	39.5	0.0	27.2
70th %ile Term Code	Gap	Gap	Gap	Skip	Gap	Hold	Skip	Gap
50th %ile Green (s)	14.3	14.3	14.3	0.0	6.7	35.8	0.0	24.5
50th %ile Term Code	Gap	Gap	Gap	Skip	Gap	Hold	Skip	Gap
30th %ile Green (s)	12.8	12.8	12.8	0.0	0.0	21.2	0.0	21.2
30th %ile Term Code	Gap	Gap	Gap	Skip	Skip	Hold	Skip	Gap
10th %ile Green (s)	11.0	11.0	11.0	0.0	0.0	26.8	0.0	26.8
10th %ile Term Code	Gap	Gap	Gap	Skip	Skip	Dwell	Skip	Dwell

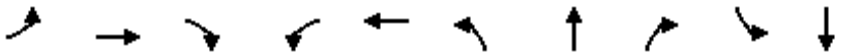
Intersection Summary
Cycle Length: 160.8
Actuated Cycle Length: 63.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 93.1
70th %ile Actuated Cycle: 67
50th %ile Actuated Cycle: 61.7
30th %ile Actuated Cycle: 45.6
10th %ile Actuated Cycle: 49.4

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	73	9	161	30	14	188	478	37	8	553
Future Volume (vph)	73	9	161	30	14	188	478	37	8	553
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	4.6	5.4	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	12.9	15.3	15.3	7.2	14.2	16.2	41.5	41.5	6.7	21.6
Actuated g/C Ratio	0.17	0.20	0.20	0.09	0.19	0.21	0.54	0.54	0.09	0.28
v/c Ratio	0.26	0.03	0.40	0.19	0.04	0.56	0.50	0.04	0.06	0.63
Control Delay	38.5	29.2	7.9	45.2	24.2	39.3	17.4	0.1	46.4	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	29.2	7.9	45.2	24.2	39.3	17.4	0.1	46.4	29.1
LOS	D	C	A	D	C	D	B	A	D	C
Approach Delay		17.9			36.2		22.4			29.4
Approach LOS		B			D		C			C

Intersection Summary	
Cycle Length: 150.4	
Actuated Cycle Length: 76.6	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 54.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: Whitewood Rd/Whitewood Rd & Baxter Rd





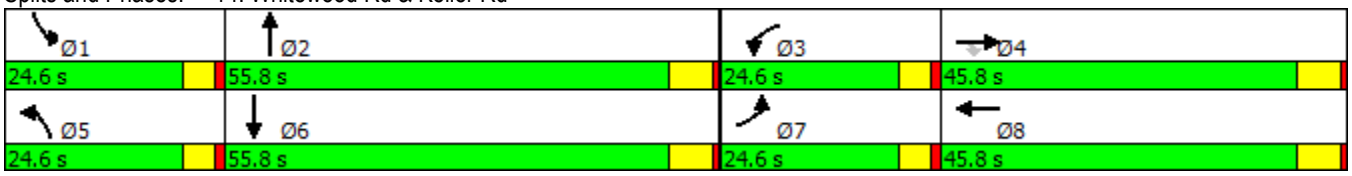
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	10.0	6.0	10.0
Minimum Split (s)	10.6	40.4	40.4	10.6	40.4	10.6	37.8	37.8	10.6	37.8
Total Split (s)	24.6	45.4	45.4	24.6	45.4	24.6	55.8	55.8	24.6	55.8
Total Split (%)	16.4%	30.2%	30.2%	16.4%	30.2%	16.4%	37.1%	37.1%	16.4%	37.1%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.4	4.4	3.6	4.4	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		28.0	28.0		28.0		25.0	25.0		25.0
Pedestrian Calls (#/hr)		0	0		1		0	0		1
90th %ile Green (s)	13.6	39.5	39.5	9.1	35.0	20.0	49.6	49.6	6.4	36.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Ped	Max	Gap	Gap	Gap	Hold
70th %ile Green (s)	9.5	12.7	12.7	6.8	10.0	18.5	45.6	45.6	0.0	22.5
70th %ile Term Code	Gap	Hold	Hold	Gap	Min	Gap	Hold	Hold	Skip	Gap
50th %ile Green (s)	21.4	10.0	10.0	6.0	0.0	16.5	41.4	41.4	0.0	20.3
50th %ile Term Code	Hold	Min	Min	Min	Skip	Gap	Hold	Hold	Skip	Gap
30th %ile Green (s)	10.8	10.0	10.0	0.0	0.0	12.6	33.0	33.0	0.0	15.8
30th %ile Term Code	Hold	Min	Min	Skip	Skip	Gap	Hold	Hold	Skip	Gap
10th %ile Green (s)	0.0	10.0	10.0	0.0	10.0	10.3	28.4	28.4	0.0	13.5
10th %ile Term Code	Skip	Min	Min	Skip	Hold	Gap	Hold	Hold	Skip	Gap

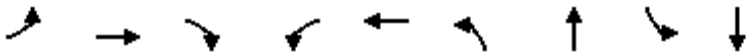
Intersection Summary
Cycle Length: 150.4
Actuated Cycle Length: 76.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 125
70th %ile Actuated Cycle: 80.9
50th %ile Actuated Cycle: 73.2
30th %ile Actuated Cycle: 54.2
10th %ile Actuated Cycle: 49.6

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	76	31	105	17	29	97	376	8	450
Future Volume (vph)	76	31	105	17	29	97	376	8	450
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.0	18.3	18.3	7.7	14.3	10.8	40.3	7.5	30.2
Actuated g/C Ratio	0.16	0.27	0.27	0.11	0.21	0.16	0.60	0.11	0.45
v/c Ratio	0.30	0.07	0.23	0.09	0.06	0.40	0.20	0.04	0.38
Control Delay	37.7	25.8	7.4	41.8	25.3	38.4	12.2	42.1	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	25.8	7.4	41.8	25.3	38.4	12.2	42.1	21.2
LOS	D	C	A	D	C	D	B	D	C
Approach Delay		20.9			30.4		17.5		21.5
Approach LOS		C			C		B		C

Intersection Summary	
Cycle Length: 150.8	
Actuated Cycle Length: 67.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 20.3	Intersection LOS: C
Intersection Capacity Utilization 45.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Whitewood Rd & Keller Rd





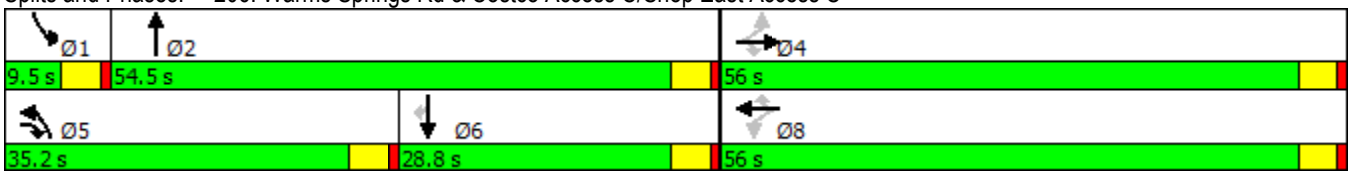
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	37.8	37.8	10.6	37.8	10.6	44.8	10.6	44.8
Total Split (s)	24.6	45.8	45.8	24.6	45.8	24.6	55.8	24.6	55.8
Total Split (%)	16.3%	30.4%	30.4%	16.3%	30.4%	16.3%	37.0%	16.3%	37.0%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	20.0	50.0	20.0	50.0
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.9	3.9	2.0	3.9	2.0	4.3	2.0	4.3
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		32.0		32.0
Pedestrian Calls (#/hr)		1	1		0		0		1
90th %ile Green (s)	14.1	32.0	32.0	7.4	25.3	16.0	48.7	6.3	39.0
90th %ile Term Code	Gap	Ped	Ped	Gap	Hold	Gap	Hold	Gap	Ped
70th %ile Green (s)	10.0	14.0	14.0	6.0	10.0	11.2	38.2	0.0	22.4
70th %ile Term Code	Gap	Hold	Hold	Min	Min	Gap	Hold	Skip	Gap
50th %ile Green (s)	8.4	23.0	23.0	0.0	10.0	9.4	33.7	0.0	19.7
50th %ile Term Code	Gap	Hold	Hold	Skip	Min	Gap	Hold	Skip	Gap
30th %ile Green (s)	11.2	10.0	10.0	0.0	0.0	7.9	28.9	0.0	16.4
30th %ile Term Code	Hold	Min	Min	Skip	Skip	Gap	Hold	Skip	Gap
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	21.5	0.0	21.5
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Dwell	Skip	Dwell

Intersection Summary
Cycle Length: 150.8
Actuated Cycle Length: 67.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 115.2
70th %ile Actuated Cycle: 74.4
50th %ile Actuated Cycle: 68.3
30th %ile Actuated Cycle: 50.5
10th %ile Actuated Cycle: 27.3

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	554	346	516	234	156		
Future Volume (vph)	554	346	516	234	156		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	35.2	56.0	35.2	54.5	28.8	9.5	56.0
Total Split (%)	29.3%	46.7%	29.3%	45.4%	24.0%	8%	47%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	55.5	29.0	21.7	37.8	11.3		
Actuated g/C Ratio	0.72	0.38	0.28	0.49	0.15		
v/c Ratio	0.53	0.76	0.63	0.30	0.35		
Control Delay	3.7	32.4	29.4	7.3	34.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	3.7	32.4	29.4	7.3	34.8		
LOS	A	C	C	A	C		
Approach Delay				19.1	34.8		
Approach LOS				B	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 76.6	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 69.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 206: Warms Springs Rd & Costco Access C/Shop East Access C



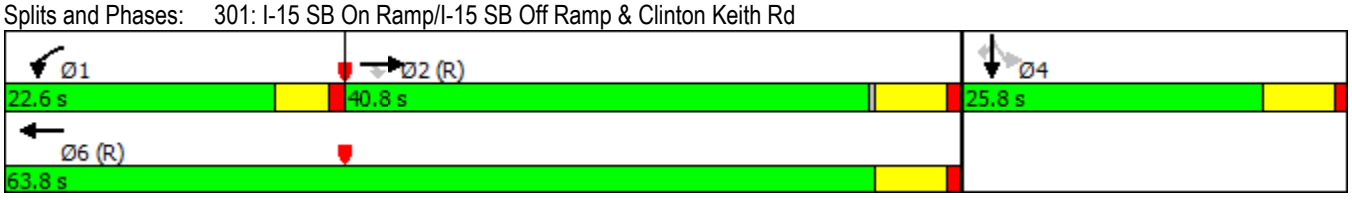
Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	35.2	56.0	35.2	54.5	28.8	9.5	56.0
Total Split (%)	29.3%	46.7%	29.3%	45.4%	24.0%	8%	47%
Maximum Green (s)	30.7	51.5	30.7	50.0	24.3	5.0	51.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	30.7	49.3	30.7	57.2	22.0	0.0	49.3
90th %ile Term Code	Max	Gap	Max	Hold	Ped	Skip	Hold
70th %ile Green (s)	25.3	34.4	25.3	41.1	11.3	0.0	34.4
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	21.6	27.8	21.6	35.9	9.8	0.0	27.8
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	17.5	21.9	17.5	30.4	8.4	0.0	21.9
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	13.1	15.6	13.1	24.5	6.9	0.0	15.6
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold

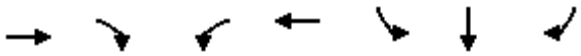
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 76.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 115.5
70th %ile Actuated Cycle: 84.5
50th %ile Actuated Cycle: 72.7
30th %ile Actuated Cycle: 61.3
10th %ile Actuated Cycle: 49.1

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	919	543	296	1093	421	1	372
Future Volume (vph)	919	543	296	1093	421	1	372
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	40.8	40.8	22.6	63.8	25.8	25.8	25.8
Total Split (%)	45.5%	45.5%	25.2%	71.2%	28.8%	28.8%	28.8%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	44.5	44.5	12.4	61.4	16.6	16.6	16.6
Actuated g/C Ratio	0.50	0.50	0.14	0.69	0.19	0.19	0.19
v/c Ratio	0.38	0.53	0.65	0.33	0.71	0.71	0.58
Control Delay	15.7	3.6	41.6	11.2	46.3	46.6	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	3.6	41.6	11.2	46.3	46.6	19.9
LOS	B	A	D	B	D	D	B
Approach Delay	11.2			17.7		34.0	
Approach LOS	B			B		C	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 301: I-15 SB On Ramp/I-15 SB Off Ramp & Clinton Keith Rd





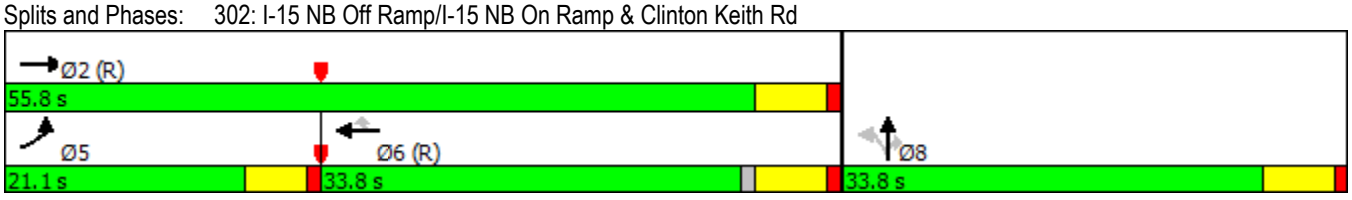
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	35.8	35.8	9.6	40.8	23.8	23.8	23.8
Total Split (s)	40.8	40.8	22.6	63.8	25.8	25.8	25.8
Total Split (%)	45.5%	45.5%	25.2%	71.2%	28.8%	28.8%	28.8%
Maximum Green (s)	35.0	35.0	18.0	58.0	20.0	20.0	20.0
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Walk Time (s)	7.0	7.0		7.0			
Flash Dont Walk (s)	23.0	23.0		28.0			
Pedestrian Calls (#/hr)	0	0		2			
90th %ile Green (s)	37.4	37.4	16.0	58.0	20.0	20.0	20.0
90th %ile Term Code	Coord	Coord	Gap	Coord	Max	Max	Max
70th %ile Green (s)	38.5	38.5	13.9	57.0	21.0	21.0	21.0
70th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
50th %ile Green (s)	43.3	43.3	12.4	60.3	17.7	17.7	17.7
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
30th %ile Green (s)	48.1	48.1	10.9	63.6	14.4	14.4	14.4
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap
10th %ile Green (s)	55.0	55.0	8.7	68.3	9.7	9.7	9.7
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap	Gap

Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	347	1063	820	523	455	5	365
Future Volume (vph)	347	1063	820	523	455	5	365
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	21.1	55.8	33.8	33.8	33.8	33.8	33.8
Total Split (%)	23.5%	62.3%	37.7%	37.7%	37.7%	37.7%	37.7%
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	13.3	56.8	38.4	38.4	21.2	21.2	21.2
Actuated g/C Ratio	0.15	0.63	0.43	0.43	0.24	0.24	0.24
v/c Ratio	0.70	0.34	0.39	0.55	0.74	0.73	0.62
Control Delay	36.2	5.1	19.8	4.6	42.7	38.0	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	5.1	19.8	4.6	42.7	38.0	24.9
LOS	D	A	B	A	D	D	C
Approach Delay		12.8	13.8			35.5	
Approach LOS		B	B			D	

Intersection Summary	
Cycle Length: 89.6	
Actuated Cycle Length: 89.6	
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 302: I-15 NB Off Ramp/I-15 NB On Ramp & Clinton Keith Rd



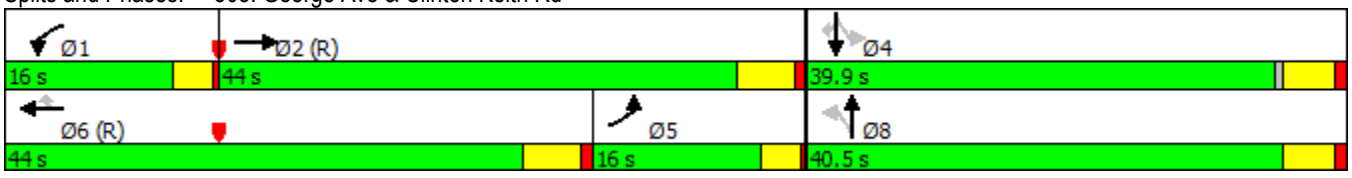
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Protected Phases	5	2	6			8	
Permitted Phases				6	8		8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	35.8	35.8	35.8	22.5	22.5	22.5
Total Split (s)	21.1	55.8	33.8	33.8	33.8	33.8	33.8
Total Split (%)	23.5%	62.3%	37.7%	37.7%	37.7%	37.7%	37.7%
Maximum Green (s)	16.0	50.0	28.0	28.0	28.0	28.0	28.0
Yellow Time (s)	4.1	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Walk Time (s)		7.0	7.0	7.0			
Flash Dont Walk (s)		23.0	23.0	23.0			
Pedestrian Calls (#/hr)		0	0	0			
90th %ile Green (s)	16.0	50.0	28.9	28.9	28.0	28.0	28.0
90th %ile Term Code	Max	Coord	Coord	Coord	Max	Max	Max
70th %ile Green (s)	15.2	52.6	32.3	32.3	25.4	25.4	25.4
70th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	13.6	56.2	37.5	37.5	21.8	21.8	21.8
50th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	12.0	60.0	42.9	42.9	18.0	18.0	18.0
30th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	9.7	65.3	50.5	50.5	12.7	12.7	12.7
10th %ile Term Code	Gap	Coord	Coord	Coord	Gap	Gap	Gap

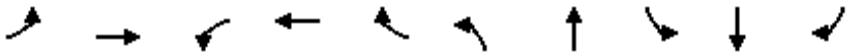
Intersection Summary
Cycle Length: 89.6
Actuated Cycle Length: 89.6
Offset: 30.1 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	267	900	113	935	45	75	29	210	36	132
Future Volume (vph)	267	900	113	935	45	75	29	210	36	132
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	16.0	44.0	16.0	44.0	44.0	40.5	40.5	39.9	39.9	39.9
Total Split (%)	15.9%	43.8%	15.9%	43.8%	43.8%	40.3%	40.3%	39.7%	39.7%	39.7%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.3	3.5	5.3	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	12.5	51.6	11.4	50.6	50.6	23.7	23.7	23.7	23.7	23.7
Actuated g/C Ratio	0.12	0.51	0.11	0.50	0.50	0.24	0.24	0.24	0.24	0.24
v/c Ratio	1.28	0.38	0.59	0.55	0.06	0.25	0.26	0.76	0.09	0.29
Control Delay	192.7	16.7	54.6	20.2	1.9	30.3	10.4	51.3	26.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	192.7	16.7	54.6	20.2	1.9	30.3	10.4	51.3	26.8	6.0
LOS	F	B	D	C	A	C	B	D	C	A
Approach Delay		55.9		23.0			18.3		33.1	
Approach LOS		E		C			B		C	

Intersection Summary	
Cycle Length: 100.5	
Actuated Cycle Length: 100.5	
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 37.8	Intersection LOS: D
Intersection Capacity Utilization 71.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 303: George Ave & Clinton Keith Rd





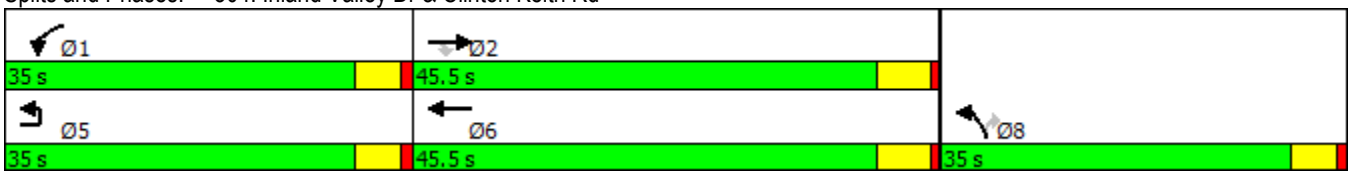
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6			8		4	
Permitted Phases					6	8		4		4
Minimum Initial (s)	4.0	6.0	10.0	7.0	7.0	9.0	9.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.3	14.5	31.3	31.3	40.5	40.5	39.9	39.9	39.9
Total Split (s)	16.0	44.0	16.0	44.0	44.0	40.5	40.5	39.9	39.9	39.9
Total Split (%)	15.9%	43.8%	15.9%	43.8%	43.8%	40.3%	40.3%	39.7%	39.7%	39.7%
Maximum Green (s)	12.5	38.7	12.5	38.7	38.7	35.6	35.6	35.0	35.0	35.0
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	0.5	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	2.0	4.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0		19.0	19.0	27.0	27.0	28.0	28.0	28.0
Pedestrian Calls (#/hr)		1		0	0	1	1	1	1	1
90th %ile Green (s)	12.5	38.7	13.1	39.3	39.3	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Hold	Hold	Ped	Ped	Ped
70th %ile Green (s)	12.5	46.3	13.0	46.8	46.8	27.5	27.5	27.5	27.5	27.5
70th %ile Term Code	Max	Coord	Gap	Coord	Coord	Hold	Hold	Gap	Gap	Gap
50th %ile Green (s)	12.5	52.7	11.1	51.3	51.3	23.0	23.0	23.0	23.0	23.0
50th %ile Term Code	Max	Coord	Gap	Coord	Coord	Hold	Hold	Gap	Gap	Gap
30th %ile Green (s)	12.5	57.5	10.0	55.0	55.0	19.3	19.3	19.3	19.3	19.3
30th %ile Term Code	Max	Coord	Min	Coord	Coord	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	12.5	62.9	10.0	60.4	60.4	13.9	13.9	13.9	13.9	13.9
10th %ile Term Code	Max	Coord	Min	Coord	Coord	Hold	Hold	Gap	Gap	Gap

Intersection Summary
Cycle Length: 100.5
Actuated Cycle Length: 100.5
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø5
Lane Configurations							
Traffic Volume (vph)	864	253	28	772	250	29	
Future Volume (vph)	864	253	28	772	250	29	
Turn Type	NA	Perm	Prot	NA	Prot	Perm	
Protected Phases	2		1	6	8		5
Permitted Phases		2				8	
Detector Phase	2	2	1	6	8	8	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	6.0	6.0	5.0
Minimum Split (s)	25.5	25.5	10.0	22.5	22.5	22.5	10.0
Total Split (s)	45.5	45.5	35.0	45.5	35.0	35.0	35.0
Total Split (%)	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%	30%
Yellow Time (s)	4.5	4.5	4.0	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.0	5.5	5.0	5.0	
Lead/Lag	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes
Recall Mode	Min	Min	None	Min	None	None	None
Act Effct Green (s)	25.2	25.2	6.1	28.7	16.1	16.1	
Actuated g/C Ratio	0.45	0.45	0.11	0.51	0.28	0.28	
v/c Ratio	0.56	0.31	0.15	0.44	0.51	0.06	
Control Delay	14.3	3.2	33.2	9.3	24.1	14.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	14.3	3.2	33.2	9.3	24.1	14.6	
LOS	B	A	C	A	C	B	
Approach Delay	11.8			10.1	23.1		
Approach LOS	B			B	C		

Intersection Summary	
Cycle Length: 115.5	
Actuated Cycle Length: 56.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 304: Inland Valley Dr & Clinton Keith Rd



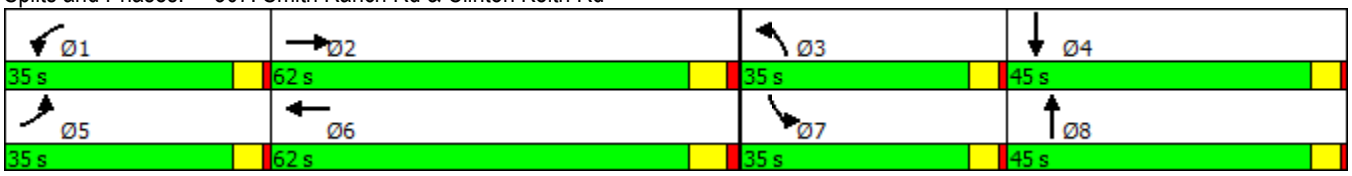
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø5
Protected Phases	2		1	6	8		5
Permitted Phases		2				8	
Minimum Initial (s)	10.0	10.0	5.0	10.0	6.0	6.0	5.0
Minimum Split (s)	25.5	25.5	10.0	22.5	22.5	22.5	10.0
Total Split (s)	45.5	45.5	35.0	45.5	35.0	35.0	35.0
Total Split (%)	39.4%	39.4%	30.3%	39.4%	30.3%	30.3%	30%
Maximum Green (s)	40.0	40.0	30.0	40.0	30.0	30.0	30.0
Yellow Time (s)	4.5	4.5	4.0	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes
Vehicle Extension (s)	2.5	2.5	1.5	2.5	3.5	3.5	1.5
Minimum Gap (s)	2.5	2.5	1.5	2.5	3.5	3.5	1.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	Min	None	Min	None	None	None
Walk Time (s)	8.0	8.0					
Flash Dont Walk (s)	12.0	12.0					
Pedestrian Calls (#/hr)	0	0					
90th %ile Green (s)	38.9	38.9	7.4	51.3	23.4	23.4	0.0
90th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Skip
70th %ile Green (s)	29.5	29.5	6.1	40.6	19.3	19.3	0.0
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Skip
50th %ile Green (s)	24.9	24.9	0.0	24.9	16.1	16.1	0.0
50th %ile Term Code	Gap	Gap	Skip	Hold	Gap	Gap	Skip
30th %ile Green (s)	18.0	18.0	0.0	18.0	12.0	12.0	0.0
30th %ile Term Code	Gap	Gap	Skip	Hold	Gap	Gap	Skip
10th %ile Green (s)	15.1	15.1	0.0	15.1	9.5	9.5	0.0
10th %ile Term Code	Dwell	Dwell	Skip	Dwell	Gap	Gap	Skip

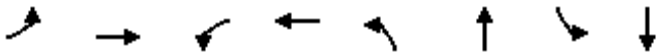
Intersection Summary
Cycle Length: 115.5
Actuated Cycle Length: 56.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 85.2
70th %ile Actuated Cycle: 70.4
50th %ile Actuated Cycle: 51.5
30th %ile Actuated Cycle: 40.5
10th %ile Actuated Cycle: 35.1

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	51	768	21	747	35	2	49	0
Future Volume (vph)	51	768	21	747	35	2	49	0
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	5.0	7.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	7.6	43.2	6.4	34.8	6.9	9.5	11.4	9.7
Actuated g/C Ratio	0.12	0.68	0.10	0.54	0.11	0.15	0.18	0.15
v/c Ratio	0.25	0.35	0.12	0.44	0.19	0.02	0.16	0.06
Control Delay	38.4	13.2	40.5	17.1	39.4	24.0	32.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	13.2	40.5	17.1	39.4	24.0	32.4	0.2
LOS	D	B	D	B	D	C	C	A
Approach Delay		14.8		17.7		37.5		18.2
Approach LOS		B		B		D		B

Intersection Summary	
Cycle Length: 177	
Actuated Cycle Length: 64	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 307: Smith Ranch Rd & Clinton Keith Rd





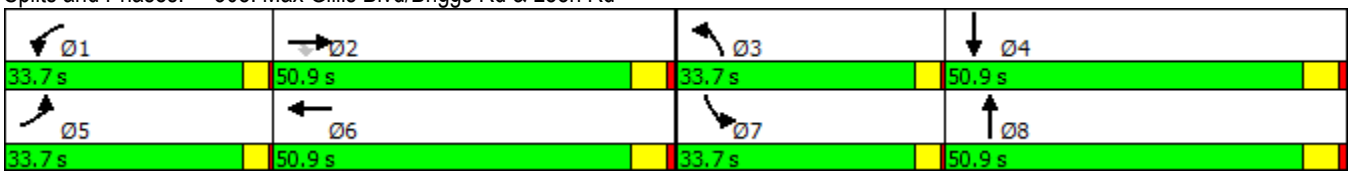
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.0	22.5	10.0	22.5	10.0	22.5	10.0	33.0
Total Split (s)	35.0	62.0	35.0	62.0	35.0	45.0	35.0	45.0
Total Split (%)	19.8%	35.0%	19.8%	35.0%	19.8%	25.4%	19.8%	25.4%
Maximum Green (s)	30.0	55.0	30.0	55.0	30.0	40.0	30.0	40.0
Yellow Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	1.5	3.5	1.5	2.5	1.5	2.5
Minimum Gap (s)	1.5	3.0	1.5	3.0	1.5	2.5	1.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	None	None	None
Walk Time (s)		7.0		7.0				12.0
Flash Dont Walk (s)		8.0		8.0				16.0
Pedestrian Calls (#/hr)		0		0				1
90th %ile Green (s)	10.6	45.1	7.4	41.9	9.0	26.6	10.4	28.0
90th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Hold	Gap	Ped
70th %ile Green (s)	7.7	28.8	5.8	26.9	6.7	0.0	17.7	6.0
70th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Skip	Hold	Min
50th %ile Green (s)	6.6	35.9	0.0	24.3	5.8	0.0	16.8	6.0
50th %ile Term Code	Gap	Hold	Skip	Gap	Gap	Skip	Hold	Min
30th %ile Green (s)	5.6	35.2	0.0	24.6	0.0	0.0	0.0	0.0
30th %ile Term Code	Gap	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip
10th %ile Green (s)	0.0	25.4	0.0	25.4	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Dwell	Skip	Dwell	Skip	Skip	Skip	Skip

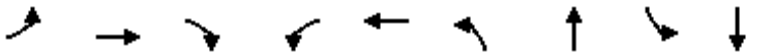
Intersection Summary
Cycle Length: 177
Actuated Cycle Length: 64
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 111.5
70th %ile Actuated Cycle: 69.3
50th %ile Actuated Cycle: 64.7
30th %ile Actuated Cycle: 42.2
10th %ile Actuated Cycle: 32.4

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	98	218	655	118	171	520	225	7	304
Future Volume (vph)	98	218	655	118	171	520	225	7	304
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.7	5.9	5.9	3.7	5.9	3.7	5.9	3.7	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Act Effct Green (s)	7.6	25.1	25.1	8.2	25.8	21.9	44.0	5.4	19.3
Actuated g/C Ratio	0.08	0.26	0.26	0.09	0.27	0.23	0.46	0.06	0.20
v/c Ratio	0.38	0.25	0.85	0.42	0.19	0.70	0.23	0.04	0.61
Control Delay	53.5	29.0	19.3	52.7	28.0	41.8	15.7	56.9	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	29.0	19.3	52.7	28.0	41.8	15.7	56.9	38.9
LOS	D	C	B	D	C	D	B	E	D
Approach Delay		25.0			38.1		31.5		39.1
Approach LOS		C			D		C		D

Intersection Summary	
Cycle Length: 169.2	
Actuated Cycle Length: 95.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 31.0	Intersection LOS: C
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 308: Max Gillis Blvd/Briggs Rd & Leon Rd





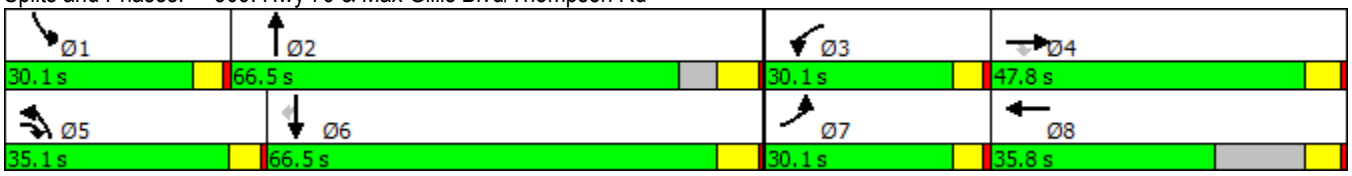
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases			2						
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Minimum Split (s)	9.5	35.9	35.9	9.5	35.9	9.5	35.9	9.5	35.9
Total Split (s)	33.7	50.9	50.9	33.7	50.9	33.7	50.9	33.7	50.9
Total Split (%)	19.9%	30.1%	30.1%	19.9%	30.1%	19.9%	30.1%	19.9%	30.1%
Maximum Green (s)	30.0	45.0	45.0	30.0	45.0	30.0	45.0	30.0	45.0
Yellow Time (s)	3.2	4.7	4.7	3.2	4.7	3.2	4.7	3.2	4.7
All-Red Time (s)	0.5	1.2	1.2	0.5	1.2	0.5	1.2	0.5	1.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	1.5	3.0	1.5	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	Min	None	Min
Walk Time (s)		7.0	7.0		7.0		7.0		7.0
Flash Dont Walk (s)		23.0	23.0		23.0		23.0		23.0
Pedestrian Calls (#/hr)		1	1		0		0		2
90th %ile Green (s)	10.3	45.0	45.0	11.4	46.1	30.0	55.0	5.0	30.0
90th %ile Term Code	Gap	Max	Max	Gap	Hold	Max	Hold	Min	Ped
70th %ile Green (s)	8.8	35.3	35.3	9.6	36.1	27.2	54.2	0.0	23.3
70th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
50th %ile Green (s)	7.3	25.4	25.4	8.0	26.1	21.8	43.8	0.0	18.3
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
30th %ile Green (s)	6.1	17.2	17.2	6.6	17.7	17.3	35.9	0.0	14.9
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap
10th %ile Green (s)	5.0	10.3	10.3	5.3	10.6	13.1	28.2	0.0	11.4
10th %ile Term Code	Min	Gap	Gap	Gap	Hold	Gap	Hold	Skip	Gap

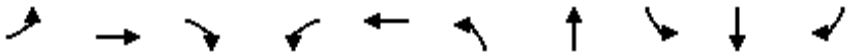
Intersection Summary
Cycle Length: 169.2
Actuated Cycle Length: 95.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 135.6
70th %ile Actuated Cycle: 114.6
50th %ile Actuated Cycle: 92.7
30th %ile Actuated Cycle: 75.2
10th %ile Actuated Cycle: 59.3

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	158	306	562	140	260	460	959	30	1057	159
Future Volume (vph)	158	306	562	140	260	460	959	30	1057	159
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Detector Phase	7	4	5	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.8	5.1	5.1	5.8	5.1	6.5	5.1	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	18.9	31.5	62.7	17.6	30.3	30.5	80.6	7.5	55.1	55.1
Actuated g/C Ratio	0.12	0.20	0.40	0.11	0.19	0.19	0.51	0.05	0.35	0.35
v/c Ratio	0.79	0.87	0.87	0.75	0.83	1.42	0.66	0.38	0.90	0.28
Control Delay	94.6	84.8	50.6	92.8	82.1	247.4	33.1	91.2	59.9	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.6	84.8	50.6	92.8	82.1	247.4	33.1	91.2	59.9	21.6
LOS	F	F	D	F	F	F	C	F	E	C
Approach Delay		67.6			85.7		95.9		55.8	
Approach LOS		E			F		F		E	

Intersection Summary	
Cycle Length: 179.5	
Actuated Cycle Length: 157.6	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 76.3	Intersection LOS: E
Intersection Capacity Utilization 99.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 309: Hwy 79 & Max Gillis Blvd/Thompson Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases			4							6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.1	47.8	10.1	10.1	22.5	10.1	38.5	10.1	47.5	47.5
Total Split (s)	30.1	47.8	35.1	30.1	35.8	35.1	66.5	30.1	66.5	66.5
Total Split (%)	16.8%	26.6%	19.6%	16.8%	19.9%	19.6%	37.0%	16.8%	37.0%	37.0%
Maximum Green (s)	25.0	42.0	30.0	25.0	30.0	30.0	60.0	25.0	60.0	60.0
Yellow Time (s)	4.1	4.8	4.1	4.1	4.8	4.1	5.5	4.1	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0					7.0		5.0	5.0
Flash Dont Walk (s)		35.0					25.0		36.0	36.0
Pedestrian Calls (#/hr)		3					0		0	0
90th %ile Green (s)	25.0	42.0	30.0	25.0	42.0	30.0	79.1	10.9	60.0	60.0
90th %ile Term Code	Max	Max	Max	Max	Hold	Max	Hold	Gap	Max	Max
70th %ile Green (s)	23.3	37.7	30.0	21.4	35.8	30.0	81.2	8.8	60.0	60.0
70th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Gap	Max	Max
50th %ile Green (s)	19.6	32.4	30.0	17.9	30.7	30.0	82.6	7.4	60.0	60.0
50th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Gap	Max	Max
30th %ile Green (s)	16.4	27.6	30.0	14.9	26.1	30.0	77.4	6.1	53.5	53.5
30th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Gap	Gap	Gap
10th %ile Green (s)	11.6	20.4	30.0	10.5	19.3	30.0	77.4	0.0	42.3	42.3
10th %ile Term Code	Gap	Gap	Max	Gap	Hold	Max	Hold	Skip	Gap	Gap

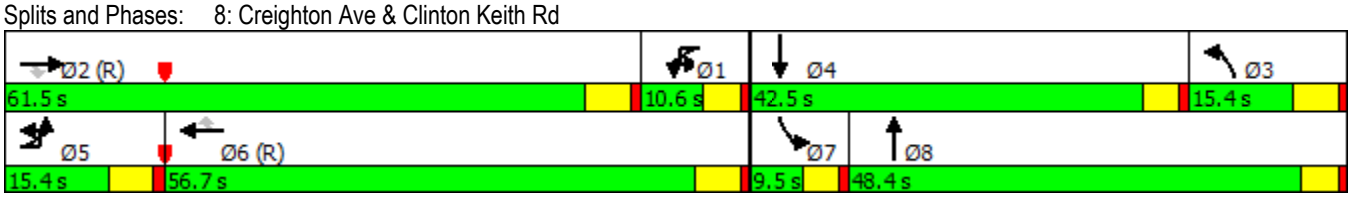
Intersection Summary
Cycle Length: 179.5
Actuated Cycle Length: 157.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 179.5
70th %ile Actuated Cycle: 171.6
50th %ile Actuated Cycle: 162.8
30th %ile Actuated Cycle: 148.5
10th %ile Actuated Cycle: 125.7

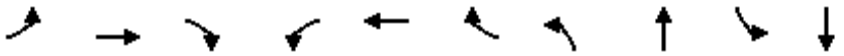
2021 Cumulative PM without Creighton Avenue Access

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	257	2174	84	39	1641	127	55	0	132	0
Future Volume (vph)	257	2174	84	39	1641	127	55	0	132	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	28.4	15.4	46.6	9.5	42.5
Total Split (s)	15.4	61.5	61.5	10.6	56.7	56.7	15.4	48.4	9.5	42.5
Total Split (%)	11.8%	47.3%	47.3%	8.2%	43.6%	43.6%	11.8%	37.2%	7.3%	32.7%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4	5.4	4.6	4.5	4.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	35.2	83.6	83.6	6.0	51.5	51.5	10.3	19.1	8.5	15.4
Actuated g/C Ratio	0.27	0.64	0.64	0.05	0.40	0.40	0.08	0.15	0.07	0.12
v/c Ratio	0.58	0.72	0.09	0.52	0.89	0.19	0.43	0.08	1.23	0.74
Control Delay	53.4	20.0	2.1	62.9	25.3	1.6	67.1	0.4	204.0	23.6
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	20.5	2.1	62.9	25.3	1.6	67.1	0.4	204.0	23.6
LOS	D	C	A	E	C	A	E	A	F	C
Approach Delay		23.2			24.4			46.4		83.9
Approach LOS		C			C			D		F

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 116 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd





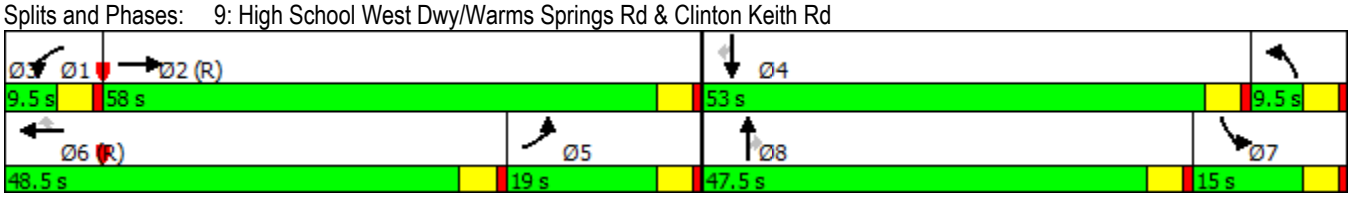
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	28.4	15.4	46.6	9.5	42.5
Total Split (s)	15.4	61.5	61.5	10.6	56.7	56.7	15.4	48.4	9.5	42.5
Total Split (%)	11.8%	47.3%	47.3%	8.2%	43.6%	43.6%	11.8%	37.2%	7.3%	32.7%
Maximum Green (s)	10.0	56.1	56.1	6.0	51.3	51.3	10.0	43.8	5.0	38.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		16.0	16.0		16.0	16.0		35.0		31.0
Pedestrian Calls (#/hr)		17	17		2	2		2		2
90th %ile Green (s)	10.0	56.1	56.1	6.0	51.3	51.3	10.0	43.8	5.0	38.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Max	Hold	Max	Ped
70th %ile Green (s)	31.1	77.2	77.2	6.0	51.3	51.3	11.3	22.7	5.0	15.6
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap
50th %ile Green (s)	35.6	82.9	82.9	6.0	52.5	52.5	10.0	17.0	5.0	11.2
50th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Min	Hold	Max	Gap
30th %ile Green (s)	41.2	87.3	87.3	6.0	51.3	51.3	10.0	0.0	22.2	6.8
30th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Min	Skip	Hold	Gap
10th %ile Green (s)	57.9	114.6	114.6	0.0	51.3	51.3	0.0	0.0	5.5	5.5
10th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Skip	Skip	Hold	Gap

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 116 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Lane Configurations									
Traffic Volume (vph)	567	1680	1281	227	21	348	521		
Future Volume (vph)	567	1680	1281	227	21	348	521		
Turn Type	Prot	NA	NA	Perm	Perm	Prot	Perm		
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Detector Phase	5	2	6	6	8	7	4		
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Act Effct Green (s)	14.5	78.9	59.9	59.9	12.4	25.2	42.1		
Actuated g/C Ratio	0.11	0.61	0.46	0.46	0.10	0.19	0.32		
v/c Ratio	1.65	0.63	0.62	0.30	0.08	0.58	0.44		
Control Delay	334.2	11.2	19.1	2.9	0.5	52.8	2.1		
Queue Delay	0.0	0.5	0.2	0.0	0.0	0.0	0.0		
Total Delay	334.2	11.7	19.2	2.9	0.5	52.8	2.1		
LOS	F	B	B	A	A	D	A		
Approach Delay		91.3	16.8						
Approach LOS		F	B						

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.65	
Intersection Signal Delay: 54.2	Intersection LOS: D
Intersection Capacity Utilization 62.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: High School West Dwy/Warms Springs Rd & Clinton Keith Rd



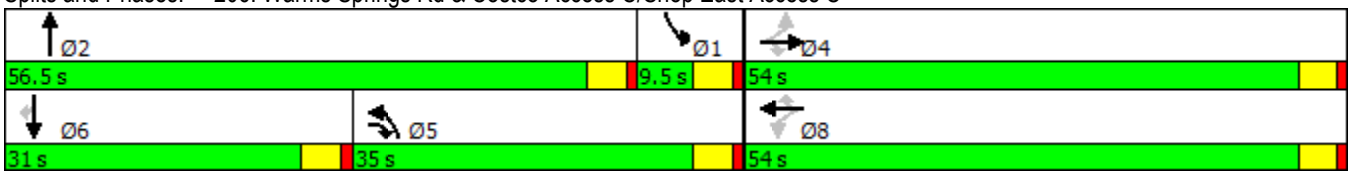
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3
Protected Phases	5	2	6			7		1	3
Permitted Phases				6	8		4		
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	47.5	47.5	9.5	47.5	9.5	9.5
Total Split (s)	19.0	58.0	48.5	48.5	47.5	15.0	53.0	9.5	9.5
Total Split (%)	14.6%	44.6%	37.3%	37.3%	36.5%	11.5%	40.8%	7%	7%
Maximum Green (s)	14.5	53.5	44.0	44.0	43.0	10.5	48.5	5.0	5.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	C-Max	Min	None	Min	None	None
Walk Time (s)		7.0	7.0	7.0	7.0		7.0		
Flash Dont Walk (s)		24.0	31.0	31.0	33.0		30.0		
Pedestrian Calls (#/hr)		2	2	2	2		2		
90th %ile Green (s)	14.5	63.0	44.0	44.0	40.0	13.5	58.0	0.0	0.0
90th %ile Term Code	Max	Coord	Coord	Coord	Ped	Max	Hold	Skip	Skip
70th %ile Green (s)	14.5	87.2	68.2	68.2	5.5	23.8	33.8	0.0	0.0
70th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
50th %ile Green (s)	14.5	86.3	67.3	67.3	5.5	24.7	34.7	0.0	0.0
50th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
30th %ile Green (s)	14.5	83.6	64.6	64.6	5.5	27.4	37.4	0.0	0.0
30th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip
10th %ile Green (s)	14.5	74.5	55.5	55.5	5.5	36.5	46.5	0.0	0.0
10th %ile Term Code	Max	Coord	Coord	Coord	Gap	Gap	Hold	Skip	Skip

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	456	255	376	173	127		
Future Volume (vph)	456	255	376	173	127		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	35.0	54.0	35.0	56.5	31.0	9.5	54.0
Total Split (%)	29.2%	45.0%	29.2%	47.1%	25.8%	8%	45%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lag		Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	39.9	19.7	15.2	30.2	10.1		
Actuated g/C Ratio	0.67	0.33	0.25	0.51	0.17		
v/c Ratio	0.44	0.65	0.51	0.21	0.25		
Control Delay	2.1	25.5	23.4	5.4	25.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	2.1	25.5	23.4	5.4	25.6		
LOS	A	C	C	A	C		
Approach Delay				15.3	25.6		
Approach LOS				B	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 59.8	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 206: Warms Springs Rd & Costco Access C/Shop East Access C



Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	35.0	54.0	35.0	56.5	31.0	9.5	54.0
Total Split (%)	29.2%	45.0%	29.2%	47.1%	25.8%	8%	45%
Maximum Green (s)	30.5	49.5	30.5	52.0	26.5	5.0	49.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag		Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	24.0	37.0	24.0	50.5	22.0	0.0	37.0
90th %ile Term Code	Gap	Ped	Gap	Hold	Ped	Skip	Hold
70th %ile Green (s)	17.1	21.9	17.1	30.8	9.2	0.0	21.9
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	14.0	17.8	14.0	26.6	8.1	0.0	17.8
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	12.2	14.6	12.2	24.0	7.3	0.0	14.6
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	9.1	10.8	9.1	19.9	6.3	0.0	10.8
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold

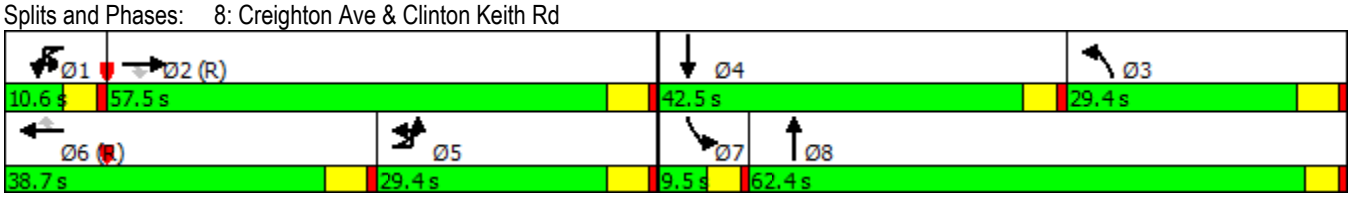
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 59.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 96.5
70th %ile Actuated Cycle: 61.7
50th %ile Actuated Cycle: 53.4
30th %ile Actuated Cycle: 47.6
10th %ile Actuated Cycle: 39.7

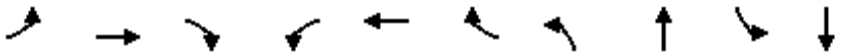
2021 Cumulative Saturday Midday without Creighton Avenue Access

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	285	1779	54	7	1585	139	53	0	133	0
Future Volume (vph)	285	1779	54	7	1585	139	53	0	133	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	29.4	29.4	29.4	10.6	28.4	28.4	29.4	46.6	9.5	42.5
Total Split (s)	29.4	57.5	57.5	10.6	38.7	38.7	29.4	62.4	9.5	42.5
Total Split (%)	21.0%	41.1%	41.1%	7.6%	27.6%	27.6%	21.0%	44.6%	6.8%	30.4%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4	5.4	4.6	4.5	4.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Max	C-Max	None	C-Max	C-Max	Min	Min	None	None
Act Effct Green (s)	24.0	99.4	99.4	6.1	72.2	72.2	11.1	18.9	5.0	12.0
Actuated g/C Ratio	0.17	0.71	0.71	0.04	0.52	0.52	0.08	0.14	0.04	0.09
v/c Ratio	1.05	0.55	0.05	0.11	0.67	0.17	0.42	0.04	2.35	0.40
Control Delay	99.4	6.6	0.1	67.7	28.4	6.7	70.3	0.2	680.3	1.8
Queue Delay	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	99.4	6.8	0.1	67.7	28.6	6.7	70.3	0.2	680.3	1.9
LOS	F	A	A	E	C	A	E	A	F	A
Approach Delay		19.1			27.1			57.6		248.6
Approach LOS		B			C			E		F

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 114 (81%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.35	
Intersection Signal Delay: 42.5	Intersection LOS: D
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	29.4	29.4	29.4	10.6	28.4	28.4	29.4	46.6	9.5	42.5
Total Split (s)	29.4	57.5	57.5	10.6	38.7	38.7	29.4	62.4	9.5	42.5
Total Split (%)	21.0%	41.1%	41.1%	7.6%	27.6%	27.6%	21.0%	44.6%	6.8%	30.4%
Maximum Green (s)	24.0	52.1	52.1	6.0	33.3	33.3	24.0	57.8	5.0	38.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Min	C-Max	C-Max	None	C-Max	C-Max	Min	Min	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		16.0	16.0		16.0	16.0		35.0		31.0
Pedestrian Calls (#/hr)		2	2		2	2		2		2
90th %ile Green (s)	24.0	61.5	61.5	6.7	43.4	43.4	13.9	47.7	5.0	38.0
90th %ile Term Code	Max	Coord	Coord	Gap	Coord	Coord	Gap	Hold	Max	Ped
70th %ile Green (s)	24.0	107.7	107.7	0.0	78.3	78.3	11.5	12.8	5.0	5.5
70th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Gap	Hold	Max	Gap
50th %ile Green (s)	24.0	109.2	109.2	0.0	79.8	79.8	10.0	11.3	5.0	5.5
50th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Min	Hold	Max	Gap
30th %ile Green (s)	24.0	109.2	109.2	0.0	79.8	79.8	10.0	11.3	5.0	5.5
30th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Min	Hold	Max	Gap
10th %ile Green (s)	24.0	109.2	109.2	0.0	79.8	79.8	10.0	11.3	5.0	5.5
10th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Min	Hold	Max	Gap

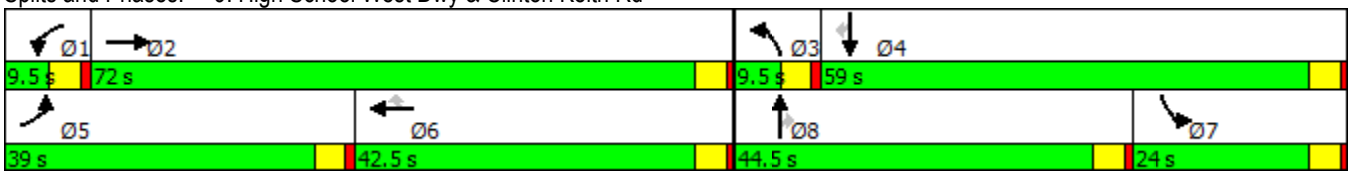
Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 114 (81%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

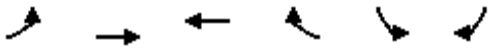
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	849	1045	1009	333	451	696			
Future Volume (vph)	849	1045	1009	333	451	696			
Turn Type	Prot	NA	NA	Perm	Prot	Perm			
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Detector Phase	5	2	6	6	7	4			
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	35.4	76.1	36.2	36.2	20.0	26.6			
Actuated g/C Ratio	0.32	0.68	0.32	0.32	0.18	0.24			
v/c Ratio	0.93	0.36	0.74	0.54	0.87	0.61			
Control Delay	52.4	10.2	38.4	11.1	61.1	2.7			
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0			
Total Delay	52.4	10.2	38.5	11.1	61.1	2.7			
LOS	D	B	D	B	E	A			
Approach Delay		29.1	31.7						
Approach LOS		C	C						

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 112
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 29.0 Intersection LOS: C
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 9: High School West Dwy & Clinton Keith Rd





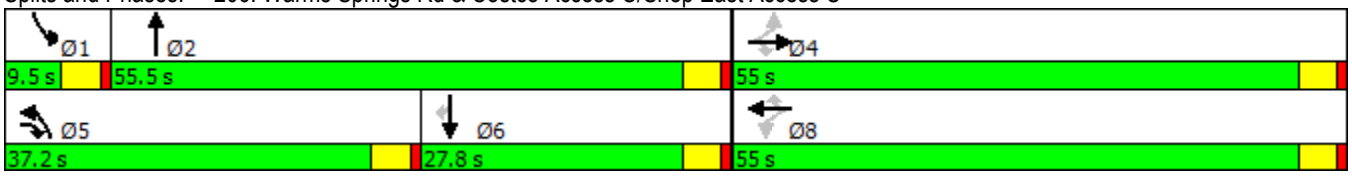
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø8
Protected Phases	5	2	6		7		1	3	8
Permitted Phases				6		4			
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.5	42.5	42.5	9.5	41.5	9.5	9.5	44.5
Total Split (s)	39.0	72.0	42.5	42.5	24.0	59.0	9.5	9.5	44.5
Total Split (%)	26.0%	48.0%	28.3%	28.3%	16.0%	39.3%	6%	6%	30%
Maximum Green (s)	34.5	67.5	38.0	38.0	19.5	54.5	5.0	5.0	40.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0	7.0		7.0			7.0
Flash Dont Walk (s)		24.0	31.0	31.0		30.0			33.0
Pedestrian Calls (#/hr)		3	2	2		2			2
90th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	64.0	0.0	0.0	40.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Ped
70th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	19.5	0.0	0.0	0.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Skip
50th %ile Green (s)	34.5	77.0	38.0	38.0	19.5	19.5	0.0	0.0	0.0
50th %ile Term Code	Max	Hold	Max	Max	Max	Hold	Skip	Skip	Skip
30th %ile Green (s)	34.5	73.4	34.4	34.4	19.5	19.5	0.0	0.0	0.0
30th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip
10th %ile Green (s)	34.5	68.5	29.5	29.5	19.5	19.5	0.0	0.0	0.0
10th %ile Term Code	Max	Hold	Gap	Gap	Max	Hold	Skip	Skip	Skip

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 112
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 105.5
50th %ile Actuated Cycle: 105.5
30th %ile Actuated Cycle: 101.9
10th %ile Actuated Cycle: 97

Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	596	346	555	251	166		
Future Volume (vph)	596	346	555	251	166		
Turn Type	pm+ov	Perm	Prot	NA	NA		
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Detector Phase	5	8	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	37.2	55.0	37.2	55.5	27.8	9.5	55.0
Total Split (%)	31.0%	45.8%	31.0%	46.3%	23.2%	8%	46%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	58.3	29.8	23.6	40.0	11.6		
Actuated g/C Ratio	0.73	0.37	0.30	0.50	0.15		
v/c Ratio	0.57	0.77	0.64	0.31	0.38		
Control Delay	4.6	33.9	29.8	7.9	36.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	4.6	33.9	29.8	7.9	36.4		
LOS	A	C	C	A	D		
Approach Delay				19.8	36.4		
Approach LOS				B	D		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 79.6	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 206: Warms Springs Rd & Costco Access C/Shop East Access C



Lane Group	EBR	WBL	NBL	NBT	SBT	Ø1	Ø4
Protected Phases	5		5	2	6	1	4
Permitted Phases	4	8					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	41.5	9.5	29.5	26.5	9.5	37.5
Total Split (s)	37.2	55.0	37.2	55.5	27.8	9.5	55.0
Total Split (%)	31.0%	45.8%	31.0%	46.3%	23.2%	8%	46%
Maximum Green (s)	32.7	50.5	32.7	51.0	23.3	5.0	50.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		30.0		18.0	15.0		26.0
Pedestrian Calls (#/hr)		2		2	2		2
90th %ile Green (s)	32.7	50.5	32.7	59.2	22.0	0.0	50.5
90th %ile Term Code	Max	Max	Max	Hold	Ped	Skip	Hold
70th %ile Green (s)	28.1	35.6	28.1	44.4	11.8	0.0	35.6
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	23.0	28.5	23.0	37.6	10.1	0.0	28.5
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	18.7	22.5	18.7	31.9	8.7	0.0	22.5
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	14.9	16.1	14.9	26.5	7.1	0.0	16.1
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Skip	Hold

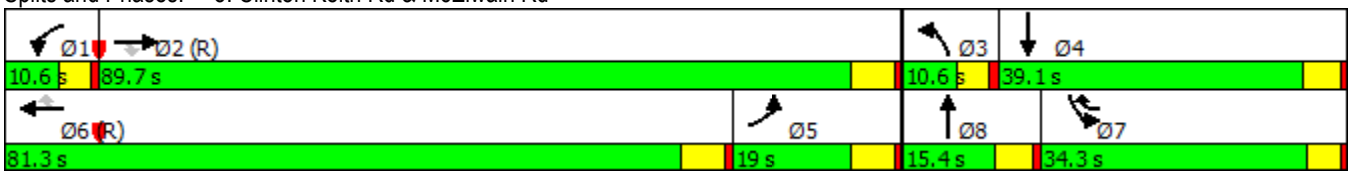
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 79.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 118.7
70th %ile Actuated Cycle: 89
50th %ile Actuated Cycle: 75.1
30th %ile Actuated Cycle: 63.4
10th %ile Actuated Cycle: 51.6

2035 General Plan Buildout PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	376	2561	29	23	3143	321	16	11	435	18
Future Volume (vph)	376	2561	29	23	3143	321	16	11	435	18
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	11.8	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	19.0	89.7	89.7	10.6	81.3	34.3	10.6	15.4	34.3	39.1
Total Split (%)	12.7%	59.8%	59.8%	7.1%	54.2%	22.9%	7.1%	10.3%	22.9%	26.1%
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	13.2	95.5	95.5	6.1	82.9	114.3	6.0	10.1	25.5	30.8
Actuated g/C Ratio	0.09	0.64	0.64	0.04	0.55	0.76	0.04	0.07	0.17	0.21
v/c Ratio	1.37	0.88	0.03	0.36	1.24	0.28	0.25	0.36	0.83	0.83
Control Delay	234.4	29.1	0.1	80.7	139.4	4.2	78.5	31.8	72.5	43.3
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	234.4	29.6	0.1	80.7	139.4	4.2	78.5	31.8	72.5	43.3
LOS	F	C	A	F	F	A	E	C	E	D
Approach Delay		55.3			126.6			43.5		59.2
Approach LOS		E			F			D		E

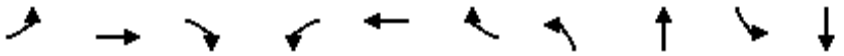
Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 120 (80%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 89.6	Intersection LOS: F
Intersection Capacity Utilization 111.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Clinton Keith Rd & McElwain Rd



Phasings
5: Clinton Keith Rd & McElwain Rd

11/05/2019



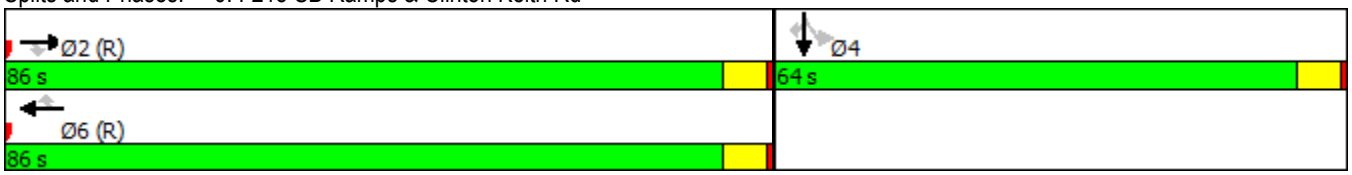
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	11.8	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	19.0	89.7	89.7	10.6	81.3	34.3	10.6	15.4	34.3	39.1
Total Split (%)	12.7%	59.8%	59.8%	7.1%	54.2%	22.9%	7.1%	10.3%	22.9%	26.1%
Maximum Green (s)	13.2	83.9	83.9	6.0	75.5	29.7	6.0	10.3	29.7	34.0
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.2	5.2	2.0	5.2	2.0	3.0	3.0	2.0	3.6
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0
Time Before Reduce (s)	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		15.0	15.0		22.0					27.0
Pedestrian Calls (#/hr)		13	13		0					16
90th %ile Green (s)	13.2	83.9	83.9	6.0	75.5	29.7	6.0	10.3	29.7	34.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Max	Max	Max	Max	Max
70th %ile Green (s)	13.2	83.9	83.9	6.0	75.5	30.0	6.0	10.0	30.0	34.0
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Hold	Max	Min	Hold	Ped
50th %ile Green (s)	13.2	87.9	87.9	6.6	80.1	25.4	6.0	10.0	25.4	29.4
50th %ile Term Code	Max	Coord	Coord	Gap	Coord	Gap	Max	Min	Gap	Hold
30th %ile Green (s)	13.2	101.5	101.5	0.0	82.5	23.0	0.0	10.0	23.0	37.6
30th %ile Term Code	Max	Coord	Coord	Skip	Coord	Gap	Skip	Min	Gap	Hold
10th %ile Green (s)	13.2	120.1	120.1	0.0	101.1	19.5	0.0	0.0	19.5	19.0
10th %ile Term Code	Max	Coord	Coord	Skip	Coord	Gap	Skip	Skip	Gap	Hold

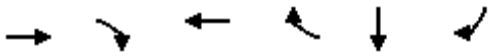
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 120 (80%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2265	784	2361	592	3	1104
Future Volume (vph)	2265	784	2361	592	3	1104
Turn Type	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	86.0	86.0	86.0	86.0	64.0	64.0
Total Split (%)	57.3%	57.3%	57.3%	57.3%	42.7%	42.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	80.2	80.2	80.2	80.2	58.2	58.2
Actuated g/C Ratio	0.53	0.53	0.53	0.53	0.39	0.39
v/c Ratio	0.87	0.98	0.90	0.72	0.68	1.03
Control Delay	19.4	38.3	11.5	9.3	44.4	79.1
Queue Delay	7.2	21.1	11.4	1.4	0.0	31.9
Total Delay	26.6	59.3	22.9	10.6	44.4	111.0
LOS	C	E	C	B	D	F
Approach Delay	35.0		20.4		91.3	
Approach LOS	C		C		F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 134 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 41.0	Intersection LOS: D
Intersection Capacity Utilization 93.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: I-215 SB Ramps & Clinton Keith Rd





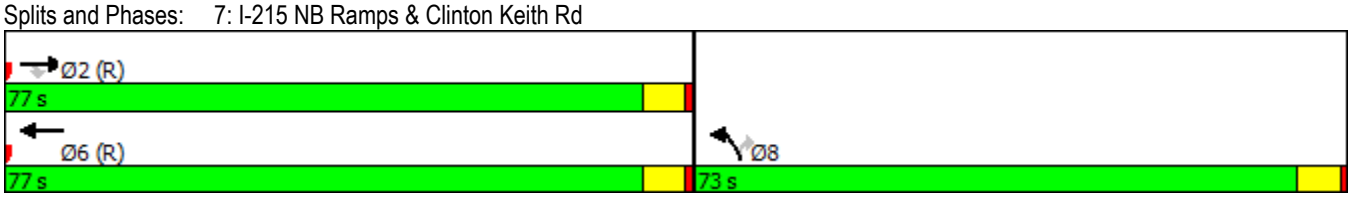
Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Protected Phases	2		6		4	
Permitted Phases		2		6		4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	32.8	32.8	22.5	22.5	22.5	22.5
Total Split (s)	86.0	86.0	86.0	86.0	64.0	64.0
Total Split (%)	57.3%	57.3%	57.3%	57.3%	42.7%	42.7%
Maximum Green (s)	80.2	80.2	80.2	80.2	58.2	58.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0				
Flash Dont Walk (s)	20.0	20.0				
Pedestrian Calls (#/hr)	6	6				
90th %ile Green (s)	80.2	80.2	80.2	80.2	58.2	58.2
90th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	80.2	80.2	80.2	80.2	58.2	58.2
70th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	80.2	80.2	80.2	80.2	58.2	58.2
50th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
30th %ile Green (s)	80.2	80.2	80.2	80.2	58.2	58.2
30th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max
10th %ile Green (s)	80.2	80.2	80.2	80.2	58.2	58.2
10th %ile Term Code	Coord	Coord	Coord	Coord	Max	Max

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 134 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1805	919	2400	552	733
Future Volume (vph)	1805	919	2400	552	733
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	2		6	8	
Permitted Phases		2			8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	77.0	77.0	77.0	73.0	73.0
Total Split (%)	51.3%	51.3%	51.3%	48.7%	48.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	71.4	71.4	71.4	67.0	67.0
Actuated g/C Ratio	0.48	0.48	0.48	0.45	0.45
v/c Ratio	0.80	0.91	1.07	0.93	0.98
Control Delay	24.0	18.9	56.9	57.8	71.5
Queue Delay	0.5	2.4	14.0	0.0	0.0
Total Delay	24.5	21.3	70.9	57.8	71.5
LOS	C	C	E	E	E
Approach Delay	23.4		70.9	64.4	
Approach LOS	C		E	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 128 (85%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 49.4	Intersection LOS: D
Intersection Capacity Utilization 101.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 7: I-215 NB Ramps & Clinton Keith Rd



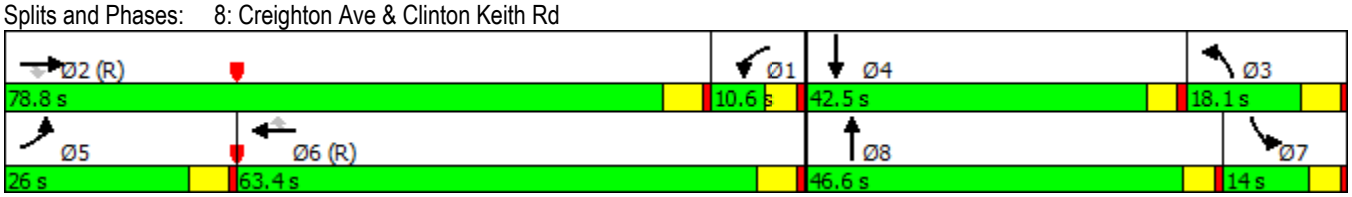
Lane Group	EBT	EBR	WBT	NBL	NBR
Protected Phases	2		6	8	
Permitted Phases		2			8
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	43.8	43.8	10.8	10.8	10.8
Total Split (s)	77.0	77.0	77.0	73.0	73.0
Total Split (%)	51.3%	51.3%	51.3%	48.7%	48.7%
Maximum Green (s)	71.2	71.2	71.2	67.2	67.2
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.5	2.5
Minimum Gap (s)	2.0	2.0	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			
Flash Dont Walk (s)	31.0	31.0			
Pedestrian Calls (#/hr)	20	20			
90th %ile Green (s)	71.2	71.2	71.2	67.2	67.2
90th %ile Term Code	Coord	Coord	Coord	Max	Max
70th %ile Green (s)	71.2	71.2	71.2	67.2	67.2
70th %ile Term Code	Coord	Coord	Coord	Max	Max
50th %ile Green (s)	71.2	71.2	71.2	67.2	67.2
50th %ile Term Code	Coord	Coord	Coord	Max	Max
30th %ile Green (s)	71.2	71.2	71.2	67.2	67.2
30th %ile Term Code	Coord	Coord	Coord	Max	Max
10th %ile Green (s)	72.4	72.4	72.4	66.0	66.0
10th %ile Term Code	Coord	Coord	Coord	Gap	Gap

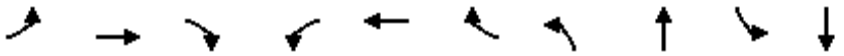
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 128 (85%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	299	2128	111	31	2407	127	66	0	132	0
Future Volume (vph)	299	2128	111	31	2407	127	66	0	132	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	28.4	15.4	46.6	9.5	42.5
Total Split (s)	26.0	78.8	78.8	10.6	63.4	63.4	18.1	46.6	14.0	42.5
Total Split (%)	17.3%	52.5%	52.5%	7.1%	42.3%	42.3%	12.1%	31.1%	9.3%	28.3%
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	4.6	5.4	5.4	5.4	4.6	4.5	4.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	20.6	102.4	102.4	6.0	84.9	84.9	11.4	13.2	15.7	12.5
Actuated g/C Ratio	0.14	0.68	0.68	0.04	0.57	0.57	0.08	0.09	0.10	0.08
v/c Ratio	1.33	0.67	0.12	0.47	0.91	0.15	0.54	0.10	0.77	0.69
Control Delay	214.3	11.3	2.1	71.5	23.2	3.2	82.0	0.8	90.4	12.5
Queue Delay	0.0	0.3	0.0	0.0	12.6	0.0	9.7	0.0	0.0	0.3
Total Delay	214.3	11.6	2.1	71.5	35.7	3.2	91.8	0.8	90.4	12.9
LOS	F	B	A	E	D	A	F	A	F	B
Approach Delay		35.1			34.6			67.2		38.8
Approach LOS		D			C			E		D

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 148 (99%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 100.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: Creighton Ave & Clinton Keith Rd





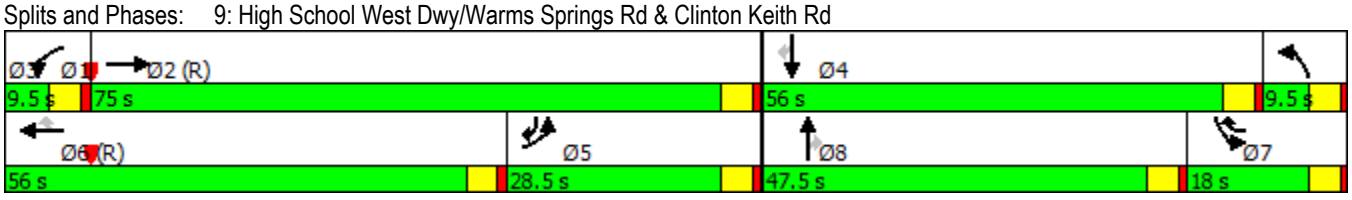
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases			2			6				
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	10.0	10.0	6.0	5.0	5.0
Minimum Split (s)	15.4	28.4	28.4	10.6	28.4	28.4	15.4	46.6	9.5	42.5
Total Split (s)	26.0	78.8	78.8	10.6	63.4	63.4	18.1	46.6	14.0	42.5
Total Split (%)	17.3%	52.5%	52.5%	7.1%	42.3%	42.3%	12.1%	31.1%	9.3%	28.3%
Maximum Green (s)	20.6	73.4	73.4	6.0	58.0	58.0	12.7	42.0	9.5	38.0
Yellow Time (s)	4.4	4.4	4.4	3.6	4.4	4.4	4.4	3.6	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	2.0	4.3	4.3	3.0	2.5	3.0	3.0
Time Before Reduce (s)	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		16.0	16.0		16.0	16.0		35.0		31.0
Pedestrian Calls (#/hr)		17	17		2	2		2		2
90th %ile Green (s)	20.6	73.4	73.4	6.0	58.0	58.0	12.7	42.0	9.5	38.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Max	Ped	Max	Ped
70th %ile Green (s)	20.6	103.6	103.6	6.0	88.2	88.2	12.7	6.0	15.3	7.8
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Max	Min	Hold	Gap
50th %ile Green (s)	20.6	107.1	107.1	6.0	91.7	91.7	11.5	6.0	11.8	5.5
50th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Gap	Min	Hold	Gap
30th %ile Green (s)	20.6	108.6	108.6	6.0	93.2	93.2	10.0	0.0	20.9	5.5
30th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Min	Skip	Hold	Gap
10th %ile Green (s)	20.6	119.2	119.2	0.0	93.2	93.2	10.0	0.0	20.9	5.5
10th %ile Term Code	Max	Coord	Coord	Skip	Coord	Coord	Min	Skip	Hold	Gap

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 148 (99%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3	Ø4
Lane Configurations										
Traffic Volume (vph)	720	1518	1755	427	21	384	810			
Future Volume (vph)	720	1518	1755	427	21	384	810			
Turn Type	Prot	NA	NA	pm+ov	Perm	Prot	pm+ov			
Protected Phases	5	2	6	7		7	5	1	3	4
Permitted Phases				6	8		4			
Detector Phase	5	2	6	7	8	7	5			
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	9.5	47.5	9.5	9.5	9.5	9.5	47.5
Total Split (s)	28.5	75.0	56.0	18.0	47.5	18.0	28.5	9.5	9.5	56.0
Total Split (%)	19.0%	50.0%	37.3%	12.0%	31.7%	12.0%	19.0%	6%	6%	37%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	24.0	97.1	68.6	104.1	12.4	31.0	72.4			
Actuated g/C Ratio	0.16	0.65	0.46	0.69	0.08	0.21	0.48			
v/c Ratio	1.46	0.54	0.85	0.40	0.09	0.60	0.63			
Control Delay	254.2	8.0	22.9	1.1	0.7	58.5	24.1			
Queue Delay	0.0	0.3	11.7	0.3	0.0	0.0	0.0			
Total Delay	254.2	8.2	34.6	1.4	0.7	58.5	24.1			
LOS	F	A	C	A	A	E	C			
Approach Delay		85.6	28.1							
Approach LOS		F	C							

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.46	
Intersection Signal Delay: 52.6	Intersection LOS: D
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: High School West Dwy/Warms Springs Rd & Clinton Keith Rd



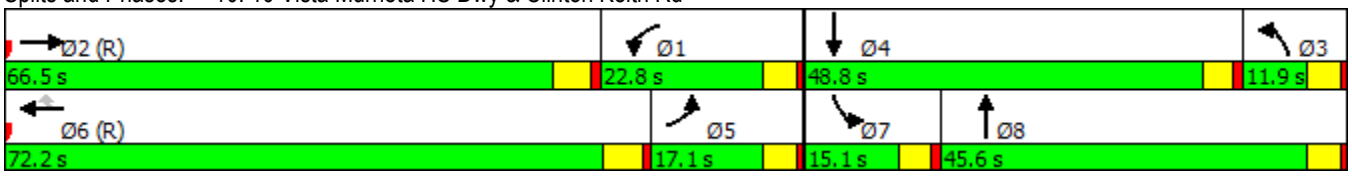
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR	Ø1	Ø3	Ø4
Protected Phases	5	2	6	7		7	5	1	3	4
Permitted Phases				6	8		4			
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	47.5	47.5	9.5	47.5	9.5	9.5	9.5	9.5	47.5
Total Split (s)	28.5	75.0	56.0	18.0	47.5	18.0	28.5	9.5	9.5	56.0
Total Split (%)	19.0%	50.0%	37.3%	12.0%	31.7%	12.0%	19.0%	6%	6%	37%
Maximum Green (s)	24.0	70.5	51.5	13.5	43.0	13.5	24.0	5.0	5.0	51.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0					7.0
Flash Dont Walk (s)		24.0	31.0		33.0					30.0
Pedestrian Calls (#/hr)		2	2		2					2
90th %ile Green (s)	24.0	80.0	51.5	16.5	40.0	16.5	24.0	0.0	0.0	61.0
90th %ile Term Code	Max	Coord	Coord	Max	Ped	Max	Max	Skip	Skip	Hold
70th %ile Green (s)	24.0	101.0	72.5	30.0	5.5	30.0	24.0	0.0	0.0	40.0
70th %ile Term Code	Max	Coord	Coord	Gap	Gap	Gap	Max	Skip	Skip	Hold
50th %ile Green (s)	24.0	100.6	72.1	30.4	5.5	30.4	24.0	0.0	0.0	40.4
50th %ile Term Code	Max	Coord	Coord	Gap	Gap	Gap	Max	Skip	Skip	Hold
30th %ile Green (s)	24.0	107.2	78.7	33.8	0.0	33.8	24.0	0.0	0.0	33.8
30th %ile Term Code	Max	Coord	Coord	Gap	Skip	Gap	Max	Skip	Skip	Hold
10th %ile Green (s)	24.0	96.7	68.2	44.3	0.0	44.3	24.0	0.0	0.0	44.3
10th %ile Term Code	Max	Coord	Coord	Gap	Skip	Gap	Max	Skip	Skip	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	121	1675	176	1958	78	128	0	100	0
Future Volume (vph)	121	1675	176	1958	78	128	0	100	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	5.0
Minimum Split (s)	10.6	38.4	10.6	48.4	48.4	10.6	45.6	10.6	47.5
Total Split (s)	17.1	66.5	22.8	72.2	72.2	11.9	45.6	15.1	48.8
Total Split (%)	11.4%	44.3%	15.2%	48.1%	48.1%	7.9%	30.4%	10.1%	32.5%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.6	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	4.6	4.6	4.5
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	12.5	88.9	18.2	94.6	94.6	12.0	13.2	10.5	11.8
Actuated g/C Ratio	0.08	0.59	0.12	0.63	0.63	0.08	0.09	0.07	0.08
v/c Ratio	0.92	0.68	0.91	0.68	0.08	0.52	0.28	0.90	0.33
Control Delay	103.8	17.3	67.7	10.0	0.0	73.1	2.2	125.7	3.0
Queue Delay	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Delay	103.8	17.4	67.7	10.4	0.0	73.1	2.2	125.7	3.0
LOS	F	B	E	B	A	E	A	F	A
Approach Delay		22.9		14.6			46.9		70.9
Approach LOS		C		B			D		E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 124 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: 10 Vista Murrieta HS Dwy & Clinton Keith Rd



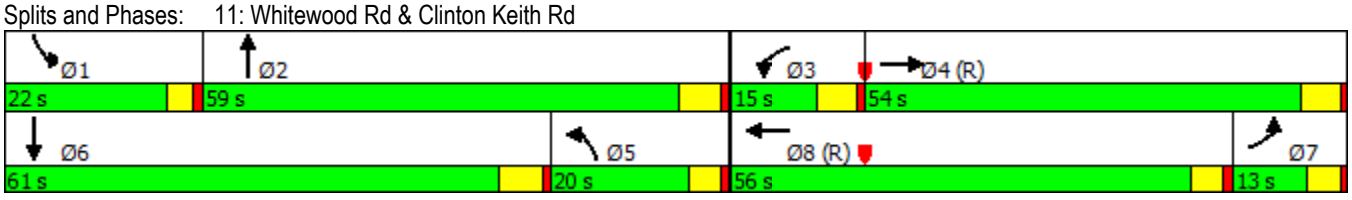
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Minimum Initial (s)	6.0	10.0	6.0	10.0	10.0	6.0	6.0	6.0	5.0
Minimum Split (s)	10.6	38.4	10.6	48.4	48.4	10.6	45.6	10.6	47.5
Total Split (s)	17.1	66.5	22.8	72.2	72.2	11.9	45.6	15.1	48.8
Total Split (%)	11.4%	44.3%	15.2%	48.1%	48.1%	7.9%	30.4%	10.1%	32.5%
Maximum Green (s)	12.5	61.1	18.2	66.8	66.8	7.3	41.0	10.5	44.3
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	3.6	3.6	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.9	2.0	3.9	3.9	2.0	3.0	2.0	3.0
Minimum Gap (s)	2.0	3.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0		15.0	15.0		33.0		30.0
Pedestrian Calls (#/hr)		2		2	2		2		2
90th %ile Green (s)	12.5	61.8	18.2	67.5	67.5	13.9	40.3	10.5	37.0
90th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Max	Ped
70th %ile Green (s)	12.5	94.7	18.2	100.4	100.4	12.5	7.4	10.5	5.5
70th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap
50th %ile Green (s)	12.5	95.7	18.2	101.4	101.4	11.5	6.4	10.5	5.5
50th %ile Term Code	Max	Coord	Max	Coord	Coord	Gap	Hold	Max	Gap
30th %ile Green (s)	12.5	96.1	18.2	101.8	101.8	11.1	6.0	10.5	5.5
30th %ile Term Code	Max	Coord	Max	Coord	Coord	Hold	Min	Max	Gap
10th %ile Green (s)	12.5	96.1	18.2	101.8	101.8	11.1	6.0	10.5	5.5
10th %ile Term Code	Max	Coord	Hold	Coord	Coord	Hold	Min	Max	Gap

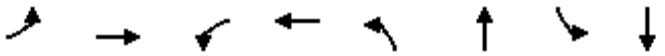
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 124 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	714	1452	314	1198	644	580	767	613
Future Volume (vph)	714	1452	314	1198	644	580	767	613
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	3.0	6.0	6.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	11.4	41.6	10.6	48.8	10.0	48.8
Total Split (s)	13.0	54.0	15.0	56.0	20.0	59.0	22.0	61.0
Total Split (%)	8.7%	36.0%	10.0%	37.3%	13.3%	39.3%	14.7%	40.7%
Yellow Time (s)	3.6	4.4	4.4	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	4.6	4.6	5.8	4.0	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	8.4	48.6	9.6	51.4	15.4	53.2	18.0	55.2
Actuated g/C Ratio	0.06	0.32	0.06	0.34	0.10	0.35	0.12	0.37
v/c Ratio	4.05	1.73	3.00	1.95	3.87	1.98	3.90	1.01
Control Delay	1396.5	359.9	944.0	458.0	1320.1	475.1	1333.1	70.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1396.5	359.9	944.0	458.0	1320.1	475.1	1333.1	70.0
LOS	F	F	F	F	F	F	F	E
Approach Delay		653.9		518.0		775.5		564.3
Approach LOS		F		F		F		F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 136 (91%), Referenced to phase 4:EBT and 8:WBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 4.05	
Intersection Signal Delay: 619.9	Intersection LOS: F
Intersection Capacity Utilization 211.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Whitewood Rd & Clinton Keith Rd





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Minimum Initial (s)	3.0	6.0	6.0	3.0	6.0	10.0	6.0	10.0
Minimum Split (s)	7.6	31.4	11.4	41.6	10.6	48.8	10.0	48.8
Total Split (s)	13.0	54.0	15.0	56.0	20.0	59.0	22.0	61.0
Total Split (%)	8.7%	36.0%	10.0%	37.3%	13.3%	39.3%	14.7%	40.7%
Maximum Green (s)	8.4	48.6	9.6	51.4	15.4	53.2	18.0	55.2
Yellow Time (s)	3.6	4.4	4.4	3.6	3.6	4.8	3.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	0.5	6.9	3.0	0.5	2.0	6.1	2.0	6.1
Minimum Gap (s)	0.5	3.0	3.0	0.5	2.0	3.0	2.0	3.0
Time Before Reduce (s)	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Walk Time (s)		7.0		7.0		7.0		7.0
Flash Dont Walk (s)		19.0		30.0		36.0		36.0
Pedestrian Calls (#/hr)		2		2		2		2
90th %ile Green (s)	8.4	48.6	9.6	51.4	15.4	53.2	18.0	55.2
90th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
70th %ile Green (s)	8.4	48.6	9.6	51.4	15.4	53.2	18.0	55.2
70th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
50th %ile Green (s)	8.4	48.6	9.6	51.4	15.4	53.2	18.0	55.2
50th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
30th %ile Green (s)	8.4	48.6	9.6	51.4	15.4	53.2	18.0	55.2
30th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
10th %ile Green (s)	8.4	48.6	9.6	51.4	15.4	53.2	18.0	55.2
10th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 136 (91%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Control Type: Actuated-Coordinated

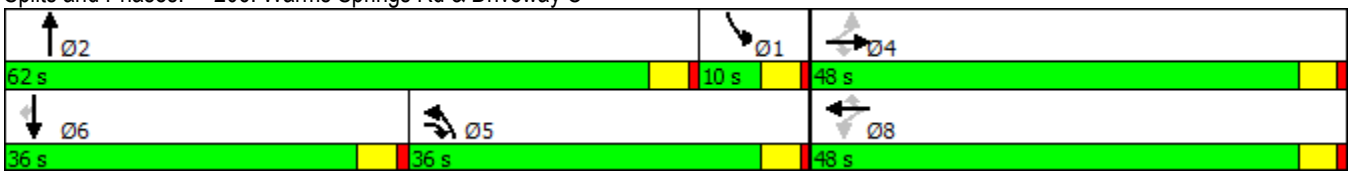
Timings
206: Warms Springs Rd & Driveway C

02/07/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	54	5	380	254	5	7	461	476	13	543	25
Future Volume (vph)	54	5	380	254	5	7	461	476	13	543	25
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases		4	5		8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	4	4	5	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	37.5	37.5	9.5	41.5	41.5	41.5	9.5	29.5	9.5	26.5	26.5
Total Split (s)	48.0	48.0	36.0	48.0	48.0	48.0	36.0	62.0	10.0	36.0	36.0
Total Split (%)	40.0%	40.0%	30.0%	40.0%	40.0%	40.0%	30.0%	51.7%	8.3%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lag				Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Min	None	None	None	Min	None	None	None	None
Act Effct Green (s)		25.1	50.5	25.1	25.1	25.1	20.5	43.4	8.4	21.9	21.9
Actuated g/C Ratio		0.31	0.62	0.31	0.31	0.31	0.25	0.53	0.10	0.27	0.27
v/c Ratio		0.15	0.44	0.72	0.01	0.01	0.62	0.38	0.04	0.66	0.06
Control Delay		24.0	9.2	38.2	23.0	0.0	32.8	15.2	39.3	32.6	0.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.0	9.2	38.2	23.0	0.0	32.8	15.2	39.3	32.6	0.2
LOS		C	A	D	C	A	C	B	D	C	A
Approach Delay		11.2			36.9			22.8		31.4	
Approach LOS		B			D			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82.1	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 63.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 206: Warms Springs Rd & Driveway C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases		4	5		8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	37.5	37.5	9.5	41.5	41.5	41.5	9.5	29.5	9.5	26.5	26.5
Total Split (s)	48.0	48.0	36.0	48.0	48.0	48.0	36.0	62.0	10.0	36.0	36.0
Total Split (%)	40.0%	40.0%	30.0%	40.0%	40.0%	40.0%	30.0%	51.7%	8.3%	30.0%	30.0%
Maximum Green (s)	43.5	43.5	31.5	43.5	43.5	43.5	31.5	57.5	5.5	31.5	31.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag				Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	None	None	None	Min	None	None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0		30.0	30.0	30.0		18.0		15.0	15.0
Pedestrian Calls (#/hr)	2	2		2	2	2		2		2	2
90th %ile Green (s)	42.0	42.0	31.0	42.0	42.0	42.0	31.0	39.3	23.2	31.5	31.5
90th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Max	Max
70th %ile Green (s)	30.7	30.7	24.0	30.7	30.7	30.7	24.0	54.5	0.0	26.0	26.0
70th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Skip	Gap	Gap
50th %ile Green (s)	24.5	24.5	20.4	24.5	24.5	24.5	20.4	47.0	0.0	22.1	22.1
50th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Skip	Gap	Gap
30th %ile Green (s)	19.0	19.0	16.3	19.0	19.0	19.0	16.3	38.4	0.0	17.6	17.6
30th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Skip	Gap	Gap
10th %ile Green (s)	13.2	13.2	11.8	13.2	13.2	13.2	11.8	29.1	0.0	12.8	12.8
10th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Skip	Gap	Gap

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 82.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 118
70th %ile Actuated Cycle: 94.2
50th %ile Actuated Cycle: 80.5
30th %ile Actuated Cycle: 66.4
10th %ile Actuated Cycle: 51.3

Appendix F Queuing Worksheets (Synchro)

Existing PM

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	44	865	365	858	66	49	344	108	70
v/c Ratio	0.27	0.70	0.81	0.42	0.27	0.14	0.61	0.44	0.21
Control Delay	45.0	26.5	48.2	12.9	32.0	29.3	8.4	36.0	30.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	26.5	48.2	12.9	32.0	29.3	8.4	36.0	30.3
Queue Length 50th (ft)	20	176	158	116	28	20	0	47	29
Queue Length 95th (ft)	70	351	#532	294	72	56	67	110	73
Internal Link Dist (ft)		329		1951		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	693	2657	448	2241	640	900	920	638	858
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.33	0.81	0.38	0.10	0.05	0.37	0.17	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1233	455	996	583	404
v/c Ratio	0.93	0.83	0.39	0.81	0.73
Control Delay	52.5	57.9	10.1	36.1	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	57.9	10.1	36.1	13.3
Queue Length 50th (ft)	476	332	120	116	0
Queue Length 95th (ft)	#1025	#797	414	227	120
Internal Link Dist (ft)	1951		3192	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	1324	549	2571	1071	681
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.93	0.83	0.39	0.54	0.59

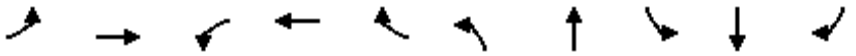
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	75	1813	43	1407	121	40	1	29	135	41
v/c Ratio	0.45	0.81	0.30	0.66	0.13	0.19	0.00	0.10	0.62	0.08
Control Delay	47.3	18.3	45.5	15.6	6.0	34.6	31.0	1.6	47.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	18.3	45.5	15.6	6.0	34.6	31.0	1.6	47.7	0.3
Queue Length 50th (ft)	40	405	23	265	13	19	1	0	70	0
Queue Length 95th (ft)	88	#731	59	442	47	50	5	5	134	0
Internal Link Dist (ft)		3192		1619			285			209
Turn Bay Length (ft)	260		150		150	150		150	150	
Base Capacity (vph)	403	2252	407	2142	962	547	771	695	578	813
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.81	0.11	0.66	0.13	0.07	0.00	0.04	0.23	0.05

Intersection Summary

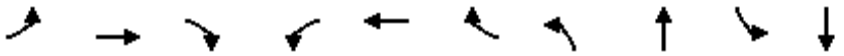
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	14	1907	145	1551	3	23	118	6	1	8
v/c Ratio	0.12	1.00	0.62	0.43	0.00	0.16	0.37	0.03	0.00	0.03
Control Delay	53.0	43.8	54.4	10.4	0.0	50.9	10.5	52.3	37.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	43.8	54.4	10.4	0.0	50.9	10.5	52.3	37.0	0.1
Queue Length 50th (ft)	7	442	75	75	0	12	1	1	1	0
Queue Length 95th (ft)	37	#1424	199	452	0	52	48	10	5	0
Internal Link Dist (ft)		1619		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	391	1913	581	3622	1141	391	710	1329	1051	927
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	1.00	0.25	0.43	0.00	0.06	0.17	0.00	0.00	0.01

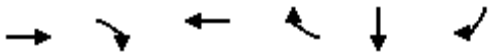
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	387	1671	30	27	1376	241	17	54	391	371
v/c Ratio	0.69	0.63	0.04	0.22	0.73	0.23	0.13	0.20	0.69	0.55
Control Delay	51.7	22.2	0.1	59.2	32.2	4.0	57.9	19.8	51.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.7	22.2	0.1	59.2	32.2	4.0	57.9	19.8	51.7	8.4
Queue Length 50th (ft)	123	304	0	17	283	14	11	7	124	9
Queue Length 95th (ft)	222	471	0	55	424	58	40	47	225	99
Internal Link Dist (ft)		1039			576			119		495
Turn Bay Length (ft)	190		100	175		160	50		235	
Base Capacity (vph)	727	2859	854	378	2667	1093	378	612	720	790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.58	0.04	0.07	0.52	0.22	0.04	0.09	0.54	0.47

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	1523	456	1016	314	257	679
v/c Ratio	0.46	0.45	0.30	0.30	0.65	0.86
Control Delay	9.1	10.5	5.1	5.6	40.9	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	10.5	5.1	5.6	40.9	35.3
Queue Length 50th (ft)	153	124	67	57	140	155
Queue Length 95th (ft)	205	212	79	m79	211	221
Internal Link Dist (ft)	576		676		431	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	3304	1019	3336	1059	475	904
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.45	0.30	0.30	0.54	0.75

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBT	NBR
Lane Group Flow (vph)	1150	663	1069	529	479
v/c Ratio	0.42	0.59	0.39	0.89	0.87
Control Delay	9.1	3.2	13.5	46.2	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	3.2	13.5	46.2	43.6
Queue Length 50th (ft)	82	25	135	284	244
Queue Length 95th (ft)	96	58	169	#473	#425
Internal Link Dist (ft)	676		451	205	
Turn Bay Length (ft)					
Base Capacity (vph)	2752	1128	2709	641	593
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.59	0.39	0.83	0.81

Intersection Summary

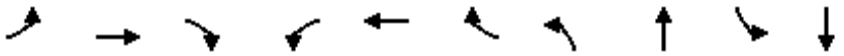
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	9	1668	88	41	1047	58	27
v/c Ratio	0.03	0.54	0.09	0.20	0.47	0.26	0.13
Control Delay	25.6	9.0	2.2	30.1	12.1	29.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	9.0	2.2	30.1	12.1	29.8	13.3
Queue Length 50th (ft)	3	136	0	14	88	19	0
Queue Length 95th (ft)	16	205	17	45	126	56	21
Internal Link Dist (ft)		451			668	529	
Turn Bay Length (ft)	250		250	235		100	
Base Capacity (vph)	734	3976	1202	623	3550	764	686
Starvation Cap Reductn	0	30	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.42	0.07	0.07	0.29	0.08	0.04

Intersection Summary

Lane Group	EBU	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	17	1609	188	936	124	82
v/c Ratio	0.12	0.61	0.60	0.25	0.31	0.32
Control Delay	40.0	14.4	39.3	4.1	36.3	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.0	14.4	39.3	4.1	36.3	13.0
Queue Length 50th (ft)	8	181	82	36	27	0
Queue Length 95th (ft)	30	273	169	96	62	42
Internal Link Dist (ft)		432		1311	438	
Turn Bay Length (ft)	200		315			
Base Capacity (vph)	358	3437	853	4744	1920	931
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.47	0.22	0.20	0.06	0.09

Intersection Summary



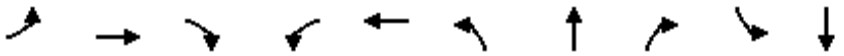
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	513	774	275	121	505	54	211	489	88	636
v/c Ratio	0.83	0.68	0.40	0.43	0.42	0.11	0.75	0.80	0.57	0.62
Control Delay	60.4	39.2	6.0	61.7	41.0	0.4	67.7	46.0	71.9	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	39.2	6.0	61.7	41.0	0.4	67.7	46.0	71.9	26.3
Queue Length 50th (ft)	188	265	3	45	121	0	152	322	64	134
Queue Length 95th (ft)	#359	408	69	95	188	0	#304	539	147	234
Internal Link Dist (ft)		1311			543			266		2522
Turn Bay Length (ft)	250			150		150	300		100	
Base Capacity (vph)	757	1634	871	332	1782	650	389	906	209	1408
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.47	0.32	0.36	0.28	0.08	0.54	0.54	0.42	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	73	76	5	38	745	2	612
v/c Ratio	0.18	0.09	0.03	0.17	0.43	0.01	0.39
Control Delay	20.6	0.2	25.2	27.2	11.6	28.5	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	0.2	25.2	27.2	11.6	28.5	13.4
Queue Length 50th (ft)	13	0	1	8	60	0	46
Queue Length 95th (ft)	65	0	12	45	200	7	168
Internal Link Dist (ft)			441		2522		2550
Turn Bay Length (ft)	130			200		200	
Base Capacity (vph)	1206	1274	946	702	3244	702	3190
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.06	0.01	0.05	0.23	0.00	0.19

Intersection Summary

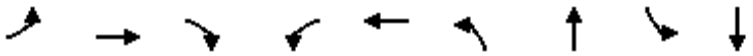


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	17	3	169	8	17	205	551	11	1	460
v/c Ratio	0.09	0.01	0.36	0.04	0.02	0.51	0.52	0.01	0.01	0.48
Control Delay	38.3	24.3	7.1	38.9	20.1	31.8	14.8	0.0	40.0	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	24.3	7.1	38.9	20.1	31.8	14.8	0.0	40.0	23.0
Queue Length 50th (ft)	5	1	0	2	1	54	82	0	0	63
Queue Length 95th (ft)	37	9	50	23	12	232	469	0	7	196
Internal Link Dist (ft)		490			484		2550			5647
Turn Bay Length (ft)	215					215				
Base Capacity (vph)	621	1307	1141	621	2189	614	1603	1347	621	3020
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.00	0.15	0.01	0.01	0.33	0.34	0.01	0.00	0.15

Intersection Summary

Queues
14: 19 Whitewood Rd & Keller Rd

02/15/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	55	16	48	10	20	45	533	12	415
v/c Ratio	0.19	0.03	0.08	0.04	0.02	0.16	0.24	0.04	0.20
Control Delay	32.0	18.3	1.5	35.9	17.2	32.5	12.2	35.6	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	18.3	1.5	35.9	17.2	32.5	12.2	35.6	14.8
Queue Length 50th (ft)	8	2	0	2	1	7	35	2	25
Queue Length 95th (ft)	79	24	7	25	12	68	193	28	155
Internal Link Dist (ft)		944			1048		5647		232
Turn Bay Length (ft)	175			200		225		115	
Base Capacity (vph)	897	1531	1299	897	2672	897	3066	897	3038
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.01	0.04	0.01	0.01	0.05	0.17	0.01	0.14

Intersection Summary

Existing Saturday Midday

Queues
1: Nutmeg St & Clinton Keith Rd

12/07/2018

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	30	660	199	637	66	46	220	69	52
v/c Ratio	0.16	0.58	0.55	0.33	0.25	0.13	0.46	0.27	0.16
Control Delay	36.3	21.7	33.0	11.4	25.5	23.2	7.1	25.8	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	21.7	33.0	11.4	25.5	23.2	7.1	25.8	23.7
Queue Length 50th (ft)	10	92	61	41	20	14	0	21	16
Queue Length 95th (ft)	49	254	198	202	62	46	48	65	51
Internal Link Dist (ft)		329		1947		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	892	3142	612	2885	854	1181	1080	841	1072
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.21	0.33	0.22	0.08	0.04	0.20	0.08	0.05

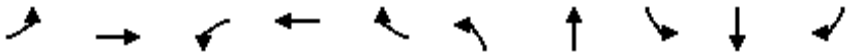
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	825	364	656	352	234
v/c Ratio	0.69	0.62	0.25	0.58	0.60
Control Delay	27.5	30.3	4.0	17.5	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	30.3	4.0	17.5	12.8
Queue Length 50th (ft)	189	158	47	29	0
Queue Length 95th (ft)	311	301	80	81	78
Internal Link Dist (ft)	1947		3193	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	2164	892	3457	1538	767
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.41	0.19	0.23	0.31

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	46	1217	32	991	128	33	32	120	30
v/c Ratio	0.24	0.62	0.18	0.50	0.14	0.13	0.06	0.47	0.05
Control Delay	37.2	13.1	37.6	11.8	4.7	29.4	0.2	35.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	13.1	37.6	11.8	4.7	29.4	0.2	35.0	0.2
Queue Length 50th (ft)	18	190	13	143	9	12	0	46	0
Queue Length 95th (ft)	59	311	46	238	38	42	0	118	0
Internal Link Dist (ft)		3193		1619					209
Turn Bay Length (ft)	260		150		150	150	150	150	
Base Capacity (vph)	560	2718	539	2758	1209	761	1047	796	1019
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.45	0.06	0.36	0.11	0.04	0.03	0.15	0.03

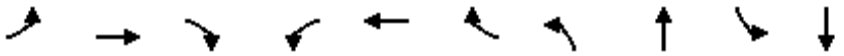
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	15	1307	115	1114	5	21	87	3	1	13
v/c Ratio	0.13	0.67	0.58	0.31	0.00	0.18	0.28	0.02	0.00	0.05
Control Delay	52.9	21.9	55.8	9.9	0.0	53.2	10.4	52.7	37.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	21.9	55.8	9.9	0.0	53.2	10.4	52.7	37.0	0.3
Queue Length 50th (ft)	8	210	58	48	0	11	1	1	1	0
Queue Length 95th (ft)	38	#785	162	297	0	47	42	7	5	0
Internal Link Dist (ft)		1619		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	383	1943	574	3554	1107	365	657	978	1028	845
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.67	0.20	0.31	0.00	0.06	0.13	0.00	0.00	0.02

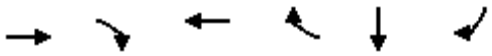
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	291	1088	14	26	941	246	11	29	431	279
v/c Ratio	0.54	0.44	0.02	0.16	0.59	0.26	0.07	0.10	0.60	0.43
Control Delay	38.5	17.7	0.1	45.5	26.7	2.4	45.3	19.2	35.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	17.7	0.1	45.5	26.7	2.4	45.3	19.2	35.5	6.3
Queue Length 50th (ft)	74	128	0	13	156	0	6	3	106	4
Queue Length 95th (ft)	146	271	0	47	262	38	27	29	208	70
Internal Link Dist (ft)		1039			574			119		534
Turn Bay Length (ft)	190		100	175		160	50		235	
Base Capacity (vph)	953	3532	1114	501	3568	1042	501	803	963	883
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.31	0.01	0.05	0.26	0.24	0.02	0.04	0.45	0.32

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	1026	428	769	263	152	529
v/c Ratio	0.27	0.37	0.20	0.23	0.64	0.75
Control Delay	4.7	6.2	2.7	3.3	50.5	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.7	6.2	2.7	3.3	50.5	18.1
Queue Length 50th (ft)	60	76	20	20	88	50
Queue Length 95th (ft)	101	155	48	60	142	103
Internal Link Dist (ft)	574		676		493	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	3752	1161	3789	1155	447	1012
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.37	0.20	0.23	0.34	0.52

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	663	522	795	374	316
v/c Ratio	0.21	0.45	0.26	0.79	0.56
Control Delay	6.9	2.9	8.9	44.7	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.9	8.9	44.7	14.5
Queue Length 50th (ft)	34	4	68	210	59
Queue Length 95th (ft)	78	167	113	278	124
Internal Link Dist (ft)	676		457		
Turn Bay Length (ft)					
Base Capacity (vph)	3122	1150	3066	662	714
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.45	0.26	0.56	0.44

Intersection Summary

Queues
8: Creighton Ave & Clinton Keith Rd

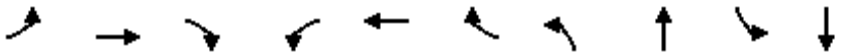
11/01/2019

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	9	953	54	7	789	53	12
v/c Ratio	0.02	0.30	0.05	0.04	0.46	0.21	0.06
Control Delay	18.1	5.5	2.5	21.7	13.6	22.1	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	5.5	2.5	21.7	13.6	22.1	12.3
Queue Length 50th (ft)	2	31	0	2	61	14	0
Queue Length 95th (ft)	13	95	14	12	93	42	12
Internal Link Dist (ft)		457			668	529	
Turn Bay Length (ft)	250		250	235		100	
Base Capacity (vph)	730	4279	1336	665	4195	921	770
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.22	0.04	0.01	0.19	0.06	0.02

Intersection Summary

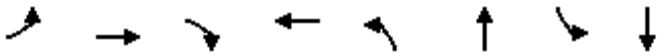
Lane Group	EBU	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1	953	38	717	62	10
v/c Ratio	0.00	0.39	0.13	0.26	0.11	0.04
Control Delay	23.0	7.7	21.7	5.4	19.9	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	7.7	21.7	5.4	19.9	13.8
Queue Length 50th (ft)	0	31	7	22	5	0
Queue Length 95th (ft)	4	95	38	65	26	12
Internal Link Dist (ft)		432		1311	438	
Turn Bay Length (ft)	200		315			
Base Capacity (vph)	683	4813	1532	5085	3148	1434
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.20	0.02	0.14	0.02	0.01

Intersection Summary



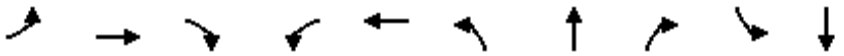
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	304	438	172	114	339	30	116	239	55	444
v/c Ratio	0.66	0.48	0.33	0.31	0.27	0.06	0.51	0.43	0.32	0.49
Control Delay	42.9	29.5	7.2	40.9	28.2	0.2	45.1	23.7	45.2	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	29.5	7.2	40.9	28.2	0.2	45.1	23.7	45.2	18.0
Queue Length 50th (ft)	69	88	0	25	45	0	50	84	24	57
Queue Length 95th (ft)	164	208	56	74	115	0	147	178	84	123
Internal Link Dist (ft)		1311			543			266		2522
Turn Bay Length (ft)	250			150		150	300		100	
Base Capacity (vph)	1115	2409	1093	489	2575	883	575	1294	309	1944
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.18	0.16	0.23	0.13	0.03	0.20	0.18	0.18	0.23

Intersection Summary



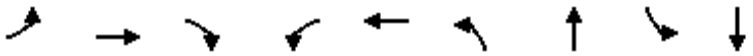
Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	2	82	5	37	359	2	459
v/c Ratio	0.13	0.01	0.17	0.02	0.14	0.19	0.01	0.26
Control Delay	18.4	19.0	7.1	24.8	23.9	10.1	25.0	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	19.0	7.1	24.8	23.9	10.1	25.0	12.5
Queue Length 50th (ft)	9	0	0	1	7	24	0	31
Queue Length 95th (ft)	50	6	32	11	40	92	7	121
Internal Link Dist (ft)		272		441		2522		2550
Turn Bay Length (ft)	130				200		200	
Base Capacity (vph)	1397	1010	1304	1471	843	3352	843	3309
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.00	0.06	0.00	0.04	0.11	0.00	0.14

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	4	3	56	8	15	60	333	5	9	386
v/c Ratio	0.02	0.01	0.11	0.03	0.02	0.22	0.26	0.00	0.03	0.19
Control Delay	32.8	18.7	2.8	32.1	13.3	29.5	12.2	0.0	32.1	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	18.7	2.8	32.1	13.3	29.5	12.2	0.0	32.1	15.1
Queue Length 50th (ft)	1	1	0	2	0	14	43	0	2	41
Queue Length 95th (ft)	14	8	13	21	8	80	258	0	22	146
Internal Link Dist (ft)		490			484		2550			5675
Turn Bay Length (ft)	215					215				
Base Capacity (vph)	859	1596	1269	859	2564	818	1702	1423	859	3227
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.00	0.04	0.01	0.01	0.07	0.20	0.00	0.01	0.12

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	11	18	15	20	27	274	8	348
v/c Ratio	0.08	0.02	0.03	0.05	0.02	0.09	0.10	0.03	0.13
Control Delay	27.9	16.9	0.1	28.5	13.4	27.6	9.0	29.3	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	16.9	0.1	28.5	13.4	27.6	9.0	29.3	9.4
Queue Length 50th (ft)	2	1	0	2	0	3	0	1	0
Queue Length 95th (ft)	41	19	0	31	12	46	92	21	118
Internal Link Dist (ft)		944			1048		5675		232
Turn Bay Length (ft)	175			200		225		115	
Base Capacity (vph)	976	1511	1405	1025	2794	986	3181	1025	3123
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.01	0.01	0.01	0.03	0.09	0.01	0.11

Intersection Summary

2021 Project Completion PM with Creighton Avenue Access

Queues
1: Nutmeg St & Clinton Keith Rd

11/03/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	964	419	977	70	53	395	127	75
v/c Ratio	0.34	0.77	0.82	0.46	0.30	0.16	0.66	0.54	0.24
Control Delay	58.5	34.7	49.3	12.9	41.6	38.2	9.6	48.5	39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.5	34.7	49.3	12.9	41.6	38.2	9.6	48.5	39.5
Queue Length 50th (ft)	28	267	246	158	40	30	0	77	43
Queue Length 95th (ft)	81	#531	#506	332	89	69	82	148	91
Internal Link Dist (ft)		329		1946		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	172	1528	714	2558	529	748	854	528	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.63	0.59	0.38	0.13	0.07	0.46	0.24	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1397	503	1155	628	438
v/c Ratio	0.97	1.03	0.45	0.90dr	0.74
Control Delay	57.1	97.6	10.7	43.5	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	97.6	10.7	43.5	13.4
Queue Length 50th (ft)	602	441	172	152	0
Queue Length 95th (ft)	#1151	#959	478	279	135
Internal Link Dist (ft)	1946		3189	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	1445	490	2569	867	637
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.97	1.03	0.45	0.72	0.69

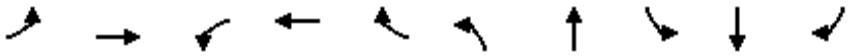
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	2029	62	1610	142	42	1	45	158	43
v/c Ratio	0.65	0.89	0.59	0.74	0.15	0.19	0.00	0.12	0.69	0.12
Control Delay	73.1	23.1	71.8	18.1	5.5	38.5	34.0	0.7	56.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.1	23.1	71.8	18.1	5.5	38.5	34.0	0.7	56.2	0.7
Queue Length 50th (ft)	51	563	40	370	17	24	1	0	98	0
Queue Length 95th (ft)	#130	#913	#107	551	51	55	5	0	167	0
Internal Link Dist (ft)		3189		1617			285			209
Turn Bay Length (ft)	260		150		150	150		150	150	
Base Capacity (vph)	125	2285	105	2165	976	472	667	651	499	629
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.89	0.59	0.74	0.15	0.09	0.00	0.07	0.32	0.07

Intersection Summary

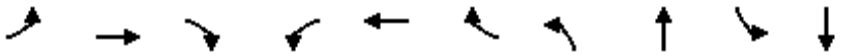
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	15	2157	180	1791	3	24	148	8	1	8
v/c Ratio	0.19	0.95	0.91	0.45	0.00	0.28	0.49	0.05	0.01	0.03
Control Delay	76.4	34.3	105.9	9.3	0.0	77.9	13.7	72.0	56.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.4	34.3	105.9	9.3	0.0	77.9	13.7	72.0	56.0	0.3
Queue Length 50th (ft)	12	697	150	94	0	19	2	3	1	0
Queue Length 95th (ft)	45	#1657	#406	512	0	63	64	14	7	0
Internal Link Dist (ft)		1617		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	78	2272	197	3949	1229	87	569	152	552	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.95	0.91	0.45	0.00	0.28	0.26	0.05	0.00	0.01

Intersection Summary

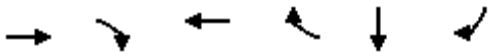
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	410	1934	32	28	1638	283	18	58	439	393
v/c Ratio	0.76	0.63	0.03	0.33	0.72	0.25	0.22	0.34	0.73	0.60
Control Delay	62.8	20.9	0.1	72.9	22.8	1.9	66.2	26.6	57.2	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	20.9	0.1	72.9	22.9	1.9	66.2	26.6	57.2	9.1
Queue Length 50th (ft)	172	408	0	22	261	0	15	10	185	13
Queue Length 95th (ft)	230	542	0	m50	411	55	42	54	225	104
Internal Link Dist (ft)		1039			575			183		450
Turn Bay Length (ft)	190		100	175		160	50		235	
Base Capacity (vph)	538	3049	930	86	2287	1150	83	238	699	691
Starvation Cap Reductn	0	0	0	0	75	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.63	0.03	0.33	0.74	0.25	0.22	0.24	0.63	0.57

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	1790	483	1270	408	411	720
v/c Ratio	0.57	0.50	0.40	0.41	0.79	0.83
Control Delay	8.7	8.8	8.8	9.7	53.2	47.0
Queue Delay	0.1	0.3	0.0	0.0	0.0	0.0
Total Delay	8.8	9.0	8.8	9.7	53.2	47.0
Queue Length 50th (ft)	113	83	108	95	320	295
Queue Length 95th (ft)	126	108	122	124	398	340
Internal Link Dist (ft)	575		676		681	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	3120	959	3151	1000	705	1150
Starvation Cap Reductn	346	112	0	0	0	0
Spillback Cap Reductn	0	0	26	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.57	0.41	0.41	0.58	0.63

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1547	703	1286	597	543
v/c Ratio	0.59	0.63	0.49	0.85	0.89
Control Delay	15.8	3.8	6.2	46.1	52.4
Queue Delay	0.1	0.2	0.1	0.0	0.0
Total Delay	15.9	4.0	6.3	46.1	52.4
Queue Length 50th (ft)	169	6	102	435	427
Queue Length 95th (ft)	244	62	16	544	552
Internal Link Dist (ft)	676		455	205	
Turn Bay Length (ft)					
Base Capacity (vph)	2625	1113	2625	817	708
Starvation Cap Reductn	0	58	262	0	0
Spillback Cap Reductn	185	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.67	0.54	0.73	0.77

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	48	2138	93	43	1517	61	28	43
v/c Ratio	0.35	0.60	0.09	0.52	0.45	0.44	0.07	0.15
Control Delay	53.1	11.0	0.2	68.9	6.3	67.3	0.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	11.0	0.2	68.9	6.3	67.3	0.4	1.1
Queue Length 50th (ft)	40	193	0	38	75	50	0	0
Queue Length 95th (ft)	m62	#746	m1	#87	135	98	0	0
Internal Link Dist (ft)		455			668		529	243
Turn Bay Length (ft)	250		250	235		100		
Base Capacity (vph)	138	3559	1094	83	3407	140	637	576
Starvation Cap Reductn	0	79	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.61	0.09	0.52	0.45	0.44	0.04	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	551	1665	1099	258	24	370	493
v/c Ratio	1.41	0.52	0.45	0.29	0.08	0.59	0.37
Control Delay	230.5	2.4	18.0	1.7	0.5	54.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	230.5	2.4	18.0	1.7	0.5	54.4	0.8
Queue Length 50th (ft)	~321	5	160	0	0	149	0
Queue Length 95th (ft)	#415	8	119	m7	0	#262	0
Internal Link Dist (ft)		668	432				
Turn Bay Length (ft)	205			250		350	350
Base Capacity (vph)	390	3178	2444	903	643	626	1499
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	144	0	0	4	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.41	0.55	0.45	0.29	0.04	0.59	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

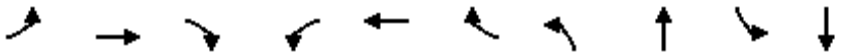
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	29	1881	197	1148	27	132	87	26	18
v/c Ratio	0.34	0.59	0.95	0.31	0.02	0.80	0.25	0.31	0.06
Control Delay	56.4	12.7	107.0	10.0	0.0	93.4	1.7	70.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	12.7	107.0	10.0	0.0	93.4	1.7	70.2	0.4
Queue Length 50th (ft)	25	187	167	118	0	57	0	22	0
Queue Length 95th (ft)	m44	#657	#320	288	0	#112	0	54	0
Internal Link Dist (ft)		432		513			438		99
Turn Bay Length (ft)	200		315		85				
Base Capacity (vph)	88	3177	208	3756	1195	165	677	83	629
Starvation Cap Reductn	0	159	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.62	0.95	0.31	0.02	0.80	0.13	0.31	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



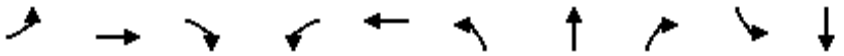
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	599	904	356	129	612	57	282	519	93	723
v/c Ratio	0.67	0.75	0.48	0.51	0.73	0.16	0.85	0.80	0.68	0.73
Control Delay	48.9	43.1	8.7	68.8	57.4	0.9	76.2	48.0	85.8	31.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	43.1	8.7	68.8	57.4	0.9	76.2	48.0	85.8	31.9
Queue Length 50th (ft)	226	352	30	54	186	0	235	393	77	185
Queue Length 95th (ft)	#423	484	120	101	231	0	#477	579	#178	273
Internal Link Dist (ft)		718			543			266		1846
Turn Bay Length (ft)	250			150			300		100	
Base Capacity (vph)	896	1493	839	280	1574	568	332	816	157	1287
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.61	0.42	0.46	0.39	0.10	0.85	0.64	0.59	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

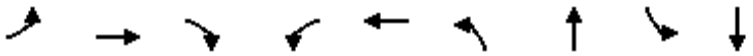
Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	87	5	46	835	2	692
v/c Ratio	0.20	0.13	0.03	0.21	0.44	0.01	0.45
Control Delay	23.4	0.4	27.0	30.1	11.1	30.5	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	0.4	27.0	30.1	11.1	30.5	14.6
Queue Length 50th (ft)	21	0	1	14	70	1	88
Queue Length 95th (ft)	72	0	12	54	225	7	192
Internal Link Dist (ft)			441		593		2550
Turn Bay Length (ft)	130			200		200	
Base Capacity (vph)	1122	1150	261	598	3600	305	3490
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.08	0.02	0.08	0.23	0.01	0.20

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	3	185	8	18	224	624	12	1	524
v/c Ratio	0.10	0.01	0.39	0.04	0.03	0.57	0.58	0.01	0.01	0.51
Control Delay	40.9	27.0	7.5	41.4	22.2	34.0	15.2	0.0	43.0	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	27.0	7.5	41.4	22.2	34.0	15.2	0.0	43.0	23.6
Queue Length 50th (ft)	6	1	0	3	1	66	98	0	0	74
Queue Length 95th (ft)	40	9	55	24	13	255	552	0	7	241
Internal Link Dist (ft)		490			484		2550			297
Turn Bay Length (ft)	215					215				
Base Capacity (vph)	224	1202	1069	194	1972	1034	1759	1471	194	2990
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.00	0.17	0.04	0.01	0.22	0.35	0.01	0.01	0.18

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	58	18	55	12	22	52	593	13	463
v/c Ratio	0.18	0.03	0.09	0.05	0.02	0.19	0.25	0.05	0.22
Control Delay	32.4	19.9	0.3	37.3	18.0	34.0	11.8	37.1	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	19.9	0.3	37.3	18.0	34.0	11.8	37.1	16.0
Queue Length 50th (ft)	12	4	0	3	1	13	40	3	50
Queue Length 95th (ft)	83	26	0	29	13	77	217	29	175
Internal Link Dist (ft)		944			1048		242		232
Turn Bay Length (ft)	175			200		225		115	
Base Capacity (vph)	786	1450	1243	487	2318	786	3292	487	3220
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.04	0.02	0.01	0.07	0.18	0.03	0.14

Intersection Summary

206: Warms Springs Rd & Costco Access C/Shop East Access C

02/05/2020

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	500	253	413	350	140
v/c Ratio	0.39	0.54	0.45	0.21	0.21
Control Delay	1.5	21.8	21.6	5.1	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	1.5	21.8	21.6	5.1	23.7
Queue Length 50th (ft)	1	60	51	13	18
Queue Length 95th (ft)	26	168	147	48	57
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1525	1229	2224	2986	2025
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.21	0.19	0.12	0.07

Intersection Summary

2021 Project Completion Saturday Midday with Creighton Avenue Access

Queues
1: 1 Nutmeg St & Clinton Keith Rd

11/03/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	775	255	767	71	48	281	96	55
v/c Ratio	0.20	0.64	0.64	0.39	0.28	0.14	0.54	0.39	0.17
Control Delay	45.2	24.8	37.7	11.7	32.0	29.2	8.1	34.2	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	24.8	37.7	11.7	32.0	29.2	8.1	34.2	29.7
Queue Length 50th (ft)	13	133	95	95	26	17	0	36	20
Queue Length 95th (ft)	61	342	274	236	82	59	62	106	66
Internal Link Dist (ft)		329		1941		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	189	2340	855	3114	778	1079	1031	767	979
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.33	0.30	0.25	0.09	0.04	0.27	0.13	0.06

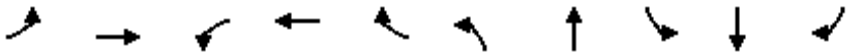
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1013	414	826	389	263
v/c Ratio	0.74	0.69	0.30	0.67	0.67
Control Delay	31.1	38.5	3.8	22.2	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	38.5	3.8	22.2	15.1
Queue Length 50th (ft)	297	239	67	42	0
Queue Length 95th (ft)	445	412	108	102	92
Internal Link Dist (ft)	1941		3191	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	1857	772	3290	1087	596
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.54	0.25	0.36	0.44

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	49	1459	55	1210	156	35	57	149	32
v/c Ratio	0.45	0.60	0.47	0.48	0.14	0.18	0.16	0.73	0.09
Control Delay	76.1	14.2	51.9	4.0	0.5	52.3	0.9	77.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	14.2	51.9	4.0	0.5	52.3	0.9	77.4	0.5
Queue Length 50th (ft)	44	365	46	53	0	28	0	132	0
Queue Length 95th (ft)	86	512	95	45	0	59	0	198	0
Internal Link Dist (ft)		3191		1618					209
Turn Bay Length (ft)	260		150		150	150	150	150	
Base Capacity (vph)	127	2434	128	2501	1109	350	529	367	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.60	0.43	0.48	0.14	0.10	0.11	0.41	0.06

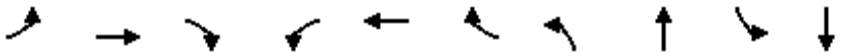
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	16	1597	156	1378	5	22	130	4	1	14
v/c Ratio	0.21	0.68	0.96	0.36	0.00	0.26	0.45	0.04	0.01	0.05
Control Delay	58.4	14.1	112.0	1.6	0.0	72.1	12.4	65.0	47.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.4	14.1	112.0	1.6	0.0	72.1	12.4	65.0	47.0	0.4
Queue Length 50th (ft)	15	207	150	9	0	19	3	2	1	0
Queue Length 95th (ft)	m26	#950	#297	70	m0	51	52	8	5	0
Internal Link Dist (ft)		1618		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	77	2341	162	3881	1212	84	532	112	542	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.68	0.96	0.36	0.00	0.26	0.24	0.04	0.00	0.03

Intersection Summary

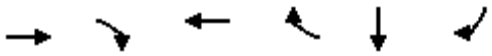
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	308	1400	15	27	1226	296	12	30	494	296
v/c Ratio	0.56	0.43	0.01	0.30	0.48	0.26	0.15	0.21	0.82	0.54
Control Delay	37.6	3.8	0.0	62.7	24.6	1.3	68.6	30.6	66.7	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	3.8	0.0	62.7	24.6	1.3	68.6	30.6	66.7	9.8
Queue Length 50th (ft)	137	161	0	25	317	7	11	5	226	9
Queue Length 95th (ft)	157	32	m0	m51	350	14	33	39	274	90
Internal Link Dist (ft)		1039			570			119		671
Turn Bay Length (ft)	190		100	175		160	50		235	
Base Capacity (vph)	549	3220	1039	100	2533	1185	82	175	802	640
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.43	0.01	0.27	0.48	0.25	0.15	0.17	0.62	0.46

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	1360	454	1067	378	373	561
v/c Ratio	0.49	0.53	0.38	0.44	0.77	0.65
Control Delay	8.2	10.4	9.8	11.9	33.4	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	10.4	9.8	11.9	33.4	21.1
Queue Length 50th (ft)	135	125	155	195	144	97
Queue Length 95th (ft)	138	157	146	161	214	135
Internal Link Dist (ft)	570		676		584	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	2782	861	2810	856	612	1069
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.53	0.38	0.44	0.61	0.52

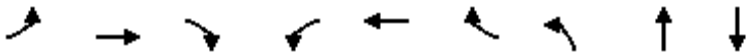
Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1193	554	1079	441	399
v/c Ratio	0.38	0.48	0.34	0.83	0.83
Control Delay	17.0	7.7	7.3	58.2	56.4
Queue Delay	0.0	0.3	0.0	0.0	0.0
Total Delay	17.0	8.0	7.3	58.2	56.4
Queue Length 50th (ft)	243	121	203	373	331
Queue Length 95th (ft)	252	124	7	443	413
Internal Link Dist (ft)	676		453	205	
Turn Bay Length (ft)					
Base Capacity (vph)	3147	1166	3147	790	694
Starvation Cap Reductn	0	176	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.56	0.34	0.56	0.57

Intersection Summary

Queues
8: 8 Creighton Ave & Clinton Keith Rd

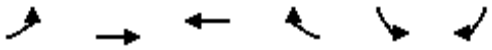
11/03/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	68	1574	57	7	1361	1	56	13	56
v/c Ratio	0.46	0.43	0.05	0.10	0.43	0.00	0.40	0.03	0.10
Control Delay	80.5	5.6	0.1	67.4	17.4	0.0	69.8	0.1	0.3
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.5	5.7	0.1	67.4	17.4	0.0	69.8	0.1	0.3
Queue Length 50th (ft)	63	57	0	6	193	0	50	0	0
Queue Length 95th (ft)	m112	228	m0	23	439	0	94	0	0
Internal Link Dist (ft)		453			668			529	243
Turn Bay Length (ft)	250		250	235		150	100		
Base Capacity (vph)	309	3687	1177	70	3152	1065	306	735	793
Starvation Cap Reductn	0	723	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.53	0.05	0.10	0.43	0.00	0.18	0.02	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



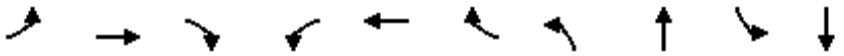
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	866	930	827	401	513	693
v/c Ratio	0.70	0.28	0.65	0.58	0.73	0.46
Control Delay	34.8	9.9	38.0	7.3	47.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	9.9	38.0	7.3	47.3	1.0
Queue Length 50th (ft)	210	65	154	0	142	0
Queue Length 95th (ft)	#535	205	286	50	#366	0
Internal Link Dist (ft)		668	432			
Turn Bay Length (ft)	350			250	350	350
Base Capacity (vph)	1237	3579	1978	863	699	2072
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.26	0.42	0.46	0.73	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

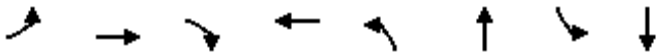
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	1243	39	1004	42	66	11	34	25
v/c Ratio	0.12	0.42	0.20	0.31	0.04	0.15	0.03	0.13	0.04
Control Delay	39.3	14.7	39.3	12.6	0.1	34.3	0.1	34.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	14.7	39.3	12.6	0.1	34.3	0.1	34.9	0.1
Queue Length 50th (ft)	7	89	13	34	0	10	0	11	0
Queue Length 95th (ft)	42	332	62	255	0	44	0	56	0
Internal Link Dist (ft)		432		463			438		85
Turn Bay Length (ft)	200		315		85				
Base Capacity (vph)	194	3316	201	3439	1102	2507	1498	275	1246
Starvation Cap Reductn	0	1	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.37	0.19	0.29	0.04	0.03	0.01	0.12	0.02

Intersection Summary



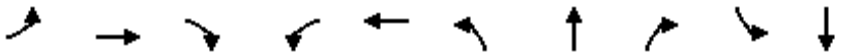
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	392	572	265	121	474	32	211	252	58	543
v/c Ratio	0.45	0.58	0.43	0.36	0.70	0.10	0.68	0.39	0.39	0.60
Control Delay	35.5	35.0	6.7	50.0	48.3	0.6	51.9	24.0	57.6	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	35.0	6.7	50.0	48.3	0.6	51.9	24.0	57.6	22.0
Queue Length 50th (ft)	96	146	0	34	95	0	114	101	32	83
Queue Length 95th (ft)	218	306	70	89	194	0	265	198	100	173
Internal Link Dist (ft)		768			543			266		2522
Turn Bay Length (ft)	250			150		150	300		100	
Base Capacity (vph)	1057	1452	783	446	1252	490	616	1375	198	1861
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.39	0.34	0.27	0.38	0.07	0.34	0.18	0.29	0.29

Intersection Summary



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	2	96	5	48	443	2	553
v/c Ratio	0.14	0.01	0.18	0.02	0.19	0.22	0.01	0.30
Control Delay	19.3	20.0	2.3	25.6	25.7	9.9	26.0	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	20.0	2.3	25.6	25.7	9.9	26.0	12.1
Queue Length 50th (ft)	10	0	0	1	9	30	0	38
Queue Length 95th (ft)	54	6	13	12	51	112	7	141
Internal Link Dist (ft)		272		441		2522		2550
Turn Bay Length (ft)	130				200		200	
Base Capacity (vph)	1061	767	1039	273	275	2143	266	2176
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.00	0.09	0.02	0.17	0.21	0.01	0.25

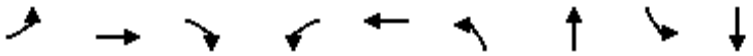
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	4	3	69	8	15	72	408	5	9	466
v/c Ratio	0.02	0.01	0.14	0.03	0.02	0.29	0.32	0.00	0.04	0.27
Control Delay	31.8	17.7	0.7	31.4	12.7	32.5	13.1	0.0	31.2	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	17.7	0.7	31.4	12.7	32.5	13.1	0.0	31.2	15.2
Queue Length 50th (ft)	1	1	0	2	0	17	55	0	2	51
Queue Length 95th (ft)	14	8	2	20	8	#113	327	0	22	165
Internal Link Dist (ft)		490			484		2550			5651
Turn Bay Length (ft)	215					215				
Base Capacity (vph)	248	1471	1187	248	2366	252	1396	1194	248	2627
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.00	0.06	0.03	0.01	0.29	0.29	0.00	0.04	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	13	25	19	22	35	329	8	407
v/c Ratio	0.09	0.02	0.04	0.06	0.02	0.12	0.12	0.03	0.16
Control Delay	30.4	18.2	0.1	30.4	14.4	29.5	8.5	31.0	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	18.2	0.1	30.4	14.4	29.5	8.5	31.0	10.4
Queue Length 50th (ft)	2	1	0	2	0	3	0	1	0
Queue Length 95th (ft)	43	20	0	36	12	54	108	20	133
Internal Link Dist (ft)		944			1048		5651		232
Turn Bay Length (ft)	175			200		225		115	
Base Capacity (vph)	286	1382	1300	301	2587	309	3028	301	2972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.01	0.02	0.06	0.01	0.11	0.11	0.03	0.14

Intersection Summary

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	652	342	591	528	184
v/c Ratio	0.54	0.72	0.58	0.29	0.33
Control Delay	4.2	31.6	25.3	5.6	31.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	31.6	25.3	5.6	31.7
Queue Length 50th (ft)	38	117	100	27	35
Queue Length 95th (ft)	126	279	223	70	86
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1247	1007	1989	2733	1230
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.34	0.30	0.19	0.15

Intersection Summary

2021 Project Completion PM without Creighton Avenue Access

Queues
8: Creighton Ave & Clinton Keith Rd

11/03/2019

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	9	2177	93	43	1560	89
v/c Ratio	0.07	0.58	0.08	0.30	0.38	0.52
Control Delay	63.5	5.9	0.5	53.1	1.6	57.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.5	6.0	0.5	53.1	1.6	57.4
Queue Length 50th (ft)	7	159	0	37	22	61
Queue Length 95th (ft)	m12	210	m2	79	63	114
Internal Link Dist (ft)		455			668	529
Turn Bay Length (ft)	250		250	235		100
Base Capacity (vph)	138	3731	1127	158	4115	232
Starvation Cap Reductn	0	119	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.60	0.08	0.27	0.38	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	591	1665	1099	258	24	370	535
v/c Ratio	1.52	0.52	0.45	0.29	0.08	0.59	0.40
Control Delay	275.6	4.6	17.9	1.7	0.5	54.4	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	275.6	4.6	17.9	1.7	0.5	54.4	1.2
Queue Length 50th (ft)	~359	9	209	0	0	149	0
Queue Length 95th (ft)	#464	236	117	m7	0	#262	0
Internal Link Dist (ft)		668	432				
Turn Bay Length (ft)	205			250		350	350
Base Capacity (vph)	390	3178	2444	903	643	626	1499
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	161	0	0	5	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.52	0.55	0.45	0.29	0.04	0.59	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
206: Warms Springs Rd & Costco Access C/Shop East Access C

02/05/2020

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	536	253	442	363	149
v/c Ratio	0.45	0.58	0.50	0.20	0.24
Control Delay	2.2	23.8	22.4	5.1	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	2.2	23.8	22.4	5.1	24.5
Queue Length 50th (ft)	6	62	56	14	20
Queue Length 95th (ft)	39	174	157	50	62
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1529	1187	2204	3006	1797
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.21	0.20	0.12	0.08

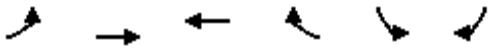
Intersection Summary

2021 Project Completion Saturday Midday without Creighton Avenue Access

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	9	1633	57	7	1417	69
v/c Ratio	0.11	0.39	0.04	0.10	0.34	0.47
Control Delay	65.2	2.2	0.4	67.4	3.7	64.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	2.2	0.4	67.4	3.7	64.1
Queue Length 50th (ft)	8	55	0	6	75	54
Queue Length 95th (ft)	m21	117	m4	23	179	103
Internal Link Dist (ft)		453			668	529
Turn Bay Length (ft)	250		250	235		100
Base Capacity (vph)	96	4198	1311	108	4191	361
Starvation Cap Reductn	0	617	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.46	0.04	0.06	0.34	0.19

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	933	930	827	401	513	757
v/c Ratio	0.75	0.28	0.65	0.58	0.73	0.50
Control Delay	36.2	9.9	38.0	7.3	47.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	9.9	38.0	7.3	47.3	1.2
Queue Length 50th (ft)	232	65	154	0	142	0
Queue Length 95th (ft)	#602	205	286	50	#366	0
Internal Link Dist (ft)		668	432			
Turn Bay Length (ft)	350			250	350	350
Base Capacity (vph)	1237	3579	1978	863	699	2072
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.26	0.42	0.46	0.73	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	701	342	636	548	195
v/c Ratio	0.58	0.73	0.59	0.29	0.36
Control Delay	5.0	33.3	25.6	6.0	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	33.3	25.6	6.0	33.5
Queue Length 50th (ft)	52	122	112	31	39
Queue Length 95th (ft)	163	293	244	78	96
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1252	935	2042	2742	1166
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.37	0.31	0.20	0.17

Intersection Summary

2021 Cumulative PM with Creighton Avenue Access

Queues
1: Nutmeg St & Clinton Keith Rd

11/03/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	51	1066	457	1072	79	53	436	143	79
v/c Ratio	0.41	0.83	0.85	0.49	0.34	0.16	0.69	0.62	0.26
Control Delay	64.2	39.4	53.4	13.4	45.1	40.5	10.0	55.1	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	39.4	53.4	13.4	45.1	40.5	10.0	55.1	42.2
Queue Length 50th (ft)	36	357	304	193	53	34	0	100	52
Queue Length 95th (ft)	88	#608	#602	380	98	69	86	166	95
Internal Link Dist (ft)		329		1946		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	157	1396	594	2280	459	651	822	460	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.76	0.77	0.47	0.17	0.08	0.53	0.31	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1546	529	1281	649	455
v/c Ratio	1.04	1.15	0.50	0.91dr	0.74
Control Delay	74.9	136.2	11.9	43.6	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	74.9	136.2	11.9	43.6	13.0
Queue Length 50th (ft)	~763	~542	219	162	0
Queue Length 95th (ft)	#1311	#1047	557	294	137
Internal Link Dist (ft)	1946		3189	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	1482	460	2545	864	649
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.04	1.15	0.50	0.75	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	2213	98	1770	174	42	1	86	179	43
v/c Ratio	0.75	1.03	0.88	0.82	0.18	0.18	0.00	0.22	0.72	0.11
Control Delay	88.4	47.8	109.7	21.4	6.1	37.5	33.0	3.2	57.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	47.8	109.7	21.4	6.1	37.5	33.0	3.2	57.1	0.6
Queue Length 50th (ft)	53	~827	66	452	24	24	1	0	113	0
Queue Length 95th (ft)	#145	#1099	#179	678	64	55	5	15	188	0
Internal Link Dist (ft)		3189		1617			285			209
Turn Bay Length (ft)	260		150		150	150		150	150	
Base Capacity (vph)	106	2159	111	2154	974	466	658	644	493	617
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	1.03	0.88	0.82	0.18	0.09	0.00	0.13	0.36	0.07

Intersection Summary

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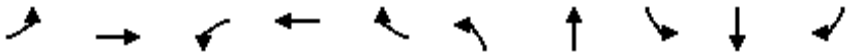
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

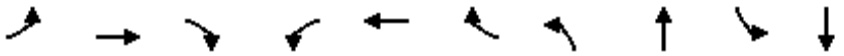


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	94	2321	237	1952	106	24	208	103	5	72
v/c Ratio	0.67	1.14	1.16	0.61	0.10	0.20	0.72	0.39	0.02	0.28
Control Delay	91.3	98.2	167.7	20.2	5.8	73.6	29.9	70.6	59.2	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.3	98.2	167.7	20.2	5.8	73.6	29.9	70.6	59.2	12.9
Queue Length 50th (ft)	89	~1338	~263	382	10	21	35	50	5	0
Queue Length 95th (ft)	170	#1880	#533	673	51	63	131	85	18	41
Internal Link Dist (ft)		1617		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	196	2044	205	3202	1010	122	519	283	508	481
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	1.14	1.16	0.61	0.10	0.20	0.40	0.36	0.01	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

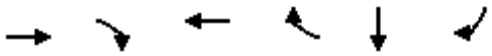
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	482	2177	32	28	1880	410	18	60	602	501
v/c Ratio	0.90	0.76	0.04	0.33	0.89	0.35	0.22	0.35	0.83	0.72
Control Delay	74.1	26.2	0.1	71.3	39.7	4.9	66.2	27.4	59.6	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.1	26.2	0.1	71.3	39.8	4.9	66.2	27.4	59.6	17.2
Queue Length 50th (ft)	208	573	0	23	414	37	15	11	248	83
Queue Length 95th (ft)	#303	656	0	m38	#678	97	42	56	315	237
Internal Link Dist (ft)		1039			575			183		450
Turn Bay Length (ft)	190		100	175		160	50		235	
Base Capacity (vph)	538	2869	883	86	2107	1167	83	238	732	719
Starvation Cap Reductn	0	0	0	0	5	0	0	0	0	0
Spillback Cap Reductn	0	11	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.76	0.04	0.33	0.89	0.35	0.22	0.25	0.82	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	2026	600	1569	549	589	807
v/c Ratio	0.74	0.71	0.56	0.64	0.90	0.77
Control Delay	15.0	16.5	11.6	14.9	57.2	40.4
Queue Delay	0.4	0.8	0.0	0.0	0.0	0.0
Total Delay	15.4	17.3	11.6	14.9	57.2	40.4
Queue Length 50th (ft)	308	226	173	183	452	317
Queue Length 95th (ft)	322	369	232	m347	#641	396
Internal Link Dist (ft)	575		676		681	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	2752	847	2778	864	705	1127
Starvation Cap Reductn	270	71	0	0	0	0
Spillback Cap Reductn	0	0	138	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.77	0.59	0.64	0.84	0.72

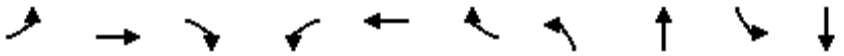
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1952	758	1660	710	639
v/c Ratio	0.81	0.74	0.69	0.91	0.95
Control Delay	23.2	7.4	6.3	50.1	58.3
Queue Delay	0.7	0.3	0.2	3.7	7.3
Total Delay	23.9	7.7	6.5	53.7	65.6
Queue Length 50th (ft)	287	36	64	526	512
Queue Length 95th (ft)	397	130	78	#769	#774
Internal Link Dist (ft)	676		455	205	
Turn Bay Length (ft)					
Base Capacity (vph)	2396	1019	2396	815	704
Starvation Cap Reductn	15	41	170	0	0
Spillback Cap Reductn	163	0	0	54	47
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.87	0.78	0.75	0.93	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	321	2349	92	43	1762	140	60	27	145	289
v/c Ratio	0.65	0.71	0.09	0.52	0.87	0.19	0.43	0.08	1.23	0.74
Control Delay	54.7	19.8	2.1	62.4	23.9	1.6	67.1	0.4	204.0	23.6
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	20.3	2.1	62.4	23.9	1.6	67.1	0.4	204.0	23.6
Queue Length 50th (ft)	257	370	0	37	504	3	49	0	~193	51
Queue Length 95th (ft)	m#564	#874	m5	m59	206	9	96	0	#331	118
Internal Link Dist (ft)		455			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	491	3303	1008	83	2026	722	139	622	118	632
Starvation Cap Reductn	0	457	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	34	0	0	0	0	0	3	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.83	0.09	0.52	0.87	0.19	0.43	0.04	1.23	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	603	1966	1456	258	24	395	550
v/c Ratio	1.55	0.63	0.62	0.30	0.08	0.58	0.41
Control Delay	290.0	11.4	19.1	2.9	0.5	52.8	1.4
Queue Delay	0.0	0.5	0.2	0.0	0.0	0.0	0.0
Total Delay	290.0	11.9	19.2	2.9	0.5	52.8	1.4
Queue Length 50th (ft)	~378	365	212	2	0	158	0
Queue Length 95th (ft)	m#473	m533	197	45	0	#286	6
Internal Link Dist (ft)		668	432				
Turn Bay Length (ft)	205			250		350	350
Base Capacity (vph)	390	3104	2367	864	643	678	1492
Starvation Cap Reductn	0	599	230	0	0	0	0
Spillback Cap Reductn	0	272	0	0	8	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.55	0.78	0.68	0.30	0.04	0.58	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

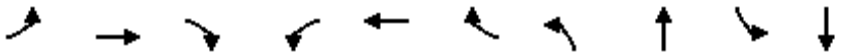
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	119	2244	206	1485	89	138	91	114	92
v/c Ratio	1.35	0.77	0.99	0.45	0.08	0.52	0.27	1.37	0.33
Control Delay	249.2	13.4	117.2	14.8	1.4	64.4	1.9	271.6	4.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	249.2	13.5	117.2	14.8	1.4	64.4	1.9	271.6	4.2
Queue Length 50th (ft)	~135	149	176	186	0	58	0	~127	0
Queue Length 95th (ft)	#258	#895	#325	404	11	89	0	#244	7
Internal Link Dist (ft)		432		513			438		99
Turn Bay Length (ft)	200		315		85				
Base Capacity (vph)	88	2904	208	3299	1073	267	645	83	629
Starvation Cap Reductn	0	80	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	5	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.35	0.79	0.99	0.45	0.08	0.52	0.14	1.37	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	740	1057	422	129	755	82	347	558	123	900
v/c Ratio	0.87	0.82	0.55	0.65	0.81	0.21	1.16	0.86	0.77	0.89dr
Control Delay	63.4	47.7	12.0	83.1	63.0	3.1	151.4	56.7	94.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.4	47.7	12.0	83.1	63.0	3.1	151.4	56.7	94.1	39.4
Queue Length 50th (ft)	354	489	73	65	267	0	~421	496	119	296
Queue Length 95th (ft)	#576	578	180	#111	287	14	#624	#694	#217	383
Internal Link Dist (ft)		718			543			266		1846
Turn Bay Length (ft)	250			150		150	300		100	
Base Capacity (vph)	849	1416	819	199	1441	537	300	707	181	1206
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.75	0.52	0.65	0.52	0.15	1.16	0.79	0.68	0.75

Intersection Summary

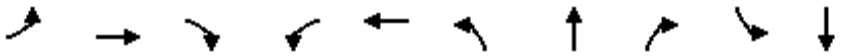
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	90	8	49	1046	7	933
v/c Ratio	0.34	0.11	0.07	0.27	0.51	0.04	0.57
Control Delay	30.1	0.3	31.0	39.5	12.2	39.5	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	0.3	31.0	39.5	12.2	39.5	17.6
Queue Length 50th (ft)	47	0	1	19	114	3	150
Queue Length 95th (ft)	135	0	18	68	333	19	306
Internal Link Dist (ft)			441		593		2550
Turn Bay Length (ft)	130			200		200	
Base Capacity (vph)	895	1087	615	521	2601	521	2552
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.08	0.01	0.09	0.40	0.01	0.37

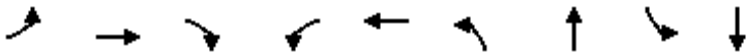
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	68	11	301	33	23	315	744	55	1	652
v/c Ratio	0.27	0.03	0.58	0.23	0.04	0.73	0.65	0.06	0.01	0.57
Control Delay	41.2	30.8	8.6	47.5	26.5	44.9	19.9	1.9	48.0	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	30.8	8.6	47.5	26.5	44.9	19.9	1.9	48.0	28.6
Queue Length 50th (ft)	27	5	0	16	4	148	219	0	1	145
Queue Length 95th (ft)	100	20	65	60	16	#469	#841	12	7	302
Internal Link Dist (ft)		490			484		2550			297
Turn Bay Length (ft)	215					215				
Base Capacity (vph)	442	918	920	436	1556	431	1147	988	436	2142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.01	0.33	0.08	0.01	0.73	0.65	0.06	0.00	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	108	37	168	12	38	119	696	13	597
v/c Ratio	0.36	0.06	0.28	0.06	0.05	0.43	0.42	0.07	0.55
Control Delay	39.2	22.1	5.7	44.8	24.5	40.7	15.9	44.9	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	22.1	5.7	44.8	24.5	40.7	15.9	44.9	25.0
Queue Length 50th (ft)	43	10	0	5	5	48	92	5	111
Queue Length 95th (ft)	143	47	49	31	23	155	278	33	266
Internal Link Dist (ft)		944			1048		242		232
Turn Bay Length (ft)	175			200		225		115	
Base Capacity (vph)	624	1247	1102	624	2252	624	2706	624	2659
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.03	0.15	0.02	0.02	0.19	0.26	0.02	0.22

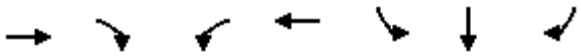
Intersection Summary

Queues
206: Warms Springs Rd & Costco Access C/Shop East Access C

02/05/2020

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	500	300	425	350	140
v/c Ratio	0.41	0.64	0.49	0.20	0.24
Control Delay	1.7	25.0	23.2	5.3	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	25.0	23.2	5.3	25.3
Queue Length 50th (ft)	1	77	57	15	20
Queue Length 95th (ft)	25	208	152	47	58
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1245	1217	1874	2884	1735
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.25	0.23	0.12	0.08

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1073	477	302	1371	375	375	473
v/c Ratio	0.53	0.52	0.67	0.46	0.77	0.77	0.54
Control Delay	23.3	4.6	41.2	14.4	39.7	39.7	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	4.6	41.2	14.4	39.7	39.7	23.0
Queue Length 50th (ft)	172	0	92	191	197	197	99
Queue Length 95th (ft)	238	68	m125	243	288	288	142
Internal Link Dist (ft)	609			534		814	
Turn Bay Length (ft)		275	175				590
Base Capacity (vph)	2020	916	536	2952	581	581	1023
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.52	0.56	0.46	0.65	0.65	0.46

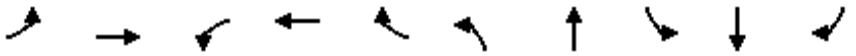
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	371	1478	1026	665	421	414	379
v/c Ratio	0.76	0.51	0.55	0.67	0.83	0.77	0.73
Control Delay	43.9	8.8	24.7	5.8	44.0	31.7	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	8.8	24.7	5.8	44.0	31.7	29.1
Queue Length 50th (ft)	77	164	178	0	221	171	143
Queue Length 95th (ft)	124	99	224	85	#348	292	250
Internal Link Dist (ft)		534	1082			783	
Turn Bay Length (ft)	205			275			645
Base Capacity (vph)	536	2895	1878	996	562	586	567
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.51	0.55	0.67	0.75	0.71	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	294	1369	137	1169	66	76	145	185	30	131
v/c Ratio	1.08	0.52	0.63	0.67	0.08	0.26	0.33	0.76	0.07	0.30
Control Delay	120.9	18.4	55.2	23.7	4.0	31.9	11.3	55.1	27.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	120.9	18.4	55.2	23.7	4.0	31.9	11.3	55.1	27.7	6.4
Queue Length 50th (ft)	~213	193	86	281	0	41	21	114	16	0
Queue Length 95th (ft)	#378	333	144	#503	22	68	59	161	33	39
Internal Link Dist (ft)		1082		1135			667		583	
Turn Bay Length (ft)	130		300		220	95		100		100
Base Capacity (vph)	271	2656	258	1746	804	491	655	401	665	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.52	0.53	0.67	0.08	0.15	0.22	0.46	0.05	0.20

Intersection Summary

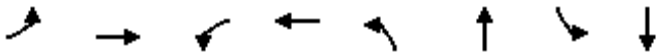
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	5	1192	402	59	919	538	117
v/c Ratio	0.06	0.78	0.46	0.42	0.50	0.89	0.21
Control Delay	44.2	26.8	5.6	49.7	15.3	49.1	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	26.8	5.6	49.7	15.3	49.1	19.3
Queue Length 50th (ft)	3	305	22	34	156	303	37
Queue Length 95th (ft)	15	413	88	73	261	#530	82
Internal Link Dist (ft)		1135			1277	318	
Turn Bay Length (ft)	300			210			50
Base Capacity (vph)	603	1609	903	603	1921	603	557
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.74	0.45	0.10	0.48	0.89	0.21

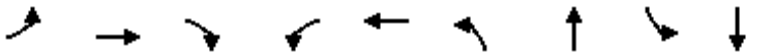
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	1226	16	917	34	4	66	59
v/c Ratio	0.41	0.50	0.14	0.45	0.26	0.02	0.27	0.26
Control Delay	47.6	12.5	47.0	16.6	47.3	27.0	38.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	12.5	47.0	16.6	47.3	27.0	38.8	13.3
Queue Length 50th (ft)	30	156	7	160	15	0	25	0
Queue Length 95th (ft)	97	497	36	363	59	11	96	36
Internal Link Dist (ft)		1203		1468		156		329
Turn Bay Length (ft)	190		190		115		115	
Base Capacity (vph)	646	2561	646	2541	646	806	646	793
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.48	0.02	0.36	0.05	0.00	0.10	0.07

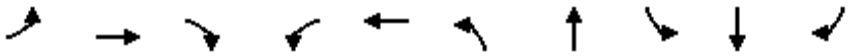
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	156	415	810	129	229	665	562	12	440
v/c Ratio	0.59	0.32	0.89	0.54	0.18	0.80	0.39	0.09	0.73
Control Delay	65.4	30.4	26.6	65.4	29.0	53.3	25.8	62.0	52.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.4	30.4	26.6	65.4	29.0	53.3	25.8	62.0	52.5
Queue Length 50th (ft)	62	123	242	52	64	256	147	4	163
Queue Length 95th (ft)	106	192	#599	91	110	#392	226	16	226
Internal Link Dist (ft)		1191			683		2197		393
Turn Bay Length (ft)	380		200	300		240		150	
Base Capacity (vph)	831	1286	906	831	1278	831	1429	831	1247
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.32	0.89	0.16	0.18	0.80	0.39	0.01	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	240	407	692	109	394	679	1596	48	860	202
v/c Ratio	0.84	0.79	0.84	0.68	1.02	1.95	1.03	0.48	0.85	0.40
Control Delay	88.4	64.5	37.1	89.6	110.5	469.9	73.6	89.0	60.5	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	64.5	37.1	89.6	110.5	469.9	73.6	89.0	60.5	28.3
Queue Length 50th (ft)	232	375	453	106	~426	~1029	~908	47	423	96
Queue Length 95th (ft)	#452	#650	#921	189	#674	#1491	#1177	102	536	180
Internal Link Dist (ft)		2197			313		614		738	
Turn Bay Length (ft)	200			145		420		630		90
Base Capacity (vph)	290	519	825	290	509	348	1566	290	1392	670
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.78	0.84	0.38	0.77	1.95	1.02	0.17	0.62	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

2021 Cumulative Saturday Midday with Creighton Avenue Access

Queues
1: Nutmeg St & Clinton Keith Rd

11/04/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	38	893	302	885	82	48	331	113	61
v/c Ratio	0.26	0.70	0.70	0.43	0.33	0.14	0.59	0.46	0.20
Control Delay	51.8	28.3	41.9	11.8	37.2	33.2	8.7	40.5	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	28.3	41.9	11.8	37.2	33.2	8.7	40.5	34.0
Queue Length 50th (ft)	18	187	136	127	36	21	0	52	26
Queue Length 95th (ft)	71	428	332	278	99	63	69	132	76
Internal Link Dist (ft)		329		1941		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	162	2022	794	2954	640	892	928	634	807
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.44	0.38	0.30	0.13	0.05	0.36	0.18	0.08

Intersection Summary

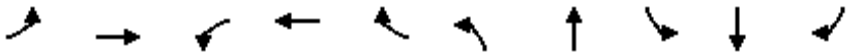
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1175	440	974	414	282
v/c Ratio	0.76	0.75	0.34	0.74	0.71
Control Delay	33.6	47.2	3.7	27.5	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	47.2	3.7	27.5	16.5
Queue Length 50th (ft)	411	316	87	58	0
Queue Length 95th (ft)	538	472	139	113	95
Internal Link Dist (ft)	1941		3191	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	1546	589	2865	925	543
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.76	0.75	0.34	0.45	0.52

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	49	1671	94	1399	189	35	100	169	32
v/c Ratio	0.45	0.72	0.73	0.57	0.17	0.17	0.27	0.76	0.09
Control Delay	76.1	19.0	64.7	5.4	0.6	50.0	4.0	76.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	19.0	64.7	5.4	0.6	50.0	4.0	76.7	0.4
Queue Length 50th (ft)	44	489	84	63	0	28	0	149	0
Queue Length 95th (ft)	86	685	#173	66	0	58	18	217	0
Internal Link Dist (ft)		3191		1618					209
Turn Bay Length (ft)	260		150		150	150	150	150	
Base Capacity (vph)	127	2311	128	2451	1091	350	520	367	517
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.72	0.73	0.57	0.17	0.10	0.19	0.46	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	93	1790	216	1543	106	22	197	122	6	96
v/c Ratio	0.54	0.91	1.33	0.54	0.12	0.16	0.61	0.49	0.02	0.28
Control Delay	77.3	29.3	213.3	9.0	1.2	61.8	18.4	67.8	49.2	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.3	29.3	213.3	9.0	1.2	61.8	18.4	67.8	49.2	3.7
Queue Length 50th (ft)	89	352	~251	97	0	18	20	55	5	0
Queue Length 95th (ft)	m#180	#1149	#423	170	m8	51	82	#96	15	14
Internal Link Dist (ft)		1618		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	173	1977	162	2845	905	140	567	248	542	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.91	1.33	0.54	0.12	0.16	0.35	0.49	0.01	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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95th percentile volume exceeds capacity, queue may be longer.
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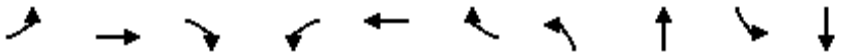
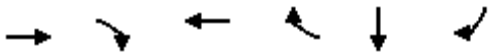
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	401	1668	15	27	1452	428	12	35	674	413
v/c Ratio	0.82	0.58	0.02	0.32	0.64	0.37	0.15	0.24	0.87	0.63
Control Delay	61.9	9.6	0.0	75.1	28.9	1.5	68.6	34.1	64.3	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	9.6	0.0	75.1	29.0	1.5	68.6	34.1	64.3	15.3
Queue Length 50th (ft)	200	290	0	24	396	13	11	10	304	67
Queue Length 95th (ft)	m225	201	m0	m39	406	21	33	46	368	194
Internal Link Dist (ft)		1039			570			119		671
Turn Bay Length (ft)	190		100	175		160	50		235	
Base Capacity (vph)	549	2870	941	95	2253	1171	82	178	831	683
Starvation Cap Reductn	0	0	0	0	100	38	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.58	0.02	0.28	0.67	0.38	0.15	0.20	0.81	0.60

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	1748	619	1481	553	573	689
v/c Ratio	0.72	0.83	0.61	0.74	0.95	0.68
Control Delay	19.8	32.4	13.8	19.3	50.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	32.4	13.8	19.3	50.6	21.8
Queue Length 50th (ft)	412	443	142	146	233	129
Queue Length 95th (ft)	493	#631	228	283	#426	192
Internal Link Dist (ft)	570		676		584	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	2423	747	2447	744	612	1025
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.83	0.61	0.74	0.94	0.67

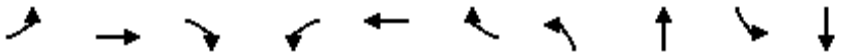
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1743	672	1584	630	554
v/c Ratio	0.66	0.63	0.60	0.89	0.91
Control Delay	32.9	14.3	22.7	53.7	58.6
Queue Delay	0.3	0.4	2.5	0.0	0.0
Total Delay	33.3	14.7	25.2	53.7	58.6
Queue Length 50th (ft)	495	239	501	511	478
Queue Length 95th (ft)	m593	m220	487	651	631
Internal Link Dist (ft)	676		453	205	
Turn Bay Length (ft)					
Base Capacity (vph)	2632	1068	2632	790	678
Starvation Cap Reductn	318	100	884	0	0
Spillback Cap Reductn	75	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.69	0.91	0.80	0.82

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	379	1914	60	8	1703	154	59	13	148	318
v/c Ratio	1.25	0.53	0.05	0.11	0.65	0.17	0.42	0.04	2.35	0.49
Control Delay	169.1	6.4	0.1	67.7	27.9	6.7	70.3	0.2	680.3	2.6
Queue Delay	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	169.1	6.5	0.1	67.7	28.1	6.7	70.3	0.2	680.3	2.7
Queue Length 50th (ft)	~439	77	0	7	353	9	53	0	~220	0
Queue Length 95th (ft)	m#627	373	m0	26	#729	68	99	0	#364	0
Internal Link Dist (ft)		453			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	303	3608	1154	71	2623	880	306	689	63	838
Starvation Cap Reductn	0	583	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	275	0	0	0	0	29
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.25	0.63	0.05	0.11	0.73	0.17	0.19	0.02	2.35	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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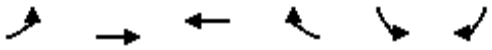
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	957	1259	1216	401	543	776
v/c Ratio	0.87	0.36	0.74	0.54	0.87	0.56
Control Delay	46.7	10.2	38.4	11.1	61.1	1.9
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	46.7	10.2	38.5	11.1	61.1	1.9
Queue Length 50th (ft)	306	95	250	37	184	0
Queue Length 95th (ft)	#625	292	443	134	#396	0
Internal Link Dist (ft)		668	432			
Turn Bay Length (ft)	350			250	350	350
Base Capacity (vph)	1105	3457	1768	769	625	1903
Starvation Cap Reductn	0	0	62	1	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.36	0.71	0.52	0.87	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	169	1583	42	1358	145	71	12	158	129
v/c Ratio	0.83	0.59	0.31	0.62	0.19	0.18	0.03	0.46	0.20
Control Delay	70.4	19.8	48.8	23.3	7.1	36.0	0.1	36.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.4	19.8	48.8	23.3	7.1	36.0	0.1	36.7	0.7
Queue Length 50th (ft)	76	185	19	167	5	15	0	62	0
Queue Length 95th (ft)	#306	#556	70	#448	56	43	0	178	0
Internal Link Dist (ft)		432		463			438		85
Turn Bay Length (ft)	200		315		85				
Base Capacity (vph)	204	2668	137	2234	765	1829	1222	480	1023
Starvation Cap Reductn	0	12	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.60	0.31	0.61	0.19	0.04	0.01	0.33	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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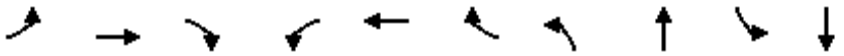

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	575	772	368	132	664	68	316	331	109	785
v/c Ratio	0.76	0.74	0.54	0.56	0.85	0.19	0.84	0.48	0.64	0.77
Control Delay	55.5	46.8	9.5	71.2	64.5	1.2	69.1	31.1	75.8	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	46.8	9.5	71.2	64.5	1.2	69.1	31.1	75.8	35.0
Queue Length 50th (ft)	236	306	23	57	202	0	258	200	91	228
Queue Length 95th (ft)	344	432	111	101	278	0	#408	298	165	308
Internal Link Dist (ft)		768			543			266		2522
Turn Bay Length (ft)	250			150		150	300		100	
Base Capacity (vph)	833	1227	746	246	949	402	487	918	250	1349
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.63	0.49	0.54	0.70	0.17	0.65	0.36	0.44	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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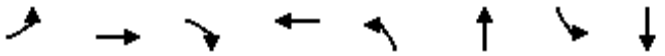
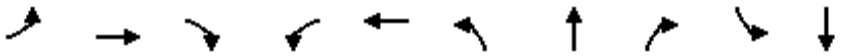


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	113	2	95	9	48	647	11	787
v/c Ratio	0.27	0.01	0.21	0.05	0.23	0.35	0.06	0.51
Control Delay	25.7	25.0	8.0	29.1	33.9	11.0	34.4	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	25.0	8.0	29.1	33.9	11.0	34.4	16.2
Queue Length 50th (ft)	35	1	0	2	17	57	4	114
Queue Length 95th (ft)	106	7	40	18	61	184	23	243
Internal Link Dist (ft)		272		441		2522		2550
Turn Bay Length (ft)	130				200		200	
Base Capacity (vph)	1030	745	989	1035	606	2926	606	2878
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.00	0.10	0.01	0.08	0.22	0.02	0.27

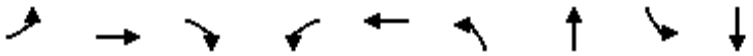
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	78	10	173	32	24	202	514	40	9	635
v/c Ratio	0.26	0.03	0.40	0.19	0.04	0.56	0.50	0.04	0.06	0.63
Control Delay	38.5	29.2	7.9	45.2	24.2	39.3	17.4	0.1	46.4	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	29.2	7.9	45.2	24.2	39.3	17.4	0.1	46.4	29.1
Queue Length 50th (ft)	26	4	0	14	3	81	126	0	4	131
Queue Length 95th (ft)	111	19	51	59	15	#263	469	1	26	296
Internal Link Dist (ft)		490			484		2550			5651
Turn Bay Length (ft)	215					215				
Base Capacity (vph)	531	1104	941	524	1784	499	1377	1167	524	2591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.01	0.18	0.06	0.01	0.40	0.37	0.03	0.02	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	86	35	119	19	43	110	437	9	597
v/c Ratio	0.30	0.07	0.23	0.09	0.06	0.40	0.20	0.04	0.38
Control Delay	37.7	25.8	7.4	41.8	25.3	38.4	12.2	42.1	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	25.8	7.4	41.8	25.3	38.4	12.2	42.1	21.2
Queue Length 50th (ft)	34	10	0	8	6	43	52	4	110
Queue Length 95th (ft)	109	44	42	38	25	131	144	24	230
Internal Link Dist (ft)		944			1048		5651		232
Turn Bay Length (ft)	175			200		225		115	
Base Capacity (vph)	640	1126	1080	672	2214	647	2728	672	2637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.03	0.11	0.03	0.02	0.17	0.16	0.01	0.23

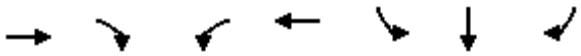
Intersection Summary

Queues
206: Warms Springs Rd & Costco Access C/Shop East Access C

02/05/2020

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	652	407	607	528	184
v/c Ratio	0.53	0.76	0.63	0.30	0.35
Control Delay	3.7	32.4	29.4	7.3	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	32.4	29.4	7.3	34.8
Queue Length 50th (ft)	35	155	119	35	40
Queue Length 95th (ft)	112	327	252	85	91
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1421	1016	1495	2424	1219
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.40	0.41	0.22	0.15

Intersection Summary

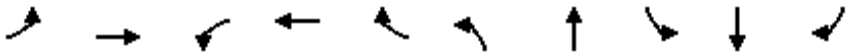


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	957	566	308	1139	219	221	388
v/c Ratio	0.38	0.53	0.65	0.33	0.71	0.71	0.58
Control Delay	15.7	3.6	41.6	11.2	46.3	46.6	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	3.6	41.6	11.2	46.3	46.6	19.9
Queue Length 50th (ft)	120	0	90	149	121	122	56
Queue Length 95th (ft)	175	60	130	192	194	196	102
Internal Link Dist (ft)	609			534		814	
Turn Bay Length (ft)		275	175				590
Base Capacity (vph)	2523	1070	689	3498	379	380	773
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.53	0.45	0.33	0.58	0.58	0.50

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	358	1096	845	539	295	288	267
v/c Ratio	0.70	0.34	0.39	0.55	0.74	0.73	0.62
Control Delay	36.2	5.1	19.8	4.6	42.7	38.0	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	5.1	19.8	4.6	42.7	38.0	24.9
Queue Length 50th (ft)	67	22	118	0	162	143	88
Queue Length 95th (ft)	94	75	180	73	232	220	157
Internal Link Dist (ft)		534	1082			783	
Turn Bay Length (ft)	205			275			645
Base Capacity (vph)	613	3224	2180	977	525	509	536
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.34	0.39	0.55	0.56	0.57	0.50

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	281	980	119	984	47	79	120	221	38	139
v/c Ratio	1.28	0.38	0.59	0.55	0.06	0.25	0.26	0.76	0.09	0.29
Control Delay	192.7	16.7	54.6	20.2	1.9	30.3	10.4	51.3	26.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	192.7	16.7	54.6	20.2	1.9	30.3	10.4	51.3	26.8	6.0
Queue Length 50th (ft)	~229	128	74	215	0	42	16	134	19	0
Queue Length 95th (ft)	#390	212	130	350	10	70	52	186	39	40
Internal Link Dist (ft)		1082		1135			667		583	
Turn Bay Length (ft)	131		300		220	95		100		100
Base Capacity (vph)	220	2599	224	1780	816	481	638	437	659	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.28	0.38	0.53	0.55	0.06	0.16	0.19	0.51	0.06	0.22

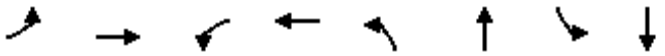
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

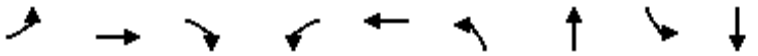
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	891	261	29	796	258	30
v/c Ratio	0.56	0.31	0.15	0.44	0.51	0.06
Control Delay	14.3	3.2	33.2	9.3	24.1	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	3.2	33.2	9.3	24.1	14.6
Queue Length 50th (ft)	89	0	8	77	62	3
Queue Length 95th (ft)	232	40	41	140	192	26
Internal Link Dist (ft)	1135			1277	318	
Turn Bay Length (ft)			210			50
Base Capacity (vph)	2691	1233	1046	2790	1046	942
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.21	0.03	0.29	0.25	0.03

Intersection Summary



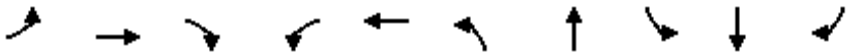
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	827	22	834	36	5	51	40
v/c Ratio	0.25	0.35	0.12	0.44	0.19	0.02	0.16	0.06
Control Delay	38.4	13.2	40.5	17.1	39.4	24.0	32.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	13.2	40.5	17.1	39.4	24.0	32.4	0.2
Queue Length 50th (ft)	20	90	8	136	14	1	15	0
Queue Length 95th (ft)	77	301	42	321	58	11	74	0
Internal Link Dist (ft)		1203		1468		156		329
Turn Bay Length (ft)	190		190		115		115	
Base Capacity (vph)	992	2912	992	2895	992	1188	992	1264
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.28	0.02	0.29	0.04	0.00	0.05	0.03

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	103	229	689	124	180	547	357	7	435
v/c Ratio	0.38	0.25	0.85	0.42	0.19	0.70	0.23	0.04	0.61
Control Delay	53.5	29.0	19.3	52.7	28.0	41.8	15.7	56.9	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	29.0	19.3	52.7	28.0	41.8	15.7	56.9	38.9
Queue Length 50th (ft)	30	54	77	36	42	151	52	2	115
Queue Length 95th (ft)	76	108	302	88	87	297	129	11	226
Internal Link Dist (ft)		1191			683		2197		393
Turn Bay Length (ft)	380		200	300		240		150	
Base Capacity (vph)	1175	1816	1073	1175	1822	1175	1852	1175	1758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.13	0.64	0.11	0.10	0.47	0.19	0.01	0.25

Intersection Summary



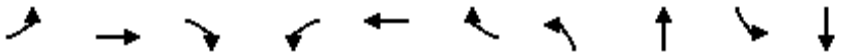
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	166	322	592	147	296	484	1169	32	1113	167
v/c Ratio	0.79	0.87	0.87	0.75	0.83	1.42	0.66	0.38	0.90	0.28
Control Delay	94.6	84.8	50.6	92.8	82.1	247.4	33.1	91.2	59.9	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.6	84.8	50.6	92.8	82.1	247.4	33.1	91.2	59.9	21.6
Queue Length 50th (ft)	175	336	489	155	307	~708	473	34	574	63
Queue Length 95th (ft)	280	478	#724	248	436	#1056	693	79	#810	142
Internal Link Dist (ft)		2197			313		614		738	
Turn Bay Length (ft)	200			145		420		630		90
Base Capacity (vph)	285	504	678	285	500	342	1778	285	1368	652
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.64	0.87	0.52	0.59	1.42	0.66	0.11	0.81	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

2021 Cumulative PM without Creighton Avenue Access



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	282	2389	92	43	1803	140	60	27	145	289
v/c Ratio	0.58	0.72	0.09	0.52	0.89	0.19	0.43	0.08	1.23	0.74
Control Delay	53.4	20.0	2.1	62.9	25.3	1.6	67.1	0.4	204.0	23.6
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	20.5	2.1	62.9	25.3	1.6	67.1	0.4	204.0	23.6
Queue Length 50th (ft)	223	380	0	36	513	1	49	0	~193	51
Queue Length 95th (ft)	m#479	#900	m5	m60	221	9	96	0	#331	118
Internal Link Dist (ft)		455			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	488	3303	1008	83	2036	725	139	622	118	632
Starvation Cap Reductn	0	441	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	34	0	0	0	0	0	3	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.83	0.09	0.52	0.89	0.19	0.43	0.04	1.23	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	644	1966	1456	258	24	395	592
v/c Ratio	1.65	0.63	0.62	0.30	0.08	0.58	0.44
Control Delay	334.2	11.2	19.1	2.9	0.5	52.8	2.1
Queue Delay	0.0	0.5	0.2	0.0	0.0	0.0	0.0
Total Delay	334.2	11.7	19.2	2.9	0.5	52.8	2.1
Queue Length 50th (ft)	~418	365	212	2	0	158	0
Queue Length 95th (ft)	m#513	m533	197	45	0	#286	18
Internal Link Dist (ft)		668	432				
Turn Bay Length (ft)	205			250		350	350
Base Capacity (vph)	390	3104	2367	864	643	678	1492
Starvation Cap Reductn	0	604	230	0	0	0	0
Spillback Cap Reductn	0	272	0	0	8	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.65	0.79	0.68	0.30	0.04	0.58	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

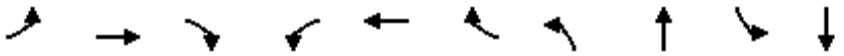
Queues
206: Warms Springs Rd & Costco Access C/Shop East Access C

02/05/2020

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	536	300	442	363	149
v/c Ratio	0.44	0.65	0.51	0.21	0.25
Control Delay	2.1	25.5	23.4	5.4	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	2.1	25.5	23.4	5.4	25.6
Queue Length 50th (ft)	6	78	60	16	22
Queue Length 95th (ft)	39	210	157	50	62
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1242	1196	1916	2900	1716
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.25	0.23	0.13	0.09

Intersection Summary

2021 Cumulative Saturday Midday without Creighton Avenue Access



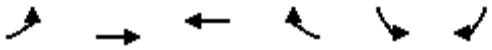
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	317	1977	60	8	1761	154	59	13	148	259
v/c Ratio	1.05	0.55	0.05	0.11	0.67	0.17	0.42	0.04	2.35	0.40
Control Delay	99.4	6.6	0.1	67.7	28.4	6.7	70.3	0.2	680.3	1.8
Queue Delay	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	99.4	6.8	0.1	67.7	28.6	6.7	70.3	0.2	680.3	1.9
Queue Length 50th (ft)	~319	80	0	7	371	9	53	0	~220	0
Queue Length 95th (ft)	m#494	423	m0	26	#769	68	99	0	#364	0
Internal Link Dist (ft)		453			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	303	3608	1154	71	2623	880	306	689	63	838
Starvation Cap Reductn	0	538	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	293	0	0	0	0	32
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.64	0.05	0.11	0.76	0.17	0.19	0.02	2.35	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1023	1259	1216	401	543	839
v/c Ratio	0.93	0.36	0.74	0.54	0.87	0.61
Control Delay	52.4	10.2	38.4	11.1	61.1	2.7
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	52.4	10.2	38.5	11.1	61.1	2.7
Queue Length 50th (ft)	336	95	250	37	184	0
Queue Length 95th (ft)	#690	292	443	134	#396	0
Internal Link Dist (ft)		668	432			
Turn Bay Length (ft)	350			250	350	350
Base Capacity (vph)	1105	3457	1768	769	625	1903
Starvation Cap Reductn	0	0	62	1	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.36	0.71	0.52	0.87	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

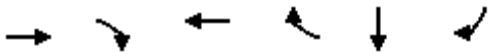
Queues
206: Warms Springs Rd & Costco Access C/Shop East Access C

02/05/2020

Lane Group	EBR	WBL	NBL	NBT	SBT
Lane Group Flow (vph)	701	407	653	548	195
v/c Ratio	0.57	0.77	0.64	0.31	0.38
Control Delay	4.6	33.9	29.8	7.9	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	33.9	29.8	7.9	36.4
Queue Length 50th (ft)	50	162	132	41	44
Queue Length 95th (ft)	152	337	275	96	98
Internal Link Dist (ft)				105	275
Turn Bay Length (ft)			250		
Base Capacity (vph)	1421	970	1529	2400	1123
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.42	0.43	0.23	0.17

Intersection Summary

2035 General Plan Buildout PM



Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	2335	808	2434	610	476	1138
v/c Ratio	0.87	0.98	0.90	0.72	0.68	1.03
Control Delay	19.4	38.3	11.5	9.3	44.4	79.1
Queue Delay	7.2	21.1	11.4	1.4	0.0	31.9
Total Delay	26.6	59.3	22.9	10.6	44.4	111.0
Queue Length 50th (ft)	521	701	289	119	386	~668
Queue Length 95th (ft)	484	m#1027	m233	m115	520	#821
Internal Link Dist (ft)	569		676		681	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	2692	828	2718	845	695	1104
Starvation Cap Reductn	338	60	271	95	0	0
Spillback Cap Reductn	0	0	312	0	0	641
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.05	1.01	0.81	0.68	2.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

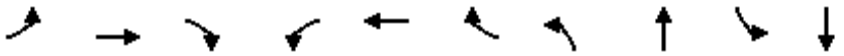
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1962	999	2609	728	669
v/c Ratio	0.80	0.91	1.07	0.93	0.98
Control Delay	24.0	18.9	56.9	57.8	71.5
Queue Delay	0.5	2.4	14.0	0.0	0.0
Total Delay	24.5	21.3	70.9	57.8	71.5
Queue Length 50th (ft)	278	161	~1038	660	668
Queue Length 95th (ft)	432	#382	#1081	#925	#957
Internal Link Dist (ft)	676		454	205	
Turn Bay Length (ft)					
Base Capacity (vph)	2445	1101	2445	789	682
Starvation Cap Reductn	161	42	96	0	0
Spillback Cap Reductn	154	0	53	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.86	0.94	1.11	0.92	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	329	2338	122	34	2645	140	73	27	145	289
v/c Ratio	1.33	0.67	0.12	0.47	0.91	0.15	0.54	0.10	0.77	0.69
Control Delay	214.3	11.3	2.1	71.5	23.2	3.2	82.0	0.8	90.4	12.5
Queue Delay	0.0	0.3	0.0	0.0	12.6	0.0	9.7	0.0	0.0	0.3
Total Delay	214.3	11.6	2.1	71.5	35.7	3.2	91.8	0.8	90.4	12.9
Queue Length 50th (ft)	~422	236	3	34	286	9	70	0	~150	0
Queue Length 95th (ft)	m#536	m658	m4	m43	#1324	m11	126	0	#326	55
Internal Link Dist (ft)		454			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	247	3505	1036	72	2905	952	149	532	188	642
Starvation Cap Reductn	0	475	0	0	136	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	305	0	49	0	0	82
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.33	0.77	0.12	0.47	1.02	0.15	0.73	0.05	0.77	0.52

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	818	1782	1994	485	24	436	920
v/c Ratio	1.46	0.54	0.85	0.40	0.09	0.60	0.63
Control Delay	254.2	8.0	22.9	1.1	0.7	58.5	24.1
Queue Delay	0.0	0.3	11.7	0.3	0.0	0.0	0.0
Total Delay	254.2	8.2	34.6	1.4	0.7	58.5	24.1
Queue Length 50th (ft)	~577	276	516	2	0	202	315
Queue Length 95th (ft)	#689	204	#866	9	0	#354	275
Internal Link Dist (ft)		668	432				
Turn Bay Length (ft)	250			250		350	350
Base Capacity (vph)	560	3307	2348	1220	564	723	1467
Starvation Cap Reductn	0	710	166	284	0	0	0
Spillback Cap Reductn	0	114	369	0	3	0	12
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.46	0.69	1.01	0.52	0.04	0.60	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

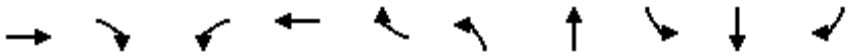
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	138	2046	200	2225	89	145	85	114	92
v/c Ratio	0.92	0.68	0.91	0.68	0.08	0.52	0.28	0.90	0.33
Control Delay	103.8	17.3	67.7	10.0	0.0	73.1	2.2	125.7	3.0
Queue Delay	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Delay	103.8	17.4	67.7	10.4	0.0	73.1	2.2	125.7	3.0
Queue Length 50th (ft)	138	191	208	160	0	71	0	113	0
Queue Length 95th (ft)	#261	#530	m116	m265	m0	105	0	#229	0
Internal Link Dist (ft)		432		413			438		99
Turn Bay Length (ft)	200		315		85				
Base Capacity (vph)	150	3013	219	3270	1059	277	573	126	596
Starvation Cap Reductn	0	183	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	444	0	0	0	0	14
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.72	0.91	0.79	0.08	0.52	0.15	0.90	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Queues
206: Warms Springs Rd & Driveway C

02/05/2020



Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	70	447	299	6	8	542	712	15	639	29
v/c Ratio	0.15	0.44	0.72	0.01	0.01	0.62	0.38	0.04	0.66	0.06
Control Delay	24.0	9.2	38.2	23.0	0.0	32.8	15.2	39.3	32.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	9.2	38.2	23.0	0.0	32.8	15.2	39.3	32.6	0.2
Queue Length 50th (ft)	26	96	133	2	0	124	84	3	148	0
Queue Length 95th (ft)	66	179	265	12	0	227	266	13	273	0
Internal Link Dist (ft)	183			260			167		275	
Turn Bay Length (ft)						250		100		100
Base Capacity (vph)	850	1010	776	1092	968	1457	2580	359	1502	727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.44	0.39	0.01	0.01	0.37	0.28	0.04	0.43	0.04

Intersection Summary

Appendix G Freeway Mainline Worksheets (HCS)

Existing AM

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	2867	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	763	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1057	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1057	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	75.0	mi/h
Number of lanes, N	3	
Density, D	14.1	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2372	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	495	vph
Length of first accel/decel lane	530	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	793	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2372	495	793	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	631	132	211	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2624	548	844	pcph

Estimation of V12 Merge Areas

L_{EQ} = 342.33 (Equation 13-6 or 13-7)

P_{FM} = 0.592 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1554 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3172	7200	No
v_3 or v_{av34}	1070 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 1554 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2102	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.316	
Space mean speed in ramp influence area,	S_R = 63.2	mph
Space mean speed in outer lanes,	S_0 = 70.9	mph
Space mean speed for all vehicles,	S = 65.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3165	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	793	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	495	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3165	793	495	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	842	211	132	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3502	877	548	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.632 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2536 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3502	7200	No
$v_{FO} = v_F - v_R$	2625	7200	No
v_R	877	2000	No
v_3 or v_{av34}	966 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2536 (Equation 13-15, 13-16, 18, or 19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2536	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.507

Space mean speed in ramp influence area, S_R = 57.3 mph

Space mean speed in outer lanes, S_0 = 80.1 mph

Space mean speed for all vehicles, S = 62.2 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	Scott/Clinton Keith
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3165	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	842	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1167	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1167	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	74.7	mi/h
Number of lanes, N	3	
Density, D	15.6	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: AM Peak
Freeway/Dir of Travel: I-215 North
Junction: Clinton Keith On
Jurisdiction:
Analysis Year: Existing
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3020	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	145	vph
Length of first accel/decel lane	410	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	753	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3020	145	753	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	803	39	200	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3341	160	833	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1968 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3501	7200	No
v_3 or v_{av34}	1373 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1968 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2128	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.325

Space mean speed in ramp influence area, S_R = 62.9 mph

Space mean speed in outer lanes, S_0 = 69.9 mph

Space mean speed for all vehicles, S = 65.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2267	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	753	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	680	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2267	753	680	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	603	200	181	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2508	833	752	pcph

Estimation of V12 Merge Areas

L_{EQ} = 453.97 (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1498 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3341	7200	No
v_3 or v_{av34}	1010 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 1498 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2331	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.312	
Space mean speed in ramp influence area,	S_R = 63.3	mph
Space mean speed in outer lanes,	S_0 = 71.2	mph
Space mean speed for all vehicles,	S = 65.5	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2947	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	680	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	753	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2947	680	753	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	784	181	200	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3261	752	833	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.644 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2368 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3261	7200	No
$v_{FO} = v_F - v_R$	2509	7200	No
v_R	752	2000	No
v_3 or v_{av34}	893 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2368 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2368	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.496	
Space mean speed in ramp influence area,	S_R = 57.6	mph
Space mean speed in outer lanes,	S_0 = 80.1	mph
Space mean speed for all vehicles,	S = 62.4	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	2947	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	784	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1087	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1087	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	74.9	mi/h
Number of lanes, N	3	
Density, D	14.5	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2259	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	688	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	647	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2259	688	647	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	601	183	172	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2499	761	688	pcph

Estimation of V12 Merge Areas

L_{EQ} = 414.44 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1489 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3260	7200	No
v_3 or v_{av34}	1010 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1489 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2250	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.313

Space mean speed in ramp influence area, S_R = 63.3 mph

Space mean speed in outer lanes, S_0 = 71.2 mph

Space mean speed for all vehicles, S = 65.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: AM Peak
Freeway/Dir of Travel: I-215 North
Junction: Los Alamos Road Off
Jurisdiction:
Analysis Year: Existing
Description: Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2905	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	647	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	688	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2905	647	688	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	773	172	183	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3214	716	761	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.647 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2331 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3214	7200	No
$v_{FO} = v_F - v_R$	2498	7200	No
v_R	716	2000	No
v_3 or v_{av34}	883 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2331 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2331	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 22.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.492	
Space mean speed in ramp influence area,	S_R = 57.7	mph
Space mean speed in outer lanes,	S_0 = 80.1	mph
Space mean speed for all vehicles,	S = 62.5	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	Los Alamos/MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	2905	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	773	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1071	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1071	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	74.9	mi/h
Number of lanes, N	3	
Density, D	14.3	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	1976	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	929	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	147	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1976	929	147	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	526	247	39	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2186	1028	163	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1302 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3214	7200	No
v_3 or v_{av34}	884 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1302 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2330	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.316	
Space mean speed in ramp influence area,	S_R = 63.2	mph
Space mean speed in outer lanes,	S_0 = 71.6	mph
Space mean speed for all vehicles,	S = 65.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	1829	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	147	vph
Length of first accel/decel lane	725	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	929	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1829	147	929	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	486	39	247	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2024	163	1028	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1210 pc/h

Capacity Checks

		Actual	Maximum	LOS F?
v_{FO}		2187	7200	No
v_3 or v_{av34}		814 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?		No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2		Yes	

If yes, v_{12A} = 1210 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	1373	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 11.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.286	
Space mean speed in ramp influence area,	S_R = 64.1	mph
Space mean speed in outer lanes,	S_0 = 71.9	mph
Space mean speed for all vehicles,	S = 66.8	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2208	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	379	vph
Length of first accel/decel lane	140	ft
Length of second accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	147	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2208	379	147	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	587	101	39	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2443	419	163	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 2443 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2443	4800	No
$v_{FO} = v - v_F - v_R$	2024	4800	No
v_R	419	4000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2443 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2443	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 11.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.466	
Space mean speed in ramp influence area,	S_R = 58.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 58.6	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	South of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	2208	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	587	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1221	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1221	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	74.5	mi/h
Number of lanes, N	2	
Density, D	16.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3880	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1032	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1403	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1403	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.2	mi/h
Number of lanes, N	3	
Density, D	19.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3880	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	500	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1027	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3880	500	1027	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1032	133	273	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, f_{HV}	0.980	0.980	0.980	
Driver population factor, f_P	1.00	1.00	1.00	
Flow rate, v_p	4210	543	1114	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.630 Using Equation 9

$v_{12} = v_R + (v - v_F) P_{FD}$ = 2852 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v$	4210	7200	No
$v_{FO} = v - v_R$	3667	7200	No
v_R	543	2000	No
v_3 or v_{av34}	1358 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2852 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2852	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_{12}$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.477	
Space mean speed in ramp influence area,	S_R = 58.2	mph
Space mean speed in outer lanes,	S_0 = 78.7	mph
Space mean speed for all vehicles,	S = 63.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3380	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1027	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	500	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3380	1027	500	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	899	273	133	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3668	1114	543	pcph

Estimation of V12 Merge Areas

L_{EQ} = 695.75 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2175 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4782	7200	No
v_3 or v_{av34}	1493 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2175 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3289	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.387

Space mean speed in ramp influence area, S_R = 61.0 mph

Space mean speed in outer lanes, S_0 = 69.4 mph

Space mean speed for all vehicles, S = 63.4 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	Scott/Clinton
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4407	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1172	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1594	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1594	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	71.1	mi/h
Number of lanes, N	3	
Density, D	22.4	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Clinton Keith Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4407	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	739	vph
Length of first accel/decel lane	275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	313	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2560	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4407	739	313	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1172	197	83	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, f_{HV}	0.980	0.980	0.980	
Driver population factor, f_P	1.00	1.00	1.00	
Flow rate, v_p	4782	802	340	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.604 Using Equation 9

$v_{12} = v_R + (v - v_F) P_{FD}$ = 3204 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4782	7200	No
$v_{FO} = v - v_F - v_R$	3980	7200	No
v_R	802	2000	No
v_3 or v_{av34}	1578 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3204 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3204	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 29.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.500	
Space mean speed in ramp influence area,	S_R = 57.5	mph
Space mean speed in outer lanes,	S_0 = 77.8	mph
Space mean speed for all vehicles,	S = 62.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3668	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	313	vph
Length of first accel/decel lane	680	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	472	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3668	313	472	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	976	83	126	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3980	340	512	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2374 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4320	7200	No
v_3 or v_{av34}	1606 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2374 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2714	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.332	
Space mean speed in ramp influence area,	S_R = 62.7	mph
Space mean speed in outer lanes,	S_0 = 69.0	mph
Space mean speed for all vehicles,	S = 64.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3981	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	472	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	313	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3981	472	313	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1059	126	83	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4320	512	340	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.595 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2570 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4832	7200	No
v_3 or v_{av34}	1750 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2570 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3082	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.363

Space mean speed in ramp influence area, S_R = 61.8 mph

Space mean speed in outer lanes, S_0 = 68.5 mph

Space mean speed for all vehicles, S = 64.0 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4453	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1184	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1611	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1611	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	70.9	mi/h
Number of lanes, N	3	
Density, D	22.7	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4453	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	984	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	633	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4453	984	633	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1184	262	168	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4832	1068	687	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.590 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3289 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4832	7200	No
$v_{FO} = v_F - v_R$	3764	7200	No
v_R	1068	2000	No
v_3 or v_{av34}	1543 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3289 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3289	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 30.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.524

Space mean speed in ramp influence area, S_R = 56.8 mph

Space mean speed in outer lanes, S_0 = 78.0 mph

Space mean speed for all vehicles, S = 62.2 mph

HCS 2010: Freeway Weaving Release 6.80

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency/Co.:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Dir of Travel:	I-215 SOuth
Weaving Location:	Los Alamos ON/MHSR Off
Analysis Year:	Exsiting
Description:	Costco Murrieta

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	73	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2400	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1978	633	857	0	veh/h
Peak hour factor, PHF	0.94	0.94	0.94	0.94	
Peak 15-min volume, v15	526	168	228	0	
Trucks and buses	4	4	4	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.980	0.980	0.980	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2146	687	930	0	pc/h
Volume ratio, VR		0.430			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.6	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	687	lc/h
Weaving lane changes, LCW	927	lc/h
Non-weaving vehicle index, INW	322	
Non-weaving lane change, LCNW	1219	lc/h
Total lane changes, LCALL	2146	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.200

Average weaving speed, SW	63.3	mi/h
Average non-weaving speed, SNW	62.0	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	62.6	mi/h
Weaving segment density, D	20.0+	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.674	
Weaving segment flow rate, v	3690	veh/h
Weaving segment capacity, cW	5476	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7016	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2400	2054	c
		Maximum	Analyzed	
v/c ratio		1.00	0.674	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3245	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	317	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	97	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3245	317	97	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	863	84	26	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3521	344	105	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3521 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3865	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3521 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3865	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.458	
Space mean speed in ramp influence area,	S_R = 58.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 58.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3562	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	97	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	317	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3562	97	317	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	947	26	84	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3865	105	344	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3865 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3970	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3865 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3970	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.486	
Space mean speed in ramp influence area,	S_R = 57.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 57.9	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	SOuth of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3659	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	973	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1985	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1985	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	64.3	mi/h
Number of lanes, N	2	
Density, D	30.9	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4617	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1228	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1703	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1703	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	69.5	mi/h
Number of lanes, N	3	
Density, D	24.5	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4187	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	430	vph
Length of first accel/decel lane	530	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	509	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4187	430	509	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1114	114	135	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4632	476	541	pcph

Estimation of V12 Merge Areas

L_{EQ} = 756.63 (Equation 13-6 or 13-7)

P_{FM} = 0.592 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2744 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5108	7200	No
v_3 or v_{av34}	1888 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2744 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3220	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.382

Space mean speed in ramp influence area, S_R = 61.2 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 63.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4696	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	509	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	430	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4696	509	430	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1249	135	114	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5196	563	476	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.604 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3362 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5196	7200	No
$v_{FO} = v_F - v_R$	4633	7200	No
v_R	563	2000	No
v_3 or v_{av34}	1834 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3362 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3362	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 31.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.479

Space mean speed in ramp influence area, S_R = 58.2 mph

Space mean speed in outer lanes, S_0 = 76.8 mph

Space mean speed for all vehicles, S = 63.6 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	Scott/Clinton Keith
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4696	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1249	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1732	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1732	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	69.1	mi/h
Number of lanes, N	3	
Density, D	25.1	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4641	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	55	vph
Length of first accel/decel lane	410	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	732	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4641	55	732	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1234	15	195	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5135	61	810	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3024 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5196	7200	No
v_3 or v_{av34}	2111 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3024 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3085	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.378	
Space mean speed in ramp influence area,	S_R = 61.3	mph
Space mean speed in outer lanes,	S_0 = 67.2	mph
Space mean speed for all vehicles,	S = 63.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3909	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	732	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	771	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3909	732	771	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1040	195	205	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4325	810	853	pcph

Estimation of V12 Merge Areas

L_{EQ} = 837.89 (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2582 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5135	7200	No
v_3 or v_{av34}	1743 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2582 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3392	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.388	
Space mean speed in ramp influence area,	S_R = 61.0	mph
Space mean speed in outer lanes,	S_0 = 68.5	mph
Space mean speed for all vehicles,	S = 63.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4680	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	771	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	732	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4680	771	732	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1245	205	195	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5178	853	810	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.591 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3410 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5178	7200	No
$v_{FO} = v_F - v_R$	4325	7200	No
v_R	853	2000	No
v_3 or v_{av34}	1768 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3410 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3410	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_{12}$ = 31.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.505	
Space mean speed in ramp influence area,	S_R = 57.4	mph
Space mean speed in outer lanes,	S_0 = 77.1	mph
Space mean speed for all vehicles,	S = 62.8	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4680	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1245	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1726	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1726	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	69.2	mi/h
Number of lanes, N	3	
Density, D	25.0	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3978	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	702	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	659	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3978	702	659	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1058	187	175	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4401	777	701	pcph

Estimation of V12 Merge Areas

L_{EQ} = 824.89 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2622 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5178	7200	No
v_3 or v_{av34}	1779 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2622 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3399	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.392	
Space mean speed in ramp influence area,	S_R = 60.8	mph
Space mean speed in outer lanes,	S_0 = 68.4	mph
Space mean speed for all vehicles,	S = 63.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4638	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	659	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	702	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4638	659	702	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1234	175	187	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5131	729	777	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.598 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3362 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5131	7200	No
$v_{FO} = v_F - v_R$	4402	7200	No
v_R	729	2000	No
v_3 or v_{av34}	1769 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3362 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3362	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.494

Space mean speed in ramp influence area, S_R = 57.7 mph

Space mean speed in outer lanes, S_0 = 77.1 mph

Space mean speed for all vehicles, S = 63.2 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	Los Alamos/MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4638	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1234	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1710	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1710	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	69.4	mi/h
Number of lanes, N	3	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3690	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	948	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	421	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3690	948	421	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	981	252	112	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4083	1049	466	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2432 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5132	7200	No
v_3 or v_{av34}	1651 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2432 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3481	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.402	
Space mean speed in ramp influence area,	S_R = 60.5	mph
Space mean speed in outer lanes,	S_0 = 68.9	mph
Space mean speed for all vehicles,	S = 63.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3269	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	421	vph
Length of first accel/decel lane	725	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	982	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3269	421	982	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	869	112	261	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3617	466	1086	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2162 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4083	7200	No
v_3 or v_{av34}	1455 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2162 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2628	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.324

Space mean speed in ramp influence area, S_R = 62.9 mph

Space mean speed in outer lanes, S_0 = 69.6 mph

Space mean speed for all vehicles, S = 65.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3655	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	386	vph
Length of first accel/decel lane	140	ft
Length of second accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	421	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3655	386	421	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	972	103	112	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4044	427	466	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4044 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4044	4800	No
$v_{FO} = v_F - v_R$	3617	4800	No
v_R	427	4000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4044 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4044	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 25.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.466

Space mean speed in ramp influence area, S_R = 58.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 58.5 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	South of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3655	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	972	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2022	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2022	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	63.4	mi/h
Number of lanes, N	2	
Density, D	31.9	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3940	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1048	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1425	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1425	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.0	mi/h
Number of lanes, N	3	
Density, D	19.5	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3940	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	561	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	649	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3940	561	649	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1048	149	173	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4275	609	704	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.625 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2901 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4275	7200	No
$v_{FO} = v_F - v_R$	3666	7200	No
v_R	609	2000	No
v_3 or v_{av34}	1374 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2901 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2901	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.483	
Space mean speed in ramp influence area,	S_R = 58.0	mph
Space mean speed in outer lanes,	S_0 = 78.6	mph
Space mean speed for all vehicles,	S = 63.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3379	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	649	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	561	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3379	649	561	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	899	173	149	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3667	704	609	pcph

Estimation of V12 Merge Areas

L_{EQ} = 607.79 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2174 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4371	7200	No
v_3 or v_{av34}	1493 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2174 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2878	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.352

Space mean speed in ramp influence area, S_R = 62.1 mph

Space mean speed in outer lanes, S_0 = 69.4 mph

Space mean speed for all vehicles, S = 64.4 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	Scott/Clinton
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4028	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1071	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1457	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1457	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	72.7	mi/h
Number of lanes, N	3	
Density, D	20.0	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Clinton Keith Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4028	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	898	vph
Length of first accel/decel lane	275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	217	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2560	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4028	898	217	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1071	239	58	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4371	974	235	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.606 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3032 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4371	7200	No
$v_{FO} = v_F - v_R$	3397	7200	No
v_R	974	2000	No
v_3 or v_{av34}	1339 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3032 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3032	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 27.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.516	
Space mean speed in ramp influence area,	S_R = 57.0	mph
Space mean speed in outer lanes,	S_0 = 78.8	mph
Space mean speed for all vehicles,	S = 62.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3130	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	217	vph
Length of first accel/decel lane	680	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	428	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3130	217	428	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	832	58	114	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3396	235	464	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2026 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3631	7200	No
v_3 or v_{av34}	1370 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2026 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2261	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.311	
Space mean speed in ramp influence area,	S_R = 63.4	mph
Space mean speed in outer lanes,	S_0 = 69.9	mph
Space mean speed for all vehicles,	S = 65.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3347	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	428	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	217	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3347	428	217	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	890	114	58	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3632	464	235	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.595 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2161 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4096	7200	No
v_3 or v_{av34}	1471 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2161 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2625	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.331	
Space mean speed in ramp influence area,	S_R = 62.7	mph
Space mean speed in outer lanes,	S_0 = 69.5	mph
Space mean speed for all vehicles,	S = 65.0	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3775	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1004	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1365	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1365	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.5	mi/h
Number of lanes, N	3	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3775	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	952	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	613	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3775	952	613	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1004	253	163	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4096	1033	665	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.610 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2902 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4096	7200	No
$v_{FO} = v_F - v_R$	3063	7200	No
v_R	1033	2000	No
v_3 or v_{av34}	1194 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2902 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2902	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.521	
Space mean speed in ramp influence area,	S_R = 56.8	mph
Space mean speed in outer lanes,	S_0 = 79.3	mph
Space mean speed for all vehicles,	S = 62.0	mph

HCS 2010: Freeway Weaving Release 6.80

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency/Co.:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Dir of Travel:	I-215 SOuth
Weaving Location:	Los Alamos ON/MHSR Off
Analysis Year:	Exsiting
Description:	Costco Murrieta

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	73	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2400	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1382	613	829	0	veh/h
Peak hour factor, PHF	0.94	0.94	0.94	0.94	
Peak 15-min volume, v15	368	163	220	0	
Trucks and buses	4	4	4	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.980	0.980	0.980	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1500	665	900	0	pc/h

Volume ratio, VR	0.511	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.6	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	665	lc/h
Weaving lane changes, LCW	905	lc/h
Non-weaving vehicle index, INW	225	
Non-weaving lane change, LCNW	1086	lc/h
Total lane changes, LCALL	1991	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.189

Average weaving speed, SW	63.8	mi/h
Average non-weaving speed, SNW	63.3	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	63.6	mi/h
Weaving segment density, D	16.1	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.652	
Weaving segment flow rate, v	3005	veh/h
Weaving segment capacity, cW	4608	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7951	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2400	1983	c
		Maximum	Analyzed	
v/c ratio		1.00	0.652	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2607	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	189	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	94	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2607	189	94	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	693	50	25	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2829	205	102	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2829 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3034	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2829 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3034	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.353	
Space mean speed in ramp influence area,	S_R = 62.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 62.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2796	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	94	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	189	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2796	94	189	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	744	25	50	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3034	102	205	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3034 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3136	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3034 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3136	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.369	
Space mean speed in ramp influence area,	S_R = 61.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 61.6	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	SOuth of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	2890	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	769	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1568	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1568	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	71.4	mi/h
Number of lanes, N	2	
Density, D	22.0	pc/mi/ln
Level of service, LOS	C	

Existing PM

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Scott/Clinton Keith
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3709	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	986	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1342	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1342	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.7	mi/h
Number of lanes, N	3	
Density, D	18.2	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3648	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	61	vph
Length of first accel/decel lane	410	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	507	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3648	61	507	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	970	16	135	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3958	66	550	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2331 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4024	7200	No
v_3 or v_{av34}	1627 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2331 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2397	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.335

Space mean speed in ramp influence area, S_R = 62.6 mph

Space mean speed in outer lanes, S_0 = 68.9 mph

Space mean speed for all vehicles, S = 65.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3141	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	507	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	524	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3141	507	524	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	835	135	139	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3408	550	569	pcph

Estimation of V12 Merge Areas

L_{EQ} = 586.01 (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2035 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3958	7200	No
v_3 or v_{av34}	1373 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2035 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2585	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.324

Space mean speed in ramp influence area, S_R = 63.0 mph

Space mean speed in outer lanes, S_0 = 69.9 mph

Space mean speed for all vehicles, S = 65.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3665	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	524	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	507	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3665	524	507	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	975	139	135	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3977	569	550	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.634 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2731 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3977	7200	No
$v_{FO} = v_F - v_R$	3408	7200	No
v_R	569	2000	No
v_3 or v_{av34}	1246 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2731 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2731	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 25.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.479	
Space mean speed in ramp influence area,	S_R = 58.1	mph
Space mean speed in outer lanes,	S_0 = 79.1	mph
Space mean speed for all vehicles,	S = 63.4	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3665	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	975	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1326	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1326	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.8	mi/h
Number of lanes, N	3	
Density, D	18.0-	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3174	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	491	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	461	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3174	491	461	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	844	131	123	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3444	533	500	pcph

Estimation of V12 Merge Areas

L_{EQ} = 567.88 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2052 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3977	7200	No
v_3 or v_{av34}	1392 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2052 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2585	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.327	
Space mean speed in ramp influence area,	S_R = 62.9	mph
Space mean speed in outer lanes,	S_0 = 69.8	mph
Space mean speed for all vehicles,	S = 65.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3635	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	461	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	491	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3635	461	491	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	967	123	131	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3944	500	533	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.638 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2699 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3944	7200	No
$v_{FO} = v_F - v_R$	3444	7200	No
v_R	500	2000	No
v_3 or v_{av34}	1245 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2699 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2699	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.473

Space mean speed in ramp influence area, S_R = 58.3 mph

Space mean speed in outer lanes, S_0 = 79.1 mph

Space mean speed for all vehicles, S = 63.6 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Los Alamos/MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3635	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	967	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1315	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1315	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.9	mi/h
Number of lanes, N	3	
Density, D	17.8	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2972	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	663	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	232	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2972	663	232	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	790	176	62	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3225	719	252	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1921 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3944	7200	No
v_3 or v_{av34}	1304 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1921 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2640	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.330	
Space mean speed in ramp influence area,	S_R = 62.8	mph
Space mean speed in outer lanes,	S_0 = 70.1	mph
Space mean speed for all vehicles,	S = 65.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2740	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	232	vph
Length of first accel/decel lane	725	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	663	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2740	232	663	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	729	62	176	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2973	252	719	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1777 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3225	7200	No
v_3 or v_{av34}	1196 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1777 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2029	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.300	
Space mean speed in ramp influence area,	S_R = 63.7	mph
Space mean speed in outer lanes,	S_0 = 70.5	mph
Space mean speed for all vehicles,	S = 66.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3010	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	270	vph
Length of first accel/decel lane	140	ft
Length of second accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	232	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3010	270	232	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	801	72	62	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3266	293	252	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3266 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3266	4800	No
$v_{FO} = v_F - v_R$	2973	4800	No
v_R	293	4000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3266 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3266	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 18.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.454	
Space mean speed in ramp influence area,	S_R = 58.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 58.9	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	South of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3010	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	801	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1633	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1633	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	70.6	mi/h
Number of lanes, N	2	
Density, D	23.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 South
From/To:	Scott/Clinton
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4149	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1103	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	1493	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1493	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	72.3	mi/h
Number of lanes, N	3	
Density, D	20.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Clinton Keith Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4149	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	501	vph
Length of first accel/decel lane	275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	142	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2560	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4149	501	142	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1103	133	38	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4480	541	153	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.623 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2995 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4480	7200	No
$v_{FO} = v_F - v_R$	3939	7200	No
v_R	541	2000	No
v_3 or v_{av34}	1485 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2995 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2995	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.477

Space mean speed in ramp influence area, S_R = 58.2 mph

Space mean speed in outer lanes, S_0 = 78.2 mph

Space mean speed for all vehicles, S = 63.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3648	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	142	vph
Length of first accel/decel lane	680	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	489	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3648	142	489	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	970	38	130	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3939	153	528	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2350 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4092	7200	No
v_3 or v_{av34}	1589 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2350 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2503	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.321

Space mean speed in ramp influence area, S_R = 63.0 mph

Space mean speed in outer lanes, S_0 = 69.1 mph

Space mean speed for all vehicles, S = 65.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3790	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	489	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	142	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3790	489	142	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1008	130	38	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4092	528	153	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.595 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2434 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4620	7200	No
v_3 or v_{av34}	1658 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2434 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2962	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.353

Space mean speed in ramp influence area, S_R = 62.1 mph

Space mean speed in outer lanes, S_0 = 68.8 mph

Space mean speed for all vehicles, S = 64.3 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 South
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4279	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1138	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	1540	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1540	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	71.8	mi/h
Number of lanes, N	3	
Density, D	21.5	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4279	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	930	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	598	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4279	930	598	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1138	247	159	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4620	1004	646	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.598 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3168 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4620	7200	No
$v_{FO} = v_F - v_R$	3616	7200	No
v_R	1004	2000	No
v_3 or v_{av34}	1452 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3168 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3168	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 29.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.518

Space mean speed in ramp influence area, S_R = 56.9 mph

Space mean speed in outer lanes, S_0 = 78.3 mph

Space mean speed for all vehicles, S = 62.3 mph

HCS 2010: Freeway Weaving Release 6.80

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency/Co.:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Dir of Travel:	I-215 SOuth
Weaving Location:	Los Alamos ON/MHSR Off
Analysis Year:	Exsiting
Description:	Costco Murrieta

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	73	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2400	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1941	598	810	0	veh/h
Peak hour factor, PHF	0.94	0.94	0.94	0.94	
Peak 15-min volume, v15	516	159	215	0	
Trucks and buses	3	3	3	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.985	0.985	0.985	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2096	646	875	0	pc/h
Volume ratio, VR		0.421			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.6	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	646	lc/h
Weaving lane changes, LCW	886	lc/h
Non-weaving vehicle index, INW	314	
Non-weaving lane change, LCNW	1209	lc/h
Total lane changes, LCALL	2095	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.197

Average weaving speed, SW	63.5	mi/h
Average non-weaving speed, SNW	62.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	62.9	mi/h
Weaving segment density, D	19.2	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.634	
Weaving segment flow rate, v	3563	veh/h
Weaving segment capacity, cW	5623	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6912	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2400	2062	c
		Maximum	Analyzed	
v/c ratio		1.00	0.634	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3138	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	279	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	92	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3138	279	92	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	835	74	24	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3388	301	99	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 3388 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3689	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3388 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3689	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.428	
Space mean speed in ramp influence area,	S_R = 59.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 59.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3417	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	92	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	279	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3417	92	279	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	909	24	74	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3690	99	301	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 3690 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3789	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3690 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3789	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A =$ 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.451	
Space mean speed in ramp influence area,	S_R = 59.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 59.0	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	SOuth of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3509	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	933	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	1894	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1894	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	66.2	mi/h
Number of lanes, N	2	
Density, D	28.6	pc/mi/ln
Level of service, LOS	D	

Existing Saturday Midday

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Scott/Clinton Keith
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3709	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	986	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1342	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1342	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.7	mi/h
Number of lanes, N	3	
Density, D	18.2	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3648	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	61	vph
Length of first accel/decel lane	410	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	507	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3648	61	507	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	970	16	135	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3958	66	550	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2331 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4024	7200	No
v_3 or v_{av34}	1627 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2331 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2397	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.335

Space mean speed in ramp influence area, S_R = 62.6 mph

Space mean speed in outer lanes, S_0 = 68.9 mph

Space mean speed for all vehicles, S = 65.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3141	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	507	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	524	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3141	507	524	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	835	135	139	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3408	550	569	pcph

Estimation of V12 Merge Areas

L_{EQ} = 586.01 (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2035 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3958	7200	No
v_3 or v_{av34}	1373 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2035 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2585	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.324

Space mean speed in ramp influence area, S_R = 63.0 mph

Space mean speed in outer lanes, S_0 = 69.9 mph

Space mean speed for all vehicles, S = 65.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3665	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	524	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	507	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3665	524	507	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	975	139	135	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3977	569	550	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.634 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2731 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3977	7200	No
$v_{FO} = v_F - v_R$	3408	7200	No
v_R	569	2000	No
v_3 or v_{av34}	1246 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2731 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2731	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 25.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.479	
Space mean speed in ramp influence area,	S_R = 58.1	mph
Space mean speed in outer lanes,	S_0 = 79.1	mph
Space mean speed for all vehicles,	S = 63.4	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3665	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	975	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1326	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1326	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.8	mi/h
Number of lanes, N	3	
Density, D	18.0-	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3174	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	491	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	461	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3174	491	461	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	844	131	123	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3444	533	500	pcph

Estimation of V12 Merge Areas

L_{EQ} = 567.88 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2052 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3977	7200	No
v_3 or v_{av34}	1392 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2052 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2585	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.327	
Space mean speed in ramp influence area,	S_R = 62.9	mph
Space mean speed in outer lanes,	S_0 = 69.8	mph
Space mean speed for all vehicles,	S = 65.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3635	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	461	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	491	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3635	461	491	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	967	123	131	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3944	500	533	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.638 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2699 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3944	7200	No
$v_{FO} = v_F - v_R$	3444	7200	No
v_R	500	2000	No
v_3 or v_{av34}	1245 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2699 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2699	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.473

Space mean speed in ramp influence area, S_R = 58.3 mph

Space mean speed in outer lanes, S_0 = 79.1 mph

Space mean speed for all vehicles, S = 63.6 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Los Alamos/MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3635	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	967	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1315	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1315	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	73.9	mi/h
Number of lanes, N	3	
Density, D	17.8	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2972	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	663	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	232	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2972	663	232	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	790	176	62	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3225	719	252	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1921 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3944	7200	No
v_3 or v_{av34}	1304 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1921 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2640	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.330	
Space mean speed in ramp influence area,	S_R = 62.8	mph
Space mean speed in outer lanes,	S_0 = 70.1	mph
Space mean speed for all vehicles,	S = 65.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2740	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	232	vph
Length of first accel/decel lane	725	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	663	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2740	232	663	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	729	62	176	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2973	252	719	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1777 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3225	7200	No
v_3 or v_{av34}	1196 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1777 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2029	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.300	
Space mean speed in ramp influence area,	S_R = 63.7	mph
Space mean speed in outer lanes,	S_0 = 70.5	mph
Space mean speed for all vehicles,	S = 66.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3010	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	270	vph
Length of first accel/decel lane	140	ft
Length of second accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	232	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3010	270	232	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	801	72	62	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3266	293	252	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3266 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3266	4800	No
$v_{FO} = v_F - v_R$	2973	4800	No
v_R	293	4000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3266 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3266	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 18.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.454	
Space mean speed in ramp influence area,	S_R = 58.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 58.9	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	South of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3010	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	801	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1633	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1633	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	70.6	mi/h
Number of lanes, N	2	
Density, D	23.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 South
From/To:	Scott/Clinton
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4149	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1103	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	1493	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1493	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	72.3	mi/h
Number of lanes, N	3	
Density, D	20.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Clinton Keith Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4149	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	501	vph
Length of first accel/decel lane	275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	142	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2560	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4149	501	142	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1103	133	38	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4480	541	153	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.623 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2995 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4480	7200	No
$v_{FO} = v_F - v_R$	3939	7200	No
v_R	541	2000	No
v_3 or v_{av34}	1485 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2995 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2995	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.477

Space mean speed in ramp influence area, S_R = 58.2 mph

Space mean speed in outer lanes, S_0 = 78.2 mph

Space mean speed for all vehicles, S = 63.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3648	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	142	vph
Length of first accel/decel lane	680	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	489	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3648	142	489	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	970	38	130	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3939	153	528	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2350 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4092	7200	No
v_3 or v_{av34}	1589 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2350 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2503	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.321

Space mean speed in ramp influence area, S_R = 63.0 mph

Space mean speed in outer lanes, S_0 = 69.1 mph

Space mean speed for all vehicles, S = 65.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3790	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	489	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	142	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3790	489	142	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1008	130	38	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4092	528	153	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.595 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2434 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4620	7200	No
v_3 or v_{av34}	1658 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2434 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2962	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.353

Space mean speed in ramp influence area, S_R = 62.1 mph

Space mean speed in outer lanes, S_0 = 68.8 mph

Space mean speed for all vehicles, S = 64.3 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 South
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4279	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1138	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	1540	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1540	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	71.8	mi/h
Number of lanes, N	3	
Density, D	21.5	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4279	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	930	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	598	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4279	930	598	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1138	247	159	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4620	1004	646	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.598 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3168 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4620	7200	No
$v_{FO} = v_F - v_R$	3616	7200	No
v_R	1004	2000	No
v_3 or v_{av34}	1452 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3168 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3168	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 29.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.518

Space mean speed in ramp influence area, S_R = 56.9 mph

Space mean speed in outer lanes, S_0 = 78.3 mph

Space mean speed for all vehicles, S = 62.3 mph

HCS 2010: Freeway Weaving Release 6.80

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency/Co.:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Dir of Travel:	I-215 SOuth
Weaving Location:	Los Alamos ON/MHSR Off
Analysis Year:	Exsiting
Description:	Costco Murrieta

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	73	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2400	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1941	598	810	0	veh/h
Peak hour factor, PHF	0.94	0.94	0.94	0.94	
Peak 15-min volume, v15	516	159	215	0	
Trucks and buses	3	3	3	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.985	0.985	0.985	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2096	646	875	0	pc/h
Volume ratio, VR		0.421			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.6	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	646	lc/h
Weaving lane changes, LCW	886	lc/h
Non-weaving vehicle index, INW	314	
Non-weaving lane change, LCNW	1209	lc/h
Total lane changes, LCALL	2095	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.197

Average weaving speed, SW	63.5	mi/h
Average non-weaving speed, SNW	62.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	62.9	mi/h
Weaving segment density, D	19.2	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.634	
Weaving segment flow rate, v	3563	veh/h
Weaving segment capacity, cW	5623	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6912	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2400	2062	c
		Maximum	Analyzed	
v/c ratio		1.00	0.634	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3138	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	279	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	92	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3138	279	92	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	835	74	24	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3388	301	99	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 3388 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3689	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3388 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3689	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.428	
Space mean speed in ramp influence area,	S_R = 59.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 59.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3417	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	92	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	279	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3417	92	279	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	909	24	74	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3690	99	301	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 3690 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3789	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3690 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3789	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A =$ 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.451	
Space mean speed in ramp influence area,	S_R = 59.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 59.0	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	SOuth of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3509	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	933	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	1894	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1894	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	66.2	mi/h
Number of lanes, N	2	
Density, D	28.6	pc/mi/ln
Level of service, LOS	D	

2035 General Plan Buildout AM

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3899	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1037	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1438	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1438	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	72.9	mi/h
Number of lanes, N	3	
Density, D	19.7	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3226	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	673	vph
Length of first accel/decel lane	530	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1078	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3226	673	1078	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	858	179	287	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3569	745	1147	pcph

Estimation of V12 Merge Areas

L_{EQ} = 586.72 (Equation 13-6 or 13-7)

P_{FM} = 0.592 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2114 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4314	7200	No
v_3 or v_{av34}	1455 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2114 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2859	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.352	
Space mean speed in ramp influence area,	S_R = 62.1	mph
Space mean speed in outer lanes,	S_0 = 69.6	mph
Space mean speed for all vehicles,	S = 64.4	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4304	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1078	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	673	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4304	1078	673	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1145	287	179	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4762	1193	745	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.586 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3285 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4762	7200	No
$v_{FO} = v_F - v_R$	3569	7200	No
v_R	1193	2000	No
v_3 or v_{av34}	1477 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3285 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3285	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 30.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.535

Space mean speed in ramp influence area, S_R = 56.4 mph

Space mean speed in outer lanes, S_0 = 78.2 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	Scott/Clinton Keith
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4304	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1145	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1587	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1587	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	71.2	mi/h
Number of lanes, N	3	
Density, D	22.3	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: AM Peak
Freeway/Dir of Travel: I-215 North
Junction: Clinton Keith On
Jurisdiction:
Analysis Year: 2035
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4107	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	197	vph
Length of first accel/decel lane	410	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1024	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4107	197	1024	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1092	52	272	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4544	218	1133	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2676 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4762	7200	No
v_3 or v_{av34}	1868 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2676 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2894	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.363

Space mean speed in ramp influence area, S_R = 61.8 mph

Space mean speed in outer lanes, S_0 = 68.1 mph

Space mean speed for all vehicles, S = 64.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3083	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1024	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	925	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3083	1024	925	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	820	272	246	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3411	1133	1023	pcph

Estimation of V12 Merge Areas

L_{EQ} = 711.42 (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2037 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4544	7200	No
v_3 or v_{av34}	1374 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2037 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3170	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.365

Space mean speed in ramp influence area, S_R = 61.7 mph

Space mean speed in outer lanes, S_0 = 69.9 mph

Space mean speed for all vehicles, S = 63.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4008	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	925	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1024	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4008		925		1024		vph
Peak-hour factor, PHF	0.94		0.94		0.94		
Peak 15-min volume, v15	1066		246		272		v
Trucks and buses	8		8		8		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4434	1023	1133	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.602 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3077 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4434	7200	No
$v_{FO} = v_F - v_R$	3411	7200	No
v_R	1023	2000	No
v_3 or v_{av34}	1357 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3077 (Equation 13-15, 13-16, 18, or 19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3077	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.520

Space mean speed in ramp influence area, S_R = 56.9 mph

Space mean speed in outer lanes, S_0 = 78.7 mph

Space mean speed for all vehicles, S = 62.1 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4008	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1066	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1478	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1478	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	72.5	mi/h
Number of lanes, N	3	
Density, D	20.4	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road On
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3072	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	936	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	879	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3072	936	879	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	817	249	234	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3399	1036	935	pcph

Estimation of V12 Merge Areas

L_{EQ} = 665.89 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2025 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4435	7200	No
v_3 or v_{av34}	1374 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2025 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3061	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.359

Space mean speed in ramp influence area, S_R = 61.9 mph

Space mean speed in outer lanes, S_0 = 69.9 mph

Space mean speed for all vehicles, S = 64.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3951	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	879	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	936	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3951	879	936	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1051	234	249	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4371	973	1036	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.606 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3032 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4371	7200	No
$v_{FO} = v_F - v_R$	3398	7200	No
v_R	973	2000	No
v_3 or v_{av34}	1339 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3032 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3032	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.516

Space mean speed in ramp influence area, S_R = 57.0 mph

Space mean speed in outer lanes, S_0 = 78.8 mph

Space mean speed for all vehicles, S = 62.3 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	Los Alamos/MHSR
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3951	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1051	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1457	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1457	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	72.7	mi/h
Number of lanes, N	3	
Density, D	20.0	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2687	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1264	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	200	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2687	1264	200	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	715	336	53	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2973	1398	221	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1771 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4371	7200	No
v_3 or v_{av34}	1202 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1771 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3169	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.368	
Space mean speed in ramp influence area,	S_R = 61.6	mph
Space mean speed in outer lanes,	S_0 = 70.5	mph
Space mean speed for all vehicles,	S = 63.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	2487	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	200	vph
Length of first accel/decel lane	725	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1264	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2487	200	1264	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	661	53	336	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2752	221	1398	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1645 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2973	7200	No
v_3 or v_{av34}	1107 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1645 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	1866	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 15.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.295

Space mean speed in ramp influence area, S_R = 63.8 mph

Space mean speed in outer lanes, S_0 = 70.8 mph

Space mean speed for all vehicles, S = 66.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3002	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	515	vph
Length of first accel/decel lane	140	ft
Length of second accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	200	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3002	515	200	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	798	137	53	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3321	570	221	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3321 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3321	4800	No
$v_{FO} = v_F - v_R$	2751	4800	No
v_R	570	4000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3321 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3321	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 19.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.479

Space mean speed in ramp influence area, S_R = 58.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 58.1 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 North
From/To:	South of MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3002	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	798	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1661	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1661	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	70.2	mi/h
Number of lanes, N	2	
Density, D	23.7	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5276	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1403	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1908	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1908	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	65.9	mi/h
Number of lanes, N	3	
Density, D	29.0	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5276	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	680	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1397	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5276	680	1397	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1403	181	372	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5725	738	1516	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.583 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3645 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5725	7200	No
$v_{FO} = v_F - v_R$	4987	7200	No
v_R	738	2000	No
v_3 or v_{av34}	2080 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3645 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3645	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 33.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.494	
Space mean speed in ramp influence area,	S_R = 57.7	mph
Space mean speed in outer lanes,	S_0 = 75.9	mph
Space mean speed for all vehicles,	S = 63.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: AM Peak
Freeway/Dir of Travel: I-215 South
Junction: Scott Road On
Jurisdiction:
Analysis Year: 2035
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4596	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1397	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	680	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4596	1397	680	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1222	372	181	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4987	1516	738	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1064.04 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2957 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6503	7200	No
v_3 or v_{av34}	2030 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	

If yes, v_{12A} = 2957 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4473	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 36.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.624	
Space mean speed in ramp influence area,	S_R = 53.6	mph
Space mean speed in outer lanes,	S_0 = 67.5	mph
Space mean speed for all vehicles,	S = 57.3	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	Scott/Clinton
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5993	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1594	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	2168	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2168	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	59.9	mi/h
Number of lanes, N	3	
Density, D	36.2	pc/mi/ln
Level of service, LOS	E	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Clinton Keith Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5993	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1005	vph
Length of first accel/decel lane	275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	426	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2560	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5993	1005	426	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1594	267	113	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6503	1091	462	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.547 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4053 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6503	7200	No
$v_{FO} = v_F - v_R$	5412	7200	No
v_R	1091	2000	No
v_3 or v_{av34}	2450 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4053 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4053	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 36.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.526	
Space mean speed in ramp influence area,	S_R = 56.7	mph
Space mean speed in outer lanes,	S_0 = 74.4	mph
Space mean speed for all vehicles,	S = 62.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4988	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	426	vph
Length of first accel/decel lane	680	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	642	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4988	426	642	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1327	113	171	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5413	462	697	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3229 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5875	7200	No
v_3 or v_{av34}	2184 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3229 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3691	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.430	
Space mean speed in ramp influence area,	S_R = 59.7	mph
Space mean speed in outer lanes,	S_0 = 66.9	mph
Space mean speed for all vehicles,	S = 62.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5414	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	642	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	426	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5414	642	426	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1440	171	113	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5875	697	462	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.595 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3495 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6572	7200	No
v_3 or v_{av34}	2380 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3495 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4192	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 34.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.536	
Space mean speed in ramp influence area,	S_R = 56.4	mph
Space mean speed in outer lanes,	S_0 = 66.0	mph
Space mean speed for all vehicles,	S = 59.5	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	6056	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1611	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	2190	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2190	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	59.3	mi/h
Number of lanes, N	3	
Density, D	36.9	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	6056	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1339	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	861	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6056	1339	861	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1611	356	229	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6571	1453	934	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.529 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4160 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6571	7200	No
$v_{FO} = v_F - v_R$	5118	7200	No
v_R	1453	2000	No
v_3 or v_{av34}	2411 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4160 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4160	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 38.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.559	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = 74.6	mph
Space mean speed for all vehicles,	S = 61.4	mph

HCS 2010: Freeway Weaving Release 6.80

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency/Co.:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Dir of Travel:	I-215 SOuth
Weaving Location:	Los Alamos ON/MHSR Off
Analysis Year:	2035
Description:	Costco Murrieta

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	73	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2400	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2690	861	1165	0	veh/h
Peak hour factor, PHF	0.94	0.94	0.94	0.94	
Peak 15-min volume, v15	715	229	310	0	
Trucks and buses	4	4	4	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.980	0.980	0.980	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2919	934	1264	0	pc/h
Volume ratio, VR		0.430			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.6	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	934	lc/h
Weaving lane changes, LCW	1174	lc/h
Non-weaving vehicle index, INW	438	
Non-weaving lane change, LCNW	1379	lc/h
Total lane changes, LCALL	2553	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.230

Average weaving speed, SW	62.2	mi/h
Average non-weaving speed, SNW	58.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	59.8	mi/h
Weaving segment density, D	28.5	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.916	
Weaving segment flow rate, v	5018	veh/h
Weaving segment capacity, cW	5478	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7015	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2400	2055	c
		Maximum	Analyzed	
v/c ratio		1.00	0.916	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	AM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4413	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	431	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	132	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4413	431	132	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1174	115	35	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: AM Peak
Freeway/Dir of Travel: I-215 South
Junction: MHSR On
Jurisdiction:
Analysis Year: 2035
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4844	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	132	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	431	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4844	132	431	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1288	35	115	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5256	143	468	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5256 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5399	4800	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5256 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5399	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 43.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.142

Space mean speed in ramp influence area, S_R = 37.6 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 37.6 mph

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4789	468	143	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 4789 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5257	4800	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4789 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5257	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 41.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.020

Space mean speed in ramp influence area, S_R = 41.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 41.4 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	AM Peak
Freeway/Direction:	I-215 South
From/To:	SOuth of MHSR
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4977	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1324	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	2700	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2700	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	43.0	mi/h
Number of lanes, N	2	
Density, D	62.8	pc/mi/ln
Level of service, LOS	F	

2035 General Plan Buildout PM

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	6279	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1670	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2316	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2316	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	55.8	mi/h
Number of lanes, N	3	
Density, D	41.5	pc/mi/ln
Level of service, LOS	E	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5694	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	585	vph
Length of first accel/decel lane	530	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	692	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5694	585	692	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1514	156	184	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6300	647	736	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1150.18 (Equation 13-6 or 13-7)

P_{FM} = 0.592 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3732 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6947	7200	No
v_3 or v_{av34}	2568 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3732 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4379	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.595

Space mean speed in ramp influence area, S_R = 54.6 mph

Space mean speed in outer lanes, S_0 = 64.9 mph

Space mean speed for all vehicles, S = 58.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	6386	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	692	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	585	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6386	692	585	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1698	184	156	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7065	766	647	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.548 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4219 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7065	7200	No
$v_{FO} = v_F - v_R$	6299	7200	No
v_R	766	2000	No
v_3 or v_{av34}	2846 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4365 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4365	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 40.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.497

Space mean speed in ramp influence area, S_R = 57.6 mph

Space mean speed in outer lanes, S_0 = 73.5 mph

Space mean speed for all vehicles, S = 62.8 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	Scott/Clinton Keith
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	6386	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1698	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2355	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2355	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	54.7	mi/h
Number of lanes, N	3	
Density, D	43.1	pc/mi/ln
Level of service, LOS	E	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: PM Peak
Freeway/Dir of Travel: I-215 North
Junction: Clinton Keith On
Jurisdiction:
Analysis Year: 2035
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	6312	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	200	vph
Length of first accel/decel lane	410	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	996	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6312	200	996	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1679	53	265	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6983	221	1102	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4113 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7204	7200	Yes
v_3 or v_{av34}	2870 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 4283 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4504	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.645	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 64.1	mph
Space mean speed for all vehicles,	S = 56.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5316	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	996	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1049	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5316	996	1049	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1414	265	279	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5882	1102	1161	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1233.58 (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3512 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6984	7200	No
v_3 or v_{av34}	2370 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3512 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4614	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.665

Space mean speed in ramp influence area, S_R = 52.4 mph

Space mean speed in outer lanes, S_0 = 66.1 mph

Space mean speed for all vehicles, S = 56.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	6365	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1049	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	996	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6365	1049	996	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1693	279	265	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7042	1161	1102	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.531 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4281 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7042	7200	No
$v_{FO} = v_F - v_R$	5881	7200	No
v_R	1161	2000	No
v_3 or v_{av34}	2761 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4342 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4342	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 39.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.532	
Space mean speed in ramp influence area,	S_R = 56.5	mph
Space mean speed in outer lanes,	S_0 = 73.5	mph
Space mean speed for all vehicles,	S = 62.0	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	6365	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1693	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2347	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2347	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	3	
Density, D	42.7	pc/mi/ln
Level of service, LOS	E	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5411	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	954	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	897	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5411	954	897	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1439	254	239	v
Trucks and buses	8	8	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5987	1055	954	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1223.79 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3566 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7042	7200	No
v_3 or v_{av34}	2421 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3566 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4621	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.672	
Space mean speed in ramp influence area,	S_R = 52.2	mph
Space mean speed in outer lanes,	S_0 = 65.7	mph
Space mean speed for all vehicles,	S = 56.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	6307	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	897	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	954	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6307	897	954	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1677	239	254	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6978	992	1055	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.540 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4224 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6978	7200	No
$v_{FO} = v_F - v_R$	5986	7200	No
v_R	992	2000	No
v_3 or v_{av34}	2754 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4278 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4278	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 39.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.517	
Space mean speed in ramp influence area,	S_R = 57.0	mph
Space mean speed in outer lanes,	S_0 = 73.5	mph
Space mean speed for all vehicles,	S = 62.4	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	Los Alamos/MHSR
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	6307	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1677	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2326	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2326	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	55.5	mi/h
Number of lanes, N	3	
Density, D	41.9	pc/mi/ln
Level of service, LOS	E	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5018	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1289	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	573	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5018	1289	573	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1335	343	152	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5552	1426	634	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3307 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6978	7200	No
v_3 or v_{av34}	2245 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3307 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4733	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 37.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.719	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 66.7	mph
Space mean speed for all vehicles,	S = 55.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4446	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	573	vph
Length of first accel/decel lane	725	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1289	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4446	573	1289	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1182	152	343	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4919	634	1426	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2941 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5553	7200	No
v_3 or v_{av34}	1978 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2941 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3575	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.409

Space mean speed in ramp influence area, S_R = 60.3 mph

Space mean speed in outer lanes, S_0 = 67.7 mph

Space mean speed for all vehicles, S = 62.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR Off
Jurisdiction:	
Analysis Year:	
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4971	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	525	vph
Length of first accel/decel lane	140	ft
Length of second accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	573	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4971	525	573	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1322	140	152	v
Trucks and buses	8	8	8	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.962	0.962	0.962	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5500	581	634	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5500 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5500	4800	Yes
$v_{FO} = v_F - v_R$	4919	4800	Yes
v_R	581	4000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5500 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5500	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_D$ = 37.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.480	
Space mean speed in ramp influence area,	S_R = 58.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 58.1	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 North
From/To:	South of MHSR
Jurisdiction:	
Analysis Year:	
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4971	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1322	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2750	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2750	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	41.1	mi/h
Number of lanes, N	2	
Density, D	66.9	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	North of Scott Road
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5358	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1425	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1938	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1938	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	65.3	mi/h
Number of lanes, N	3	
Density, D	29.7	pc/mi/ln
Level of service, LOS	D	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5358	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	763	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	883	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5358	763	883	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1425	203	235	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5814	828	958	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.577 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3703 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5814	7200	No
$v_{FO} = v_F - v_R$	4986	7200	No
v_R	828	2000	No
v_3 or v_{av34}	2111 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3703 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3703	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 34.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.503

Space mean speed in ramp influence area, S_R = 57.4 mph

Space mean speed in outer lanes, S_0 = 75.7 mph

Space mean speed for all vehicles, S = 63.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4596	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	883	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	763	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4596	883	763	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1222	235	203	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4987	958	828	pcph

Estimation of V12 Merge Areas

L_{EQ} = 944.63 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2957 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5945	7200	No
v_3 or v_{av34}	2030 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2957 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3915	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.478	
Space mean speed in ramp influence area,	S_R = 58.2	mph
Space mean speed in outer lanes,	S_0 = 67.5	mph
Space mean speed for all vehicles,	S = 61.1	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	
Freeway/Direction:	I-215 South
From/To:	Scott/Clinton
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5478	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1457	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1981	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1981	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	64.3	mi/h
Number of lanes, N	3	
Density, D	30.8	pc/mi/ln
Level of service, LOS	D	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Clinton Keith Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5478	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1221	vph
Length of first accel/decel lane	275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	295	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2560	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5478	1221	295	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1457	325	78	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5944	1325	320	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.550 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3868 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5944	7200	No
$v_{FO} = v_F - v_R$	4619	7200	No
v_R	1325	2000	No
v_3 or v_{av34}	2076 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3868 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3868	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 35.0+ pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.547

Space mean speed in ramp influence area, S_R = 56.0 mph

Space mean speed in outer lanes, S_0 = 75.9 mph

Space mean speed for all vehicles, S = 61.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4257	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	295	vph
Length of first accel/decel lane	680	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	582	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4257	295	582	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1132	78	155	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4619	320	632	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2755 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4939	7200	No
v_3 or v_{av34}	1864 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2755 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3075	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.358	
Space mean speed in ramp influence area,	S_R = 61.9	mph
Space mean speed in outer lanes,	S_0 = 68.1	mph
Space mean speed for all vehicles,	S = 64.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: PM Peak
Freeway/Dir of Travel: I-215 South
Junction: CLinton Keith Road On
Jurisdiction:
Analysis Year: 2035
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4552	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	582	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	295	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4552	582	295	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1211	155	78	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4939	632	320	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.595 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2938 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5571	7200	No
v_3 or v_{av34}	2001 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2938 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3570	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.416	
Space mean speed in ramp influence area,	S_R = 60.1	mph
Space mean speed in outer lanes,	S_0 = 67.6	mph
Space mean speed for all vehicles,	S = 62.6	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5134	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1365	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1857	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1857	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	66.9	mi/h
Number of lanes, N	3	
Density, D	27.8	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5134	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1295	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	833	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5134	1295	833	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1365	344	222	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5571	1405	904	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.556 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3722 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5571	7200	No
$v_{FO} = v_F - v_R$	4166	7200	No
v_R	1405	2000	No
v_3 or v_{av34}	1849 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3722 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3722	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.554	
Space mean speed in ramp influence area,	S_R = 55.8	mph
Space mean speed in outer lanes,	S_0 = 76.8	mph
Space mean speed for all vehicles,	S = 61.4	mph

HCS 2010: Freeway Weaving Release 6.80

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency/Co.:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Dir of Travel:	I-215 SOuth
Weaving Location:	Los Alamos ON/MHSR Off
Analysis Year:	2035
Description:	Costco Murrieta

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	73	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2400	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1879	833	1127	0	veh/h
Peak hour factor, PHF	0.94	0.94	0.94	0.94	
Peak 15-min volume, v15	500	222	300	0	
Trucks and buses	4	4	4	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.980	0.980	0.980	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2039	904	1223	0	pc/h
Volume ratio, VR		0.511			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.6	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	904	lc/h
Weaving lane changes, LCW	1144	lc/h
Non-weaving vehicle index, INW	306	
Non-weaving lane change, LCNW	1197	lc/h
Total lane changes, LCALL	2341	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.215

Average weaving speed, SW	62.8	mi/h
Average non-weaving speed, SNW	59.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	61.3	mi/h
Weaving segment density, D	22.7	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.886	
Weaving segment flow rate, v	4085	veh/h
Weaving segment capacity, cW	4609	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7950	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2400	1983	c
		Maximum	Analyzed	
v/c ratio		1.00	0.886	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3546	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	257	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	128	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3546	257	128	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	943	68	34	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3848	279	139	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3848 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4127	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3848 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4127	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 33.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.514	
Space mean speed in ramp influence area,	S_R = 57.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 57.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	PM Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3803	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	128	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	257	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3803	128	257	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1011	34	68	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4127	139	279	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 4127 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4266	4800	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4127 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4266	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 34.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.557	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 55.7	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	PM Peak
Freeway/Direction:	I-215 South
From/To:	SOuth of MHSR
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	3931	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1045	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	2133	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2133	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	60.8	mi/h
Number of lanes, N	2	
Density, D	35.1	pc/mi/ln
Level of service, LOS	E	

2035 General Plan Buildout Saturday Midday

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Scott/Clinton Keith
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5044	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1341	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1824	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1824	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	67.5	mi/h
Number of lanes, N	3	
Density, D	27.0	pc/mi/ln
Level of service, LOS	D	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: Sat Peak
Freeway/Dir of Travel: I-215 North
Junction: Clinton Keith On
Jurisdiction:
Analysis Year: 2035
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4961	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	83	vph
Length of first accel/decel lane	410	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	690	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4961	83	690	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1319	22	184	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5383	90	749	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3170 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5473	7200	No
v_3 or v_{av34}	2213 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3170 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3260	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.394	
Space mean speed in ramp influence area,	S_R = 60.8	mph
Space mean speed in outer lanes,	S_0 = 66.8	mph
Space mean speed for all vehicles,	S = 63.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4271	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	690	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	713	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4271	690	713	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1136	184	190	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4634	749	774	pcph

Estimation of V12 Merge Areas

L_{EQ} = 890.96 (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2767 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5383	7200	No
v_3 or v_{av34}	1867 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	

If yes, v_{12A} = 2767 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3516	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.403	
Space mean speed in ramp influence area,	S_R = 60.5	mph
Space mean speed in outer lanes,	S_0 = 68.1	mph
Space mean speed for all vehicles,	S = 62.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Clinton Keith Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4984	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	713	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	690	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4984	713	690	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1326	190	184	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5408	774	749	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.589 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3504 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5408	7200	No
$v_{FO} = v_F - v_R$	4634	7200	No
v_R	774	2000	No
v_3 or v_{av34}	1904 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3504 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3504	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 32.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.498	
Space mean speed in ramp influence area,	S_R = 57.6	mph
Space mean speed in outer lanes,	S_0 = 76.6	mph
Space mean speed for all vehicles,	S = 63.1	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4984	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1326	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1803	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1803	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	67.9	mi/h
Number of lanes, N	3	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4316	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	667	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	627	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4316	667	627	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1148	177	167	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4683	724	680	pcph

Estimation of V12 Merge Areas

L_{EQ} = 873.90 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2790 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5407	7200	No
v_3 or v_{av34}	1893 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2790 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3514	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.406

Space mean speed in ramp influence area, S_R = 60.4 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 62.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	Los Alamos Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4944	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	627	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	667	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4944	627	667	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1315	167	177	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5365	680	724	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.595 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3466 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5365	7200	No
$v_{FO} = v_F - v_R$	4685	7200	No
v_R	680	2000	No
v_3 or v_{av34}	1899 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3466 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3466	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 32.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.489	
Space mean speed in ramp influence area,	S_R = 57.8	mph
Space mean speed in outer lanes,	S_0 = 76.6	mph
Space mean speed for all vehicles,	S = 63.3	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	Los Alamos/MHSR
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4944	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1315	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	1788	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	1788	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	68.1	mi/h
Number of lanes, N	3	
Density, D	26.2	pc/mi/ln
Level of service, LOS	D	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4042	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	902	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	316	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4042	902	316	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1075	240	84	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4386	979	343	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2613 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5365	7200	No
v_3 or v_{av34}	1773 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2613 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3592	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.417	
Space mean speed in ramp influence area,	S_R = 60.1	mph
Space mean speed in outer lanes,	S_0 = 68.4	mph
Space mean speed for all vehicles,	S = 62.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	3726	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	316	vph
Length of first accel/decel lane	725	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	902	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1260	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3726	316	902	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	991	84	240	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4043	343	979	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2417 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4386	7200	No
v_3 or v_{av34}	1626 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2417 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2760	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.332	
Space mean speed in ramp influence area,	S_R = 62.7	mph
Space mean speed in outer lanes,	S_0 = 68.9	mph
Space mean speed for all vehicles,	S = 64.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 North
Junction:	MHSR Off
Jurisdiction:	
Analysis Year:	Existing
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4094	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	367	vph
Length of first accel/decel lane	140	ft
Length of second accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	316	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4094	367	316	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1089	98	84	v
Trucks and buses	4	4	4	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.980	0.980	0.980	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4442	398	343	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4442 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4442	4800	No
$v_{FO} = v_F - v_R$	4044	4800	No
v_R	398	4000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4442 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4442	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.464	
Space mean speed in ramp influence area,	S_R = 58.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 58.6	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 North
From/To:	South of MHSR
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4094	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1089	v
Trucks and buses	4	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.980	
Driver population factor, fp	1.00	
Flow rate, vp	2221	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2221	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	58.5	mi/h
Number of lanes, N	2	
Density, D	38.0	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 South
From/To:	Scott/Clinton
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5643	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1501	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	2031	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2031	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	63.2	mi/h
Number of lanes, N	3	
Density, D	32.1	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Clinton Keith Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5643	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	681	vph
Length of first accel/decel lane	275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	193	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2560	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5643		681		193		vph
Peak-hour factor, PHF	0.94		0.94		0.94		
Peak 15-min volume, v15	1501		181		51		v
Trucks and buses	3		3		3		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6093	735	208	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.574 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3810 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6093	7200	No
$v_{FO} = v_F - v_R$	5358	7200	No
v_R	735	2000	No
v_3 or v_{av34}	2283 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3810 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3810	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.494

Space mean speed in ramp influence area, S_R = 57.7 mph

Space mean speed in outer lanes, S_0 = 75.1 mph

Space mean speed for all vehicles, S = 63.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	CLinton Keith Road On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5155	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	193	vph
Length of first accel/decel lane	680	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	655	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5155	193	655	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1371	51	174	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5566	208	707	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.597 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3320 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5774	7200	No
v_3 or v_{av34}	2246 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3320 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3528	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.406

Space mean speed in ramp influence area, S_R = 60.4 mph

Space mean speed in outer lanes, S_0 = 66.7 mph

Space mean speed for all vehicles, S = 62.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst: NDD
Agency/Co.:
Date performed: 3/27/2018
Analysis time period: Sat Peak
Freeway/Dir of Travel: I-215 South
Junction: CLinton Keith Road On
Jurisdiction:
Analysis Year: 2035
Description: Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5155	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	665	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	193	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1335	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5155	665	193	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1371	177	51	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5566	718	208	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.595 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3311 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6284	7200	No
v_3 or v_{av34}	2255 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3311 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4029	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.497	
Space mean speed in ramp influence area,	S_R = 57.6	mph
Space mean speed in outer lanes,	S_0 = 66.7	mph
Space mean speed for all vehicles,	S = 60.6	mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 South
From/To:	Clinton/Los Alamos
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	5820	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1548	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	2095	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2095	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	61.7	mi/h
Number of lanes, N	3	
Density, D	33.9	pc/mi/ln
Level of service, LOS	D	

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	Scott Road Off
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	73.0	mph
Volume on freeway	5820	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1265	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	814	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2575	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5820	1265	814	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1548	336	216	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6284	1366	879	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.540 Using Equation 9

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4022 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6284	7200	No
$v_{FO} = v_F - v_R$	4918	7200	No
v_R	1366	2000	No
v_3 or v_{av34}	2262 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4022 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4022	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 37.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.551

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 75.2 mph

Space mean speed for all vehicles, S = 61.6 mph

HCS 2010: Freeway Weaving Release 6.80

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency/Co.:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Dir of Travel:	I-215 SOuth
Weaving Location:	Los Alamos ON/MHSR Off
Analysis Year:	2035
Description:	Costco Murrieta

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	73	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2400	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2640	814	1101	0	veh/h
Peak hour factor, PHF	0.94	0.94	0.94	0.94	
Peak 15-min volume, v15	702	216	293	0	
Trucks and buses	3	3	3	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.985	0.985	0.985	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2851	879	1189	0	pc/h
Volume ratio, VR		0.420			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.6	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	879	lc/h
Weaving lane changes, LCW	1119	lc/h
Non-weaving vehicle index, INW	428	
Non-weaving lane change, LCNW	1365	lc/h
Total lane changes, LCALL	2484	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.225

Average weaving speed, SW	62.4	mi/h
Average non-weaving speed, SNW	58.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	60.2	mi/h
Weaving segment density, D	27.2	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.862	
Weaving segment flow rate, v	4846	veh/h
Weaving segment capacity, cW	5624	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6911	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2400	2063	c
		Maximum	Analyzed	
v/c ratio		1.00	0.862	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On Loop
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4268	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	379	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	125	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4268	379	125	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1135	101	33	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4609	409	135	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 4609 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5018	4800	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4609 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5018	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 40.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.861

Space mean speed in ramp influence area, S_R = 46.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 46.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.80

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	NDD
Agency/Co.:	
Date performed:	3/27/2018
Analysis time period:	Sat Peak
Freeway/Dir of Travel:	I-215 South
Junction:	MHSR On
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	73.0	mph
Volume on freeway	4647	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	125	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	379	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1150	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4647	125	379	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	1236	33	101	v
Trucks and buses	3	3	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	0.985	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5018	135	409	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5018 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5153	4800	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5018 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5153	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 41.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.954

Space mean speed in ramp influence area, S_R = 43.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 43.4 mph

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	NDD
Agency or Company:	
Date Performed:	3/27/2018
Analysis Time Period:	Sat Peak
Freeway/Direction:	I-215 South
From/To:	SOuth of MHSR
Jurisdiction:	
Analysis Year:	2035
Description:	Costco Murrieta

Flow Inputs and Adjustments

Volume, V	4772	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1269	v
Trucks and buses	3	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.985	
Driver population factor, fp	1.00	
Flow rate, vp	2576	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.62	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.2	mi/h
Free-flow speed, FFS	73.2	mi/h

LOS and Performance Measures

Flow rate, vp	2576	pc/h/ln
Free-flow speed, FFS	73.2	mi/h
Average passenger-car speed, S	47.5	mi/h
Number of lanes, N	2	
Density, D	54.2	pc/mi/ln
Level of service, LOS	F	

Appendix H Costco Trip Generation Details

APPENDIX H. COSTCO TRIP ESTIMATES

COSTCO WHOLESALE CHARACTERISTICS

For the past 15 years, Kittelson & Associates, Inc. (KAI) has maintained a database of traffic data and travel characteristics for Costco Wholesale. This includes facilities with gas stations, which are included in the overall trip generation. The database contains transportation information such as trip rates, trip type percentages, and parking demand for Costco locations in the United States, as well as Canada and Mexico. A large portion of the data is from existing Costco sites in the Pacific Northwest. The data base is updated and refined each time new Costco traffic counts or information become available to KAI. Costco has recently started to add car washes at some sites, so data on the trip impact associated with the car washes is minimal. However, based on transaction data from a number of Costco sites with car washes, there is a very high rate of internalization between the car wash and Warehouse or fuel station.

Costco has invested significant effort into developing this site-specific trip generation database for both their warehouses and their fuel stations because of the unique characteristics of Costco customer travel that exists due to membership requirements and the nature of Costco sales. These unique elements apply to the trip generation and distribution for Costco warehouses, Costco Gasoline fuel stations, and the interaction of trips between the two. Base on the database, Costco sites typically generate higher traffic volumes than other land uses with similar building sizes. Costco Gasoline fuel stations all function as ancillary uses to the main Costco Warehouses. Like other Costco services, fuel can only be purchased by members. Payment can only be made with credit card and, unlike traditional gas/service station operations, there are no other automotive services (such as repairs) or other type of sales (including food or sundries) associated with the Costco Gasoline facility. All Costco Gasoline facilities have a minimum of one attendant working at all times who is responsible for expediting members' use of the fuel pumps, directing entering vehicles to available pump locations, and managing on-site queues from the pumps.

Like the Costco Gasoline fuel stations, the Costco Car Wash is for members only and requires a Costco membership card for use. The car wash is typically staffed by two attendants who are trained to manage the circulation of cars at the payment kiosks and entering and exiting the car wash facility. The car wash, like the fuel station, functions as an ancillary use to the Warehouse with significant internalization.

TRIP CHARACTERISTICS

In addition to overall trip rates, the Costco database includes customer survey information to provide the percentage of primary, pass-by, and diverted trips, as further described below.

- *Primary Trips:* entirely new trips on the roadway system for the express purpose of driving to and from Costco
- *Pass-by Trips:* existing trips that are on roadways adjacent to the site which allow motorists to turn into the Costco development and then continue on to their ultimate destination

when their shopping is concluded

- *Diverted-Linked Trips:* existing trips on nearby roadways in which motorists make a decision to drive out-of-direction for a distance to stop at Costco and, when their shopping is concluded, continue on their trip to the ultimate destination

We recommend that the trip generation prepared for the Murrieta Costco site account for pass-by and diverted trip impacts at the study intersections, subject to applicable review agencies approvals. Typically, pass-by trips have an impact only at the site-access driveways, whereas the impact of diverted trips could extend throughout the study area intersections (these would be modeled similar to net new trips at many or all of the study area intersections). The key difference between inclusion and omission of the diverted trips is related to the overall vehicle miles traveled (VMT), as diverted trips do not create the same system impacts (air quality, noise, and freeway impacts) that entirely new trips to the system could create.

The Costco sites in the database are located in a variety of locations, some adjacent to freeways/arterials, while others are located a couple of blocks or more away. This variation in warehouse locations results in differences in diverted and pass-by trips between locations. For example, sites adjacent to major arterial roadways tend to exhibit a high percentage of pass-by trips and a lower percentage of diverted trips. Similarly, Costco facilities located a block or two away from a freeway tend to experience a higher percentage of diverted trips. Given these factors, diverted and pass-by trips should be considered together with engineering judgment used to account for these two trip characteristics.

TRIP GENERATION ESTIMATE

The Costco database was queried to develop the trip generation estimate for the Murrieta Costco since the database provides use-specific data that most accurately represents the anticipated traffic characteristics of Costco. The database includes 20 Costco Warehouses with fuel stations in California, Oregon, Washington, Montana, Utah, and Colorado. The locations include warehouses ranging in size from 120,000 square-feet to 162,115 square-feet, with an average size of 143,102 square-feet. The Costco Gasoline fuel stations that accompany these warehouses range between 12 and 16 fuel pumps. The trip generation for the fuel stations is correlated to the overall warehouse size regardless of the number of fueling positions. The warehouses included in the trip generation are located in the following cities in the Western United States:

- Issaquah
- Vancouver
- Spokane
- Simi Valley
- Aurora
- Vallejo
- Eugene
- Medford
- Tumwater
- Sandy
- Santa Clara
- Laguna Niguel
- Salem
- Morena
- South San Francisco
- Portland
- Helena
- Missoula
- Albany
- Salt Lake City

Table 1 summarizes the average trip rates recorded at Costco warehouses as well as portion of primary, pass-by, and diverted trips. Due to the high rate of internalization anticipated between the car wash, fuel station, and Warehouse, and fact that the car wash and fuel station act as ancillary use to the Warehouse, the trip generation is expected to account for the car wash trips and fuel station trips.

Table 1. Average Trip Characteristics for a Costco Warehouse with Fuel Station

Land Use/Trip Type	Weekday Daily Trip Rate (per KSF)	Weekday PM Peak Hour			Saturday Midday Peak Hour		
		Trip Rate (per KSF)	Portion In	Portion Out	Trip Rate (per KSF)	Portion In	Portion Out
Costco Warehouse With Fuel Station	81.9	7.2	49%	51%	9.9	51%	49%
Portion Primary Trips	*No Data*	*35.2%*			*50.3%*		
Portion Pass-by Trips	*No Data*	*33.3%*			*29.0%*		
Portion Diverted Trips	*No Data*	*31.5%*			*20.7%*		

Table 2 presents trip generation estimates for the proposed Murrieta Costco Warehouse and fuel station based on the data shown in Table 1. Note that adjustments for transportation demand management (TDM) or other reductions are not made in Table 2. In addition, diverted trips are not included in the table as these trips are expected to come from Interstate 215 and function as new trips at the study intersections. However, it should be noted that these trips do not create similar system capacity or environmental impacts as new trips to the system because these trips generally provide no impact beyond the study area.

Table 2. Proposed Murrieta Costco Warehouse Trip Generation Estimate (Costco Database)

Land Use/Trip Type	Size	Weekday Daily Trips	Weekday PM Peak Hour Trips			Saturday Middy Peak Hour Trips		
			Total	In	Out	Total	In	Out
Costco Warehouse With Fuel Center	153,362 SF	12,560	1,107	537	570	1,518	773	745
Pass-by Trips (33.3% weekday PM, 29.0% Sat mid)		*-4,182*	*-368*	*-184*	*-184*	*-440*	*-220*	*-220*
Net New Trips		**8,378**	**739**	**353**	**386**	**1,078**	**553**	**525**

Notes: While not accounted for in the trip generation for purposes of the traffic study, it is expected that 31.5% of weekday PM and 20.7% of Saturday midday peak hour trips will be diverted trips.

The number of weekday daily primary and pass-by trips was estimated using weekday PM peak hour trip type percentages.

The City's *Traffic Impact Analysis Preparation Guide* (Reference 1) indicates that a pass-by trip discount of up to 25% is allowed for appropriate land uses. Therefore, the trip generation estimate using Costco data was compared to the trip generation calculated using the standard reference manual, *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE, Reference 2), assuming a 25% pass-by rate shown in Table 3. Table 4 provides a side by side comparison of Costco database vs ITE trip generation which shows that the Costco database is significantly higher and therefore conservative.

Table 4. Proposed Murrieta Costco Warehouse Trip Generation Estimate (ITE Manual)

Land Use	Size (TSF)	Daily	Peak Hour	
			Weekday PM	Saturday Midday
ITE Rates				
Discount Club (857)	1	41.8	4.18	6.37
ITE Trip Generation				
Warehouse with Fuel	153.362	6,411	641	977
Pass-by Trips (25%)		*-1,603*	*-160*	*-244*
Net New Trips		**4,808**	**481**	**733**

Table 4. Proposed Murrieta Costco Warehouse with Fuel Station Trip Generation Comparison

Data Source	Daily Trip Generation Rate	Net New Trips		
		Weekday Daily	Weekday PM Peak Hour	Saturday Midday Peak Hour
Costco Database	-	8,378	739	1,078
ITE – Land Use Code 857	41.8	4,808	481	733

VINEYARD II TRIP ESTIMATES

The number of trips expected to be generated by the proposed Vineyard II development were estimated using rates in manual *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE, Reference 2). The Shopping Center land-use (ITE Code 820) was used as this use accounts for "an integrated group of commercial establishments," as is proposed for the site (Reference 2). Table 5 shows the estimated trip generation.

Table 5: Phase 2 Project Trip Generation

Land Use	Size	Weekday Daily	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Midday Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center (ITE Code 820)	79,900 SF	5,870	84	52	136	247	268	515	393	363	756
Pass-by trips (-25%)		*-1,468*	*-17*	*-17*	*-34*	*-64*	*-64*	*-128*	*-94*	*-94*	*-188*
Net New Trips		**4,402**	**67**	**35**	**102**	**183**	**204**	**387**	**299**	**269**	**568**

Note: The fitted curve equation provided by ITE was used for the trip generation estimate. Consistent with the commercial development just south of the site, a 25% pass-by trip rate was assumed, as documented in *The Vineyard Shopping Center Traffic Impact Analysis* (Reference 3).

As indicated in the table, the trip generation during the weekday AM peak hour is significantly lower than the weekday PM peak hour or Saturday midday peak hour, as with the Costco site. Therefore, it is recommended to analyze the weekday PM and Saturday midday peak hour conditions for the Vineyard II portion of the overall site as well.

Appendix I Approved/Proposed Projects Trip Generation Details

Approved/Proposed Projects

Project Name	Land Use	ITE	Units	Size	Weekday PM			Saturday Midday		
					Total	In	Out	Total	In	Out
Mitchell Crossing	Multi-family Residential	220	DU	331	205	132	73	172	86	86
	Specialty Retail	826	TSF	50	136	60	76	210	105	105
				Total	**341**	**192**	**149**	**382**	**191**	**191**
The Orchard	Shopping Center		TSF	436.735	1,633	786	847	2,105	1,095	1,010
				Pass-by (20%)	*326*	*163*	*163*	*421*	*211*	*211*
				Total	**1,307**	**623**	**684**	**1,684**	**884**	**800**
				Trips associated with 100 TSF	**299**	**143**	**157**	**386**	**202**	**183**
Vineyard Shopping Center (updated)	Shopping Center	820	TSF	30.149	269	129	140	401	209	192
	Hotel	310	RM	91	53	28	25	66	37	29
	Shopping Center	820	TSF	48.34	368	177	191	545	283	262
				Pass-by (25%)	*159*	*77*	*83*	*237*	*123*	*114*
				Total	**531**	**258**	**273**	**775**	**406**	**369**
Makena Hills	Medical Office	720	TSF	116.2	415	116	299	422	240	181
	Restaurants	931	TSF	9.3	70	47	23	101	59	41
	Hotel	310	RM	206	124	63	61	148	83	65
				Total	**608**	**226**	**382**	**671**	**383**	**288**
Adobe Springs	Single Family Detached Residential	210	DU	287	287	181	106	267	144	123
	Business Park	770	TSF	208.5	263	69	194	53	27	27
				Internal (5%)	*13*	*6*	*7*	-	-	-
				Total	**538**	**244**	**294**	**320**	**171**	**149**
Alderwood	Single Family Detached Residential	210	DU	10	10	6	4	9	5	4
Golden Cities Phase 3	Single Family Residential	210	DU	69	70	44	26	64	35	29
Golden Cities Phase 4	Single Family Residential	210	DU	126	127	80	47	117	63	54
Golden Cities Phase 5	Single Family Residential	210	DU	119	119	75	44	111	60	51
Junction	Discount Club	857	TSF	148.663	630	315	315	947	464	483
	Home Improvement Store	862	TSF	140.76	345	162	183	635	324	311
	Retail/Shopping Center	820	TSF	237.377	1,109	532	577	1,144	595	549
				Pass-by (25%)	*521*	*252*	*269*	*681*	*346*	*336*
				Total	**1,563**	**757**	**806**	**2,044**	**1,037**	**1,007**
Walmart	Discount Store	815	TSF	205	1,025	513	513	1,515	773	742
	Automobile Care Center	942	TSF	6.68	23	11	11	16	8	8
	Specialty Retail	826	TSF	13.8	37	16	21	58	29	29
	High-turn-over (sit-down) Restaurant	932	TSF	6.5	72	43	30	91	48	43
	Fast-Food with Drive-thru	934	TSF	6.2	210	109	101	366	187	179
	Gas Station w/ Food Mart & Car wash	946	VFP	16	223	114	109	31	16	16
				Internal Caputre within Center (10%)	*156*	*78*	*78*	*208*	*106*	*102*
				Pass-by (25%)	*99*	*51*	*48*	*519*	*265*	*254*
				Total	**1,335**	**677**	**658**	**1,350**	**689**	**661**

Project Name	Land Use	ITE	Units	Size	Weekday PM			Saturday Midday		
					Total	In	Out	Total	In	Out
Curci	Lube/Tune	941	TSF	5	26	14	12	35	18	18
	Bank	912	TSF	5	122	61	61	132	67	64
	Shopping Center	820	TSF	22.5	315	151	164	164	85	79
	Fast-Food with Drive-thru	934	TSF	2.5	82	42	39	148	75	72
	High-turn-over (sit-down) Restaurant	932	TSF	5.5	54	33	22	77	41	36
	Internal Caputre within Center (5%)				*30*	*15*	*15*	*28*	*14*	*13*
	Pass-by (25%)				*113*	*57*	*56*	*97*	*50*	*47*
	Total				**456**	**230**	**226**	**430**	**221**	**209**
Clinton Keith Village	Fast-Food with Drive-thru	934	TSF	6	194	101	93	350	179	172
	Variety Store	814	TSF	12.84	88	44	44	114	57	57
	Convenience Market with Gas Pumps	853	FP	12	229	114	114	120	61	59
	Commercial Retail	820	TSF	18.25	68	32	35	88	46	42
	Pass-by				*271*	*137*	*134*	*277*	*142*	*136*
	Total				**307**	**155**	**152**	**395**	**201**	**194**

KUNZMAN ASSOCIATES, INC.

MITCHELL CROSSING

TRAFFIC IMPACT ANALYSIS

February 2, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

MITCHELL CROSSING

TRAFFIC IMPACT ANALYSIS

February 2, 2015

Prepared by:

Carl Ballard, LEED GA
William Kunzman, P.E.

William Kunzman

1111 Town & Country Road, Suite 34
Orange, California 92868
(714) 973-8383

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3534c

Table 3

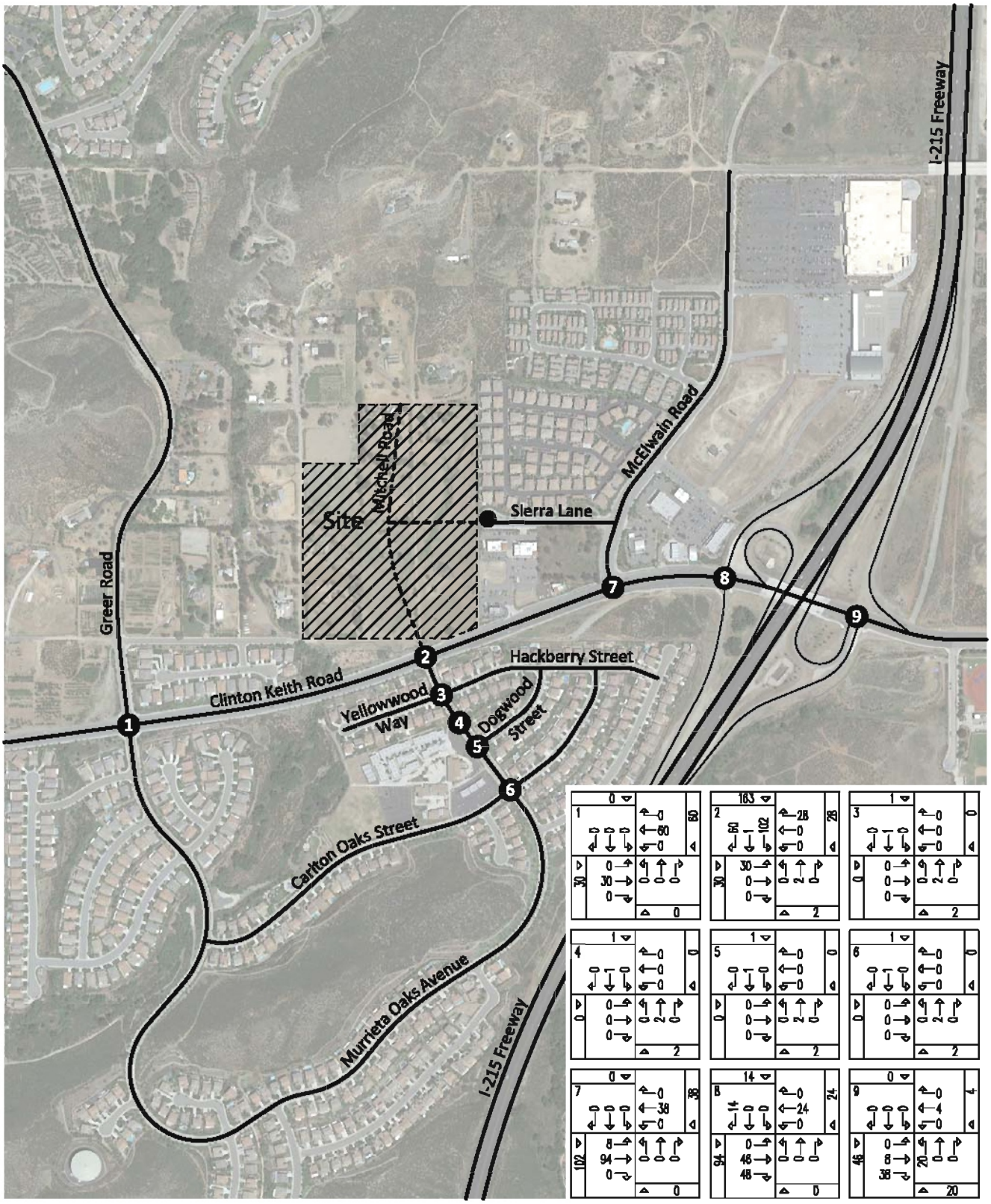
Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Multi-Family Attached Residential		DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Specialty Retail		TSF	0.80	0.53	1.33	1.19	1.52	2.71	44.32
Trips Generated									
Multi-Family Attached Residential	331	DU	33	136	169	132	73	205	2,201
Specialty Retail	50.000	TSF	40	27	67	60	76	136	2,216
Total			73	163	236	192	149	341	4,417

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 220 and 826. The morning peak hour specialty retail trip generation has been obtained from the San Diego Association of Governments, Traffic Generators, April 2003.

[2] DU = Dwelling Units; TSF = Thousand Square Feet

Figure 16
Project Morning Peak Hour Intersection Turning Movement Volumes

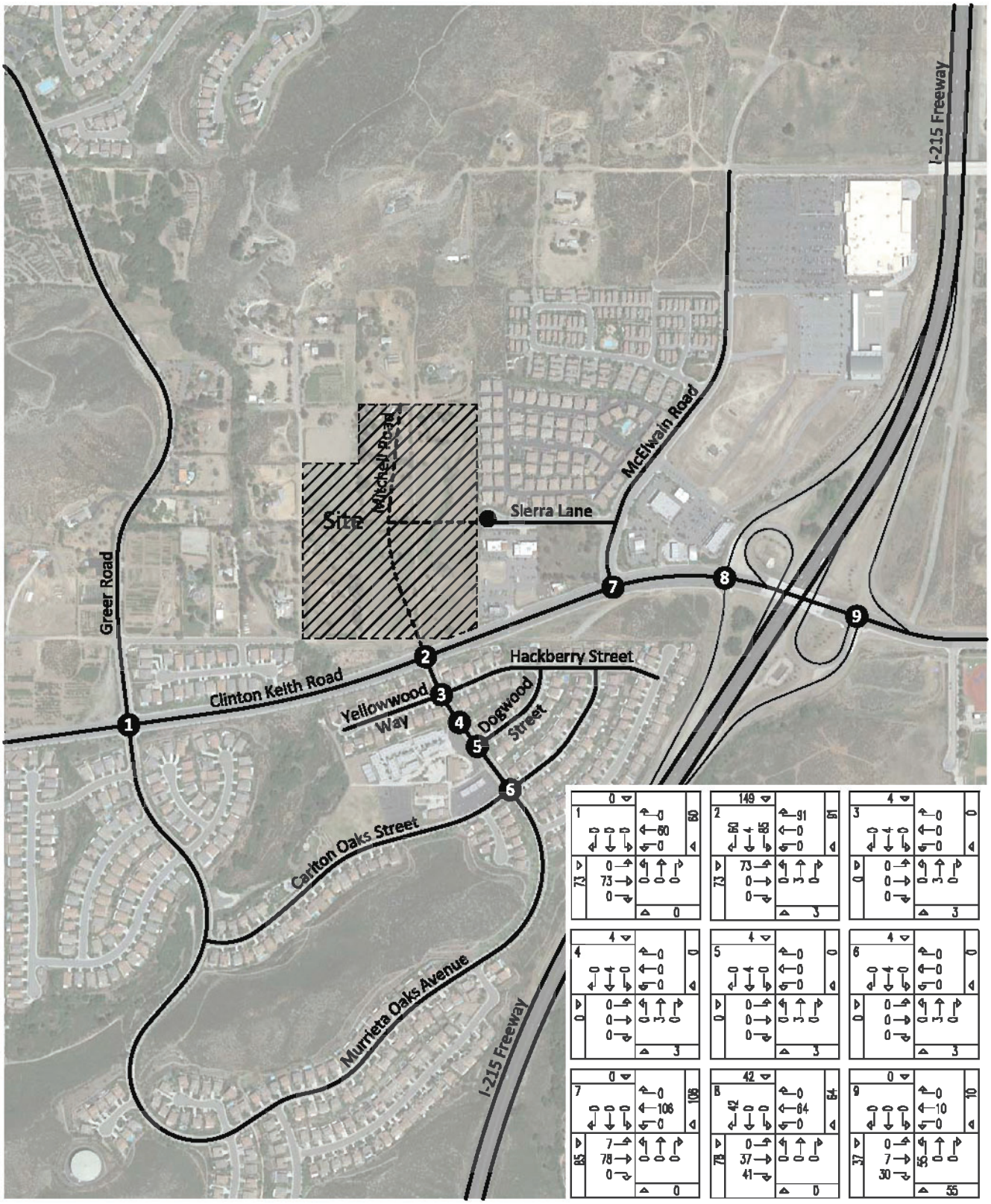


3534c/16

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 17
Project Evening Peak Hour Intersection Turning Movement Volumes



3534c/17

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Traffic Study for
The Orchard at Stonecreek
in the
City of Murrieta
(City Log #03-S-017)

February 27, 2004

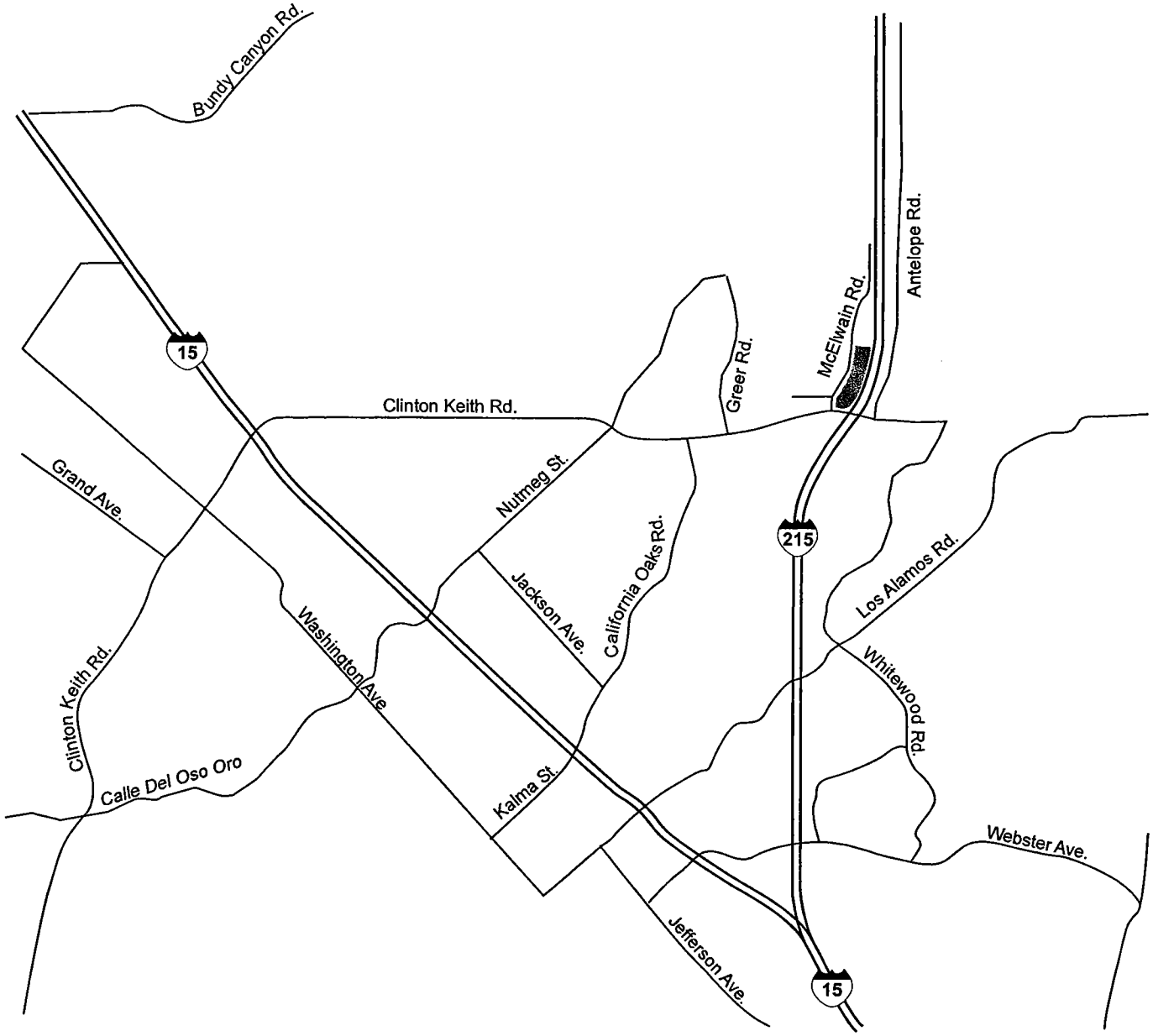
Prepared for:

City of Murrieta
26442 Beckman Court
Murrieta, CA 92562
(909) 469-2800

Prepared by:

Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners
685 E. Carnegie Dr., Suite 125
San Bernardino, CA 92408
(909) 890-9693

Job No: A3865



LEGEND

Project Site

N

Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

Murrieta Shopping Center, Traffic Study — Figure 1

Vicinity Map

Trip generation characteristics for projects are normally estimated based on rates published in *Trip Generation, Sixth Edition*, published by the Institute of Transportation Engineers (ITE). This document is widely used in Southern California and indicates the probable traffic generation rates for various land uses based upon studies of existing developments in comparable settings. The report includes trip generation information for the project uses, as shown in Table 6. These rates are appropriate for restaurants that are included in large shopping centers; however, the proportion of restaurant floor area should be less than 15% of the total site floor area.

Table 6
Trip Generation Rates

		AM Peak Hour			PM Peak Hour		
	Daily	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Shopping Center (820)	42.92	1.03	0.63	0.40	3.74	1.80	1.94

Table 7 summarizes the traffic generation expected from the project, based on the generation rates shown in Table 6.

Due to the retail nature of the projects, they will attract "passby" trips. These are people who are using the nearby roads and stop and use the services in the project. This is estimated to be 20% in the Near-Term. As traffic increases on Clinton Keith and surrounding roadways more cars will be diverted to the project site; therefore, the passby percentage is estimated to increase to 30% by the Buildout year.

Table 7
Project-Related Traffic Volumes
Near Term Conditions

		AM Peak Hour			PM Peak Hour		
	Daily	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Project							
211,623 sq ft Shopping Center	9083	218	133	85	791	381	410
- Passby Reduction (20%)	-1816	-44	-22	-22	-158	-79	-79
Total Trips Project 1	**7266**	**174**	**111**	**63**	**634**	**302**	**332**
225,112 sq ft Shopping Center	9662	232	142	90	842	405	437
- Passby Reduction (20%)	-1932	-46	-23	-23	-168	-84	-84
Total Trips Project 2	**7730**	**186**	**119**	**67**	**674**	**321**	**353**
Total New Project Trips	***14,996***	***360***	***230***	***130***	***1,308***	***623***	***685***

Project One will generate a total of 7,266 trips daily, including 174 trips during the AM peak hour and 608 trips during the PM peak hour in existing and near term conditions. Project Two will

create a total of 7,730 trips daily, including 186 trips during the AM peak hour and 624 trips during the PM peak hour in existing and near term conditions.

Project One and Two will generate a total of 14,996 trips daily, including 360 trips during the AM peak hour and 1,308 trips during the PM peak hour in existing and near term conditions

Table 8
Project-Related Traffic Volumes
Buildout Conditions

		AM Peak Hour			PM Peak Hour		
	Daily	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Project							
211,623 sq ft Shopping Center	9083	218	133	85	792	381	411
- Passby Reduction (30%)	-2725	-65	-33	-32	-237	-118	-119
Total Trips Project 1	**6358**	**153**	**100**	**53**	**555**	**263**	**292**
225,112 sq ft Shopping Center	9662	232	142	90	842	405	437
- Passby Reduction (30%)	-2899	-70	-35	-35	-263	-126	-127
Total Trips Project 2	**6763**	**162**	**107**	**55**	**589**	**279**	**310**
Total New Project Trips	***13,121***	***315***	***207***	***108***	***1,144***	***542***	***602***

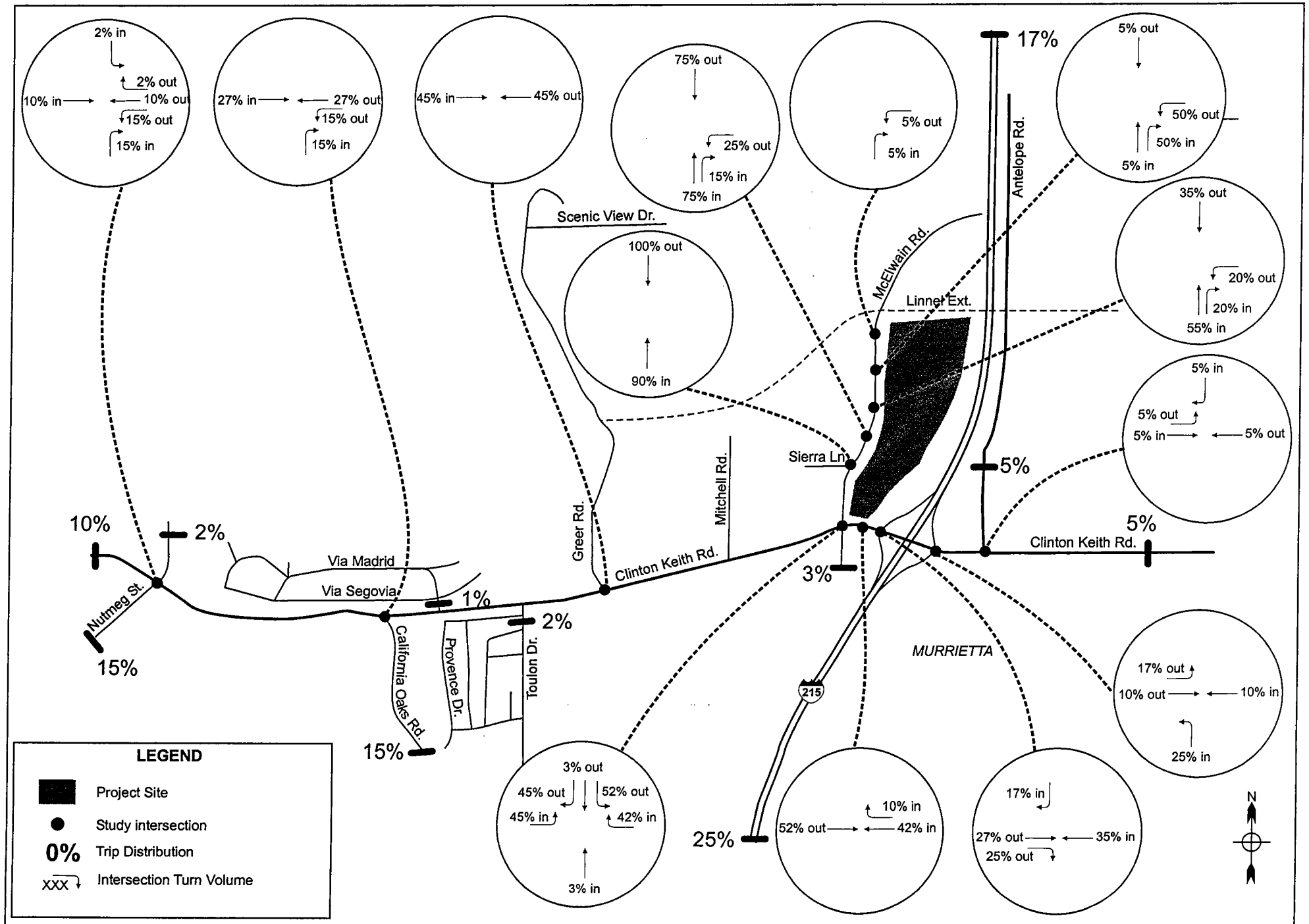
Project One will create a total of 6,358 trips daily, including 153 trips during the AM peak hour and 555 trips during the PM peak hour in buildout conditions. Project Two will create a total of 6,763 trips daily, including 162 trips during the AM peak hour and 589 trips during the PM peak hour in buildout conditions.

Project One and Two will generate a total of 13,121 trips daily, including 315 trips during the AM peak hour and 1,144 trips during the PM peak hour in existing and near term conditions. The near term trips are slightly higher, due to lower volumes, and therefore less pass-by trips, on Clinton Keith Road.

Project Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by project traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the route where the project traffic will distribute.

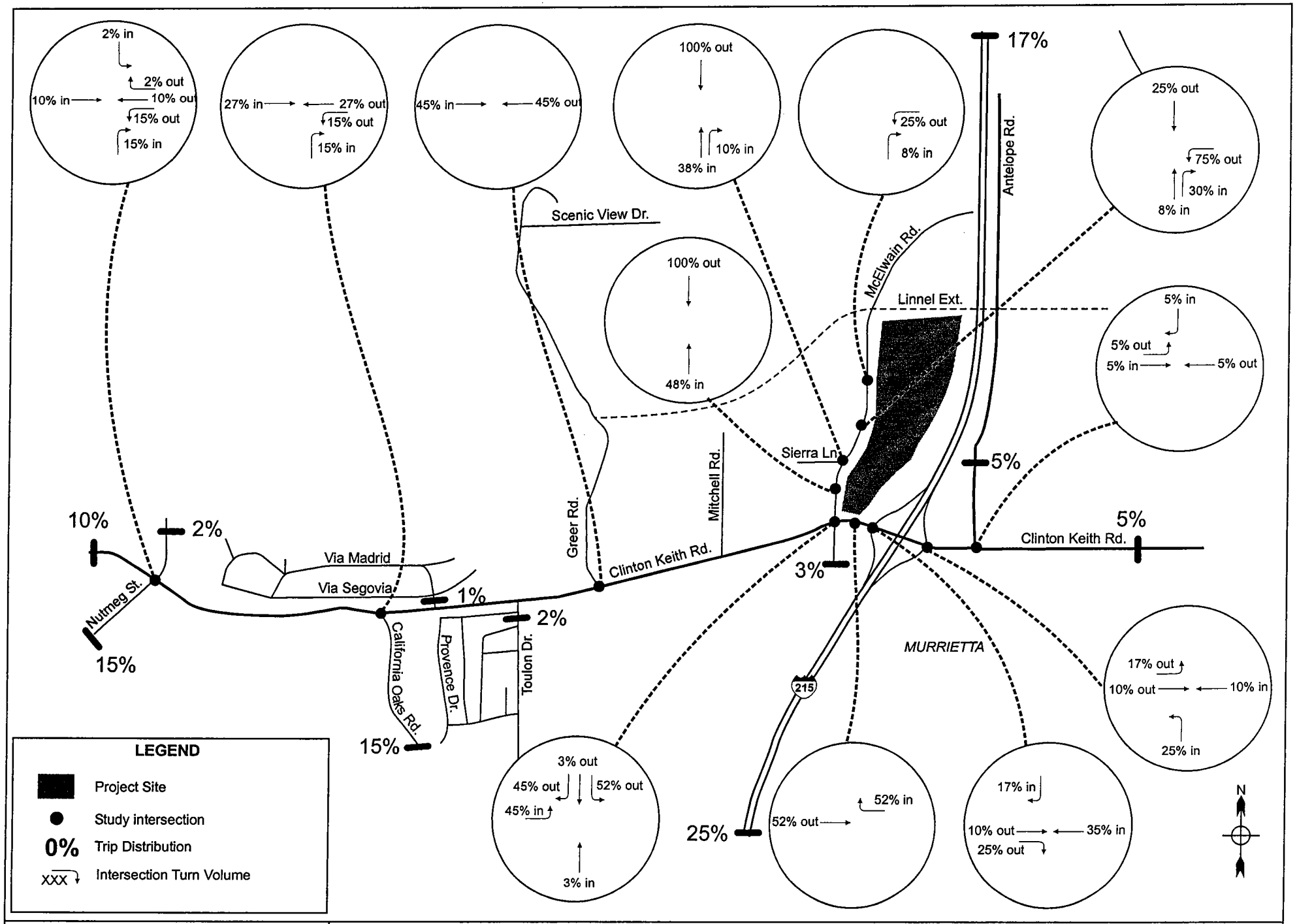
The trip distributions for Project One and Project Two are slightly different due to the driveway configuration. In addition, the distributions expected for the near-term and buildout scenarios are also slightly different, due amount of growth expected in the near term and buildout scenarios,



Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

Murrieta Shopping Center, Traffic Study — Figure 10a

Project 1 (North) Existing and Near Term Project Trip Distribution



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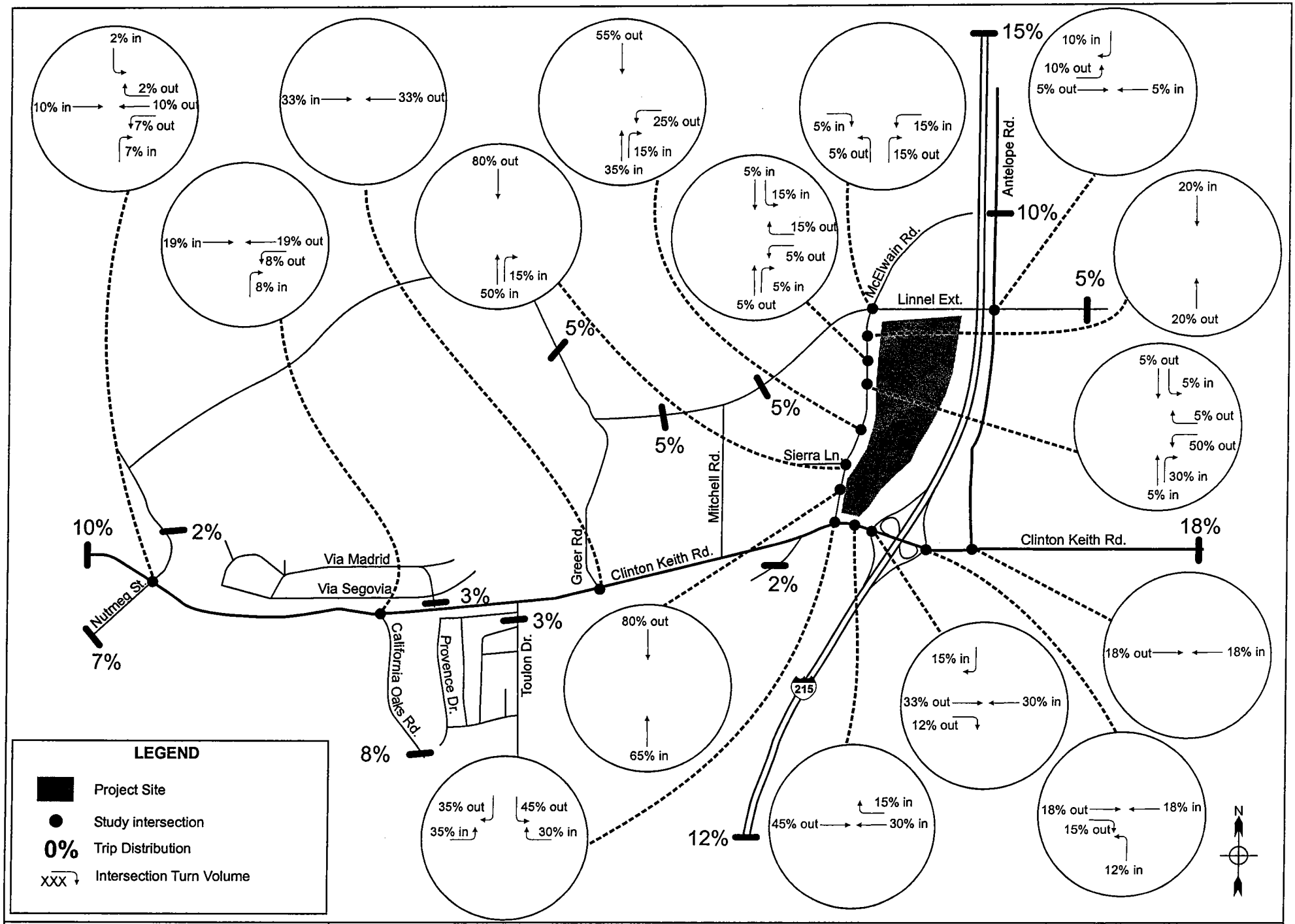
Traffic Engineers and Transportation Planners

Murrieta Shopping Center, Traffic Study — Figure 10b

Project 2 (South) Existing and Near Term Project Trip Distribution

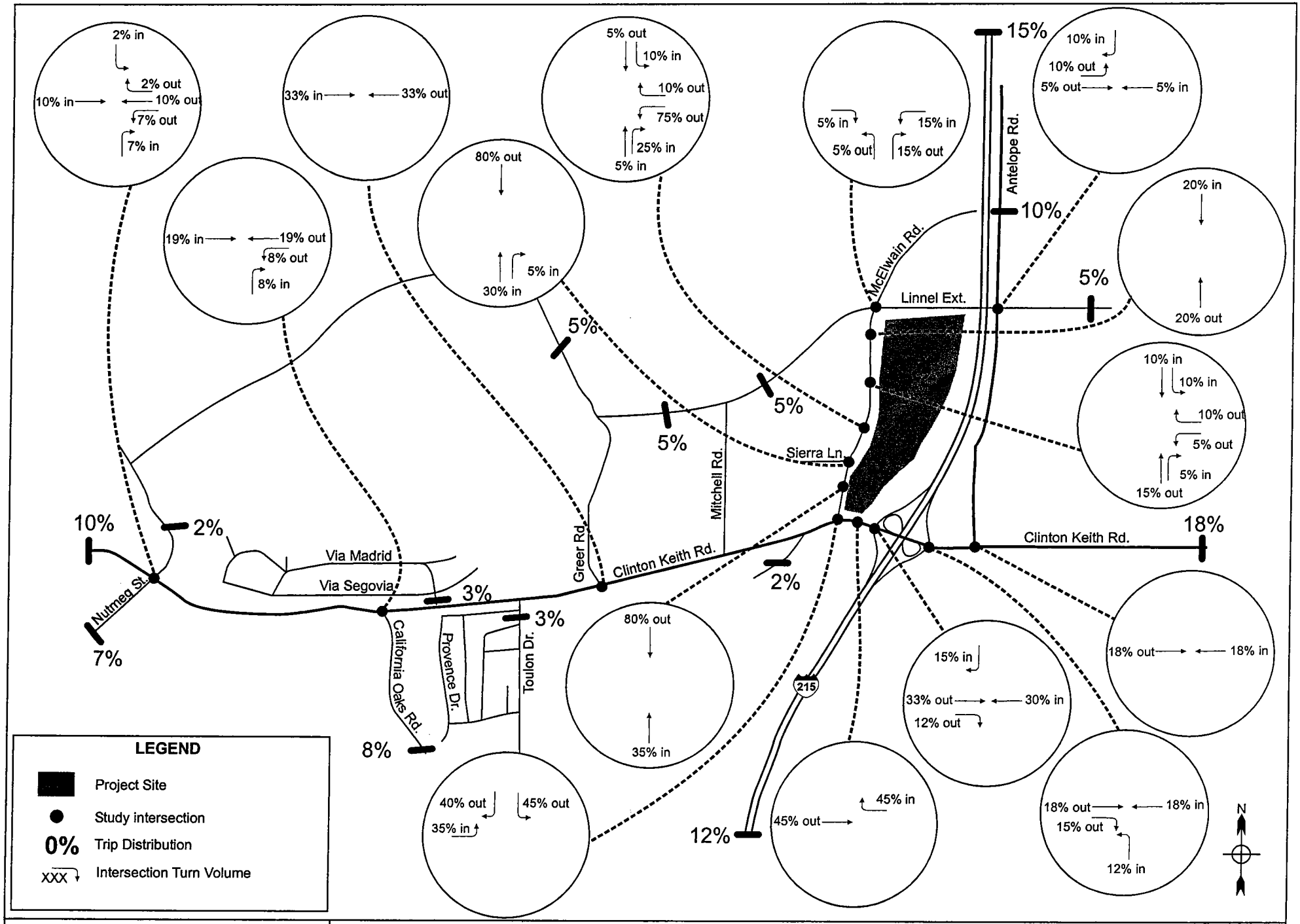


Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

Murrieta Shopping Center, Traffic Study

Figure 11a

Project 1 (North) Buildout Project Trip Distribution



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Traffic Engineers and Transportation Planners

Murrieta Shopping Center, Traffic Study

Figure 11b

Project 1 (South) Buildout Project Trip Distribution

THE VINEYARD SHOPPING CENTER
TRAFFIC IMPACT ANALYSIS
(CASE NO. DPO-2012-3260)
CITY OF MURRIETA, CALIFORNIA

APRIL 8, 2013

Prepared for:

CK-17, L.P.
Mr. Allan L. Davis
RETAIL DEVELOPMENT ADVISORS
27890 Clinton Keith Rd., Suite D-490
Murrieta, CA 92562

Prepared by:

CITY OF MURRIETA
Community Development/Planning Dept.
RECEIVED
MAY 1 4 2013
CASE #
DP-012-3260

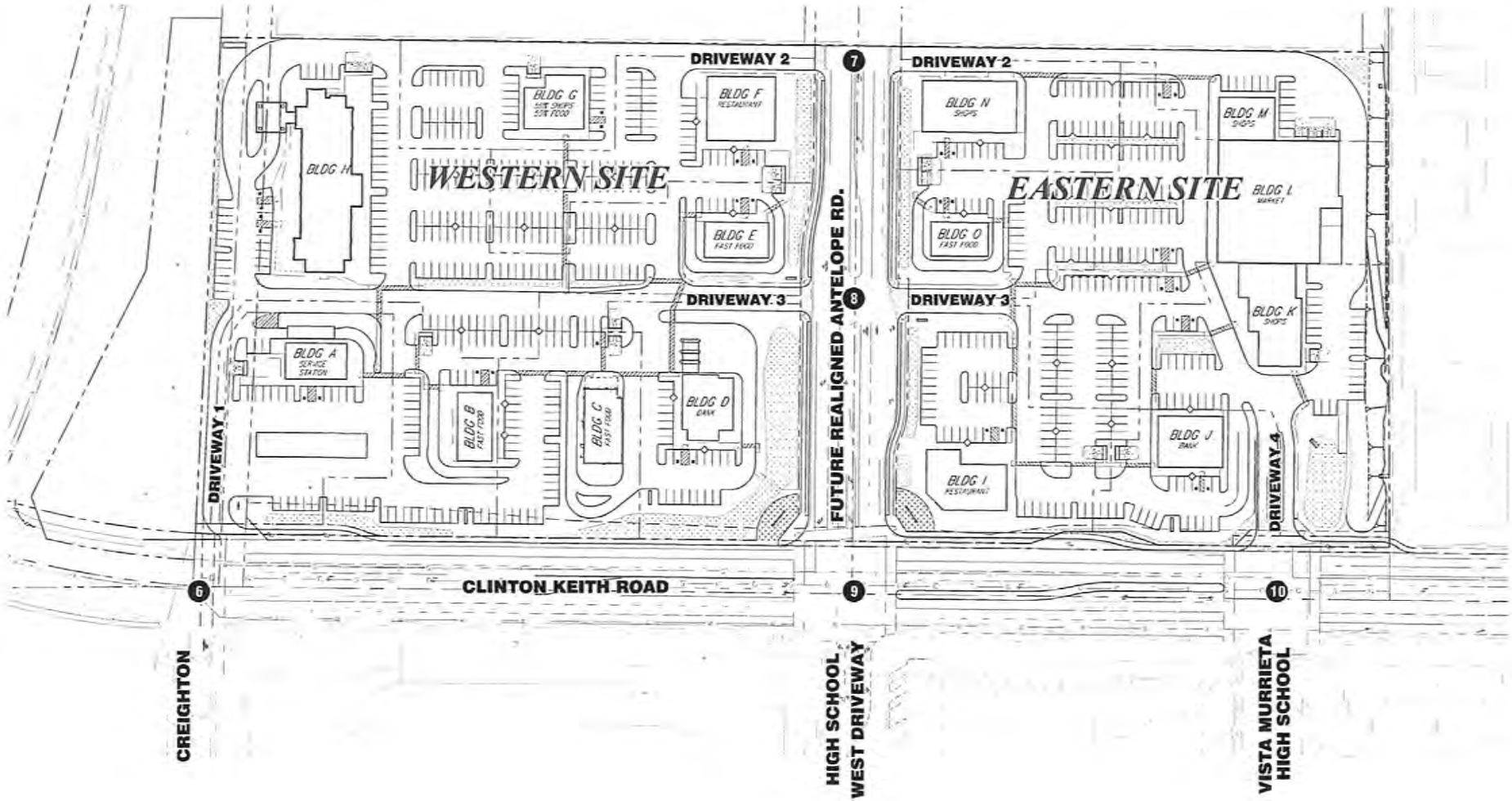
Scott Sato, P.E.
100 E. San Marcos Boulevard, Suite 400
San Marcos, CA 92069

TRAMES SOLUTIONS INC.

(0035-0001-03)

FIGURE 1-B

SITE PLAN



LEGEND:

1 = INTERSECTION ID

N

The Vineyard Shopping Center Traffic Impact Analysis
City of Murrieta, CA (JN0035-0001:01.dwg)

TRAMES SOLUTIONS INC.

TABLE 3-2

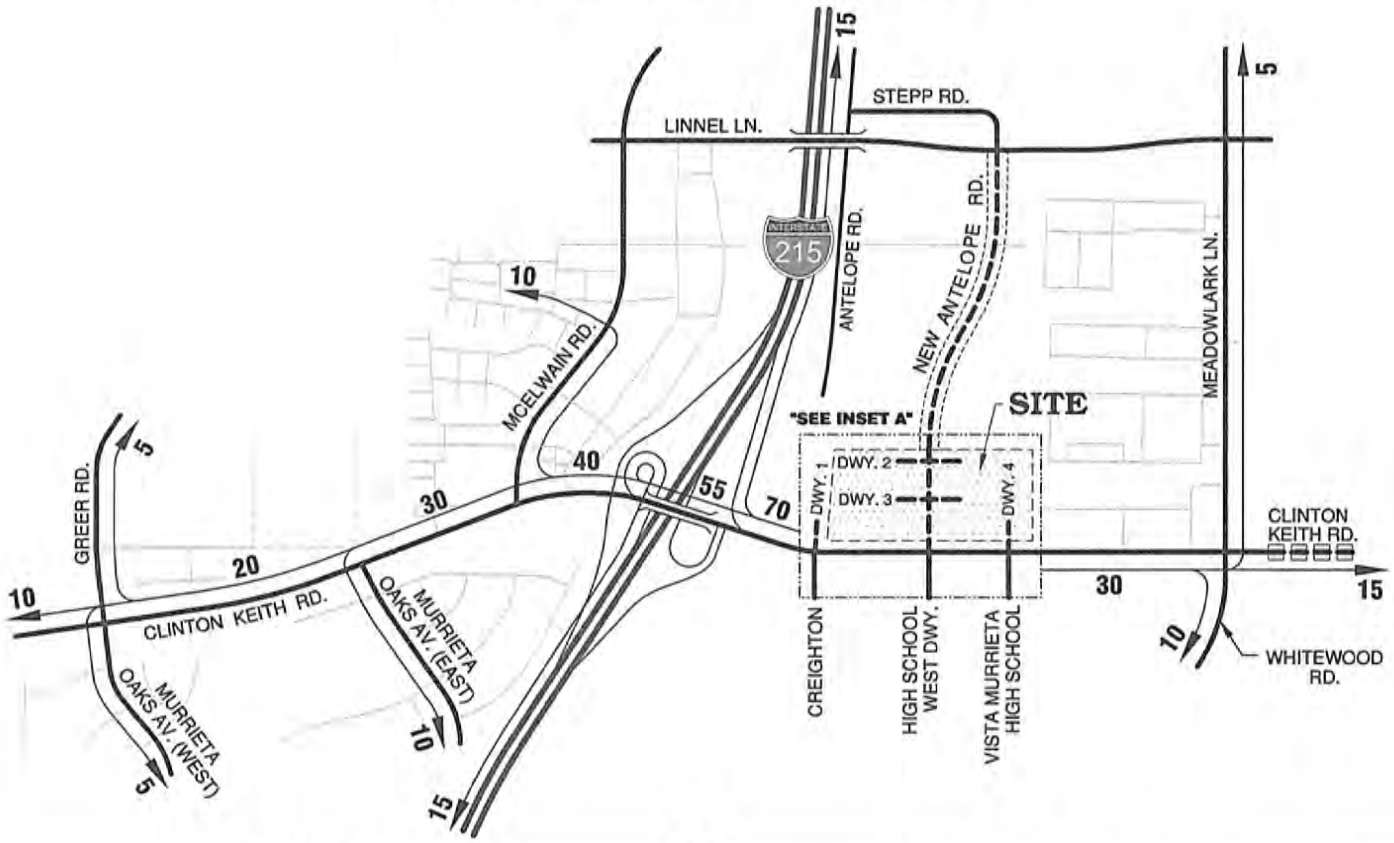
TRIP GENERATION SUMMARY

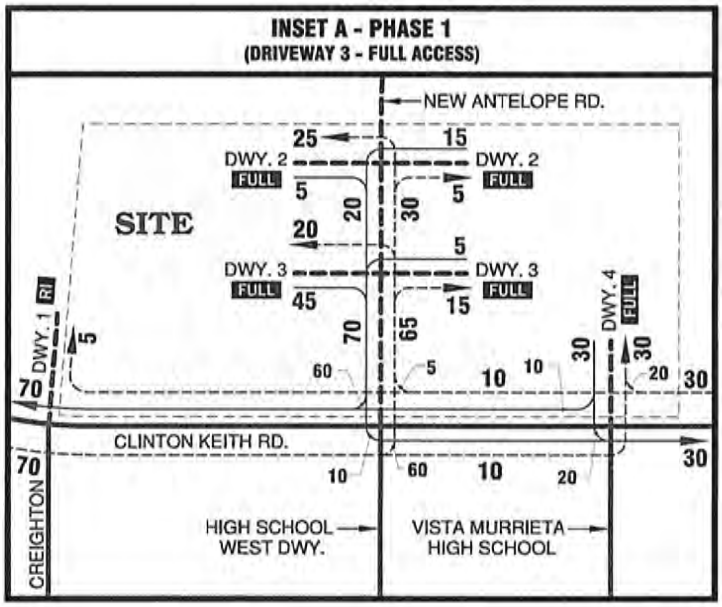
LAND USE	QUANTITY	UNITS[1]	PEAK HOUR AM IN	PEAK HOUR AM OUT	PEAK HOUR AM TOTAL	PEAK HOUR PM IN	PEAK HOUR PM OUT	PEAK HOUR PM TOTAL	DAILY
West Side									
Shopping Center	30.149	TSF	46	29	75	129	140	269	3,115
Hotel	91	RM	31	20	51	28	25	53	743
Commercial Pass-By	25%		-12	-7	-19	-32	-35	-67	-779
West Side Subtotal			65	42	107	125	130	255	3,079
East Side									
Shopping Center	48.34	TSF	62	38	100	177	191	368	4,234
Commercial Pass-By	25%		-16	-10	-26	-44	-48	-92	-1,059
East Side Subtotal			46	28	74	133	143	276	3,175
Project Total			111	70	181	258	273	531	6,254

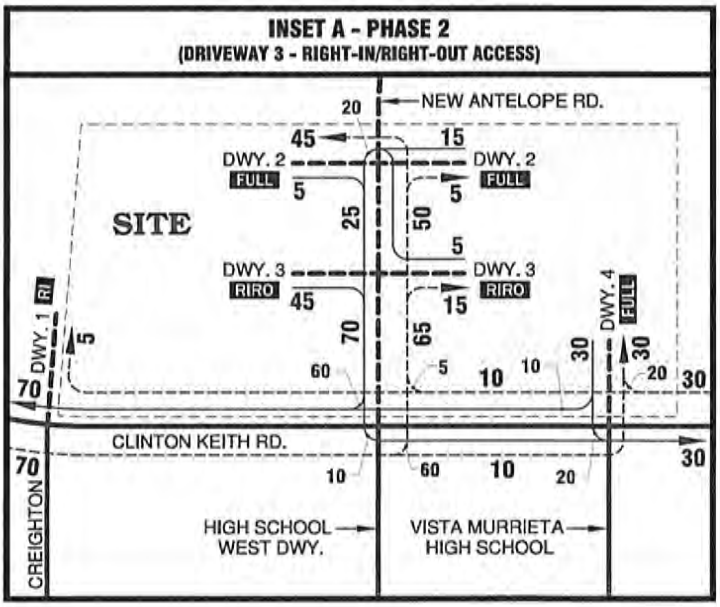
[1] RM = Rooms; TSF = Thousand Square Feet

FIGURE 3-A

PROJECT TRIP DISTRIBUTION







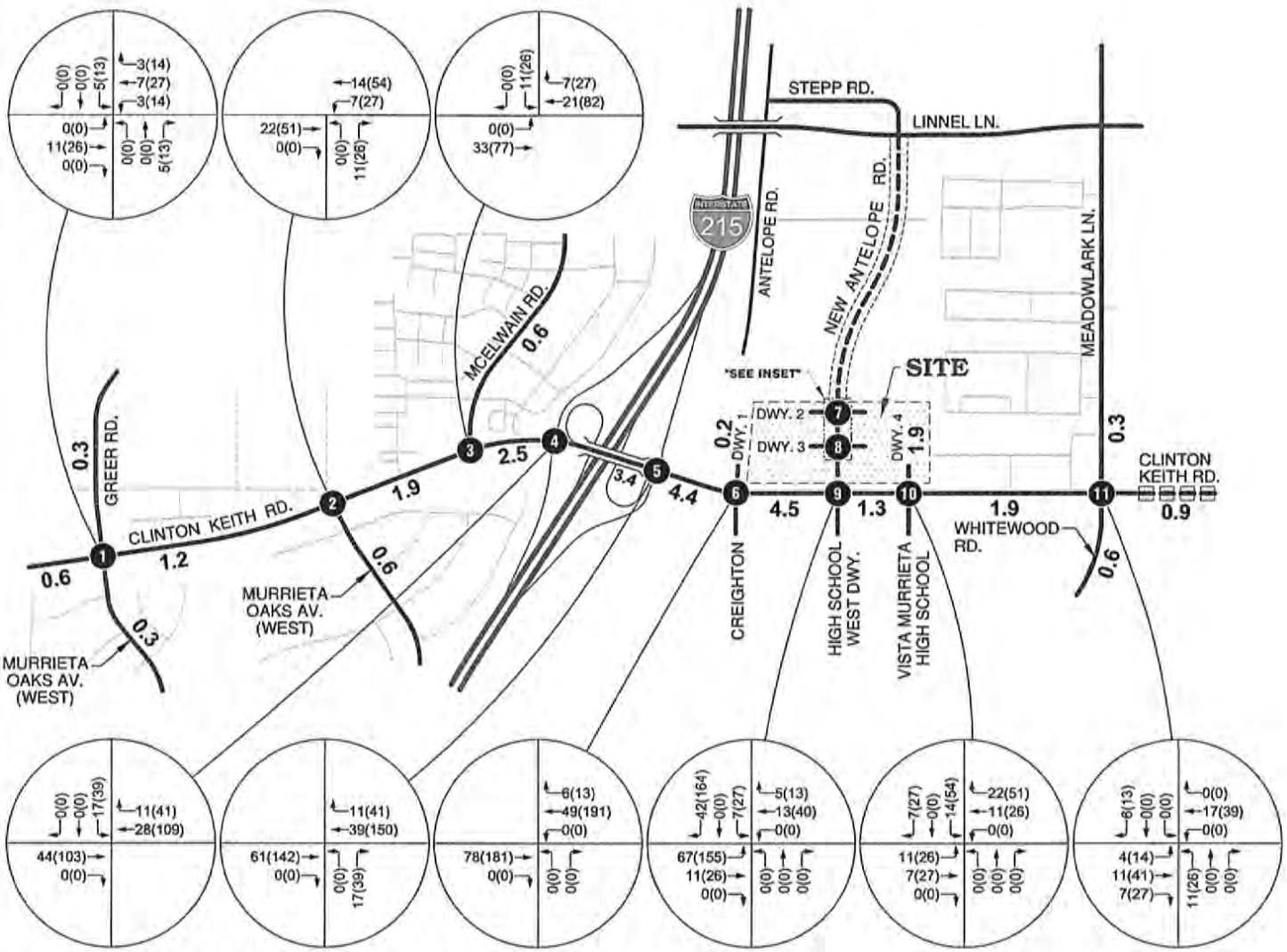
LEGEND:

- 10 = PERCENT FROM PROJECT (OUTBOUND)
- 10 = PERCENT TO PROJECT (INBOUND)
- FULL = FULL ACCESS
- RIRO = RIGHT-IN/RIGHT-OUT ONLY
- RI = RIGHT-IN ONLY
- = NEW ANTELOPE ROAD, FUTURE ROADWAY DEFERRED - CITY TO EXTEND
- = CLINTON KEITH ROAD, FUTURE ROADWAY - 1/2 WIDTH EXTENSION TO BE BUILT BY THE COUNTY CONCURRENT WITH THE PROJECT

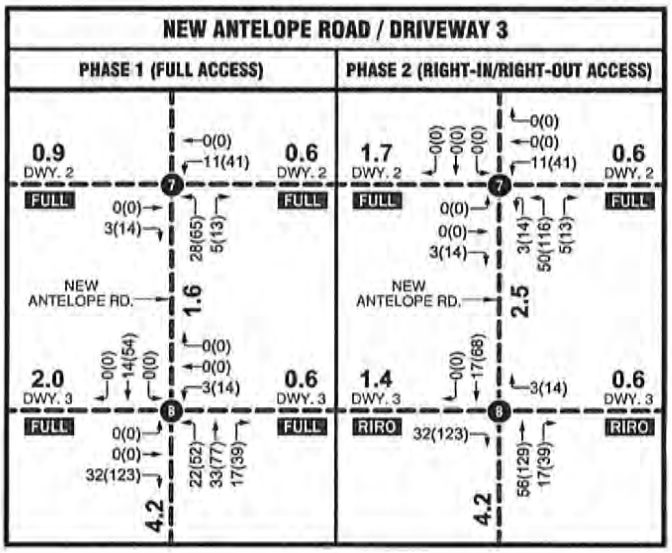
N

FIGURE 3-B

PROJECT ONLY TRAFFIC VOLUMES



NEW ANTELOPE ROAD / DRIVEWAY 3



LEGEND:

- 1 = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR VOLUMES
- 1.0 = VEHICLES PER DAY (1000's)
- FULL = FULL ACCESS
- RIRO = RIGHT-IN/RIGHT-OUT ONLY ACCESS
- = NEW ANTELOPE ROAD, FUTURE ROADWAY DEFERRED - CITY TO EXTEND
- = CLINTON KEITH ROAD, FUTURE ROADWAY - 1/2 WIDTH EXTENSION TO BE BUILT BY THE COUNTY CONCURRENT WITH THE PROJECT

N

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS

MAKENA HILLS

City of Murrieta, California
October 5, 2017

LLG Ref. 3-17-2704

CITY OF MURRIETA
Community Development/Planning Dept.
RECEIVED
NOV 27 2017
CASE #
TPM - 2017 - 1314
EA - 2017 - 1315

Prepared by:
Amy Downing, P.E.
Transportation Engineer

Under the Supervision of:
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Principal Engineer

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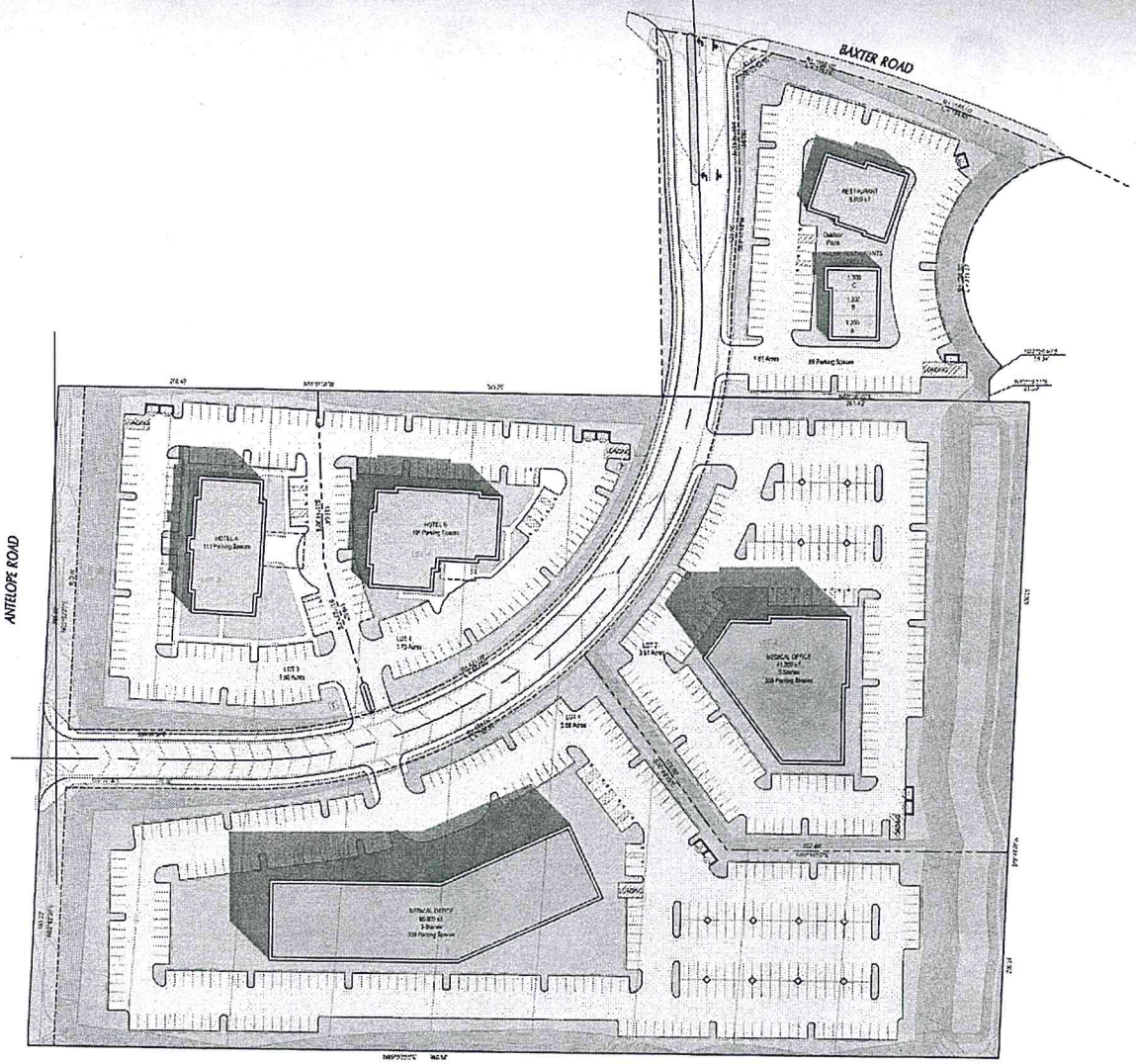

SOURCE: MAA Architects, July 25, 2017

LINSCOTT LAW & GREENSPAN engineers

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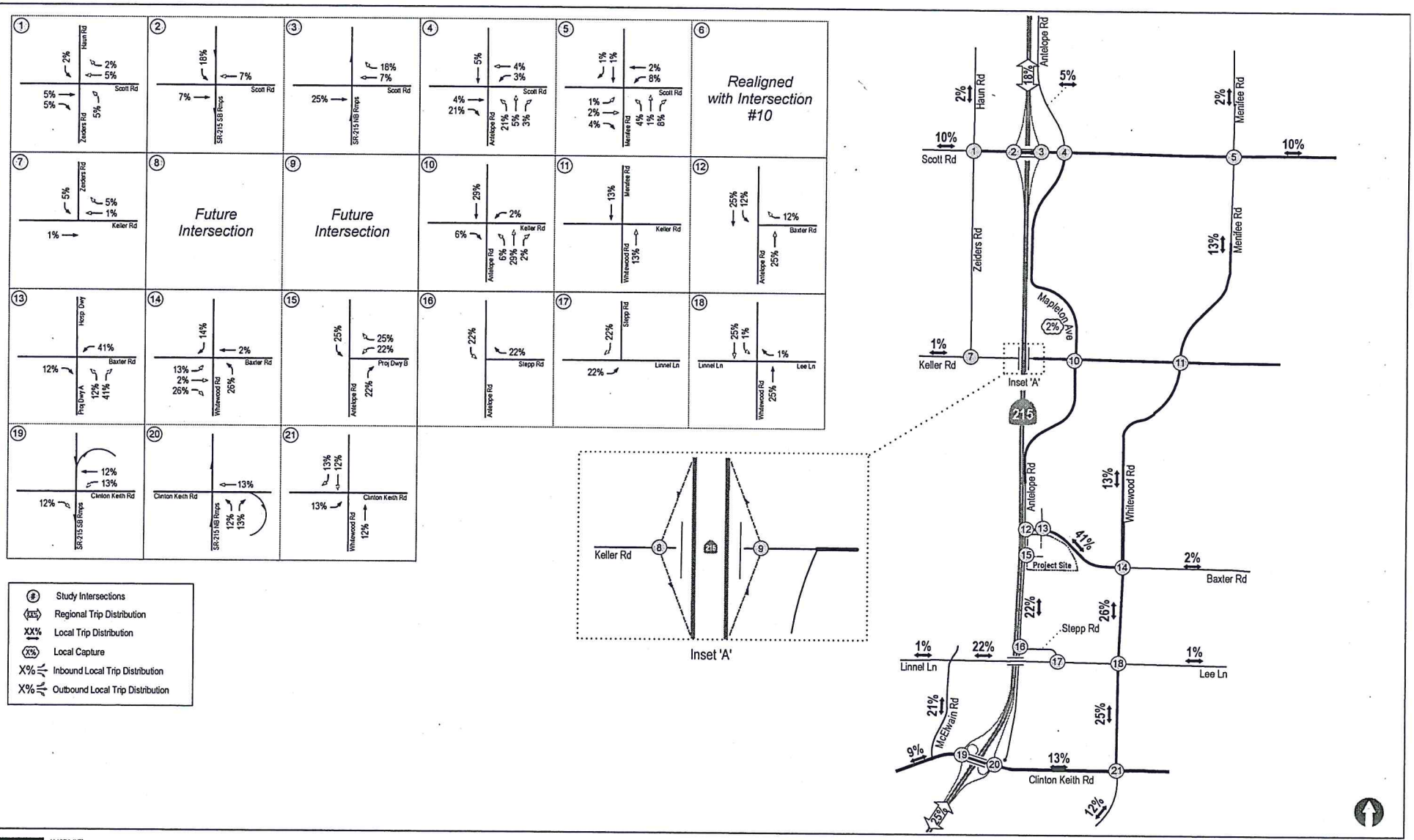
Date: 08/07/17

Figure 2-1

Site Plan

MAKENA HILLS



LINSCOTT LAW & GREENSPAN engineers

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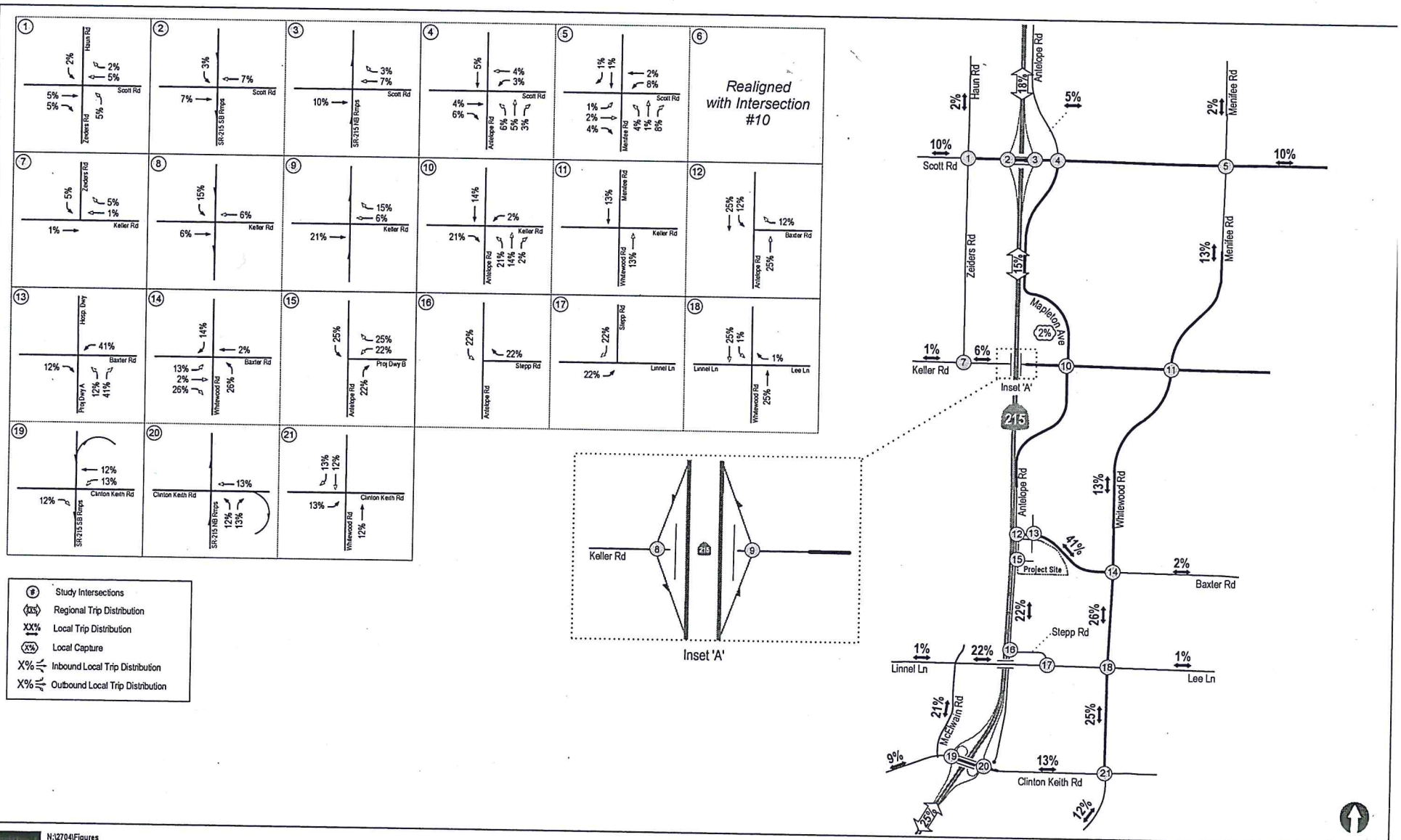
Date: 03/12/17

Figure 7-1

Project Phase I Traffic Distribution

MAKENA HILLS



LINSCOTT LAW & GREENSPAN engineers

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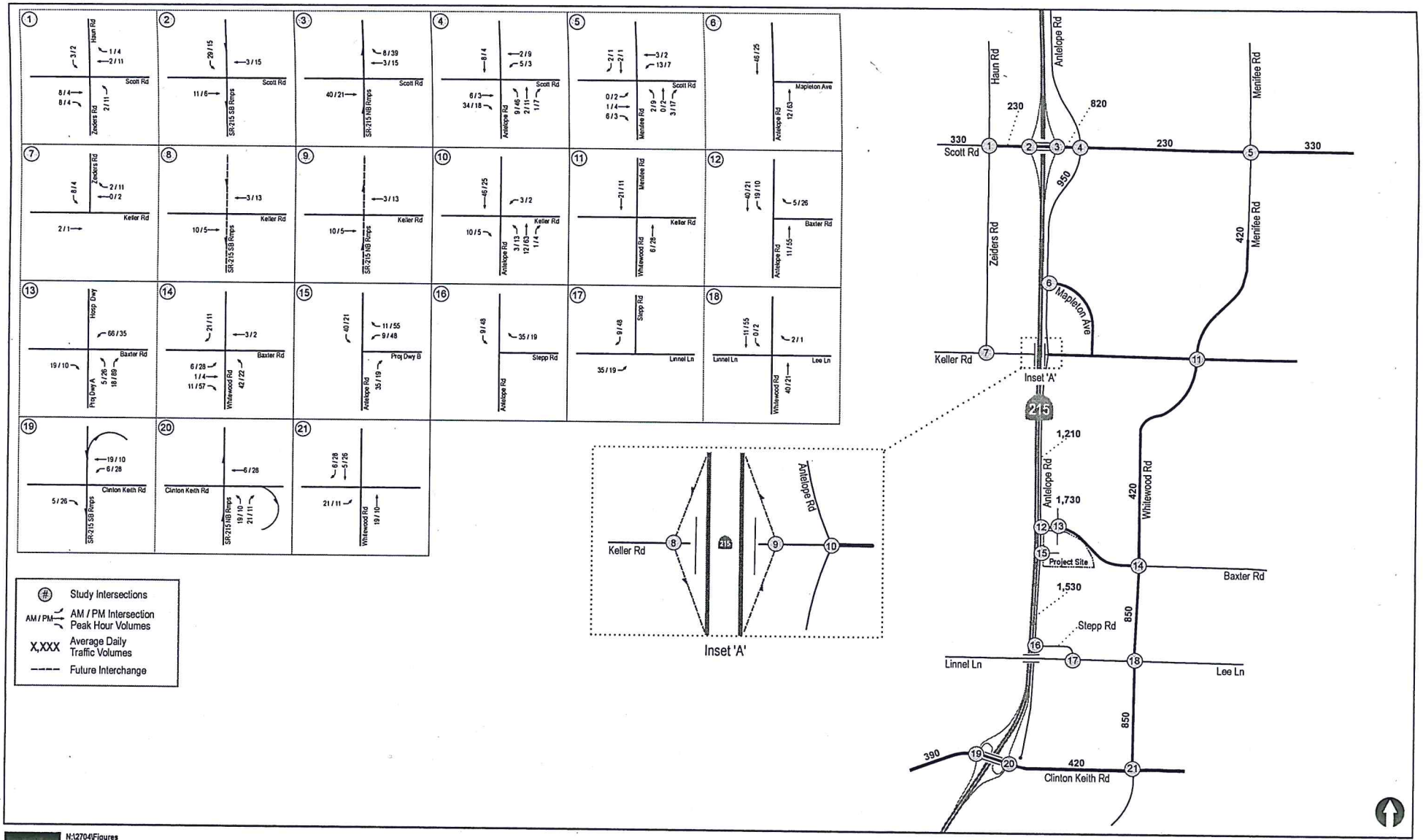
Date: 03/12/17

Figure 7-2

Project Phase II Traffic Distribution

MAKENA HILLS



LINSCOTT LAW & GREENSPAN engineers

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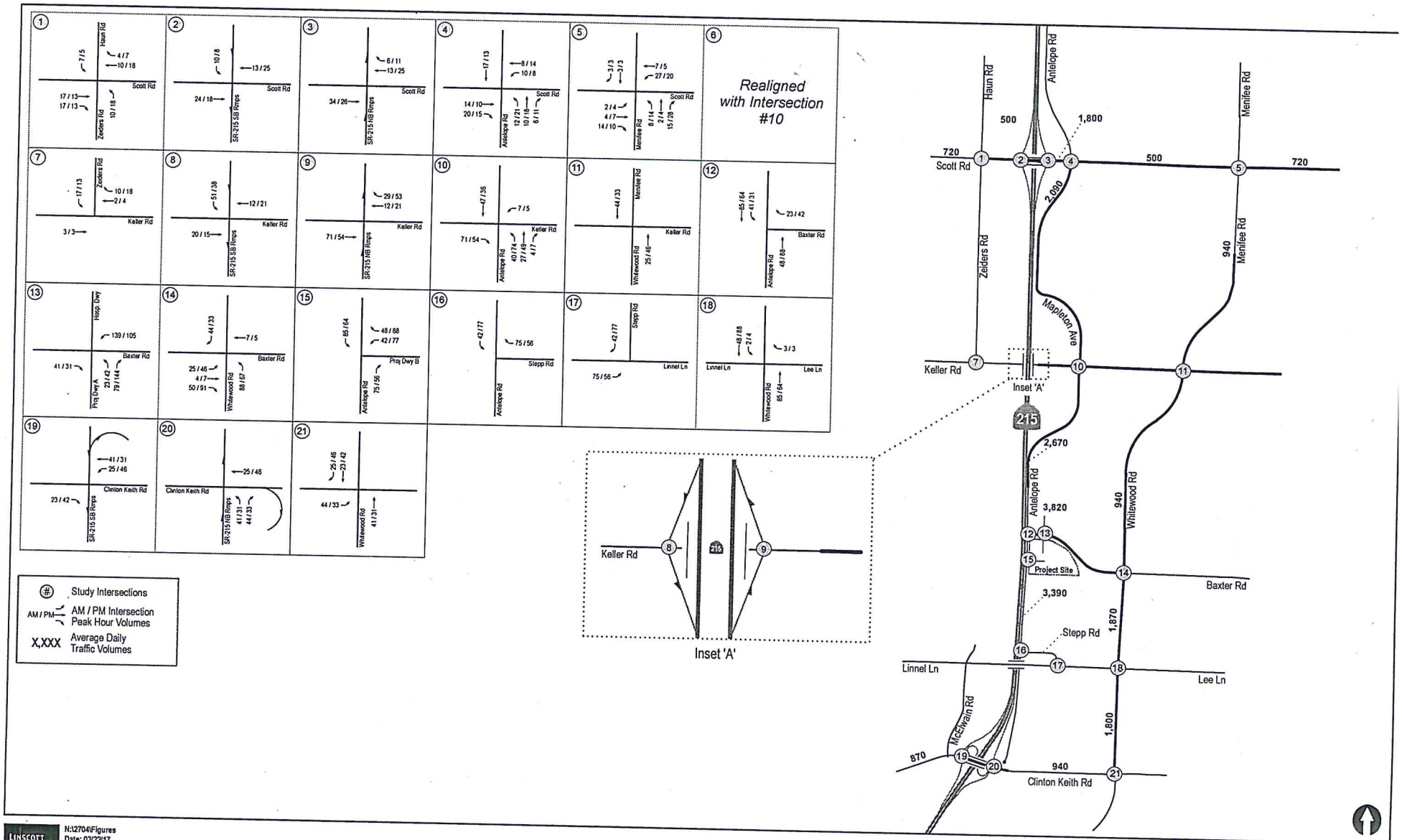
Date: 03/22/17

Figure 7-3

Project Phase I Traffic Volumes

MAKENA HILLS



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Date: 03/22/17

Figure 7-4

Project Phases I & II Traffic Volumes

MAKENA HILLS

ADOBE SPRINGS
TRAFFIC IMPACT ANALYSIS
CITY OF MURRIETA, CALIFORNIA

MAY 18, 2015

Prepared for:

Murrieta KLC Holdings 130, LLC

Prepared by:

Scott Sato, P.E.
100 E. San Marcos Boulevard, Suite 400
San Marcos, CA 92069

TRAMES SOLUTIONS INC.

(0108-0001-05)

CITY OF MURRIETA
Community Development/Planning Dept.
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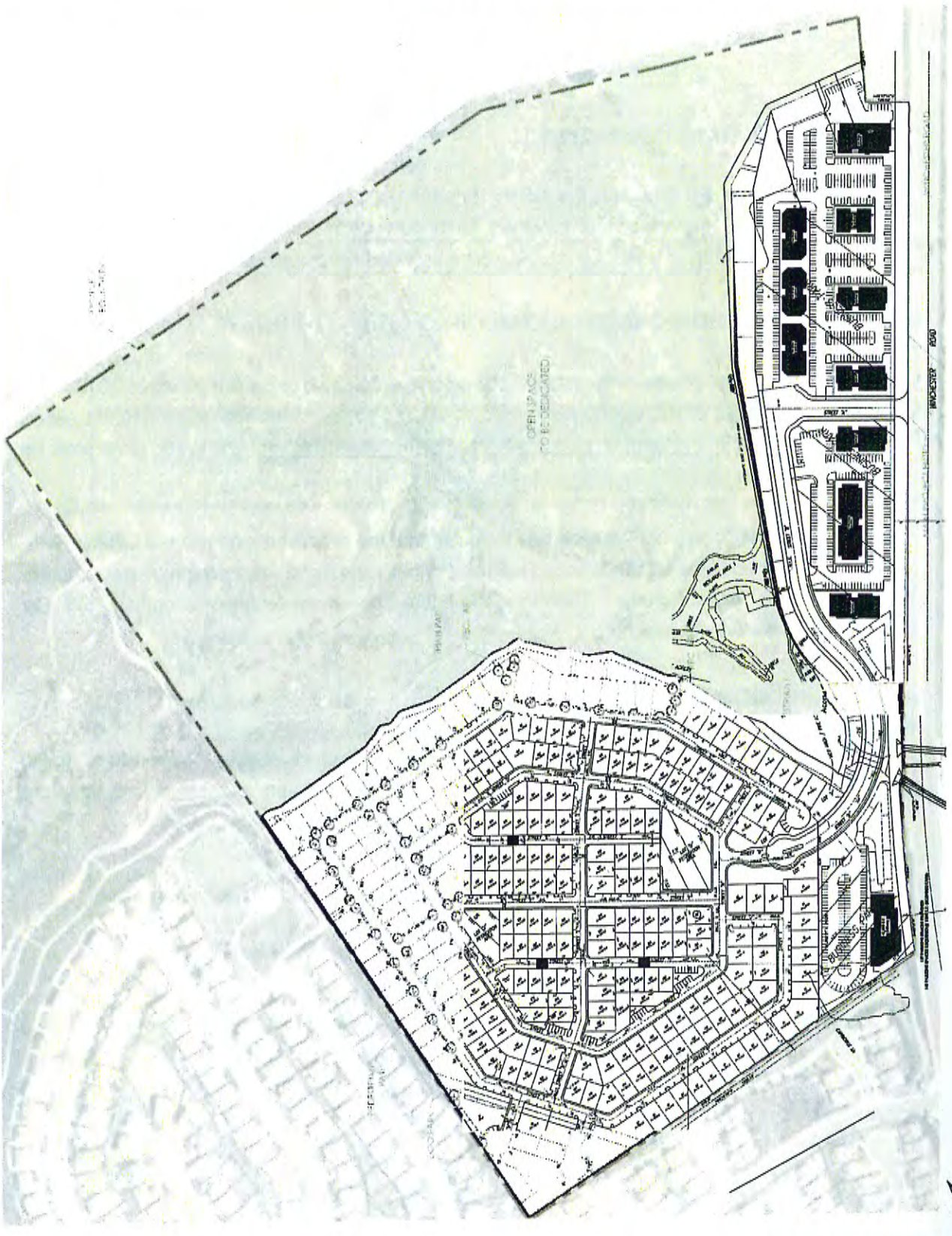
CASE #

FIGURE 1-B
SITE PLAN



Adobe SpringsTraffic Impact Analysis
City of Murrieta, CA (0108-0001:01.dwg)

TRAMES SOLUTIONS INC.

TABLE 4-1
PROJECT TRIP GENERATION RATES

LAND USE	ITE CODE	QUANTITY[2]	PEAK HOUR TRIP RATES[1]						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Detached Residential	210	287 DU	0.19	0.56	0.75	0.63	0.37	1.00	9.52
Business Park	770	208.5 TSF	1.19	0.21	1.40	0.33	0.93	1.26	12.44

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 9th Edition, 2012.

[2] DU = Dwelling Units; TSF = Thousand Square Feet

The daily and peak hour trip generations for the proposed project are shown on Table 4-2. The first phase of the proposed development is projected to generate a total of approximately 2,732 trip-ends per day with 216 vehicles per hour during the AM peak hour and 287 vehicles per hour during the PM peak hour. The second phase will include the business park development. This use will generate 2,594 trips per day with 292 AM trip ends and 263 PM trip ends. It is assumed that approximately 5 percent of the trips will be due to the interaction with the project's residential units during the PM peak hour. Therefore, the overall project will generate approximately 5,196 trips per day with 508 trips during the AM peak hour and 537 trips during the PM peak hour.

TABLE 4-2
PROJECT TRIP GENERATION SUMMARY

LAND USE	QUANTITY[1]	PEAK HOUR						DAILY
		AM			PM			
		IN	OUT	TOTAL	IN	OUT	TOTAL	
PHASE 1								
Single Family Detached Residential	287 DU	55	161	216	181	106	287	2,732
PHASE 1 SUBTOTAL		**55**	**161**	**216**	**181**	**106**	**287**	**2,732**
Business Park	208.5 TSF	248	44	292	69	194	263	2,594
INTERNAL INTERACTION (5%)		**0**	**0**	**0**	**-6**	**-7**	**-13**	**-130**
PHASE 2 SUBTOTAL		**248**	**44**	**292**	**63**	**187**	**250**	**2,464**
TOTAL PROJECT TRIPS		**303**	**205**	**508**	**244**	**293**	**537**	**5,196**

[1] DU = Dwelling Units; TSF = Thousand Square Feet

FIGURE 4-A
RESIDENTIAL PROJECT TRIP DISTRIBUTION

Adobe SpringsTraffic Impact Analysis
City of Murrieta, CA (0108-0001:01.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-B
NON-RESIDENTIAL PROJECT TRIP DISTRIBUTION

Adobe SpringsTraffic Impact Analysis
City of Murrieta, CA (0108-0001:01.dwg)

TRAMES SOLUTIONS INC.

41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

John Kain, AICP
Scott Sato, P.E.
Philip Nitollama

Prepared for:

Ms. Nancy Cappos
SUNCAL COMPANIES
1250 Corona Pointe Court, Suite 210
Corona, CA 92879

GOLDEN CITIES (TRACT 28532-3) RESIDENTIAL DEVELOPMENT MURRIETA, CALIFORNIA

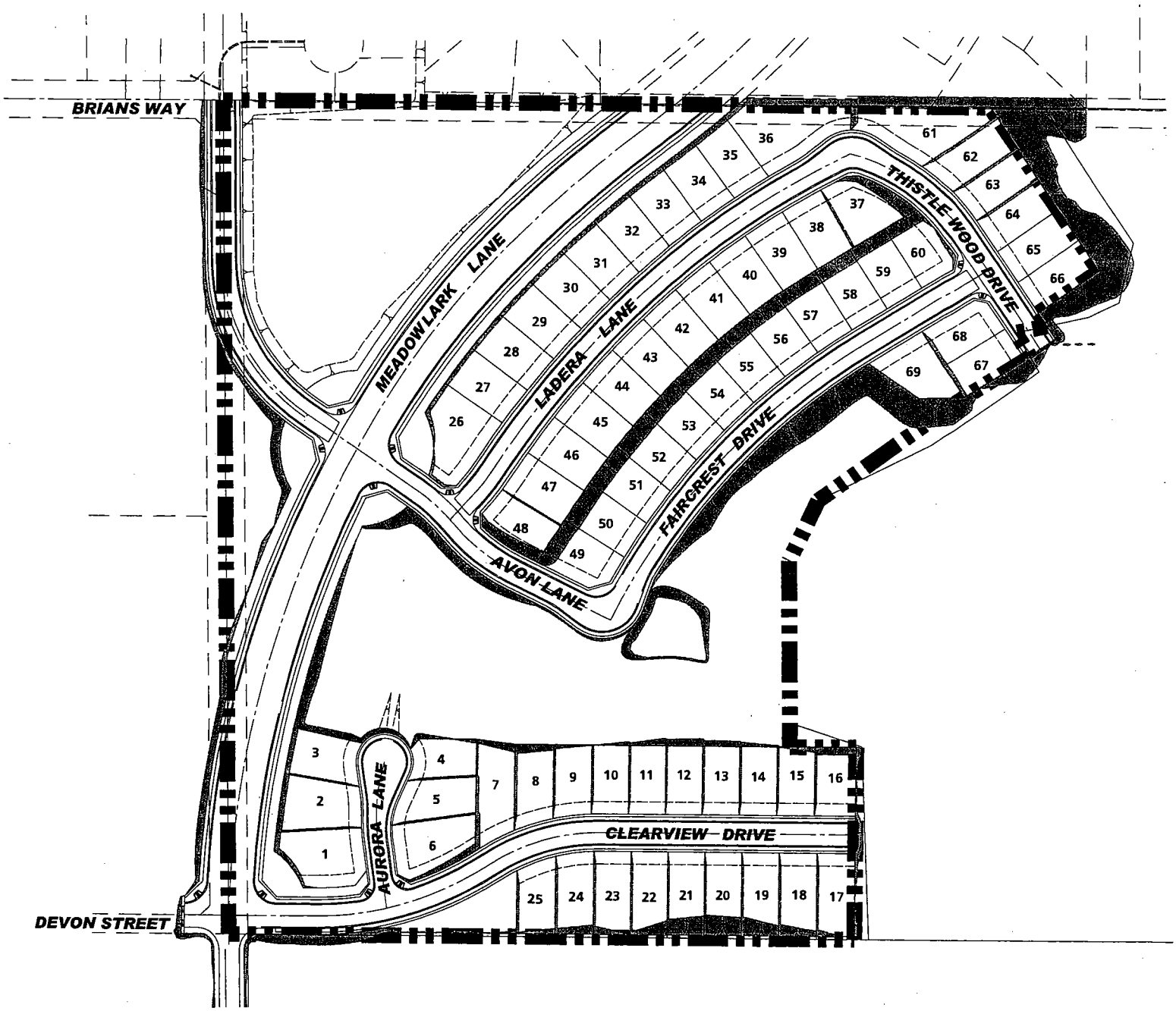
January 5, 2006

JN:02663-06
JK:SS:PN:cg

SEU-004-006

EXHIBIT B

SITE PLAN



N

URBAN CROSSROADS

GOLDEN CITIES (TRACT 28532-3) DEVELOPMENT, Murrieta, California - 02663:12-16-05\ 02.dwg

PROJECTED TRAFFIC

Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The traffic generation for the project is based upon the specific land uses which have been planned for this development.

The proposed project comprises a development of 69 single-family detached residential dwelling units. Trip generation rates for the project are shown in Table 2. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE).

TABLE 2

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Seventh Edition, 2003.

[2] DU = Dwelling Units

Both daily and peak hour trip generation for the proposed development are shown in Table 3. The proposed development is expected to generate a total of 660 daily trips with 52 trips occurring during the AM peak hour and 70 trips occurring during the PM peak hour.

TABLE 3

PROJECT TRIP GENERATION

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Residential	69	DU	13	39	52	44	26	70	660

Trip Distribution

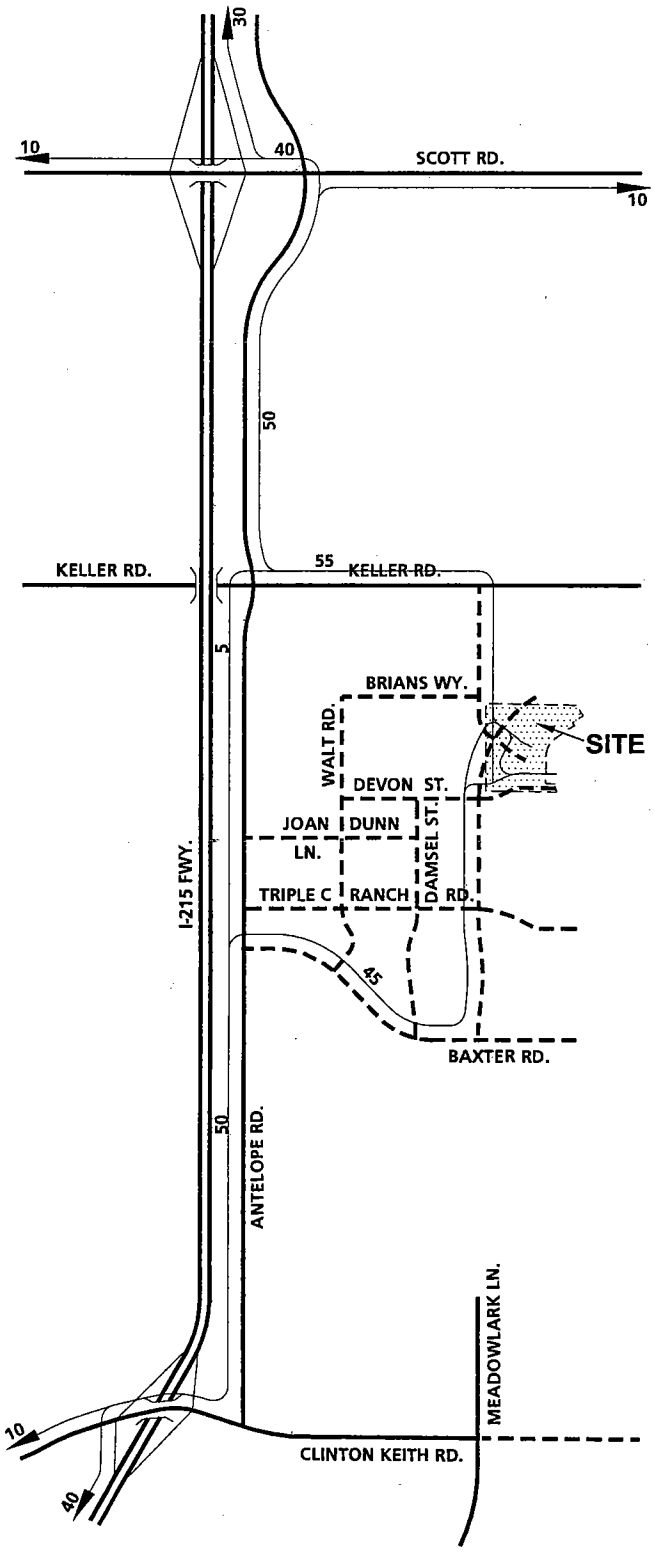
Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial, employment and recreational opportunities and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the community and existing traffic volumes.

Trip distribution for this study has been based upon near-term conditions, adopting those highway facilities which are either in place or will be completed over the next few years, which represents the opening occupancy time-frame for the proposed development. The trip distribution pattern for the project, which has been approved by the City, is shown on Exhibit I.

The traffic reducing potential of public transit has not been considered in this report. Essentially the traffic projections are "conservative" in that public transit might be able to reduce the traffic volumes.

EXHIBIT I

PROJECT TRIP DISTRIBUTION



N

URBAN
CROSSROADS

41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

Scott Sato, P.E.
Philip Nitollama

Prepared for:

Ms. Nancy Cappos
SUNCAL COMPANIES
1250 Corona Pointe Court, Suite 210
Corona, CA 92879

GOLDEN CITIES (TRACT 28532-4) RESIDENTIAL DEVELOPMENT MURRIETA, CALIFORNIA

February 15, 2006

JN:02663-06
SS:PD:cg

CITY OF MURRIETA
FEB 24 2006
RECEIVED
PLANNING DEPT.

EXHIBIT B

SITE PLAN

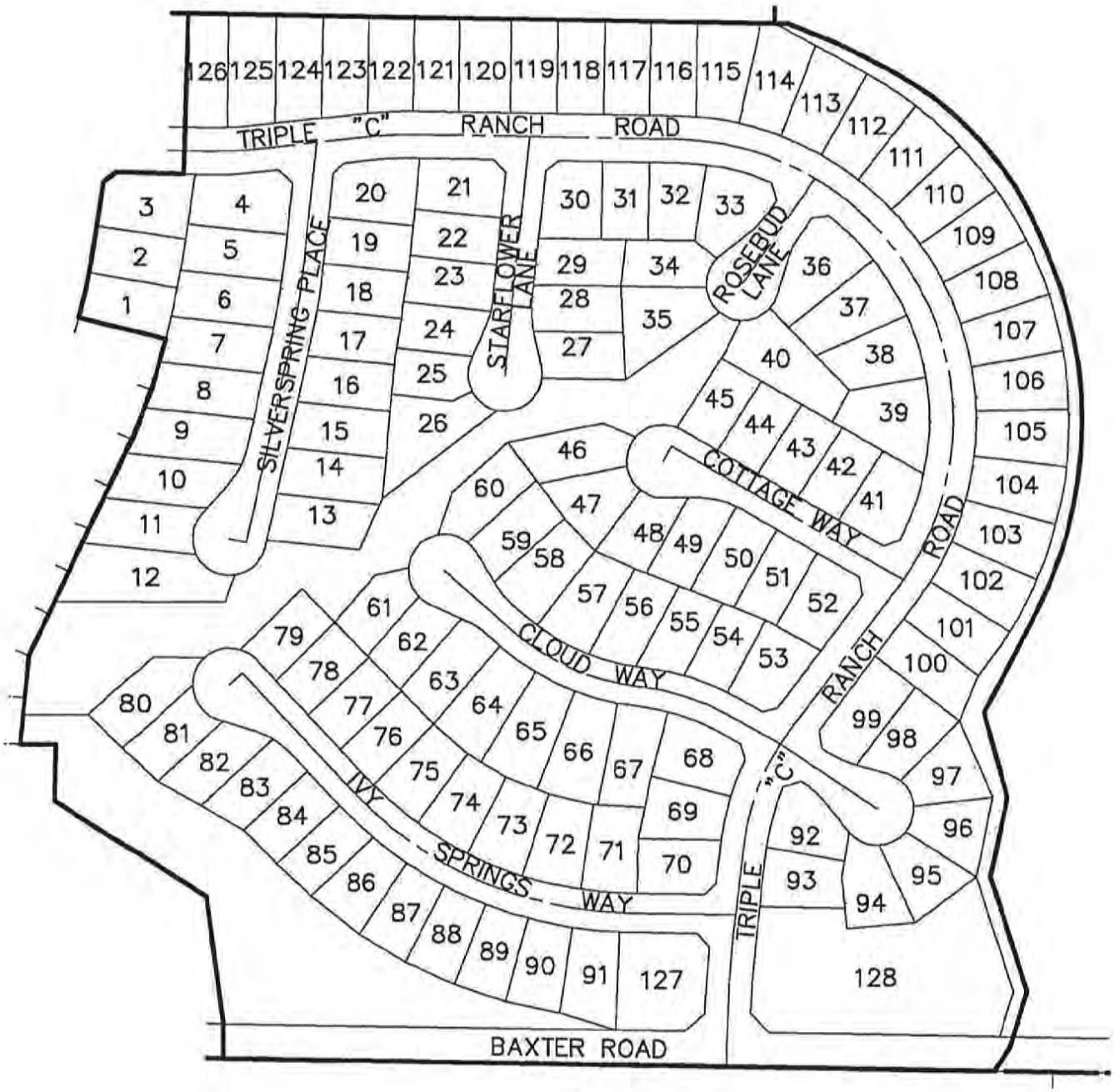


TABLE 2

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Seventh Edition, 2003.

[2] DU = Dwelling Units

Both daily and peak hour trip generation for the proposed development are shown in Table 3. The proposed development is expected to generate a total of 1,206 daily trips with 95 trips occurring during the AM peak hour and 128 trips occurring during the PM peak hour.

TABLE 3

PROJECT TRIP GENERATION

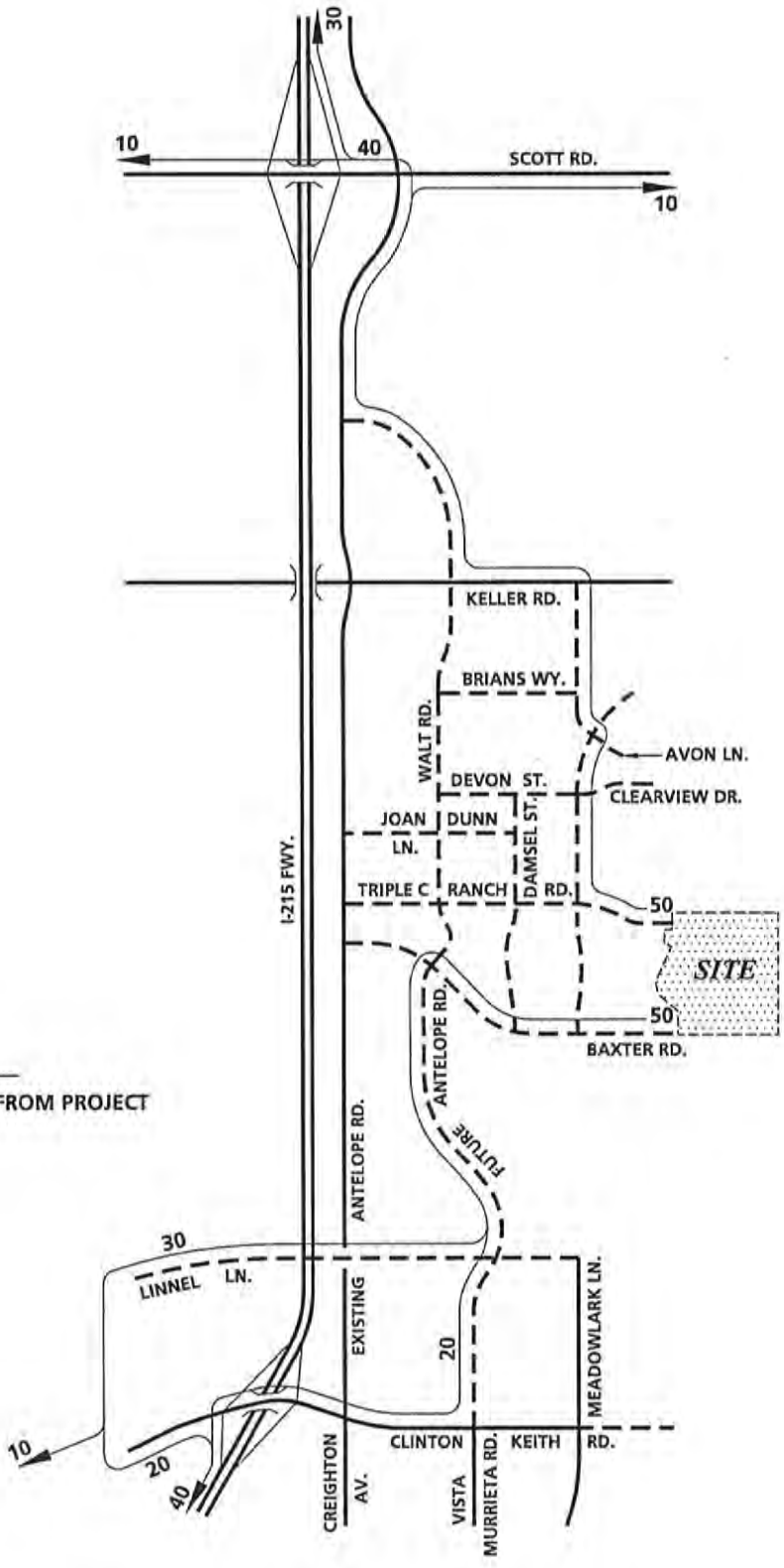
LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Residential	126	DU	24	71	95	81	47	128	1,206

Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial, employment and recreational opportunities and the proximity to the regional

EXHIBIT K

PROJECT TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

N

URBAN
CROSSROADS

41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

Scott Sato, P.E.
Philip Nitollama

Prepared for:

Ms. Nancy Cappos
SUNCAL COMPANIES
1250 Corona Pointe Court, Suite 210
Corona, CA 92879

GOLDEN CITIES
(TRACT 28532-5)
RESIDENTIAL DEVELOPMENT
MURRIETA, CALIFORNIA

April 7, 2006

JN:02663-21
SS:PN:cg

CITY OF MURRIETA
APR 24 2006
RECEIVED
PLANNING DEPT.

EXHIBIT B

SITE PLAN

N

The proposed project comprises a development of 119 single-family detached residential dwelling units. Trip generation rates for the project are shown in Table 2. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE).

TABLE 2

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Seventh Edition, 2003.

[2] DU = Dwelling Units

Both daily and peak hour trip generation for the proposed development are shown in Table 3. The proposed development is expected to generate a total of 1,139 daily trips with 90 trips occurring during the AM peak hour and 120 trips occurring during the PM peak hour.

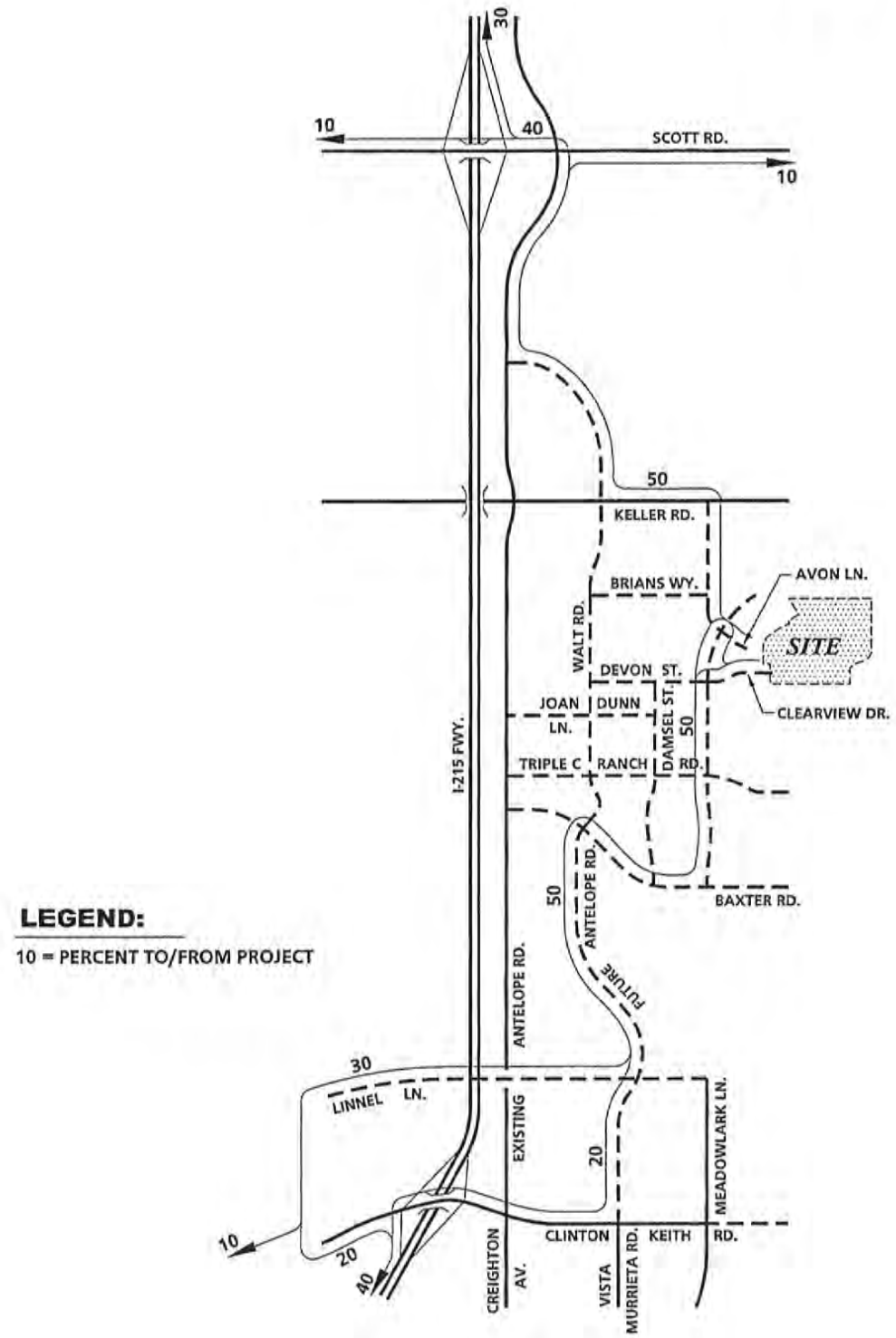
TABLE 2

TRIP GENERATION RATES[1]

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Residential	119	DU	23	67	90	76	44	120	1,139

EXHIBIT K

PROJECT TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

N

PM 34841(PP 22279) (Updated 4/25/07)
TRAFFIC IMPACT STUDY
Riverside County, California

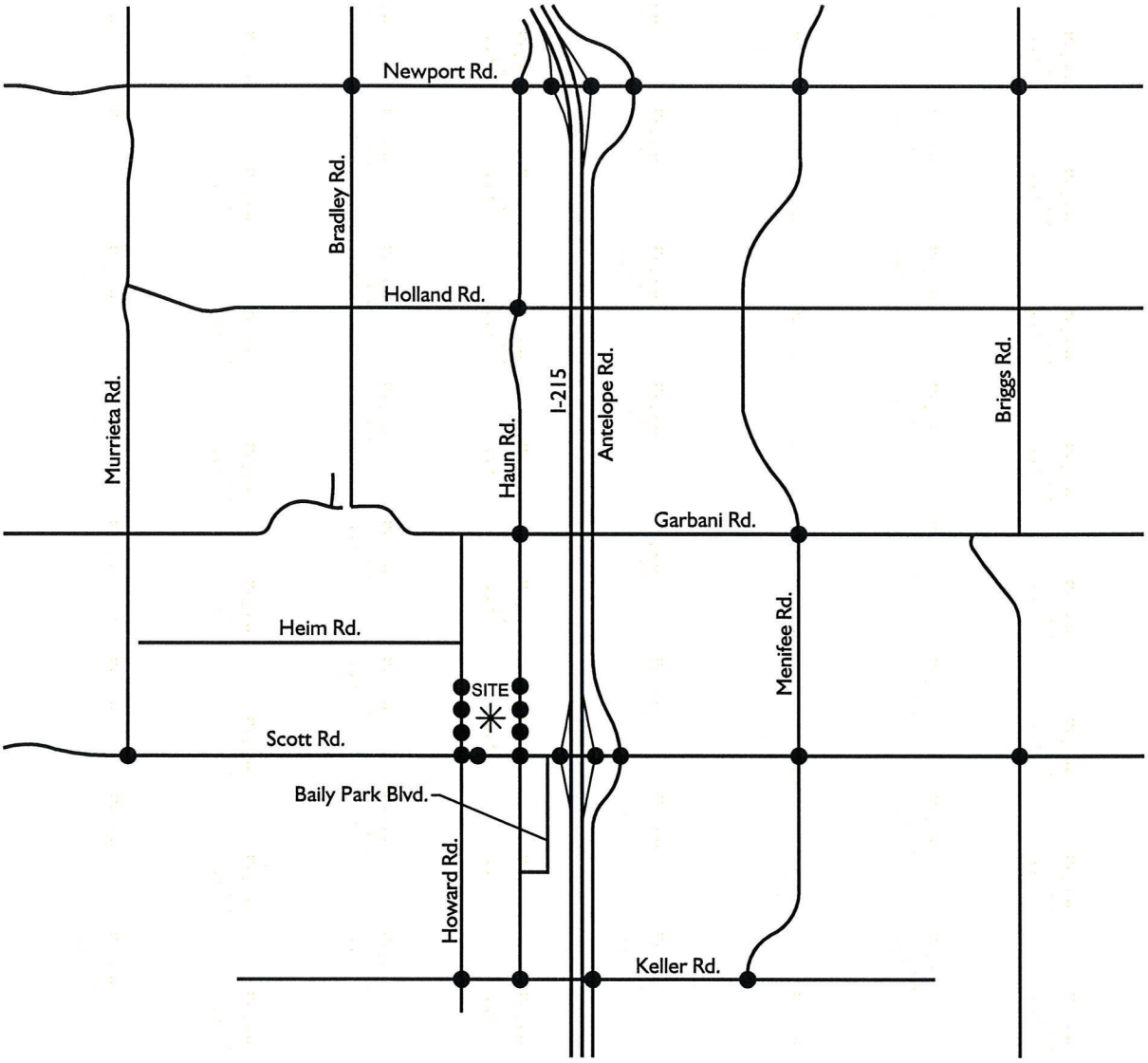
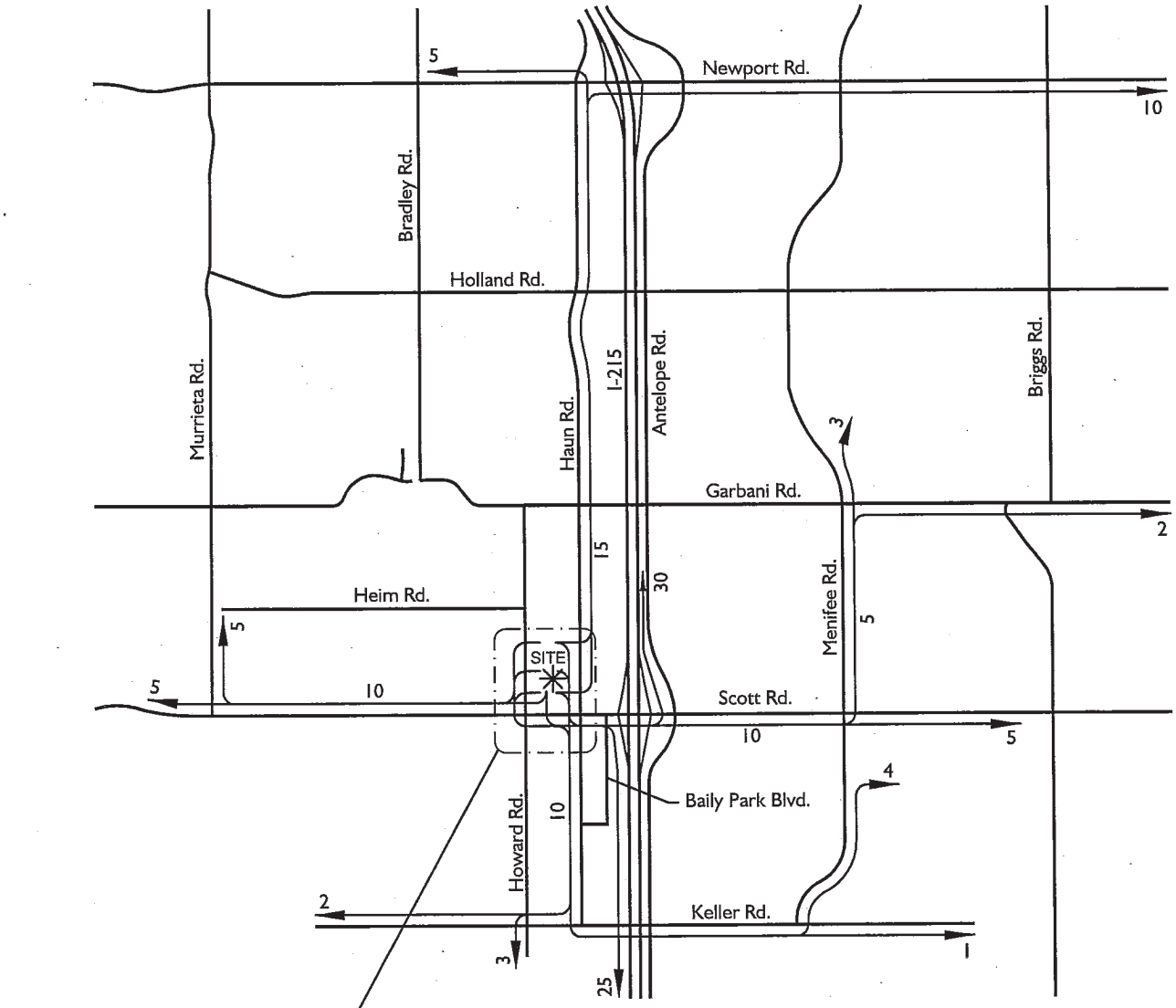
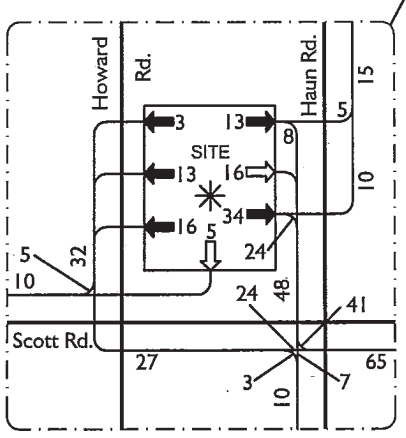


Exhibit 7-1

Outbound Project Trip Distribution





Legend:

⬅ = Full Access

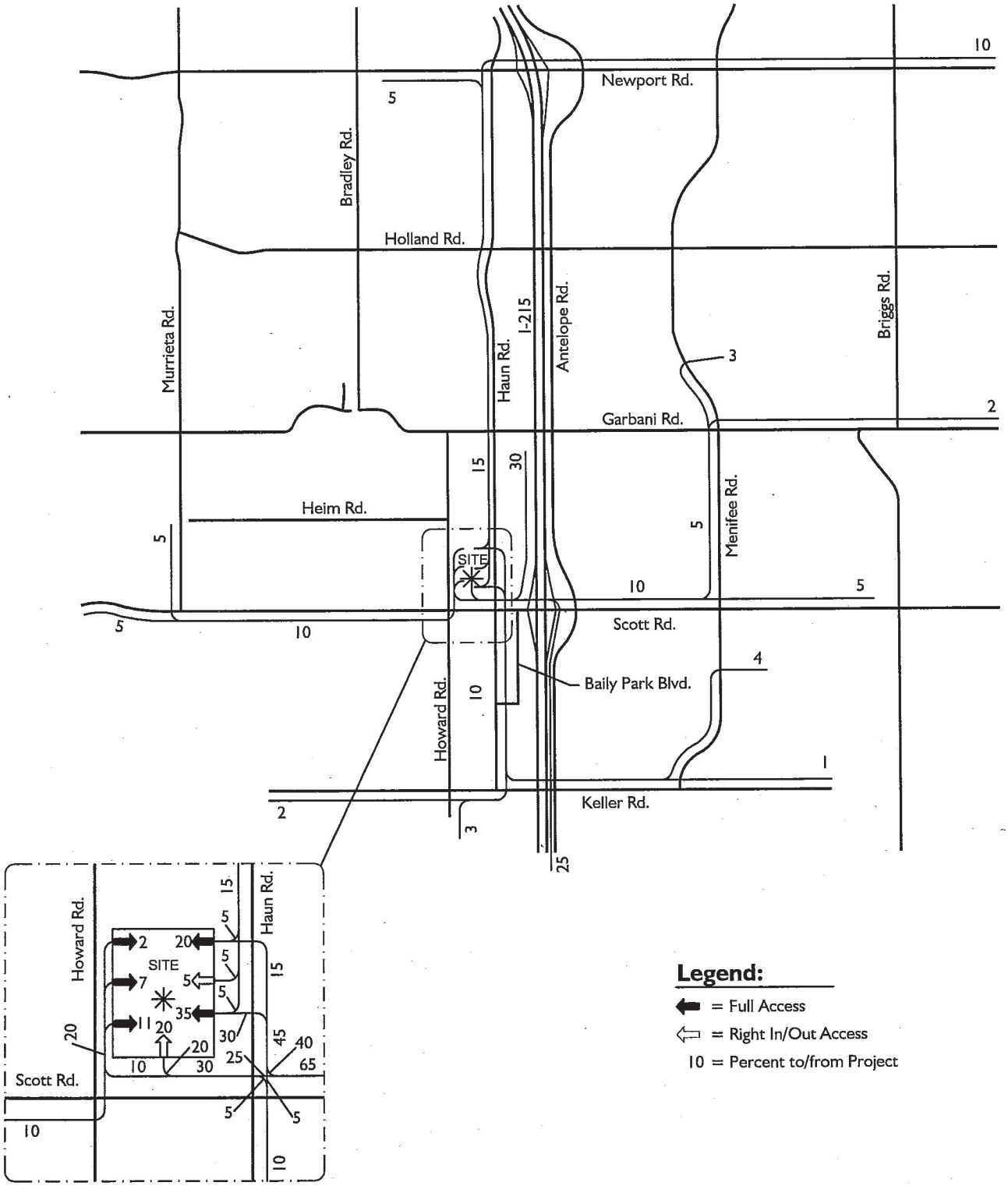
⇦ = Right In/Out Access

10 = Percent to/from Project

N

Exhibit 7-2

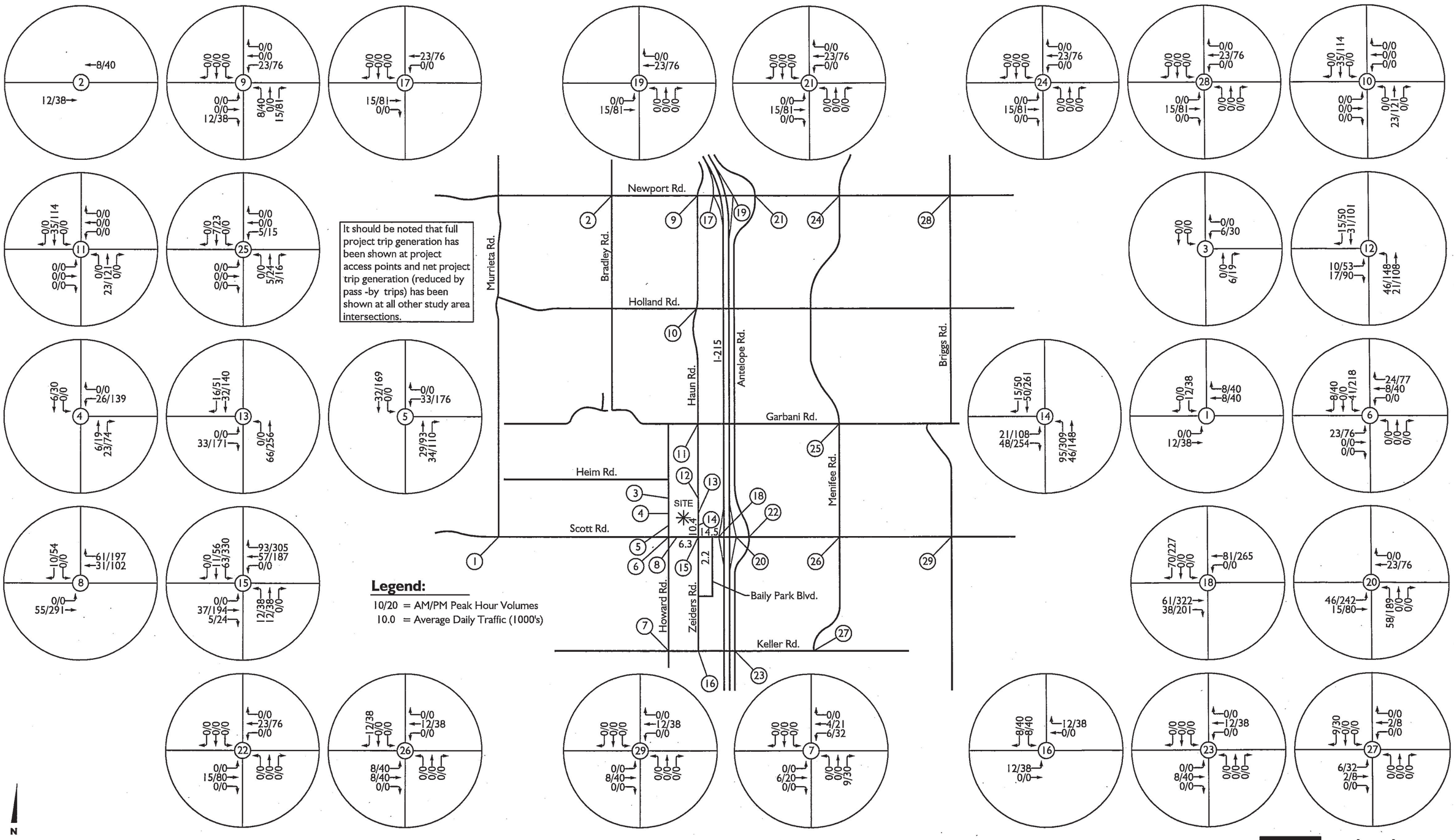
Inbound Project Trip Distribution



RK engineering group, inc.

Exhibit 8

Project Traffic Volumes



RK engineering group, inc.

TABLE 2

Trip Generation Rates[1]

Land Use	Units[2]	Peak Hour				Daily
		AM		PM		
		In	Out	In	Out	
Discount Club	TSF	0.4	0.16	2.12	2.12	41.80
Home Improvement Super Store	TSF	0.65	0.55	1.15	1.3	29.8
Retail	TSF	0.68	0.43	2.24	2.43	50.18

[1] Source: Institute of Transportation Engineers (ITE), *Trip Generation, 7th Edition* , 2003.

[2] TSF = Thousand Square Feet

TABLE 3

Project Trip Generation

Land Use	Quantity	Units[1]	Peak Hour				Daily
			AM		PM		
			In	Out	In	Out	
Discount Club	148.663	TSF	59	24	315	315	6,214
Home Improvement Super Store	140.760	TSF	91	77	162	183	4,195
Retail	237.377	TSF	160	103	532	576	11,912
Subtotal	526.800	TSF	310	204	1,009	1,074	22,321
Less Pass-By Trips (25%)			-78	-51	-252	-269	-5,580
Net Trip Generation Total			233	153	757	806	16,741

[1] TSF = Thousand Square Feet

j:\rktables\RK5284TB
JN:1789-06-03

Attachment 2
Traffic Impact Analysis (Draft EIR Appendix G)

URBAN CROSSROADS
41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

Aric Evatt, PTP
Charlene S. Hwang, PE

Prepared for:

Mr. Ken Jewell
ADAMS ENGINEERING
5876 Owens Avenue, Suite 200
Carlsbad, CA 92008

MENIFEE SHOPPING CENTER
(I-215 AND SCOTT ROAD) (PP 22674)
TRAFFIC IMPACT ANALYSIS
CITY OF MENIFEE, CALIFORNIA

May 12, 2010 (Revised)
February 17, 2009

JN:04087-15
AE:CH:rd

PROJECT (2011) TRIP DISTRIBUTION

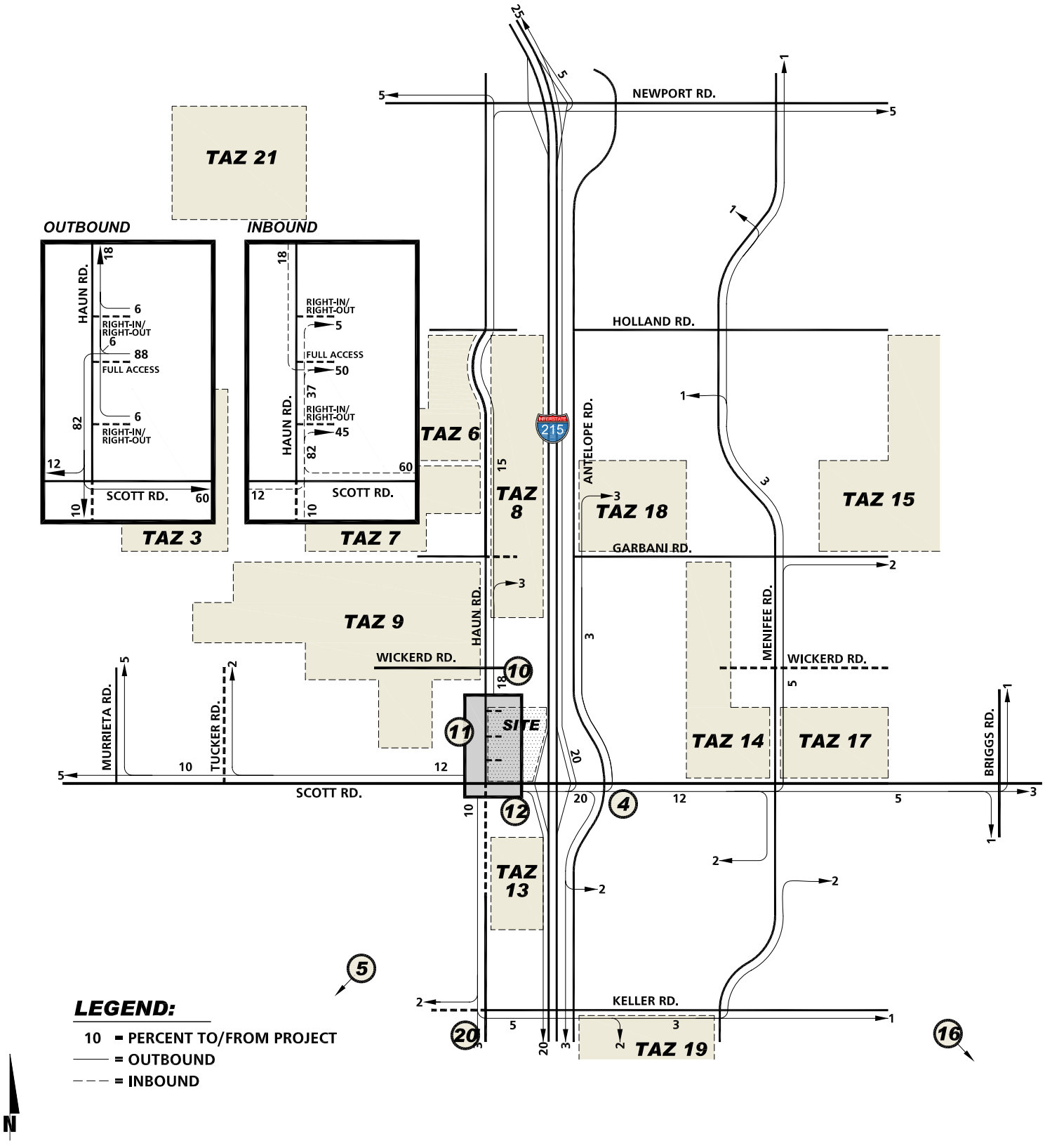


EXHIBIT 1-B
SITE PLAN

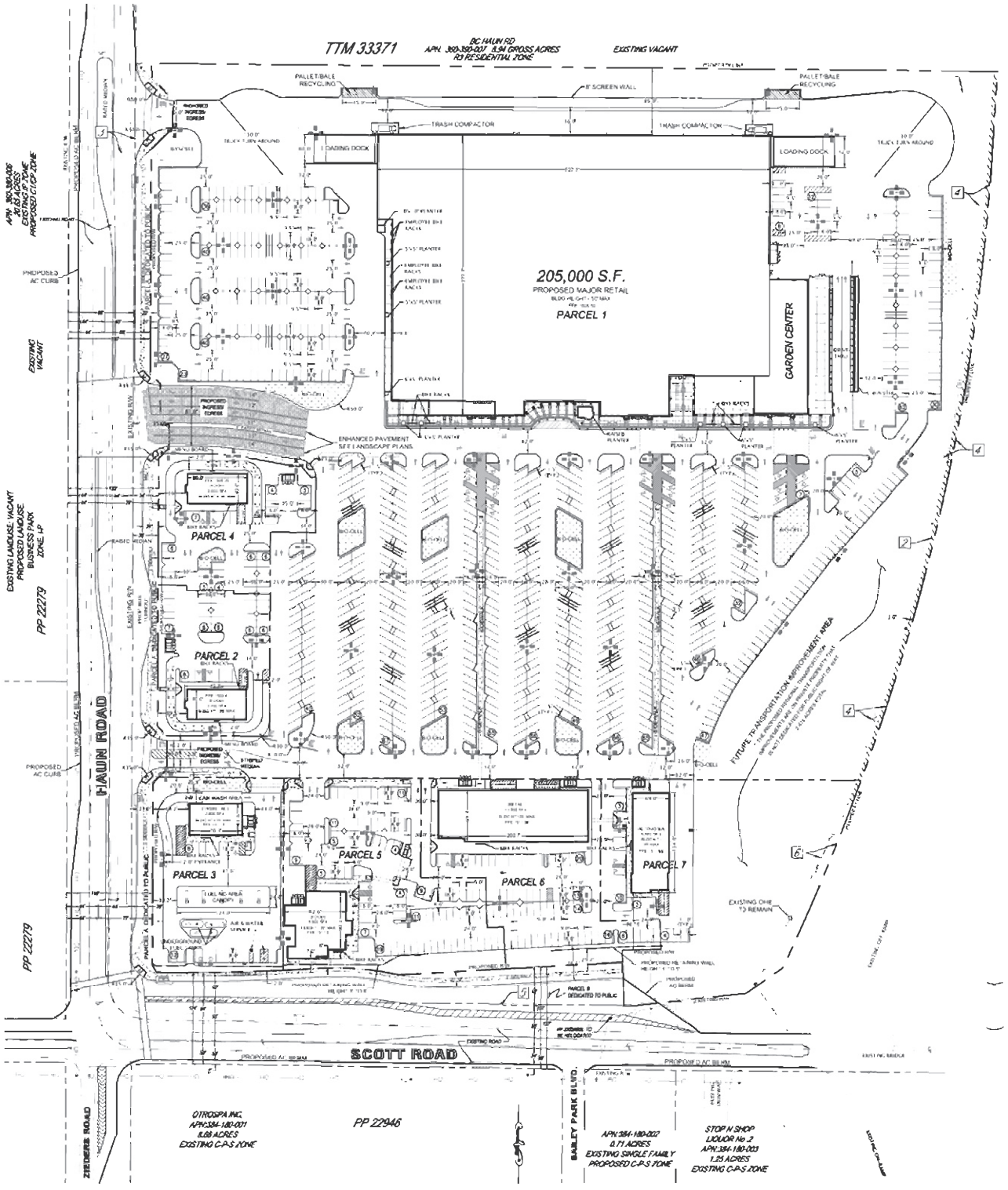


EXHIBIT 1-B

SITE PLAN

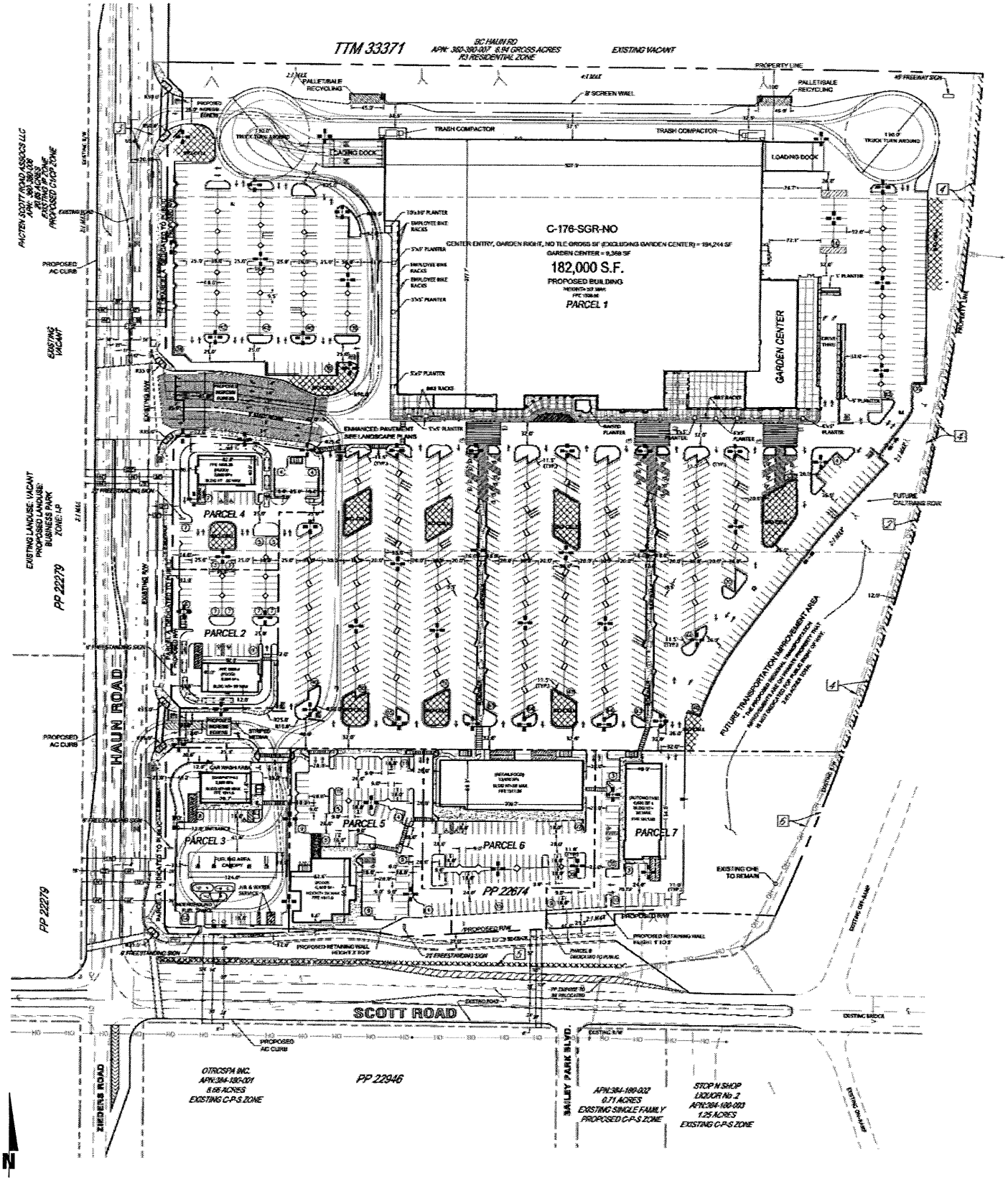


TABLE 3-1

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR TRIP RATES						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Project Trip Generation Rates:									
Free-standing Discount Superstore	813	TSF	0.94	0.73	1.67	--	--	--	--
Specialty Retail[3]	814	TSF	1.44	0.96	2.40	1.19	1.52	2.71	44.32
Free-standing Discount Store	815	TSF	--	--	--	2.50	2.50	5.00	57.24
High-turnover (Sit-down) Restaurant	932	TSF	5.99	5.53	11.52	6.58	4.57	11.15	127.15
Fast-food with Drive-thru	934	TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Automobile Care Center[4]	942	TSF	1.91	1.03	2.94	1.69	1.69	3.38	20.00
Gas Station w/ Food Mart & Car Wash	946	VFP	6.08	5.85	11.93	7.11	6.83	13.94	152.84
Cumulative Trip Generation Rates:									
General Light Industrial	110	TSF	0.81	0.11	0.92	0.12	0.85	0.97	6.97
General Light Industrial	110	AC	6.23	1.28	7.51	1.60	5.66	7.26	51.80
Warehousing	150	TSF	0.24	0.06	0.30	0.08	0.24	0.32	3.56
Mini Warehouse	151	TSF	0.09	0.06	0.15	0.13	0.13	0.26	2.50
Mini Warehouse	151	SU	0.01	0.01	0.02	0.01	0.01	0.02	0.25
Single Family Detached Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Apartments	220	DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Residential Condo/Townhouse	230	DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Senior Adult Housing - Detached	251	DU	0.08	0.14	0.22	0.16	0.11	0.27	3.71
Recreational Community Center	495	TSF	0.99	0.63	1.62	0.54	0.91	1.45	22.88
Church	560	TSF	0.35	0.21	0.56	0.26	0.29	0.55	9.11
Office (5.00 TSF)	710	TSF	3.01	0.41	3.42	2.87	14.01	16.88	26.57
Office (5.04 TSF)	710	TSF	3.00	0.41	3.41	2.85	13.91	16.76	26.52
Office (27.6 TSF)	710	TSF	2.14	0.29	2.43	0.68	3.30	3.98	17.94
Free Standing Discount Superstore	813	TSF	0.94	0.73	1.67	2.26	2.35	4.61	53.13
Commercial / Retail (4.205 TSF)	820	TSF	3.44	2.20	5.64	8.87	9.23	18.10	205.88
Commercial / Retail (93.25 TSF)	820	TSF	0.97	0.62	1.59	3.19	3.32	6.51	69.59
Commercial / Retail (82 TSF)	820	TSF	1.02	0.65	1.67	3.33	3.46	6.79	72.80
Commercial / Retail (237.377 TSF)	820	TSF	0.66	0.42	1.08	2.34	2.44	4.78	50.18
Commercial / Retail (23.34 TSF)	820	TSF	1.71	1.09	2.80	5.04	5.24	10.28	113.01
Commercial / Retail (5.875 TSF)	820	TSF	3.00	1.92	4.92	7.94	8.27	16.21	183.14
Commercial / Retail (68.2 TSF)	820	TSF	1.10	0.70	1.80	3.54	3.68	7.22	77.64
Discount Club	861	TSF	0.40	0.16	0.56	2.12	2.12	4.24	41.80
Home Improvement Superstore	862	TSF	0.72	0.54	1.26	1.14	1.23	2.37	29.80
Pharmacy with Drive-thru	881	TSF	1.52	1.14	2.66	5.17	5.18	10.35	88.16
Fast-food with Drive-thru	934	TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Gas Station w/ Food Mart & Car Wash	946	VFP	6.08	5.85	11.93	7.11	6.83	13.94	152.84

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 8th Edition, 2008.

[2] VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; DU = Dwelling Unit; AC = Acres

[3] The ITE Trip Generation Manual (7th and 8th Editions) does not provide AM peak hour trip generation rates for the adjacent street traffic. The San Diego Municipal Code Land Development Code Trip Generation Manual, May 2003 (Revised) has been utilized to obtain the Specialty Retail AM peak hour rates.

[4] Daily Trip Generation Rate Source: SANDAG Land Development Code Trip Generation Manual, May 2003. ITE does not provide a weekday rate for Land Use 942 (Automobile Care Center) in either the 7th or 8th Edition Trip Generation Manual.

TABLE 3-2

PROJECT TRIP GENERATION SUMMARY

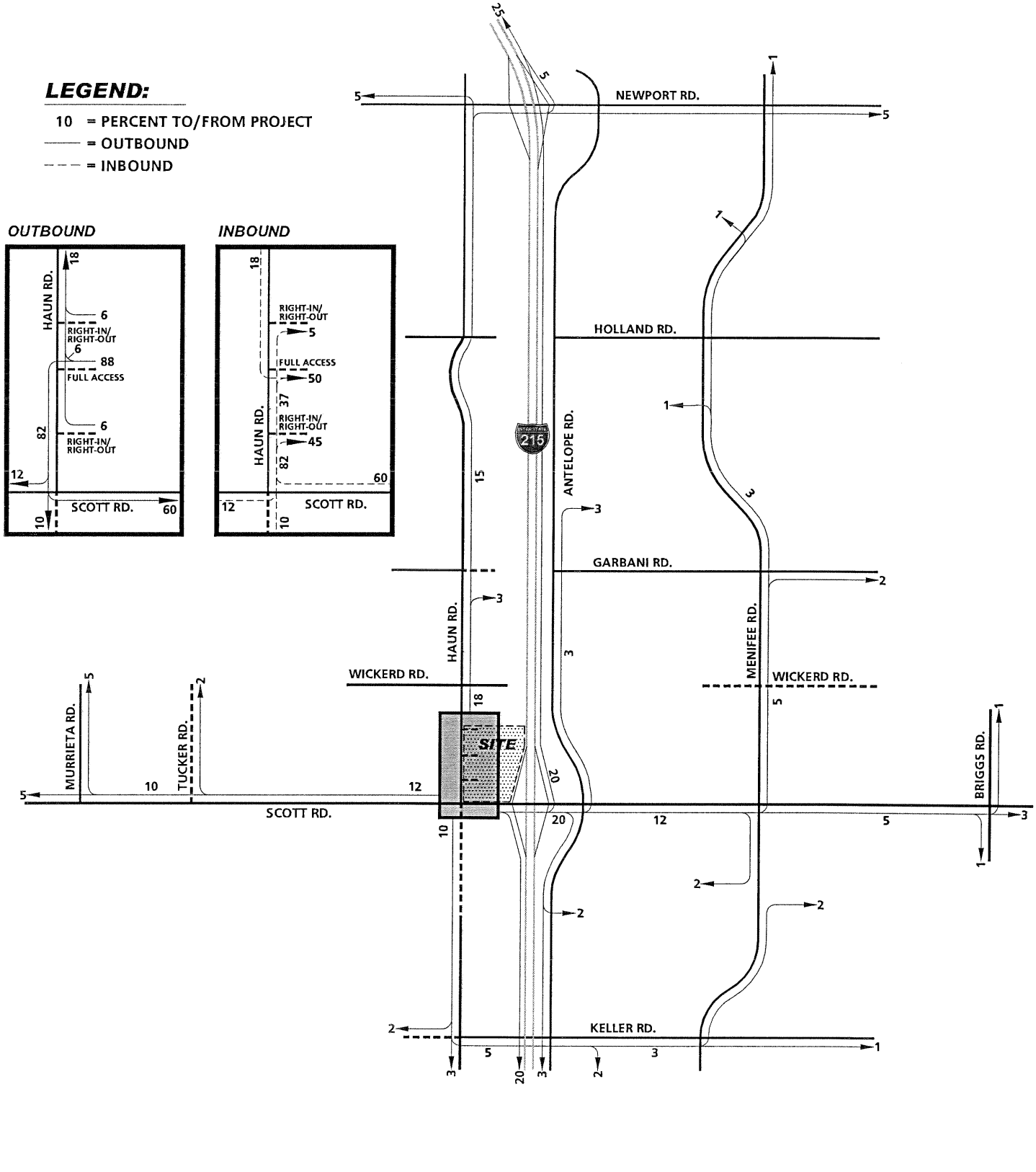
LAND USE	QUANTITY	UNITS[1]	AM			PM			DAILY
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Free-Standing Discount Superstore[2]	205.000	TSF	193	151	344	513	513	1,026	11,734
Automobile Care Center	6.680	TSF	13	7	20	11	11	22	134
Specialty Retail	13.800	TSF	20	13	33	16	21	37	612
High-turnover (Sit-down) Restaurant	6.500	TSF	39	36	75	43	30	72	826
Fast-food with Drive-thru	6.200	TSF	156	150	306	109	101	210	3,076
Gas Station w/ Food Mart & Car Wash	16	VFP	97	94	191	114	109	223	2,445
Subtotal			518	450	968	806	784	1,590	18,827
Internal Capture within Center (10%)			-45	-45	-90	-78	-78	-156	-1,883
Pass-By (25% on Fast-food and Gas Station only)			--	--	--	-51	-48	-99	-1,242
TOTAL			**473**	**405**	**878**	**677**	**658**	**1,335**	**15,702**

[1] TSF = Thousand Square Feet, VFP = Vehicle Fueling Positions

[2] To ensure a more conservative approach to trip generation ITE Land Use Code 813 rates used for AM peak hour and ITE Land Use Code 815 rates used for PM peak hour and daily.

EXHIBIT 3-A

PROJECT (2011) TRIP DISTRIBUTION



SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Murrieta Transportation Department requirements for the traffic impact analysis of the following project.

Case No. _____
Related Cases -
SP No. n/a
EIR No. n/a
GPA No. n/a
CZ No. n/a
Project Name: Curci Property
Project Address: North of Clinton Keith Road and east of I-215
Project Description: 92 RM Hotel, 7.6 tsf Retail, 3.0 tsf Fast Food w/Drive Thru, 5.0 tsf Sit Down Rest.

	Consultant	Developer
Name:	Trames Solutions, Inc.	Mr. Allan Davis
Address:	Scott Sato	Retail Development Advisors
	4225 Oceanside Blvd., #354H	27890 Clinton Keith Road D490
	Oceanside, CA 92056	Murrieta, CA 92562
Phone No:	(949) 244-2436	
Date:	11/16/2017	

A. Trip Generation Source: ITE 9th Edition **(See Tables 1 & 2)**

Proposed Land Use: _____ Previous Land Use: _____
Existing Zoning: _____ Proposed Zoning: _____

	In	Out	Total	In	Out	Total
AM Trips	124	101	225			-
PM Trips	133	125	258			-

Internal Trip Allowance Yes (5 % Trip Discount)
Pass-By Trip Allowance Yes (25 % Trip Discount)

B. Trip Geographic Distribution: (See attached exhibit for detailed assignment). **See Figure C**
N _____ S _____ E _____ W _____

C. Background Traffic
Project Build-out Year 2019 Annual Ambient Growth Rate: 2.0 %

Other projects to be analyzed: To be provided by the City of Murrieta
Model/Forecast methodology: _____

D. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments form other agencies). **See Figure A**

1 McElwain/CK
2 I-215 SB Ramps/CK
3 I-215 NB Ramps/CK
4 Creighton/CK
5 Whitewood/CK
6 All project driveways
7 Clinton Keith Road / Warm Springs Parkway (future scenario)
8 Clinton Keith Road / Bronco Way
9
10

11
12
13
14
15
16
17
18
19
20

↑ All new counts

E. **Study Roadway Segments:**

1 Clinton Keith Road, west of Creighton
2 Clinton Keith Road, east of Creighton
3
4

↑ All new counts

F. **Other Jurisdictional Impacts**

Is this project within a City's Sphere of influence or one mile radius of City boundaries? NO

If so, name of City jurisdiction: Contact City of Menifee and County of Riverside for cumulative projects.

G. **Site Plan** See Figure B

H. **Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)** (To be filled out by Transportation Department)

Existing
Existing+Ambient Growth+Project
Existing+Ambient Growth+Project+Cumulative
Existing+Ambient Growth+Cumulative (Caltrans)
Merge/Diverge Analysis at the CK/I-215 Ramps
I-215 Freeway Segment Analysis

Recommended by:

Scott Sato 11/16/2017

Consultant's Representative Date

Approved By:

* B. R. w/ revisions 11/28/17

City of Murrieta Transportation Department Date
Department - Traffic Staff

*- Assumes CK 17 project (Vineyard Shopping Center) is constructed based on current approvals (i.e. approved square footage and roadway improvements).
- Does not assume any cumulative projects to the north of the CK 17/Vineyard Shopping Center project.
- Perform queuing analysis for all study intersections.
- All intersections will need to be analyzed as a coordinated system.
- Contact Caltrans to verify if additional analysis is required. At a minimum, assume merge/diverge analysis at all Caltrans ramps.
- Assume Clinton Keith extension (east of Whitewood) is opened by 7/18.

- Applicant is proceeding at risk, as the City is aware that the CK 17/Vineyard Shopping Center project may be modified.

TABLE 1

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	QUANTITY[2]	PEAK HOUR TRIP RATES						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Hotel	310	92 RM	0.31	0.22	0.53	0.31	0.29	0.60	8.17
Shopping Center	820	7.6 TSF	2.64	1.62	4.26	6.73	7.29	14.02	167.36
Fast Food w/ Drive Thru	934	3 TSF	23.16	22.26	45.42	16.98	15.67	32.65	496.12
High Turnover (Sit-Down) Restaurant	932	5 TSF	5.95	4.86	10.81	5.91	3.94	9.85	127.15

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 9th Edition, 2012.

[2] RM = Rooms, TSF = Thousand Square Feet

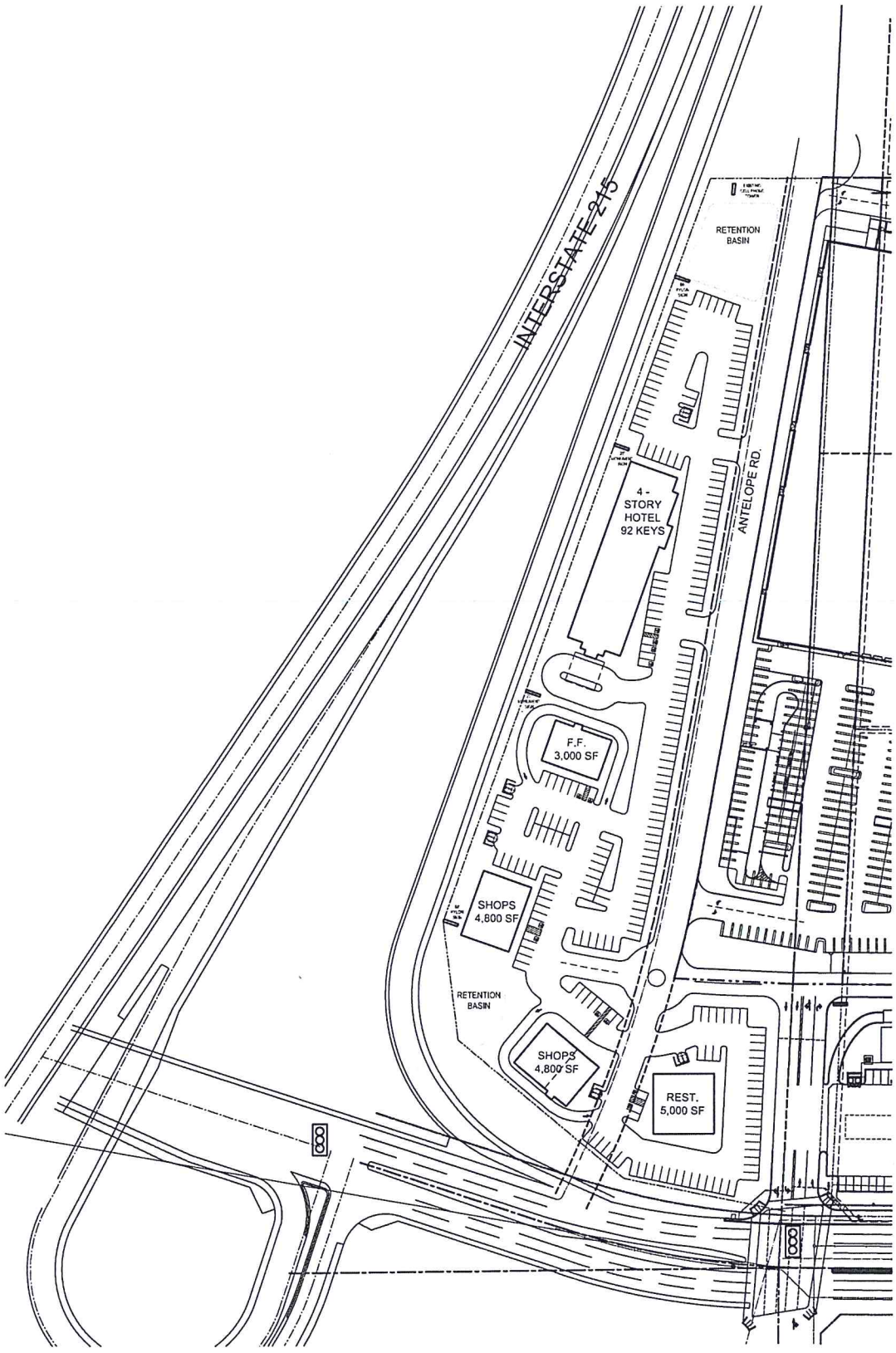
TABLE 2

TRIP GENERATION SUMMARY

LAND USE	QUANTITY[1]	PEAK HOUR						DAILY
		AM			PM			
		IN	OUT	TOTAL	IN	OUT	TOTAL	
Hotel	92 RM	29	20	49	29	27	56	752
Shopping Center	7.6 TSF	20	12	32	51	55	106	1,272
Fast Food w/ Drive Thru	3 TSF	69	67	136	51	47	98	1,488
- Pass-By Reduction (25%)		*-17*	*-17*	*-34*	*-13*	*-12*	*-25*	*-372*
High Turnover (Sit-Down) Restaurant	5 TSF	30	24	54	30	20	50	636
- Pass-By Reduction (25%) PM Only					*-8*	*-5*	*-13*	*-159*
Internal Capture (5% Reduction)		-7	-5	-12	-7	-7	-14	-189
TOTAL		**124**	**101**	**225**	**133**	**125**	**258**	**3,428**

[1] RM = Rooms; TSF = Thousand Square Feet

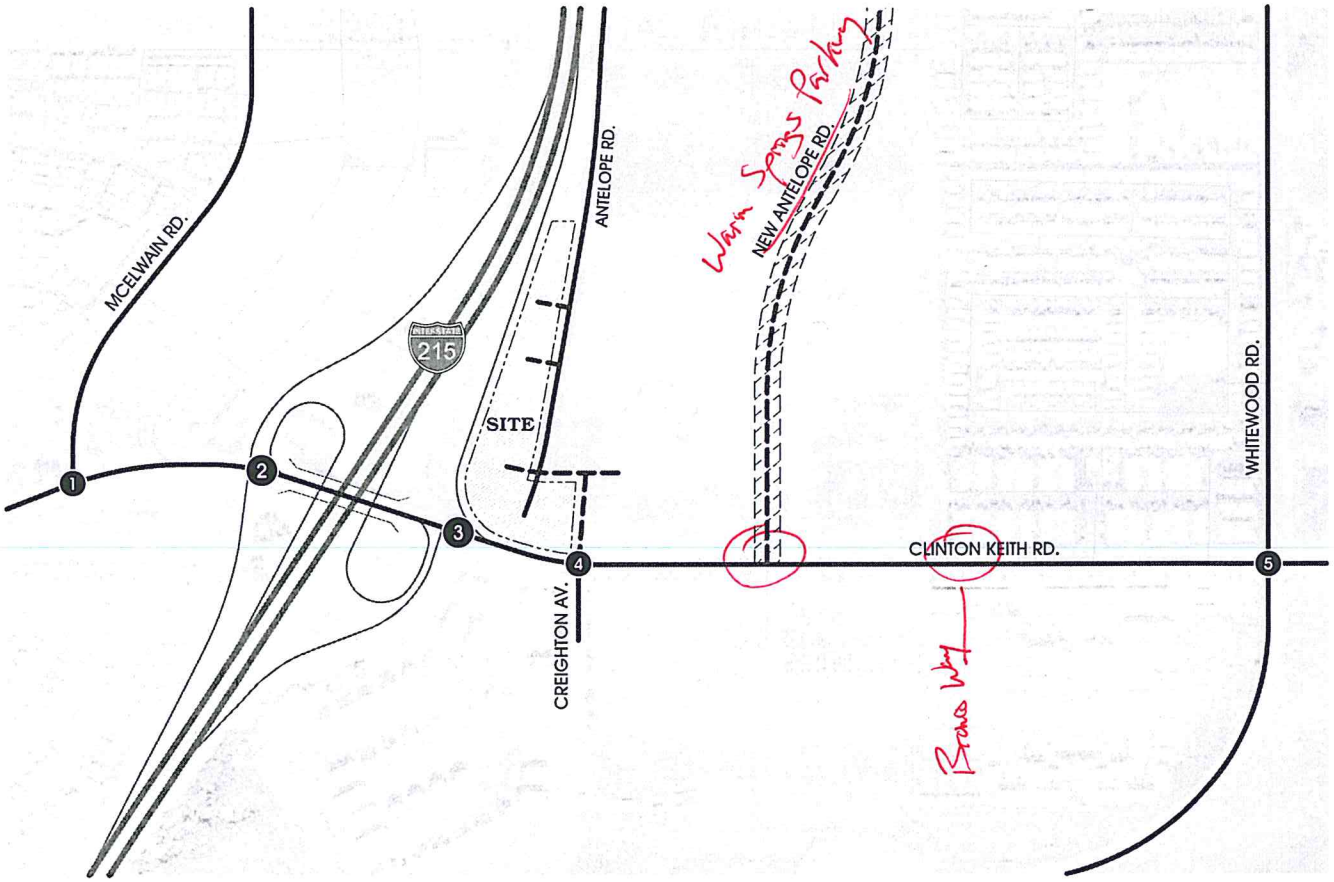
FIGURE B
SITE PLAN



Curci Property Traffic Impact Analysis
City of Murrieta, CA (JN0035-0003:scope.dwg)

TRAMES SOLUTIONS INC.

FIGURE A
STUDY AREA



LEGEND:

5 = EXISTING INTERSECTION ANALYSIS LOCATION

= FUTURE ROADWAY

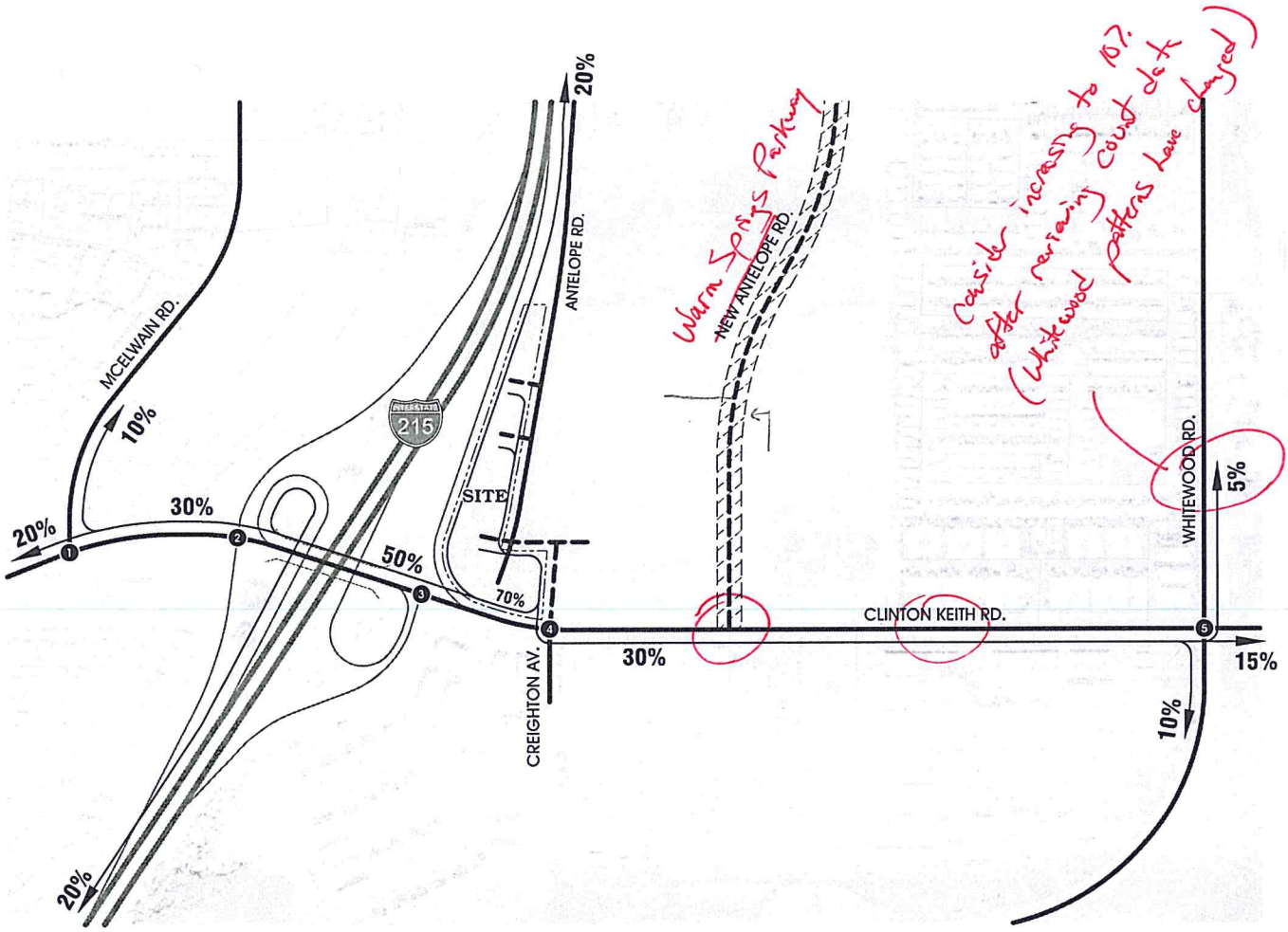
= NEW ANTELOPE ROAD, FUTURE ROADWAY DEFERRED - CITY TO EXTEND

N

Curci Property Traffic Impact Analysis
City of Murrieta, CA (JN0035-0003:scope.dwg)

TRAMES SOLUTIONS INC.

FIGURE C
PROJECT TRIP DISTRIBUTION



LEGEND:

❺ = INTERSECTION ID

10% = PERCENT TO/FROM PROJECT

N

KUNZMAN ASSOCIATES, INC.

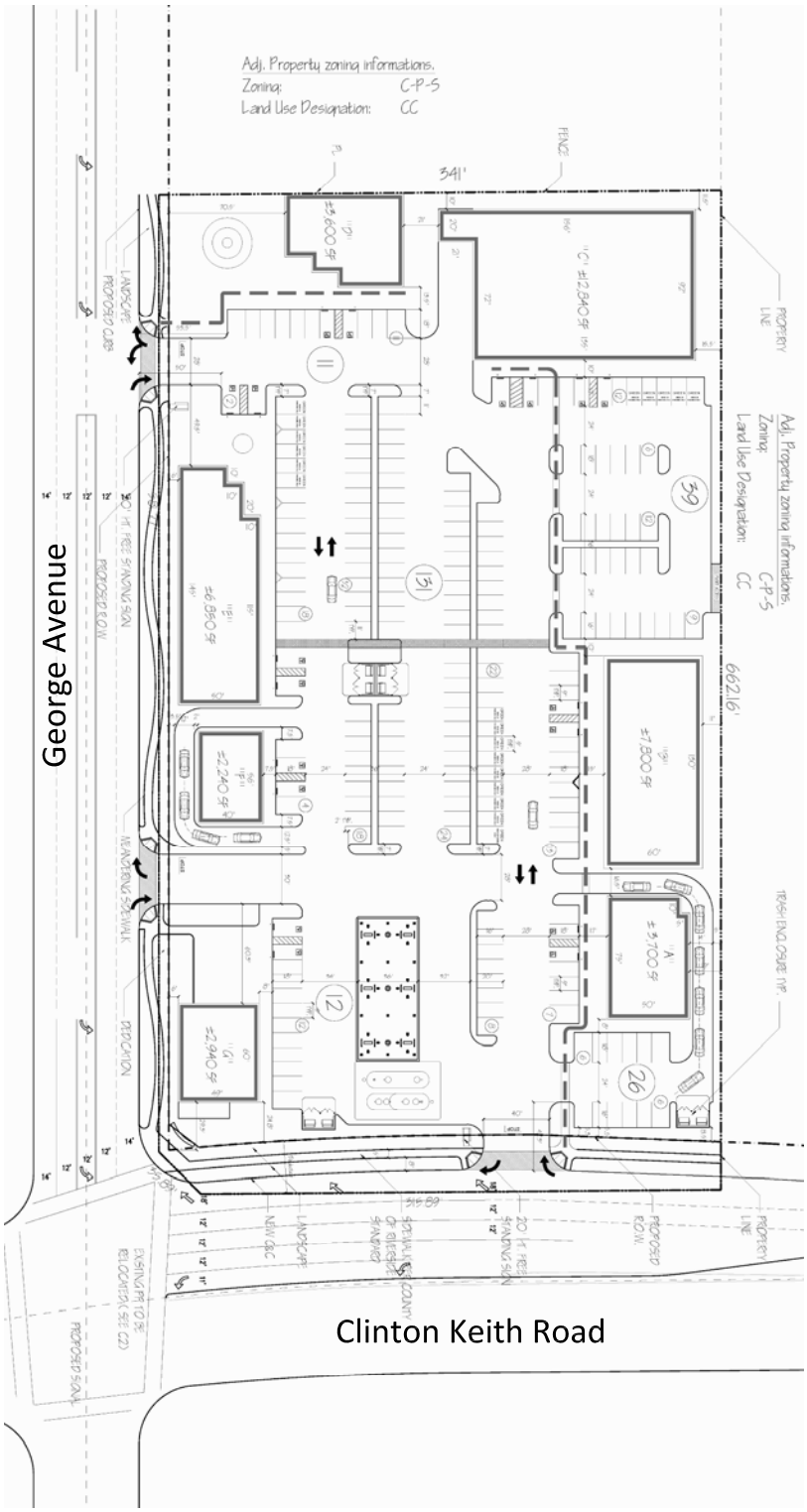
CLINTON KEITH VILLAGE

TRAFFIC IMPACT ANALYSIS

July 28, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

Figure 2
Site Plan



IV. Project Traffic

The project site is proposed to be developed with 5,940 square feet of fast food restaurant with drive-thru, 12,840 square feet of variety store, a 12 fueling position convenience market with gas pumps, and 18,250 square feet of commercial retail. The proposed project will have access to George Avenue and Clinton Keith Road.

A. Site Traffic

1. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land uses. By multiplying the trip generation rates by the land use quantities, the traffic volumes are determined. Table 2 exhibits the trip generation rates, project peak hour volumes, and project daily traffic volumes. The trip generation rates are from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

The proposed development is projected to generate a total of approximately 10,525 daily vehicle trips, 278 of which occur during the morning peak hour and 300 of which occur during the evening peak hour.

Traffic volumes shown in Table 2 consist of the total trips generated for each project land use. As a retail trip generated by the project will also be making trips to a restaurant land use within the project, a double counting of those trips occurs. In order to analyze a "conservative" scenario in terms of the assignment of trips, the trip generation has not been reduced as a result of internal interaction between the proposed land uses.

It should be noted that for commercial retail land use, a portion of the trips would come from pass-by trips, trips that are currently on the roadway system. In order to analyze a “conservative” scenario in terms of the assignment of trips, the traffic volumes from the project site has been reduced as a result of pass-by trips based upon the Institute of Transportation Engineers, Trip Generation Handbook, 2nd Edition, 2004.

2. Trip Distribution

Figures 9 and 10 contain the directional distributions of the project trips for the proposed land uses. Figures 11 and 12 show the directional distributions for pass-by trips.

To determine the trip distributions for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were reviewed.

3. Trip Assignment

Based on the identified trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 13. Morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figures 14 and 15, respectively.

4. Modal Split

The traffic reducing potential of public transit has not been considered in this report. Essentially the traffic projections are conservative in that public transit might be able to reduce the traffic volumes.

Table 2

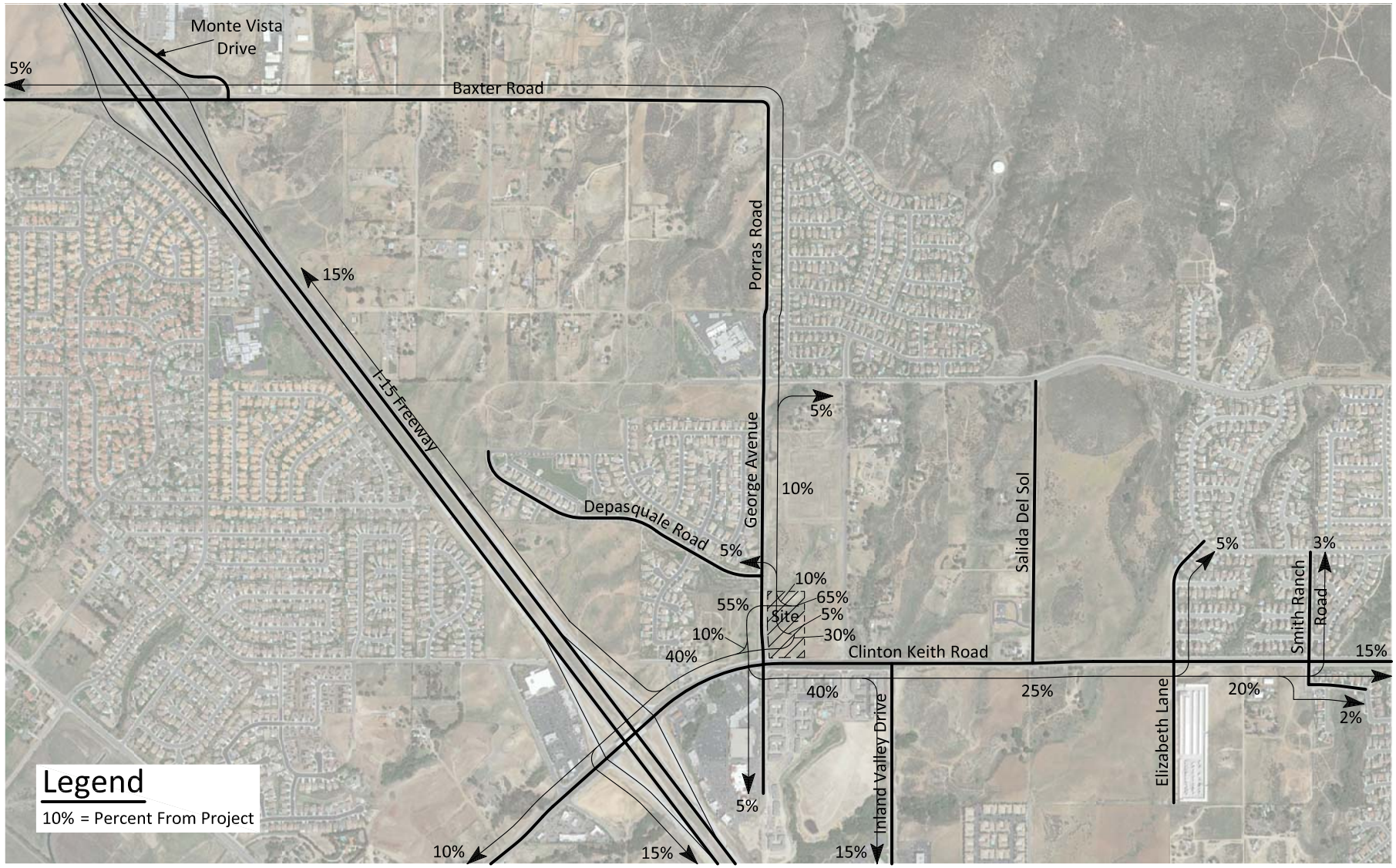
Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Fast Food Restaurant with Drive-Through Window		TSF	23.16	22.26	45.42	16.98	15.67	32.65	496.12
Variety Store		TSF	2.29	1.52	3.81	3.41	3.41	6.82	64.03
Convenience Market with Gas Pumps		FP	8.29	8.29	16.57	9.54	9.54	19.07	542.60
Commercial Retail		TSF	0.60	0.36	0.96	1.78	1.93	3.71	42.70
Trips Generated									
Fast Food Restaurant with Drive-Through Window	5.940	TSF	138	132	270	101	93	194	2,947
- Pass-by for Fast Food Restaurant (49% AM, 50% PM)			-68	-65	-133	-51	-47	-98	-231
Variety Store	12.840	TSF	29	20	49	44	44	88	822
Convenience Market with Gas Pumps	12	FP	99	99	198	114	114	228	6,511
- Pass-by for Convenience Market with Gas Pumps (63% AM, 66% PM)			-62	-62	-124	-75	-75	-150	-274
Commercial Retail	18.250	TSF	11	7	18	32	35	67	779
- Pass-by for Commercial Retail (34% PM)			--	--	--	-14	-15	-29	-29
Total			147	131	278	151	149	300	10,525

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 814, 820, 852, and 934. For land use 814: Since morning and evening peak hour inbound/outbound ratios are not avaliable, the morning and evening peak hour inbound/outbound ratio splits for specialty retail/strip commercial has been obtained from the San Diego Association of Governments, Traffic Generators, April 2003. Pass-by trip reduction rates are from the Institute of Transportation Engineers, Trip Generation Handbook, 2nd Edition, 2004.

[2] TSF = Thousand Square Feet; FP = Fueling Positions

Figure 9
Project Outbound Trip Distribution



3663d/9

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 10
Project Inbound Trip Distribution

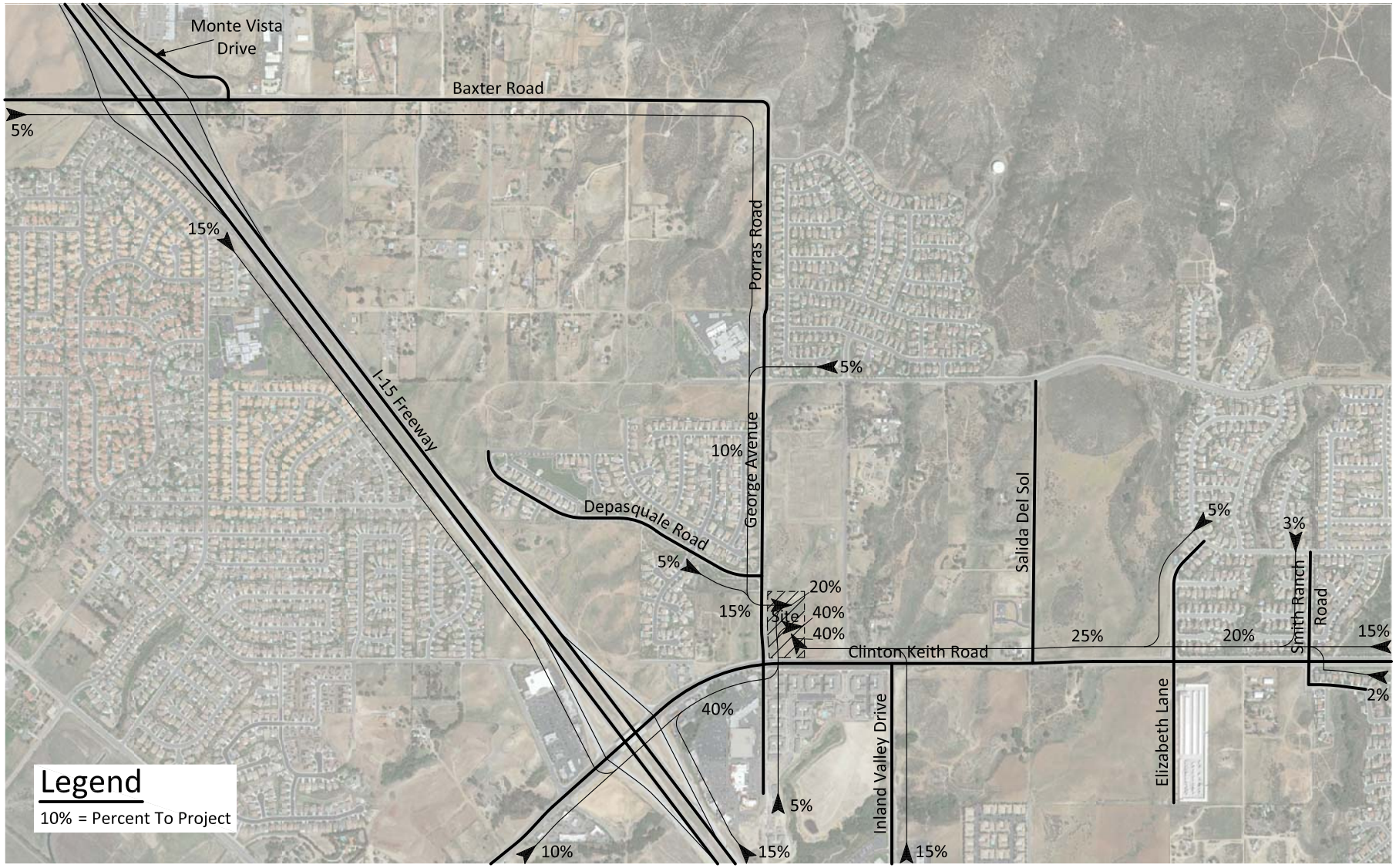


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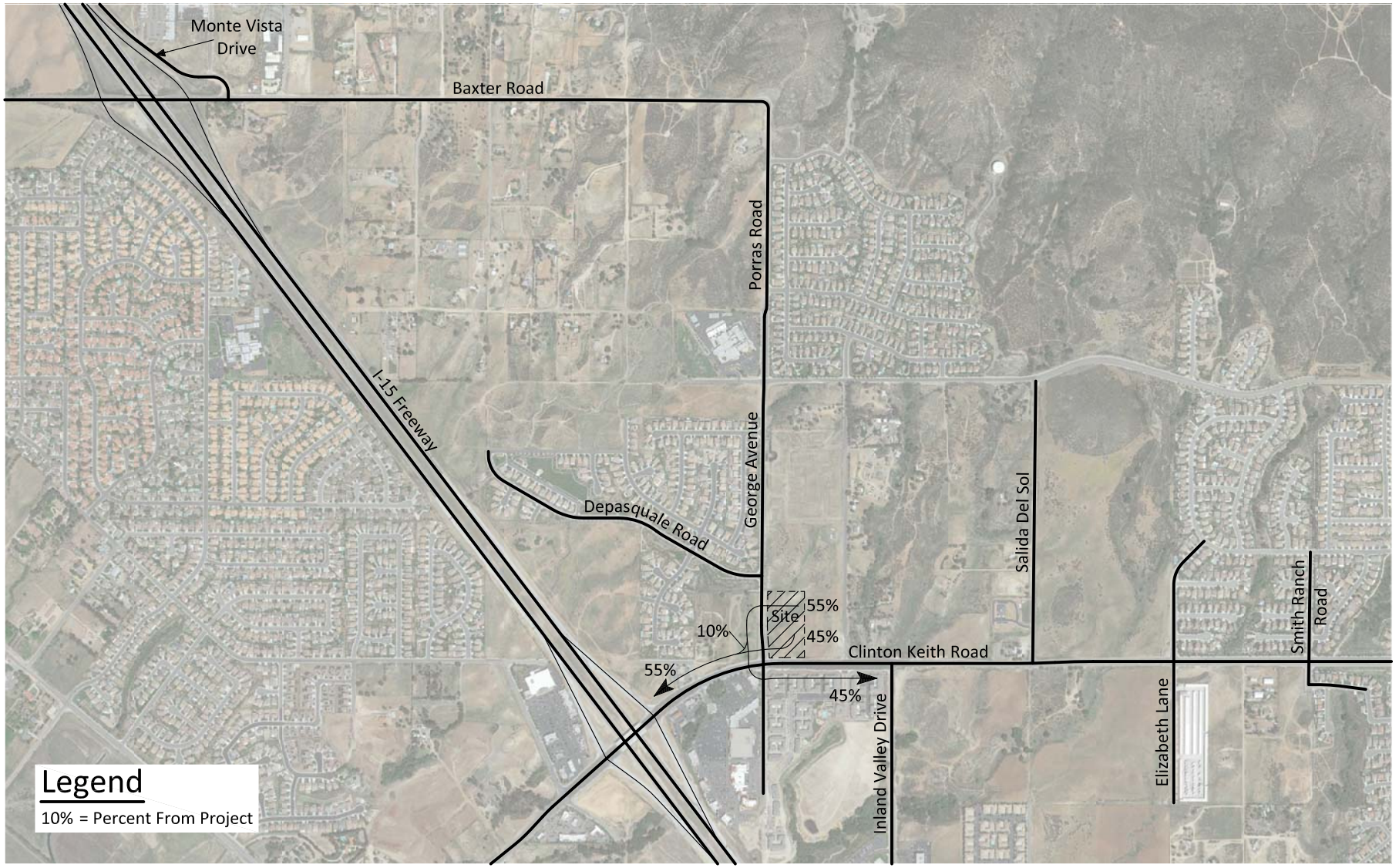
Figure 11
Project Outbound Pass-By Trip Distribution



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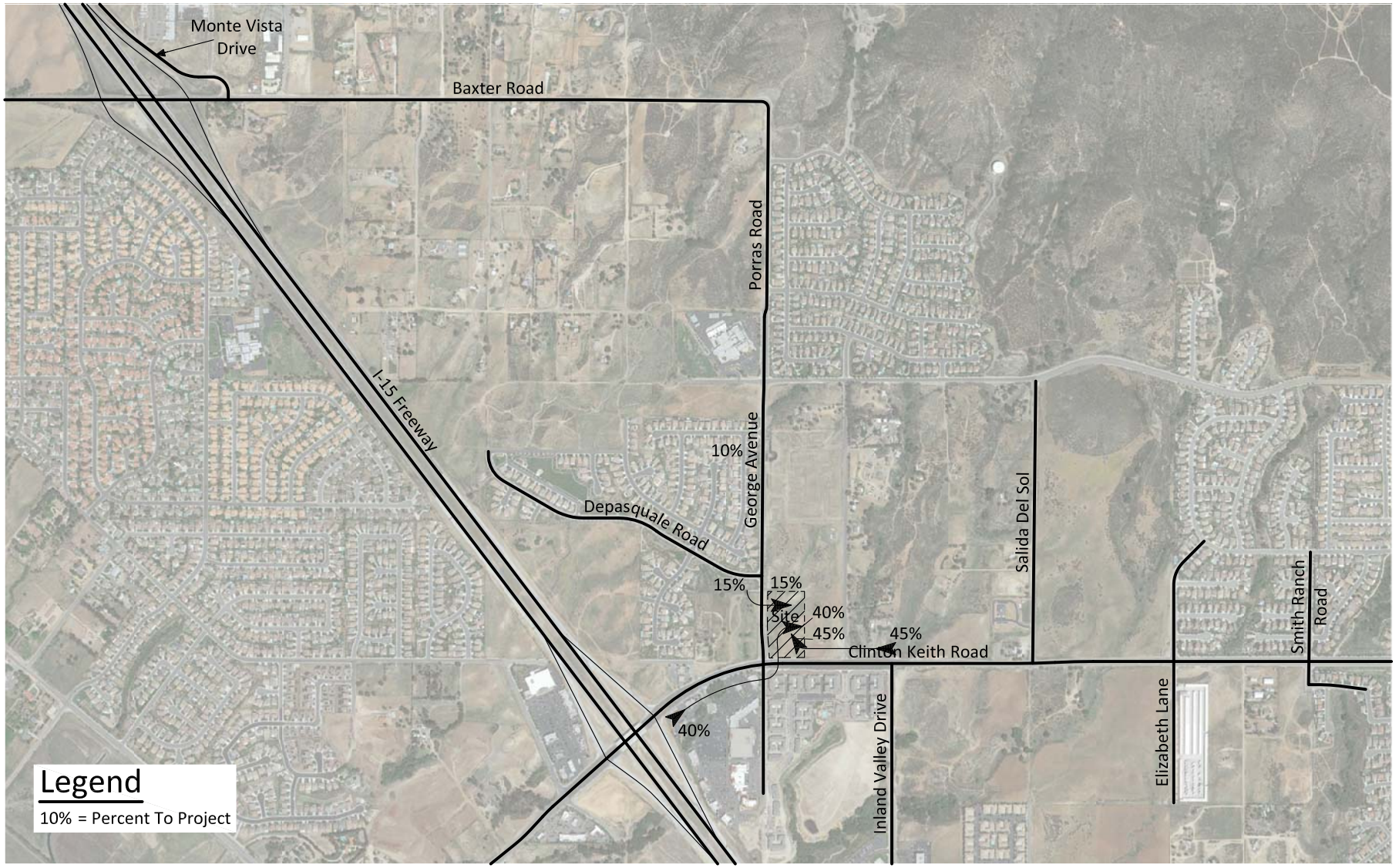
KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 12
Project Inbound Pass-By Trip Distribution



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KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 13
Project Average Daily Traffic Volumes

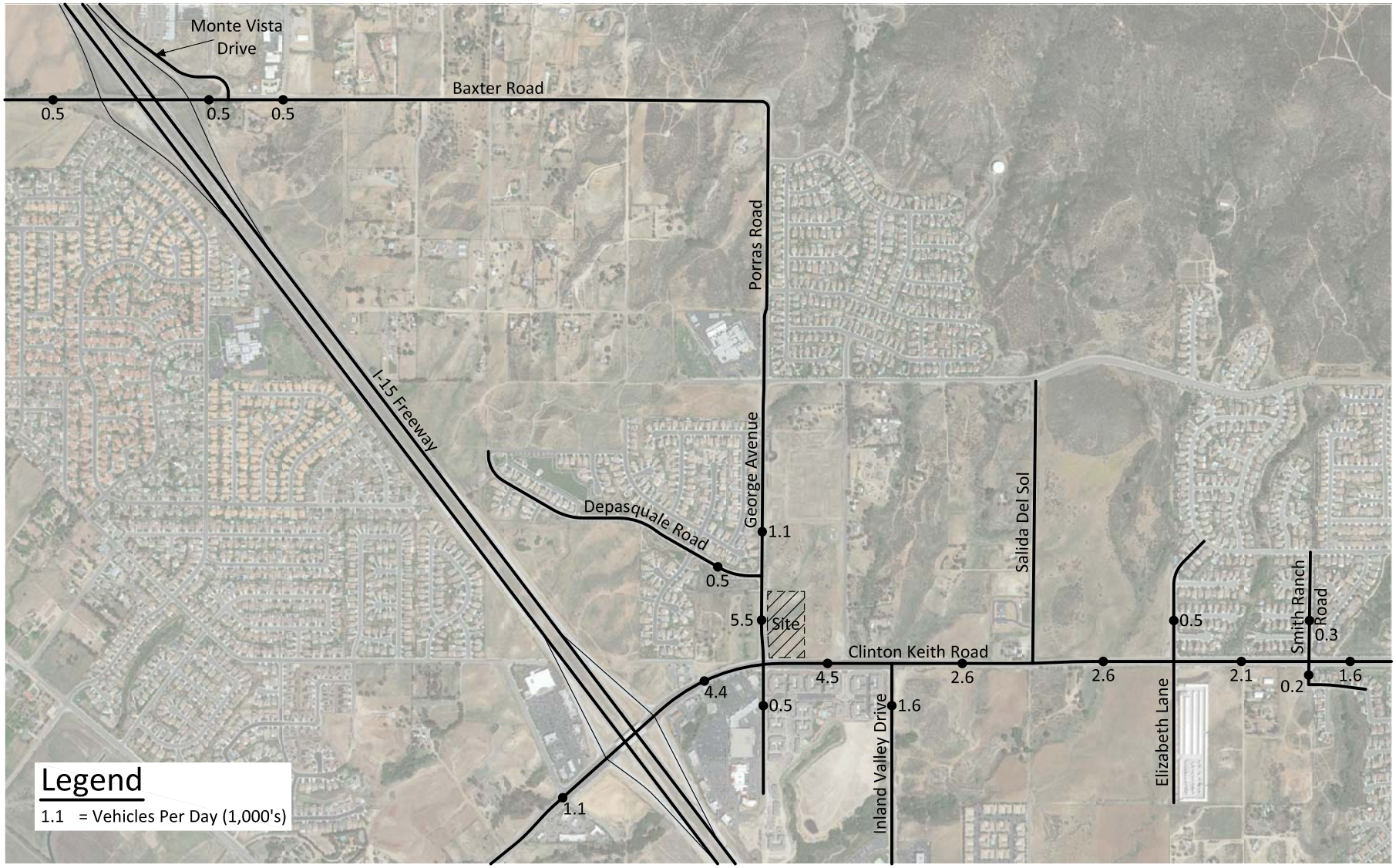

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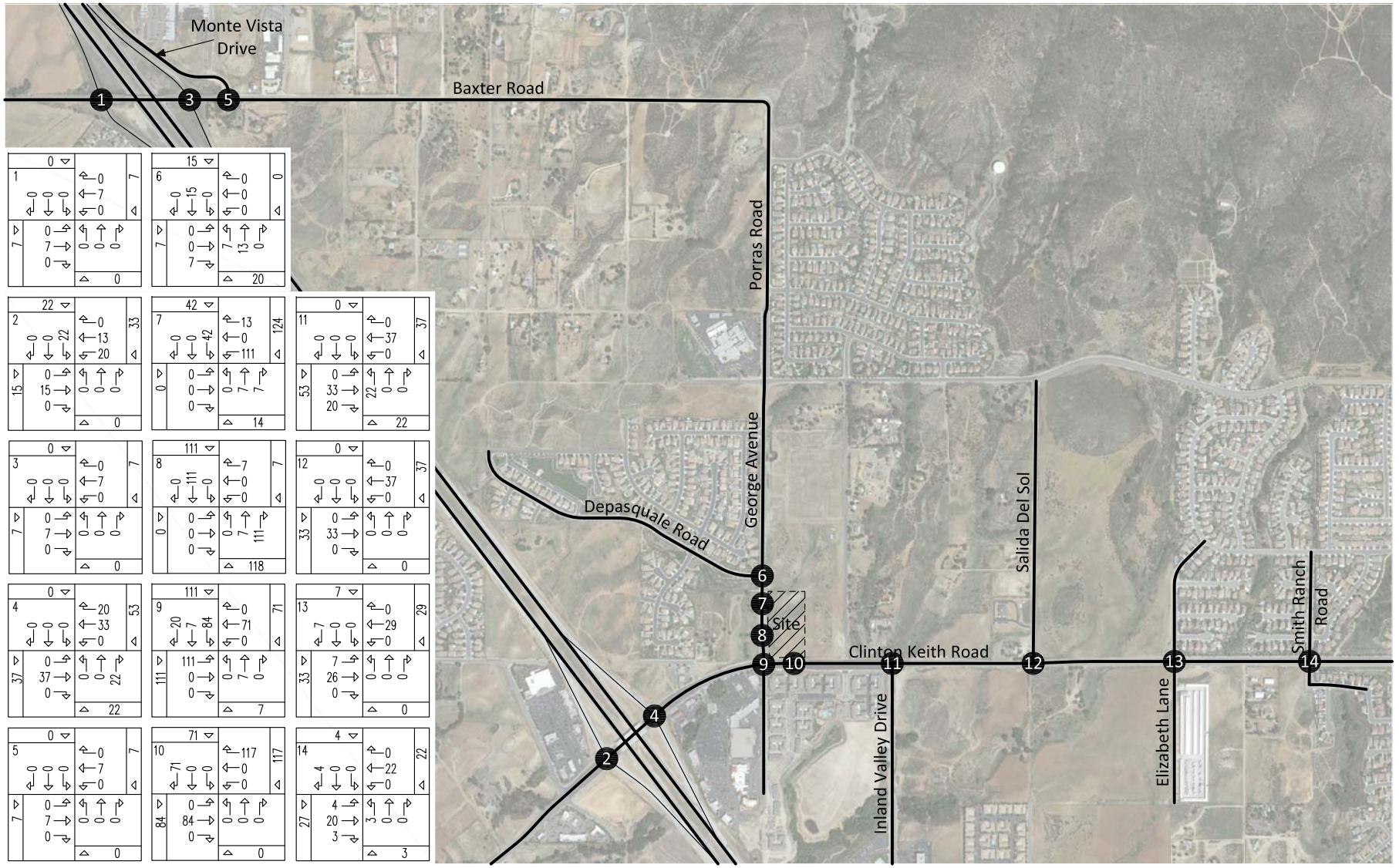
Figure 14
Project Morning Peak Hour Intersection Turning Movement Volumes

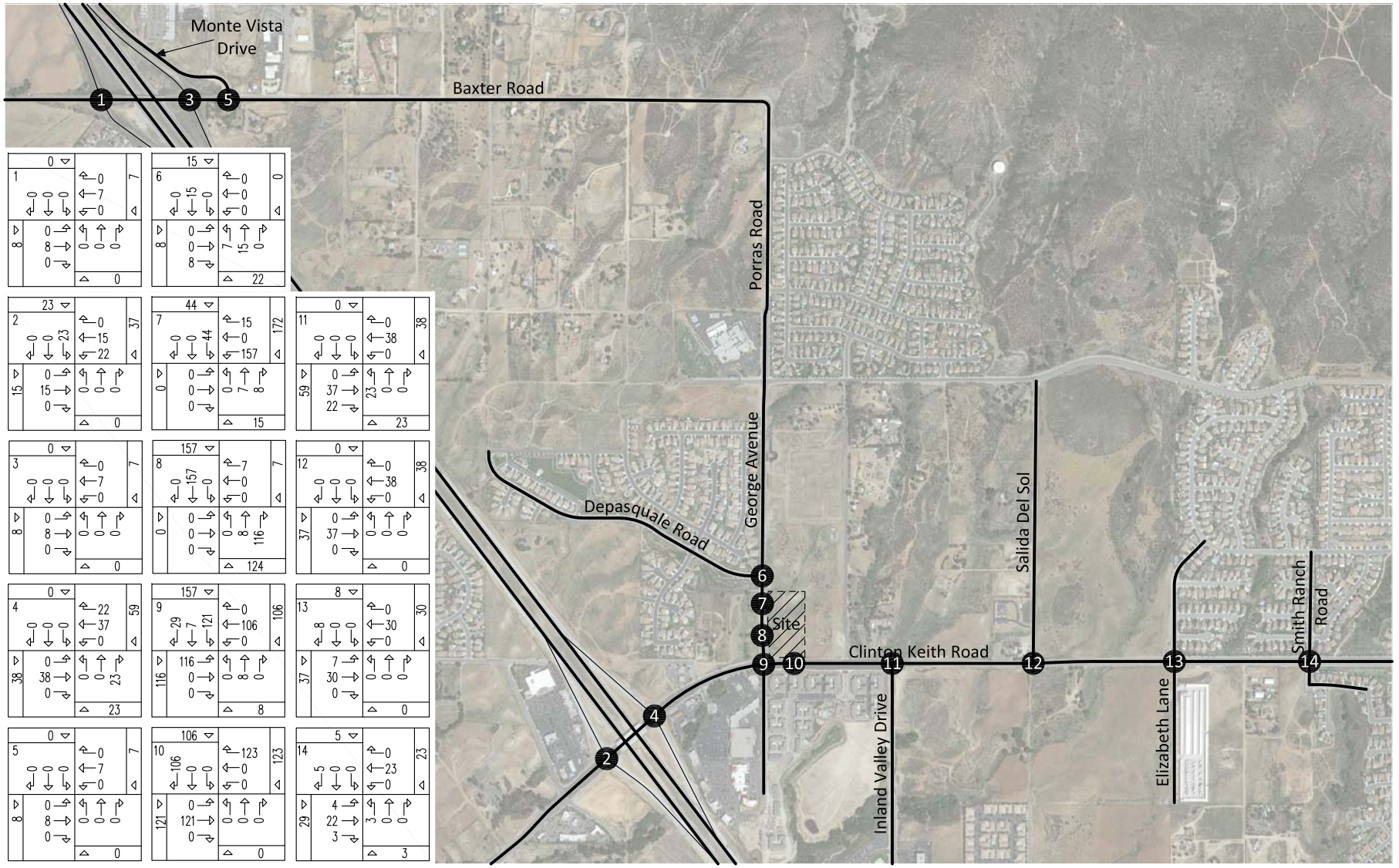


3663d/14

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 15
Project Evening Peak Hour Intersection Turning Movement Volumes



3663d/15

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

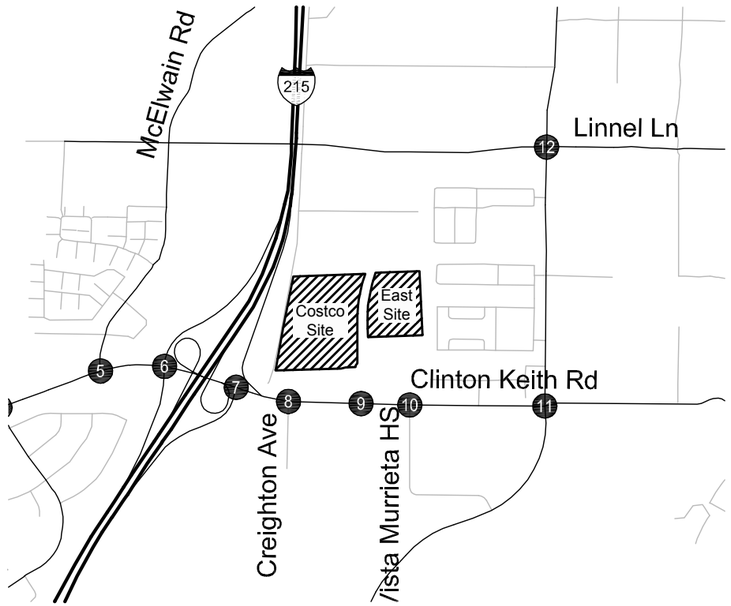
OVER 35 YEARS OF EXCELLENT SERVICE

Appendix J 2035 Volumes and All Approved/Proposed Projects

Approved/Proposed Project Included in 2035 Cumulative Conditions

ID	Source	Project Name
1	Murrieta	Adobe Springs
2	Murrieta	Golden Cities Phase 3
3	Murrieta	Golden Cities Phase 4
4	Murrieta	Golden Cities Phase 5
5	Murrieta	Physicians Hospital/Loma Linda Hospital
6	Murrieta	The Orchard
7	Murrieta	Mitchell Crossing
8	Murrieta	Murrieta Hills
9	Murrieta	Vineyard Shopping Center
10	Murrieta	Makena Hills
11	Murrieta	Curci Property
12	Murrieta	Kaiser
13	Murrieta	ALDI Food Market
14	Murrieta	Alderwood
15	Murrieta	Healthsouth Rehabilitation Hospital
16	Murrieta	Murrieta-Whitewood Skilled Nursing Facility
17	Murrieta	Murrieta Market Place
18	Murrieta	Date Street Shopping Center
19	Menifee	Junction
20	Menifee	Walmart

Note: Approved/Proposed projects in Wildomar anticipated to have minimal impact on 2035 Study Intersections



Decrease from existing volumes

	6 I-215 SB/Clinton Keith Rd	7 I-215 NB/Clinton Keith Rd	8 Creighton Ave/Clinton Keith Rd	9 Warm Springs Rd/Clinton Keith Rd
Existing (2017)	775 3 120 / 217 754 / 1140 428	55 512 / 718 732 / 406 365	27 105 / 8 984 105 / 62 24	524 / 967 47 / 20
Antelope Rd Realignment (Buildout)			314 1697 4 / 810 26 584 / 790 1719 26 / 18 16 5	170 1535 35 / 810 260 350 / 790 1490 255 / 180 160 45
General Plan 2035	608 0 47 / 219 2369 / 2930 784	314 2836 / 1562 280 / 409 492		427 1645 / 916 174 / 117 2128
2020 Background + Additional approved/proposed projects + Site Trips	1104 3 459 / 592 1578 / 2073 635	340 1557 / 1612 919 / 552 733	127 1561 29 / 263 0 132 / 291 1957 111 / 62 0 25	222 1112 0 / 607 0 384 / 610 1422 50 / 0 0 21
Antelope Study	1104 3 459 / 592 2361 / 2221 784	340 2400 / 1805 919 / 552 733	127 2407 27 / 263 0 132 / 291 2128 111 / 62 0 25	427 1755 0 / 810 0 384 / 720 1518 50 / 0 0 21
General Plan				
2020 Background+Additional A/P+site				

Note: through volumes adjusted for balancing

KITTELSON & ASSOCIATES

Future Volumes
Weekday PM Peak Hour
Murrieta, CA

Figure 1

C:\Users\klaustsen\Desktop\Figure Setup updated.dwg Feb 19, 2018 - 7:40pm - klaustsen Layout Tab: future volumes

Appendix K Signal Warrant Sheets

KITTELSON & ASSOCIATES, INC.
610 SW Alder, Suite 700
Portland, Oregon 97205
(503) 228-5230

Project #: 21763
Project Name: Murrieta Costco and Vineyard II
Analyst: KML
Date: 11/4/2019
File: H:\21\21763 - Murrieta Costco\excel\Signal Warrant\[Signal Warrant Analysis Elizabeth 2021CumulativeWeekday.xls]Data
Intersection: Elizabeth Ln/Clinton Keith
Scenario: 2021 Cumulative Weekday PM

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
5:00 PM	6:00 PM	1264	870	5	58
2nd Highest Hour		1182	814	5	55
3rd Highest Hour		1166	802	5	54
4th Highest Hour		1133	780	4	52
5th Highest Hour		1034	712	4	51
6th Highest Hour		1018	701	4	51
7th Highest Hour		952	655	4	49
8th Highest Hour		886	610	4	48
9th Highest Hour		886	610	4	46
10th Highest Hour		870	599	4	43
11th Highest Hour		821	565	4	42
12th Highest Hour		772	531	4	41
13th Highest Hour		755	520	3	39
14th Highest Hour		722	497	3	34
15th Highest Hour		575	395	2	27
16th Highest Hour		542	373	2	26
17th Highest Hour		492	339	2	18
18th Highest Hour		427	294	1	15
19th Highest Hour		345	237	1	8
20th Highest Hour		164	113	0	5
21st Highest Hour		148	102	0	5
22nd Highest Hour		98	68	0	3
23rd Highest Hour		82	56	0	2
24th Highest Hour		82	56	0	2

Warrant Summary

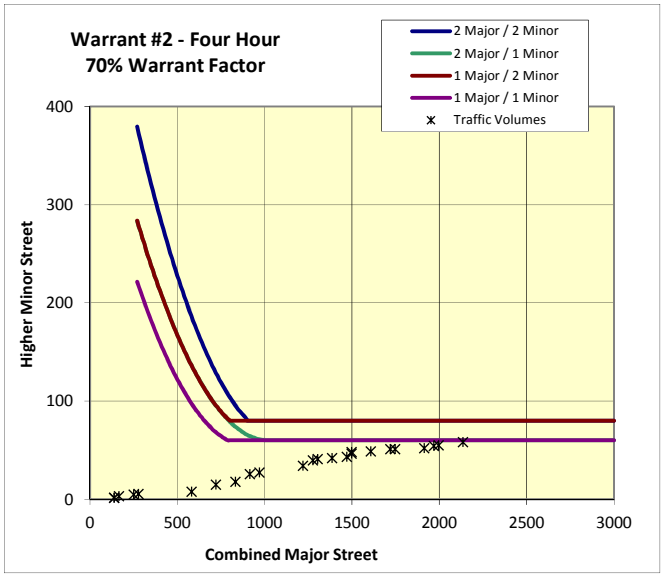
Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-
#9	Intersection Near a Grade Crossing	No	-

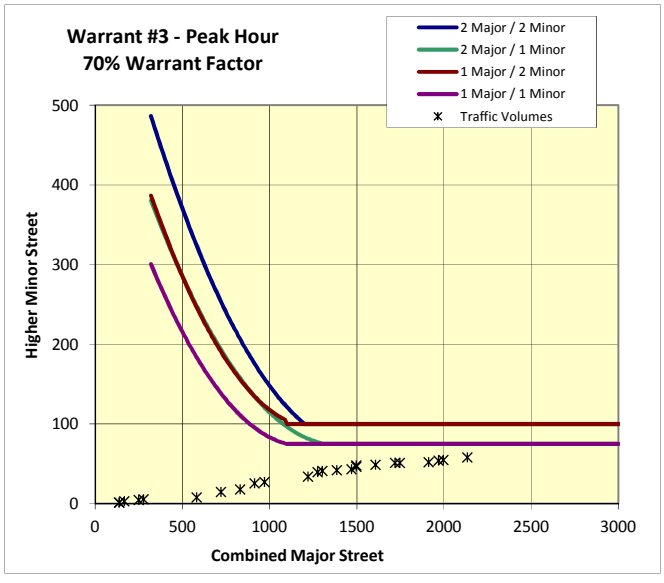
Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	2
Minor Street Thru Lanes =	1
Speed > 40 mph?	Yes
Population < 10,000?	No
Warrant Factor	70%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	90%
Major Street: 8th-Highest Hour / Peak Hour	70%
Minor Street: 4th-Highest Hour / Peak Hour	89%
Minor Street: 8th-Highest Hour / Peak Hour	83%

Warrant #1 - Eight Hour

Warrant Factor	Condition	Major Street Requirement	Minor Street Requirement	Hours That Condition Is Met	Condition for Warrant Factor Met?	Signal Warrant Met?
100%	A	600	150	0	No	**No**
	B	900	75	0	No	
80%	A	480	120	0	No	**No**
	B	720	60	0	No	
70%	A	420	105	0	No	**No**
	B	630	53	3	No	
56%	A	336	84	0	No	**Yes**
	B	504	42	11	Yes	





KITTELSON & ASSOCIATES, INC.
610 SW Alder, Suite 700
Portland, Oregon 97205
(503) 228-5230

Project #: 21763
Project Name: Murrieta Costco and Vineyard II
Analyst: KML
Date: 11/4/2019
File: H:\21\21763 - Murrieta Costco\excel\Signal Warrant\[Signal Warrant Analysis SalidaDelSol 2021CumulativeWeekday.xls]Dat
Intersection: Salida Del Sol/Clinton Keith
Scenario: 2021 Cumulative Weekday PM

Analysis Traffic Volumes

Hour Begin	Hour End	Major Street EB	Major Street WB	Minor Street NB	Minor Street SB
5:00 PM	6:00 PM	1247	902	0	26
2nd Highest Hour		1166	843	0	25
3rd Highest Hour		1150	832	0	24
4th Highest Hour		1117	808	0	23
5th Highest Hour		1020	738	0	23
6th Highest Hour		1004	726	0	23
7th Highest Hour		939	679	0	22
8th Highest Hour		875	633	0	21
9th Highest Hour		875	633	0	21
10th Highest Hour		858	621	0	19
11th Highest Hour		810	586	0	19
12th Highest Hour		761	551	0	18
13th Highest Hour		745	539	0	18
14th Highest Hour		713	515	0	15
15th Highest Hour		567	410	0	12
16th Highest Hour		534	387	0	11
17th Highest Hour		486	351	0	8
18th Highest Hour		421	305	0	7
19th Highest Hour		340	246	0	3
20th Highest Hour		162	117	0	2
21st Highest Hour		146	105	0	2
22nd Highest Hour		97	70	0	1
23rd Highest Hour		81	59	0	1
24th Highest Hour		81	59	0	1

Warrant Summary

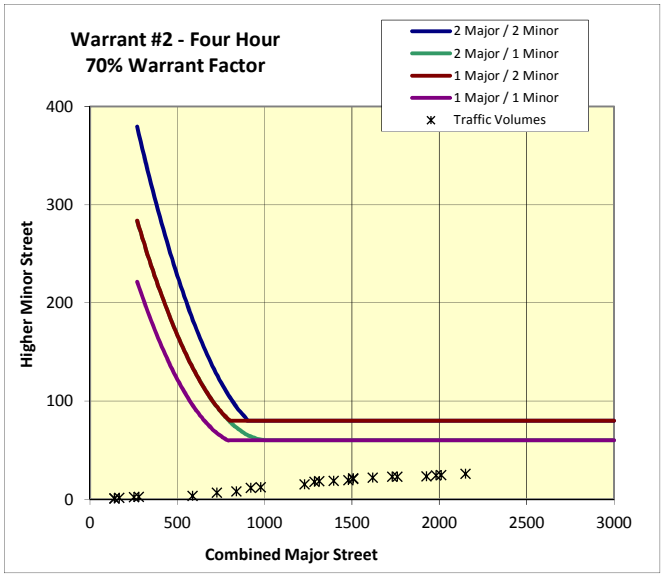
Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-
#9	Intersection Near a Grade Crossing	No	-

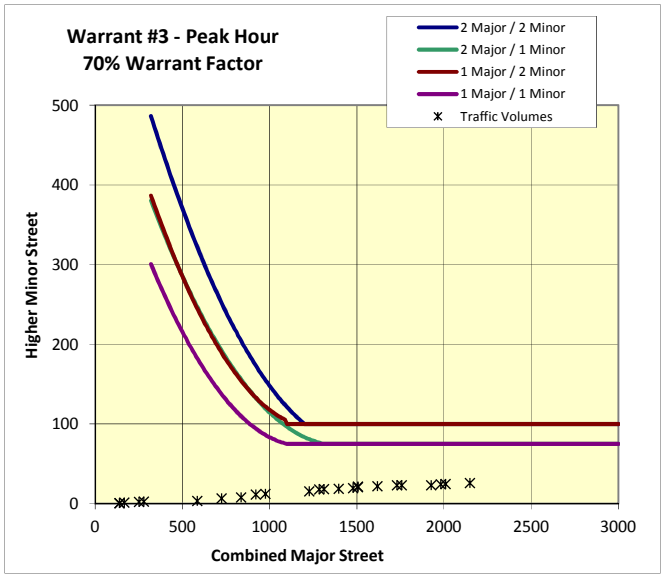
Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	2
Minor Street Thru Lanes =	1
Speed > 40 mph?	Yes
Population < 10,000?	No
Warrant Factor	70%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	90%
Major Street: 8th-Highest Hour / Peak Hour	70%
Minor Street: 4th-Highest Hour / Peak Hour	89%
Minor Street: 8th-Highest Hour / Peak Hour	83%

Warrant #1 - Eight Hour

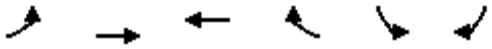
Warrant Factor	Condition	Major Street Requirement	Minor Street Requirement	Hours That Condition Is Met	Condition for Warrant Factor Met?	Signal Warrant Met?
100%	A	600	150	0	No	**No**
	B	900	75	0	No	
80%	A	480	120	0	No	**No**
	B	720	60	0	No	
70%	A	420	105	0	No	**No**
	B	630	53	0	No	
56%	A	336	84	0	No	**No**
	B	504	42	0	No	





Appendix L Level-of-Service Worksheets for Mitigations

2021 Cumulative PM Mitigated



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	1237	874	28	20	6
Future Volume (veh/h)	10	1237	874	28	20	6
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	1359	960	31	22	7
Adj No. of Lanes	1	2	2	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	543	2561	2530	82	45	14
Arrive On Green	0.72	0.72	0.72	0.72	0.04	0.04
Sat Flow, veh/h	566	3632	3590	113	1267	403
Grp Volume(v), veh/h	11	1359	486	505	30	0
Grp Sat Flow(s),veh/h/ln	566	1770	1770	1840	1728	0
Q Serve(g_s), s	0.3	6.4	3.9	3.9	0.6	0.0
Cycle Q Clear(g_c), s	4.2	6.4	3.9	3.9	0.6	0.0
Prop In Lane	1.00			0.06	0.73	0.23
Lane Grp Cap(c), veh/h	543	2561	1280	1331	62	0
V/C Ratio(X)	0.02	0.53	0.38	0.38	0.48	0.00
Avail Cap(c_a), veh/h	633	3123	1562	1624	832	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	2.8	2.3	2.0	2.0	17.7	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.2	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	1.8	1.9	0.4	0.0
LnGrp Delay(d),s/veh	2.8	2.5	2.2	2.1	23.5	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		1370	991		30	
Approach Delay, s/veh		2.5	2.2		23.5	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		31.6		5.8		31.6		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		33.0		18.0		33.0		
Max Q Clear Time (g_c+I1), s		8.4		2.6		5.9		
Green Ext Time (p_c), s		18.6		0.0		20.1		

Intersection Summary	
HCM 2010 Ctrl Delay	2.6
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1237	874	28	20	6
Future Vol, veh/h	10	1237	874	28	20	6
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	1359	960	31	22	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	992	0	-	0	1543	497
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	395	-	-	-	164	444
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	395	-	-	-	159	444
Mov Cap-2 Maneuver	-	-	-	-	159	-
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	471	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	27.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	395	-	-	-	187
HCM Lane V/C Ratio	0.028	-	-	-	0.153
HCM Control Delay (s)	14.4	-	-	-	27.7
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1196	2	4	855	11	4	0	1	9	0	49
Future Volume (veh/h)	68	1196	2	4	855	11	4	0	1	9	0	49
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	72	1272	2	4	910	12	4	0	1	10	0	52
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	502	2375	4	380	2343	31	290	17	37	121	13	163
Arrive On Green	0.66	0.66	0.66	0.66	0.66	0.66	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	604	3626	6	433	3577	47	1061	141	301	149	106	1326
Grp Volume(v), veh/h	72	621	653	4	450	472	5	0	0	62	0	0
Grp Sat Flow(s),veh/h/ln	604	1770	1862	433	1770	1854	1503	0	0	1581	0	0
Q Serve(g_s), s	2.5	7.6	7.6	0.2	4.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.3	7.6	7.6	7.8	4.8	4.8	0.1	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.03	0.80		0.20	0.16		0.84
Lane Grp Cap(c), veh/h	502	1159	1219	380	1159	1215	345	0	0	298	0	0
V/C Ratio(X)	0.14	0.54	0.54	0.01	0.39	0.39	0.01	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	597	1439	1514	449	1439	1508	790	0	0	795	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.9	3.7	3.7	5.8	3.2	3.2	15.6	0.0	0.0	16.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.4	0.0	0.2	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.7	3.9	0.0	2.3	2.4	0.1	0.0	0.0	0.6	0.0	0.0
LnGrp Delay(d),s/veh	5.1	4.1	4.1	5.8	3.5	3.4	15.7	0.0	0.0	16.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B			B		
Approach Vol, veh/h		1346			926			5			62	
Approach Delay, s/veh		4.1			3.5			15.7			16.6	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		31.1		9.5		31.1		9.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		33.0		18.0		33.0		18.0
Max Q Clear Time (g_c+I1), s		9.6		2.1		9.8		3.4
Green Ext Time (p_c), s		16.9		0.2		16.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	1196	2	4	855	11	4	0	1	9	0	49
Future Vol, veh/h	68	1196	2	4	855	11	4	0	1	9	0	49
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	1272	2	4	910	12	4	0	1	10	0	52

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	922	0	0	1274	0	0	1790	2349	637	1579	2344	462
Stage 1	-	-	-	-	-	-	1418	1418	-	925	925	-
Stage 2	-	-	-	-	-	-	372	931	-	654	1419	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	427	-	-	288	-	-	86	36	360	115	36	467
Stage 1	-	-	-	-	-	-	101	201	-	224	346	-
Stage 2	-	-	-	-	-	-	568	344	-	384	201	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	427	-	-	288	-	-	66	29	360	99	29	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	29	-	99	29	-
Stage 1	-	-	-	-	-	-	84	167	-	186	341	-
Stage 2	-	-	-	-	-	-	498	339	-	318	167	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.1	53.8	20.3
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	79	427	-	-	288	-	-	296
HCM Lane V/C Ratio	0.067	0.169	-	-	0.015	-	-	0.208
HCM Control Delay (s)	53.8	15.1	-	-	17.7	-	-	20.3
HCM Lane LOS	F	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.2	0.6	-	-	0	-	-	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1269	137	481	1166	176	829
Future Volume (vph)	1269	137	481	1166	176	829
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.91		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	0.98	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	0.89	0.85
Flt Protected	1.00		0.95	1.00	0.99	1.00
Satd. Flow (prot)	4953		1787	3539	3163	1434
Flt Permitted	1.00		0.95	1.00	0.99	1.00
Satd. Flow (perm)	4953		1787	3539	3163	1434
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1395	151	529	1281	193	911
RTOR Reduction (vph)	8	0	0	0	301	399
Lane Group Flow (vph)	1538	0	529	1281	348	56
Confl. Peds. (#/hr)		3	3		2	1
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	3%	2%	1%	2%	1%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Actuated Green, G (s)	41.1		36.8	82.5	14.4	14.4
Effective Green, g (s)	41.1		36.8	82.5	14.4	14.4
Actuated g/C Ratio	0.35		0.31	0.70	0.12	0.12
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1729		558	2480	386	175
v/s Ratio Prot	c0.31		c0.30	0.36	c0.11	
v/s Ratio Perm						0.04
v/c Ratio	0.89		0.95	0.52	0.90	0.32
Uniform Delay, d1	36.2		39.5	8.3	51.0	47.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	6.2		25.5	0.2	23.9	1.4
Delay (s)	42.3		65.0	8.5	74.8	48.5
Level of Service	D		E	A	E	D
Approach Delay (s)	42.3			25.0	64.0	
Approach LOS	D			C	E	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	117.7	Sum of lost time (s)	20.8
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	2124	34	220	1815	99	22	5	189	96	5	67
Future Volume (veh/h)	87	2124	34	220	1815	99	22	5	189	96	5	67
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1881	1881	1900	1900	1882	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2284	37	237	1952	106	24	5	203	103	5	72
Adj No. of Lanes	1	3	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	1	1	0	0	0	0	0	0	0
Cap, veh/h	312	2144	35	421	2458	771	229	6	250	148	143	121
Arrive On Green	0.35	0.83	0.83	0.47	0.96	0.96	0.13	0.16	0.16	0.04	0.08	0.08
Sat Flow, veh/h	1810	5154	83	1792	5136	1612	1810	38	1561	3510	1900	1602
Grp Volume(v), veh/h	94	1501	820	237	1952	106	24	0	208	103	5	72
Grp Sat Flow(s),veh/h/ln	1810	1696	1846	1792	1712	1612	1810	0	1599	1755	1900	1602
Q Serve(g_s), s	5.7	62.4	62.4	14.3	10.1	0.5	1.8	0.0	18.8	4.3	0.4	6.5
Cycle Q Clear(g_c), s	5.7	62.4	62.4	14.3	10.1	0.5	1.8	0.0	18.8	4.3	0.4	6.5
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	312	1411	768	421	2458	771	229	0	256	148	143	121
V/C Ratio(X)	0.30	1.06	1.07	0.56	0.79	0.14	0.10	0.00	0.81	0.70	0.03	0.60
Avail Cap(c_a), veh/h	312	1411	768	421	2458	771	229	0	398	204	507	427
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.32	0.32	0.32	0.50	0.50	0.50	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	12.6	12.6	34.2	1.9	1.7	58.0	0.0	60.8	70.9	64.3	67.1
Incr Delay (d2), s/veh	0.1	34.6	39.6	0.5	1.4	0.2	0.1	0.0	13.9	6.1	0.1	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	34.2	38.3	7.0	3.9	0.2	0.9	0.0	9.3	2.2	0.2	3.1
LnGrp Delay(d),s/veh	42.6	47.2	52.2	34.7	3.3	1.9	58.0	0.0	74.8	77.0	64.4	72.1
LnGrp LOS	D	F	F	C	A	A	E		E	E	E	E
Approach Vol, veh/h		2415			2295			232			180	
Approach Delay, s/veh		48.7			6.5			73.0			74.7	
Approach LOS		D			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.1	68.2	10.9	29.8	31.7	77.6	23.6	17.1
Change Period (Y+Rc), s	5.8	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8
Max Green Setting (Gmax), s	19.6	62.4	8.7	37.3	11.4	* 72	6.0	40.0
Max Q Clear Time (g_c+I1), s	16.3	64.4	6.3	20.8	7.7	12.1	3.8	8.5
Green Ext Time (p_c), s	0.2	0.0	0.1	2.1	0.2	47.1	0.1	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	2138	84	39	1603	127	55	0	25	132	0	263
Future Volume (veh/h)	292	2138	84	39	1603	127	55	0	25	132	0	263
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1863	1827	1900	1900	1900	1900
Adj Flow Rate, veh/h	321	2349	92	43	1762	140	60	0	27	145	0	289
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	1	0	1	0	2	0	0	0	0	0
Cap, veh/h	309	2916	875	60	2183	678	118	0	299	142	0	321
Arrive On Green	0.34	1.00	1.00	0.07	0.85	0.85	0.07	0.00	0.19	0.08	0.00	0.20
Sat Flow, veh/h	1810	5136	1542	1810	5136	1596	1774	0	1553	1810	0	1615
Grp Volume(v), veh/h	321	2349	92	43	1762	140	60	0	27	145	0	289
Grp Sat Flow(s),veh/h/ln	1810	1712	1542	1810	1712	1596	1774	0	1553	1810	0	1615
Q Serve(g_s), s	25.6	0.0	0.0	3.5	24.5	2.4	4.9	0.0	2.1	11.8	0.0	26.2
Cycle Q Clear(g_c), s	25.6	0.0	0.0	3.5	24.5	2.4	4.9	0.0	2.1	11.8	0.0	26.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	2916	875	60	2183	678	118	0	299	142	0	321
V/C Ratio(X)	1.04	0.81	0.11	0.71	0.81	0.21	0.51	0.00	0.09	1.02	0.00	0.90
Avail Cap(c_a), veh/h	309	2916	875	72	2183	678	137	0	435	142	0	446
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.4	0.0	0.0	69.3	8.3	6.6	67.6	0.0	49.7	69.1	0.0	58.6
Incr Delay (d2), s/veh	44.3	1.1	0.1	13.9	2.7	0.6	3.3	0.0	0.1	80.4	0.0	16.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	0.3	0.0	2.0	11.3	1.1	2.5	0.0	0.9	9.1	0.0	13.2
LnGrp Delay(d),s/veh	93.7	1.1	0.1	83.2	11.0	7.2	71.0	0.0	49.8	149.7	0.0	75.2
LnGrp LOS	F	A	A	F	B	A	E		D	F		E
Approach Vol, veh/h		2762			1945			87			434	
Approach Delay, s/veh		11.8			12.3			64.4			100.1	
Approach LOS		B			B			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	90.6	15.4	34.4	31.0	69.2	16.3	33.5
Change Period (Y+Rc), s	4.6	5.4	5.4	* 4.6	5.4	5.4	4.5	4.6
Max Green Setting (Gmax), s	6.0	71.1	11.6	* 41	25.6	50.7	11.8	42.0
Max Q Clear Time (g_c+I1), s	5.5	2.0	6.9	28.2	27.6	26.5	13.8	4.1
Green Ext Time (p_c), s	0.0	66.6	0.0	1.6	0.0	23.8	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

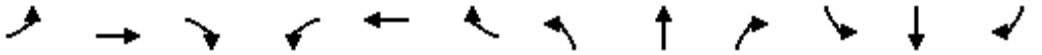
Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	2174	84	39	1641	127	55	0	25	132	0	263
Future Volume (veh/h)	257	2174	84	39	1641	127	55	0	25	132	0	263
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1863	1827	1900	1900	1900	1900
Adj Flow Rate, veh/h	282	2389	92	43	1803	140	60	0	27	145	0	289
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	1	0	1	0	2	0	0	0	0	0
Cap, veh/h	285	2928	879	60	2264	704	116	0	42	427	0	320
Arrive On Green	0.31	1.00	1.00	0.07	0.88	0.88	0.07	0.00	0.03	0.24	0.00	0.20
Sat Flow, veh/h	1810	5136	1542	1810	5136	1596	1774	0	1553	1810	0	1615
Grp Volume(v), veh/h	282	2389	92	43	1803	140	60	0	27	145	0	289
Grp Sat Flow(s),veh/h/ln	1810	1712	1542	1810	1712	1596	1774	0	1553	1810	0	1615
Q Serve(g_s), s	23.3	0.0	0.0	3.5	20.9	0.8	4.9	0.0	2.6	10.0	0.0	26.2
Cycle Q Clear(g_c), s	23.3	0.0	0.0	3.5	20.9	0.8	4.9	0.0	2.6	10.0	0.0	26.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	285	2928	879	60	2264	704	116	0	42	427	0	320
V/C Ratio(X)	0.99	0.82	0.10	0.71	0.80	0.20	0.52	0.00	0.64	0.34	0.00	0.90
Avail Cap(c_a), veh/h	285	2928	879	72	2264	704	137	0	435	427	0	453
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.3	0.0	0.0	69.3	6.2	1.0	67.8	0.0	72.3	47.6	0.0	58.7
Incr Delay (d2), s/veh	32.6	1.2	0.1	13.6	2.4	0.5	3.5	0.0	11.6	0.5	0.0	16.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	0.3	0.0	2.0	9.5	0.4	2.5	0.0	1.2	5.0	0.0	13.2
LnGrp Delay(d),s/veh	83.9	1.2	0.1	82.9	8.6	1.5	71.3	0.0	83.8	48.0	0.0	75.0
LnGrp LOS	F	A	A	F	A	A	E		F	D		E
Approach Vol, veh/h		2763			1986			87			434	
Approach Delay, s/veh		9.6			9.7			75.2			66.0	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	90.9	15.2	34.2	29.0	71.5	40.8	8.7
Change Period (Y+Rc), s	4.6	5.4	5.4	4.5	5.4	5.4	5.4	* 4.6
Max Green Setting (Gmax), s	6.0	70.4	11.6	42.1	23.6	52.0	12.5	* 42
Max Q Clear Time (g_c+I1), s	5.5	2.0	6.9	28.2	25.3	22.9	12.0	4.6
Green Ext Time (p_c), s	0.0	66.2	0.1	1.5	0.0	28.6	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Notes

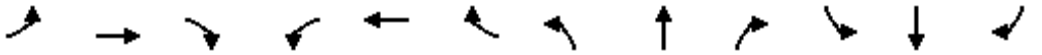


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1875	99	181	1307	78	121	0	80	100	0	81
Future Volume (veh/h)	105	1875	99	181	1307	78	121	0	80	100	0	81
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1900	1900	1881	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	2131	112	206	1485	89	138	0	91	114	0	92
Adj No. of Lanes	1	3	0	1	3	1	2	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	1	1	0	0	0	1	0	0	0	0	0
Cap, veh/h	575	3096	162	210	2141	665	222	0	112	121	0	118
Arrive On Green	0.42	0.82	0.82	0.12	0.41	0.41	0.06	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1810	4994	261	1810	5187	1611	3476	0	1615	1810	0	1615
Grp Volume(v), veh/h	119	1458	785	206	1485	89	138	0	91	114	0	92
Grp Sat Flow(s),veh/h/ln	1810	1712	1831	1810	1729	1611	1738	0	1615	1810	0	1615
Q Serve(g_s), s	6.2	25.8	26.3	17.0	35.3	4.0	5.8	0.0	8.3	9.4	0.0	8.4
Cycle Q Clear(g_c), s	6.2	25.8	26.3	17.0	35.3	4.0	5.8	0.0	8.3	9.4	0.0	8.4
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	575	2123	1135	210	2141	665	222	0	112	121	0	118
V/C Ratio(X)	0.21	0.69	0.69	0.98	0.69	0.13	0.62	0.00	0.81	0.94	0.00	0.78
Avail Cap(c_a), veh/h	575	2123	1135	210	2141	665	222	0	441	121	0	473
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.3	7.3	7.3	66.1	36.3	16.4	68.5	0.0	68.8	69.7	0.0	68.4
Incr Delay (d2), s/veh	0.1	1.4	2.7	56.4	1.9	0.4	4.0	0.0	13.0	64.2	0.0	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	12.2	13.8	11.8	17.3	1.8	2.9	0.0	4.1	6.9	0.0	4.1
LnGrp Delay(d),s/veh	31.4	8.7	10.0	122.6	38.1	16.8	72.5	0.0	81.8	133.9	0.0	79.0
LnGrp LOS	C	A	B	F	D	B	E		F	F		E
Approach Vol, veh/h		2362			1780			229			206	
Approach Delay, s/veh		10.3			46.8			76.2			109.4	
Approach LOS		B			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	98.4	14.2	15.4	53.1	67.3	14.6	15.0
Change Period (Y+Rc), s	4.6	5.4	4.6	4.5	5.4	* 5.4	4.6	4.6
Max Green Setting (Gmax), s	17.4	62.4	7.2	43.9	17.9	* 62	10.0	41.0
Max Q Clear Time (g_c+I1), s	19.0	28.3	7.8	10.4	8.2	37.3	11.4	10.3
Green Ext Time (p_c), s	0.0	33.2	0.0	0.5	9.0	14.9	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	378	361	117	198	10	297	384	127	11	283	117
Future Volume (veh/h)	142	378	361	117	198	10	297	384	127	11	283	117
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	156	415	397	129	218	11	326	422	140	12	311	129
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	1132	499	219	1078	54	414	884	290	51	570	231
Arrive On Green	0.07	0.32	0.32	0.06	0.31	0.31	0.12	0.34	0.34	0.01	0.23	0.23
Sat Flow, veh/h	3442	3539	1562	3442	3427	172	3442	2619	860	3442	2456	997
Grp Volume(v), veh/h	156	415	397	129	112	117	326	284	278	12	222	218
Grp Sat Flow(s),veh/h/ln	1721	1770	1562	1721	1770	1830	1721	1770	1709	1721	1770	1684
Q Serve(g_s), s	3.2	6.6	16.8	2.6	3.4	3.4	6.7	9.2	9.4	0.3	8.0	8.3
Cycle Q Clear(g_c), s	3.2	6.6	16.8	2.6	3.4	3.4	6.7	9.2	9.4	0.3	8.0	8.3
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.50	1.00		0.59
Lane Grp Cap(c), veh/h	237	1132	499	219	557	576	414	597	577	51	410	391
V/C Ratio(X)	0.66	0.37	0.80	0.59	0.20	0.20	0.79	0.48	0.48	0.24	0.54	0.56
Avail Cap(c_a), veh/h	275	1461	645	275	731	755	474	833	804	275	731	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	19.0	22.5	33.1	18.2	18.2	31.1	19.0	19.0	35.4	24.5	24.6
Incr Delay (d2), s/veh	3.0	0.2	5.3	0.9	0.2	0.2	6.4	0.6	0.6	0.9	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.2	7.9	1.3	1.7	1.8	3.5	4.6	4.5	0.1	4.0	4.0
LnGrp Delay(d),s/veh	36.0	19.2	27.8	34.0	18.4	18.4	37.5	19.6	19.7	36.3	25.6	25.9
LnGrp LOS	D	B	C	C	B	B	D	B	B	D	C	C
Approach Vol, veh/h		968			358			888			452	
Approach Delay, s/veh		25.5			24.0			26.2			26.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	29.1	12.5	22.8	8.7	28.8	4.8	30.4
Change Period (Y+Rc), s	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9	3.7	* 5.9
Max Green Setting (Gmax), s	5.8	* 30	10.0	* 30	5.8	* 30	5.8	* 34
Max Q Clear Time (g_c+I1), s	4.6	18.8	8.7	10.3	5.2	5.4	2.3	11.4
Green Ext Time (p_c), s	0.0	4.3	0.1	6.3	0.0	6.0	0.0	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	230	395	105	240	20	438	1407	125	46	826	130
Future Volume (veh/h)	136	230	395	105	240	20	438	1407	125	46	826	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	142	240	411	109	250	21	456	1466	130	48	860	135
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	421	759	115	335	28	451	1680	148	62	1031	461
Arrive On Green	0.09	0.23	0.23	0.06	0.20	0.20	0.25	0.51	0.51	0.03	0.29	0.29
Sat Flow, veh/h	1774	1863	1577	1774	1695	142	1774	3291	290	1774	3539	1583
Grp Volume(v), veh/h	142	240	411	109	0	271	456	784	812	48	860	135
Grp Sat Flow(s),veh/h/ln	1774	1863	1577	1774	0	1837	1774	1770	1812	1774	1770	1583
Q Serve(g_s), s	10.8	15.7	25.2	8.4	0.0	19.1	34.9	53.5	54.6	3.7	31.3	9.1
Cycle Q Clear(g_c), s	10.8	15.7	25.2	8.4	0.0	19.1	34.9	53.5	54.6	3.7	31.3	9.1
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	166	421	759	115	0	363	451	903	925	62	1031	461
V/C Ratio(X)	0.86	0.57	0.54	0.95	0.00	0.75	1.01	0.87	0.88	0.78	0.83	0.29
Avail Cap(c_a), veh/h	211	570	884	115	0	463	451	917	939	70	1074	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	47.2	25.1	64.0	0.0	51.9	51.2	29.6	29.8	65.8	45.6	37.7
Incr Delay (d2), s/veh	19.9	0.5	0.2	67.0	0.0	3.4	45.4	8.4	9.0	32.9	5.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	8.1	10.9	6.3	0.0	10.1	22.7	28.3	29.6	2.4	16.0	4.0
LnGrp Delay(d),s/veh	81.3	47.7	25.3	131.0	0.0	55.3	96.6	38.0	38.9	98.6	50.8	37.9
LnGrp LOS	F	D	C	F		E	F	D	D	F	D	D
Approach Vol, veh/h		793			380			2052			1043	
Approach Delay, s/veh		42.1			77.0			51.4			51.3	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	76.6	14.0	36.9	40.0	46.5	17.9	32.9
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	5.4	71.2	8.9	42.0	34.9	41.7	16.3	34.6
Max Q Clear Time (g_c+I1), s	5.7	56.6	10.4	27.2	36.9	33.3	12.8	21.1
Green Ext Time (p_c), s	0.0	10.5	0.0	2.6	0.0	6.7	0.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.9
HCM 2010 LOS	D

2021 Cumulative Saturday Midday Mitigated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	993	112	414	916	123	531
Future Volume (vph)	993	112	414	916	123	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8		4.6	5.8	5.8	5.8
Lane Util. Factor	0.91		1.00	0.95	0.97	0.91
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.90	0.85
Flt Protected	1.00		0.95	1.00	0.98	1.00
Satd. Flow (prot)	5000		1787	3539	3214	1455
Flt Permitted	1.00		0.95	1.00	0.98	1.00
Satd. Flow (perm)	5000		1787	3539	3214	1455
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1056	119	440	974	131	565
RTOR Reduction (vph)	11	0	0	0	255	254
Lane Group Flow (vph)	1164	0	440	974	159	28
Confl. Peds. (#/hr)		1	1			
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	2%	1%	1%	2%	2%	1%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Actuated Green, G (s)	25.1		26.4	56.1	7.4	7.4
Effective Green, g (s)	25.1		26.4	56.1	7.4	7.4
Actuated g/C Ratio	0.33		0.35	0.75	0.10	0.10
Clearance Time (s)	5.8		4.6	5.8	5.8	5.8
Vehicle Extension (s)	3.8		3.0	3.8	3.8	3.8
Lane Grp Cap (vph)	1671		628	2643	316	143
v/s Ratio Prot	c0.23		c0.25	0.28	c0.05	
v/s Ratio Perm						0.02
v/c Ratio	0.70		0.70	0.37	0.50	0.19
Uniform Delay, d1	21.7		21.0	3.3	32.1	31.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4		3.5	0.1	1.6	0.9
Delay (s)	23.1		24.5	3.4	33.7	32.0
Level of Service	C		C	A	C	C
Approach Delay (s)	23.1			10.0	33.0	
Approach LOS	C			A	C	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	20.8
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	1665	18	203	1450	100	21	6	180	115	6	90
Future Volume (veh/h)	87	1665	18	203	1450	100	21	6	180	115	6	90
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1862	1900	1900	1881	1900	1810	1846	1900	1429	1900	1759
Adj Flow Rate, veh/h	93	1771	19	216	1543	106	22	6	191	122	6	96
Adj No. of Lanes	1	3	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	1	0	5	0	0	33	0	8
Cap, veh/h	78	2244	24	358	3062	957	167	8	257	113	220	171
Arrive On Green	0.04	0.43	0.43	0.40	1.00	1.00	0.10	0.17	0.17	0.04	0.12	0.12
Sat Flow, veh/h	1810	5183	56	1810	5136	1606	1723	48	1515	2639	1900	1476
Grp Volume(v), veh/h	93	1158	632	216	1543	106	22	0	197	122	6	96
Grp Sat Flow(s),veh/h/ln	1810	1694	1850	1810	1712	1606	1723	0	1563	1320	1900	1476
Q Serve(g_s), s	6.0	41.2	41.2	13.3	0.0	0.0	1.6	0.0	16.8	6.0	0.4	8.6
Cycle Q Clear(g_c), s	6.0	41.2	41.2	13.3	0.0	0.0	1.6	0.0	16.8	6.0	0.4	8.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.97	1.00		1.00
Lane Grp Cap(c), veh/h	78	1467	801	358	3062	957	167	0	265	113	220	171
V/C Ratio(X)	1.20	0.79	0.79	0.60	0.50	0.11	0.13	0.00	0.74	1.08	0.03	0.56
Avail Cap(c_a), veh/h	78	1467	801	358	3062	957	167	0	447	113	543	422
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.72	0.72	0.72	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.0	34.2	34.2	38.0	0.0	0.0	57.9	0.0	55.2	67.0	54.9	58.6
Incr Delay (d2), s/veh	145.4	2.9	5.2	1.5	0.4	0.2	0.1	0.0	9.3	107.3	0.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	19.9	22.2	6.7	0.1	0.0	0.8	0.0	7.9	3.9	0.2	3.7
LnGrp Delay(d),s/veh	212.4	37.1	39.4	39.5	0.4	0.2	58.0	0.0	64.6	174.4	55.0	61.7
LnGrp LOS	F	D	D	D	A	A	E		E	F	D	E
Approach Vol, veh/h		1883			1865			219			224	
Approach Delay, s/veh		46.5			4.9			63.9			122.9	
Approach LOS		D			A			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.5	66.4	10.6	29.5	10.6	89.3	18.1	22.0
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	12.6	* 61	6.0	40.0	6.0	67.2	6.0	40.0
Max Q Clear Time (g_c+I1), s	15.3	43.2	8.0	18.8	8.0	2.0	3.6	10.6
Green Ext Time (p_c), s	0.0	15.1	0.0	2.3	0.0	38.8	0.1	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	1723	54	7	1533	139	53	0	12	133	0	286
Future Volume (veh/h)	341	1723	54	7	1533	139	53	0	12	133	0	286
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1696	1863	1863	1881	1743	1900	1863	1863	1900
Adj Flow Rate, veh/h	379	1914	60	8	1703	154	59	0	13	148	0	318
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	12	2	2	1	2	2	2	2	2
Cap, veh/h	432	1971	612	294	1658	516	123	0	326	122	0	349
Arrive On Green	0.49	0.78	0.78	0.18	0.33	0.33	0.07	0.00	0.22	0.07	0.00	0.22
Sat Flow, veh/h	1774	5085	1579	1616	5085	1582	1792	0	1482	1774	0	1583
Grp Volume(v), veh/h	379	1914	60	8	1703	154	59	0	13	148	0	318
Grp Sat Flow(s),veh/h/ln	1774	1695	1579	1616	1695	1582	1792	0	1482	1774	0	1583
Q Serve(g_s), s	28.0	49.9	1.3	0.6	47.6	8.5	4.6	0.0	1.0	10.0	0.0	28.6
Cycle Q Clear(g_c), s	28.0	49.9	1.3	0.6	47.6	8.5	4.6	0.0	1.0	10.0	0.0	28.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	432	1971	612	294	1658	516	123	0	326	122	0	349
V/C Ratio(X)	0.88	0.97	0.10	0.03	1.03	0.30	0.48	0.00	0.04	1.22	0.00	0.91
Avail Cap(c_a), veh/h	432	1971	612	294	1658	516	124	0	435	122	0	455
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.66	0.66	0.66	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.5	15.7	10.2	49.1	49.2	23.4	65.5	0.0	44.8	68.0	0.0	55.5
Incr Delay (d2), s/veh	12.2	10.5	0.2	0.0	25.3	1.0	2.9	0.0	0.0	151.6	0.0	19.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	24.2	0.6	0.3	26.1	3.8	2.4	0.0	0.4	10.0	0.0	14.4
LnGrp Delay(d),s/veh	47.8	26.1	10.4	49.1	74.5	24.4	68.4	0.0	44.8	219.6	0.0	74.5
LnGrp LOS	D	C	B	D	F	C	E		D	F		E
Approach Vol, veh/h		2353			1865			72			466	
Approach Delay, s/veh		29.2			70.3			64.1			120.6	
Approach LOS		C			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.9	62.0	15.4	36.7	40.9	53.0	14.5	37.6
Change Period (Y+Rc), s	5.4	* 5.4	5.4	4.5	5.4	5.4	4.5	* 5.4
Max Green Setting (Gmax), s	17.4	* 57	10.1	42.0	25.6	47.6	10.0	* 43
Max Q Clear Time (g_c+I1), s	2.6	51.9	6.6	30.6	30.0	49.6	12.0	3.0
Green Ext Time (p_c), s	1.0	4.0	0.0	1.6	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	54.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	1779	54	7	1585	139	53	0	12	133	0	233
Future Volume (veh/h)	285	1779	54	7	1585	139	53	0	12	133	0	233
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1696	1863	1863	1881	1743	1900	1863	1863	1900
Adj Flow Rate, veh/h	317	1977	60	8	1761	154	59	0	13	148	0	259
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	12	2	2	1	2	2	2	2	2
Cap, veh/h	498	2330	724	239	1654	515	123	0	252	146	0	291
Arrive On Green	0.56	0.92	0.92	0.15	0.33	0.33	0.07	0.00	0.17	0.08	0.00	0.18
Sat Flow, veh/h	1774	5085	1580	1616	5085	1582	1792	0	1482	1774	0	1583
Grp Volume(v), veh/h	317	1977	60	8	1761	154	59	0	13	148	0	259
Grp Sat Flow(s),veh/h/ln	1774	1695	1580	1616	1695	1582	1792	0	1482	1774	0	1583
Q Serve(g_s), s	17.8	21.3	0.5	0.6	47.5	8.3	4.6	0.0	1.1	12.0	0.0	23.3
Cycle Q Clear(g_c), s	17.8	21.3	0.5	0.6	47.5	8.3	4.6	0.0	1.1	12.0	0.0	23.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	2330	724	239	1654	515	123	0	252	146	0	291
V/C Ratio(X)	0.64	0.85	0.08	0.03	1.06	0.30	0.48	0.00	0.05	1.02	0.00	0.89
Avail Cap(c_a), veh/h	498	2330	724	239	1654	515	126	0	426	146	0	465
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.60	0.60	0.60	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.9	4.2	3.3	53.3	49.3	22.3	65.5	0.0	50.7	67.0	0.0	58.2
Incr Delay (d2), s/veh	1.7	2.6	0.1	0.0	37.4	0.9	2.9	0.0	0.1	78.5	0.0	12.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	9.0	0.2	0.3	27.9	3.7	2.4	0.0	0.4	9.1	0.0	11.2
LnGrp Delay(d),s/veh	28.6	6.8	3.5	53.3	86.6	23.2	68.4	0.0	50.8	145.7	0.0	70.5
LnGrp LOS	C	A	A	D	F	C	E		D	F		E
Approach Vol, veh/h		2354			1923			72			407	
Approach Delay, s/veh		9.6			81.4			65.2			97.8	
Approach LOS		A			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	72.3	15.4	31.3	46.4	52.9	16.5	30.2
Change Period (Y+Rc), s	5.4	* 5.4	5.4	4.5	5.4	5.4	4.5	* 5.4
Max Green Setting (Gmax), s	6.0	* 67	10.3	42.9	24.6	47.5	12.0	* 42
Max Q Clear Time (g_c+I1), s	2.6	23.3	6.6	25.3	19.8	49.5	14.0	3.1
Green Ext Time (p_c), s	0.3	22.3	0.0	1.5	0.4	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	47.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	222	407	140	176	21	311	959	152	30	1057	107
Future Volume (veh/h)	114	222	407	140	176	21	311	959	152	30	1057	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	120	234	428	147	185	22	327	1009	160	32	1113	113
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	459	686	151	410	49	333	1488	236	45	1145	512
Arrive On Green	0.08	0.25	0.25	0.09	0.25	0.25	0.19	0.49	0.49	0.03	0.32	0.32
Sat Flow, veh/h	1774	1863	1576	1774	1633	194	1774	3061	485	1774	3539	1582
Grp Volume(v), veh/h	120	234	428	147	0	207	327	583	586	32	1113	113
Grp Sat Flow(s),veh/h/ln	1774	1863	1576	1774	0	1827	1774	1770	1777	1774	1770	1582
Q Serve(g_s), s	9.6	15.5	30.2	11.9	0.0	13.7	26.3	36.2	36.3	2.6	44.5	7.5
Cycle Q Clear(g_c), s	9.6	15.5	30.2	11.9	0.0	13.7	26.3	36.2	36.3	2.6	44.5	7.5
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	143	459	686	151	0	459	333	860	864	45	1145	512
V/C Ratio(X)	0.84	0.51	0.62	0.97	0.00	0.45	0.98	0.68	0.68	0.72	0.97	0.22
Avail Cap(c_a), veh/h	226	546	759	151	0	459	333	860	864	85	1145	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	46.5	31.5	65.4	0.0	45.3	58.0	28.2	28.2	69.4	47.8	35.3
Incr Delay (d2), s/veh	8.1	0.3	0.9	64.8	0.0	0.3	44.3	1.8	1.8	7.8	19.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	8.0	13.3	8.5	0.0	6.9	17.0	18.1	18.2	1.4	25.0	3.3
LnGrp Delay(d),s/veh	73.1	46.8	32.4	130.3	0.0	45.6	102.3	30.0	30.0	77.1	67.8	35.4
LnGrp LOS	E	D	C	F		D	F	C	C	E	E	D
Approach Vol, veh/h		782			354			1496			1258	
Approach Delay, s/veh		42.9			80.7			45.8			65.1	
Approach LOS		D			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	76.2	17.3	41.2	32.0	52.9	16.6	41.8
Change Period (Y+Rc), s	5.1	6.5	5.1	5.8	5.1	6.5	5.1	5.8
Max Green Setting (Gmax), s	6.9	66.4	12.2	42.0	26.9	46.4	18.3	35.9
Max Q Clear Time (g_c+I1), s	4.6	38.3	13.9	32.2	28.3	46.5	11.6	15.7
Green Ext Time (p_c), s	0.0	14.6	0.0	2.0	0.0	0.0	0.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	54.6
HCM 2010 LOS	D

Murrieta Costco

Intersection Improvement Costs

Costco

Engineer's Conceptual Estimate

Prepared By: Joey Bansen

This Estimate has a Rating of:

			Clinton Keith Rd & Murrieta Oaks Ave		
ITEM		**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
	Mobilization	LS	ALL	$1,000.00	$1,000.00
	Traffic Control	LS	ALL	$1,000.00	$1,000.00
	6" Thermoplastic Traffic Stripe (Broken 17-7)	LF	1,100	$0.50	$550.00
	Thermoplastic Pavement Marking	Sq Ft	126	$5.00	$630.00
	Pavement Marker (Retroreflective)	EA	23	$5.00	$115.00
	Roadside Sign - One Post	EA	2	$300.00	$600.00
	Inductive Loop Detector	EA	0	$600.00	$0.00
TOTAL CONSTRUCTION COST					**$ 3,895**
25% Contingency					**$ 980**
TOTAL ESTIMATED PROJECT COST					**$ 4,875**

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Murrieta Costco

Intersection Improvement Costs

Costco

Engineer's Conceptual Estimate

Prepared By: Joey Bansen	*Date: 1/9/2020*
This Estimate has a Rating of:	**3C** *(See rating scale guide below.)*

		Clinton Keith Rd & Nutmeg Rd - Westbound Turn Lane Improvements			Clinton Keith Rd & Nutmeg Rd - Southbound Turn Lane Improvements			Clinton Keith Rd & Murrieta Oaks Ave - Turn Lane Improvements			Clinton Keith Rd & Whitewood Road - eastbound		
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$5,000.00	$5,000.00	ALL	$2,000.00	$2,000.00
Traffic Control	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$3,000.00	$3,000.00	ALL	$1,000.00	$1,000.00
Erosion Control	LS	ALL	$0.00	$0.00	ALL	$0.00	$0.00	ALL	$1,000.00	$1,000.00	ALL	$1,000.00	$1,000.00
Removal of Structures and Obstructions	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$4,000.00	$4,000.00	ALL	$2,000.00	$2,000.00
Clearing and Grubbing	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$1,000.00	$1,000.00	ALL	$1,000.00	$1,000.00
General Earthworks	CY	0	$25.00	$0.00	0	$25.00	$0.00	250	$25.00	$6,250.00	70	$25.00	$1,750.00
Remove Concrete Curb	LF	0	$16.00	$0.00	0	$16.00	$0.00	220	$16.00	$3,520.00	60	$16.00	$952.00
Asphalt Roadway - Full Depth	SF	0	$7.50	$0.00	0	$0.00	$0.00	1,625	$7.50	$12,187.50	455	$7.50	$3,412.50
Concrete Curbs - Standard Curb	LF	0	$50.00	$0.00	0	$50.00	$0.00	220	$50.00	$11,000.00	60	$50.00	$2,975.00
Permanent Landscaping	SF	0	$3.70	$0.00	0	$0.00	$0.00	750	$3.70	$2,775.00	210	$3.70	$777.00
Irrigation, Complete	SF	0	$2.50	$0.00	0	$2.50	$0.00	750	$2.50	$1,875.00	210	$2.50	$525.00
6" Thermoplastic Traffic Stripe	LF	200	$0.85	$170.00	300	$0.85	$255.00	250	$0.85	$212.50	70	$0.85	$59.50
8" Thermoplastic Traffic Stripe	LF	75	$1.50	$112.50	100	$1.50	$150.00	125	$1.50	$187.50	35	$1.50	$52.50
Thermoplastic Pavement Marking	Sq Ft	30	$6.50	$195.00	30	$6.50	$195.00	30	$6.50	$195.00	15	$6.50	$97.50
Pavement Marker (Retroreflective)	EA	9	$5.00	$45.00	9	$5.00	$45.00	6	$5.00	$30.00	3	$5.00	$15.00
Remove Thermoplastic Traffic Stripe	LF	200	$0.55	$110.00	300	$0.55	$165.00	0	$0.55	$0.00	0	$0.55	$0.00
Remove Thermoplastic Pavement Marking	Sq Ft	30	$4.00	$120.00	30	$4.00	$120.00	30	$4.00	$120.00	15	$4.00	$60.00
Remove Roadside Sign	EA	0	$125.00	$0.00	0	$125.00	$0.00	1	$125.00	$125.00	1	$125.00	$125.00
Roadside Sign - One Post	EA	0	$300.00	$0.00	0	$300.00	$0.00	1	$300.00	$300.00	1	$300.00	$300.00
Inductive Loop Detector	EA	1	$600.00	$600.00	1	$600.00	$600.00	1	$600.00	$600.00	1	$600.00	$600.00
TOTAL CONSTRUCTION COST				**$ 3,353**			**$ 3,530**			**$ 53,378**			**$ 18,701**
25% Contingency				**$ 840**			**$ 890**			**$ 13,350**			**$ 4,680**
TOTAL ESTIMATED PROJECT COST				**$ 4,193**			**$ 4,420**			**$ 66,728**			**$ 23,381**

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

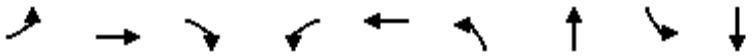
Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Appendix M Queuing Worksheets for Mitigations

Queues
13: 18 Whitewood Rd & Baxter Rd

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	3	185	8	18	224	636	1	524
v/c Ratio	0.10	0.01	0.38	0.04	0.03	0.58	0.32	0.01	0.53
Control Delay	39.6	25.3	7.2	39.4	20.7	32.9	10.7	41.0	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	25.3	7.2	39.4	20.7	32.9	10.7	41.0	24.1
Queue Length 50th (ft)	5	1	0	2	1	61	42	0	70
Queue Length 95th (ft)	38	9	53	24	12	239	222	7	238
Internal Link Dist (ft)		490			484		2550		297
Turn Bay Length (ft)	215					215			
Base Capacity (vph)	188	1157	1036	188	1951	821	3106	188	2009
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.00	0.18	0.04	0.01	0.27	0.20	0.01	0.26

Intersection Summary

2021 Project Completion PM Mitigated

Queues
1: Nutmeg St & Clinton Keith Rd

01/10/2020

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	964	419	977	70	53	395	127	75
v/c Ratio	0.35	0.80	0.82	0.46	0.29	0.16	0.65	0.53	0.23
Control Delay	50.7	34.4	45.8	12.7	33.3	30.2	8.6	40.3	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	34.4	45.8	12.7	33.3	30.2	8.6	40.3	31.5
Queue Length 50th (ft)	24	240	207	145	34	25	0	65	36
Queue Length 95th (ft)	71	#499	#505	330	69	54	66	116	71
Internal Link Dist (ft)		329		1946		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	142	1199	513	2136	559	790	880	558	754
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.80	0.82	0.46	0.13	0.07	0.45	0.23	0.10

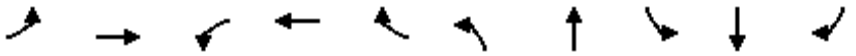
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1397	503	1155	628	438
v/c Ratio	0.85	0.86	0.47	0.81	0.74
Control Delay	42.0	53.1	11.3	29.3	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	53.1	11.3	29.3	12.9
Queue Length 50th (ft)	308	308	136	93	0
Queue Length 95th (ft)	#680	#810	488	205	121
Internal Link Dist (ft)	1946		786	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	1647	585	2479	1065	689
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.85	0.86	0.47	0.59	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	15	2157	180	1791	3	24	148	8	1	8
v/c Ratio	0.14	1.01	0.42	0.51	0.00	0.22	0.42	0.04	0.00	0.02
Control Delay	56.8	52.0	38.2	12.1	0.0	58.1	10.1	55.0	39.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	52.0	38.2	12.1	0.0	58.1	10.1	55.0	39.0	0.1
Queue Length 50th (ft)	8	375	84	94	0	13	1	2	1	0
Queue Length 95th (ft)	38	#1075	221	525	0	54	54	13	5	0
Internal Link Dist (ft)		1617		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	111	2141	564	3537	1117	111	743	215	778	739
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	1.01	0.32	0.51	0.00	0.22	0.20	0.04	0.00	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

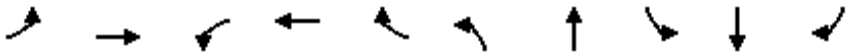
2021 Project Completion Saturday Midday Mitigated

Queues
1: 1 Nutmeg St & Clinton Keith Rd

01/10/2020

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	775	255	767	71	48	281	96	55
v/c Ratio	0.20	0.64	0.66	0.38	0.28	0.13	0.53	0.38	0.17
Control Delay	41.4	24.9	36.8	11.0	28.5	25.7	7.4	30.6	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.4	24.9	36.8	11.0	28.5	25.7	7.4	30.6	26.3
Queue Length 50th (ft)	13	126	95	56	26	17	0	36	20
Queue Length 95th (ft)	54	335	240	238	68	49	55	88	54
Internal Link Dist (ft)		329		1941		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	173	1542	1010	2975	755	1047	1010	745	951
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.50	0.25	0.26	0.09	0.05	0.28	0.13	0.06

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	16	1597	156	1378	5	22	130	4	1	14
v/c Ratio	0.21	0.49	0.77	0.36	0.00	0.26	0.45	0.04	0.01	0.05
Control Delay	58.7	13.0	72.5	1.7	0.0	72.1	12.4	65.0	47.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	13.0	72.5	1.7	0.0	72.1	12.4	65.0	47.0	0.4
Queue Length 50th (ft)	15	156	149	9	0	19	3	2	1	0
Queue Length 95th (ft)	m26	352	226	71	m0	51	52	8	5	0
Internal Link Dist (ft)		1618		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	77	3251	244	3881	1212	84	532	112	542	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.49	0.64	0.36	0.00	0.26	0.24	0.04	0.00	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

2021 Cumulative PM Mitigated

Queues
1: Nutmeg St & Clinton Keith Rd

01/10/2020

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	51	1066	457	1072	79	53	436	143	79
v/c Ratio	0.38	0.86	0.88	0.51	0.33	0.16	0.68	0.60	0.24
Control Delay	58.8	40.6	53.3	14.1	40.7	36.6	9.5	49.3	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.8	40.6	53.3	14.1	40.7	36.6	9.5	49.3	38.1
Queue Length 50th (ft)	31	319	266	187	44	29	0	85	44
Queue Length 95th (ft)	86	#683	#524	380	94	67	84	161	92
Internal Link Dist (ft)		329		1946		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	166	1244	734	2371	502	711	857	502	675
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.86	0.62	0.45	0.16	0.07	0.51	0.28	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1546	529	1281	649	455
v/c Ratio	0.88	0.96	0.52	0.85	0.76
Control Delay	41.9	68.8	10.8	32.8	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	68.8	10.8	32.8	13.8
Queue Length 50th (ft)	352	350	170	102	0
Queue Length 95th (ft)	#684	#812	485	#256	135
Internal Link Dist (ft)	1946		393	477	
Turn Bay Length (ft)		220		100	
Base Capacity (vph)	1752	552	2486	801	610
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.88	0.96	0.52	0.81	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: 3 Greer Rd/Murrieta Ave & Clinton Keith Rd

01/10/2020

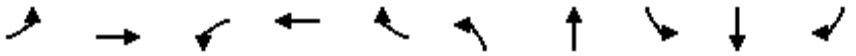
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	2213	98	1770	174	42	1	86	179	43
v/c Ratio	0.62	0.97	0.62	0.76	0.17	0.19	0.00	0.25	0.78	0.12
Control Delay	87.5	38.9	50.6	8.3	0.4	53.9	48.0	6.5	82.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.5	38.9	50.6	8.3	0.4	53.9	48.0	6.5	82.4	0.7
Queue Length 50th (ft)	76	1022	91	49	0	36	1	0	170	0
Queue Length 95th (ft)	134	#1385	#156	114	0	70	6	32	243	0
Internal Link Dist (ft)		2716		1617			285			209
Turn Bay Length (ft)	260		150		150	150		150	150	
Base Capacity (vph)	135	2280	157	2339	1049	322	456	467	341	468
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.97	0.62	0.76	0.17	0.13	0.00	0.18	0.52	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Murrieta Oaks Ave & Clinton Keith Rd

01/10/2020



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	94	2321	237	1952	106	24	208	103	5	72
v/c Ratio	0.69	0.81	1.02	0.61	0.10	0.21	0.70	0.35	0.02	0.23
Control Delay	63.7	26.1	98.0	3.3	0.1	70.1	23.7	65.9	53.8	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	26.1	98.0	3.3	0.1	70.1	23.7	65.9	53.8	1.7
Queue Length 50th (ft)	88	402	~250	36	0	22	16	51	5	0
Queue Length 95th (ft)	m97	m#987	m#363	138	m0	56	98	73	15	0
Internal Link Dist (ft)		1617		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	137	2853	233	3208	1020	117	543	305	506	525
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.81	1.02	0.61	0.10	0.21	0.38	0.34	0.01	0.14

Intersection Summary

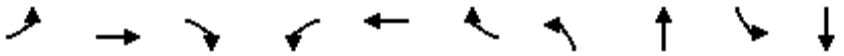
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
8: Creighton Ave & Clinton Keith Rd

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	321	2349	92	43	1762	140	60	27	145	289
v/c Ratio	0.72	0.67	0.09	0.49	0.58	0.14	0.48	0.11	0.89	0.64
Control Delay	75.9	10.1	1.3	96.7	7.3	0.3	79.6	0.9	111.9	8.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	10.3	1.3	96.7	7.4	0.3	79.6	0.9	111.9	8.7
Queue Length 50th (ft)	163	213	1	44	73	0	58	0	~150	0
Queue Length 95th (ft)	m202	#754	m1	m#83	#702	0	108	0	#298	38
Internal Link Dist (ft)		455			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	597	3528	1040	88	3029	1000	136	523	163	685
Starvation Cap Reductn	0	402	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	2	0	0	132	0	0	0	0	8
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.75	0.09	0.49	0.61	0.14	0.44	0.05	0.89	0.43

Intersection Summary

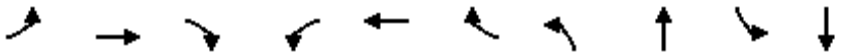
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
8: Creighton Ave & Clinton Keith Rd

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	282	2389	92	43	1803	140	60	27	145	289
v/c Ratio	0.64	0.72	0.09	0.52	0.65	0.15	0.43	0.08	1.23	0.74
Control Delay	61.0	20.0	2.1	62.9	11.7	1.1	67.1	0.4	204.0	23.6
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	20.5	2.1	62.9	11.7	1.1	67.1	0.4	204.0	23.6
Queue Length 50th (ft)	121	380	0	36	107	0	49	0	~193	51
Queue Length 95th (ft)	m#186	#900	m5	m60	221	9	96	0	#331	118
Internal Link Dist (ft)		455			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	439	3303	1008	83	2780	938	139	622	118	632
Starvation Cap Reductn	0	441	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	34	0	0	0	0	0	3	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.83	0.09	0.52	0.65	0.15	0.43	0.04	1.23	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	119	2244	206	1485	89	138	91	114	92
v/c Ratio	0.55	0.78	0.76	0.48	0.09	0.52	0.25	0.95	0.27
Control Delay	55.7	16.5	79.1	19.6	2.0	73.5	1.7	137.6	1.9
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	16.7	79.1	19.6	2.0	73.5	1.7	137.6	1.9
Queue Length 50th (ft)	111	407	193	251	0	68	0	113	0
Queue Length 95th (ft)	m164	#916	#354	471	16	101	0	#235	0
Internal Link Dist (ft)		432		513			438		99
Turn Bay Length (ft)	200		315		85				
Base Capacity (vph)	215	2891	270	3099	1012	267	615	120	639
Starvation Cap Reductn	0	95	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	126	0	0	0	0	5
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.80	0.76	0.50	0.09	0.52	0.15	0.95	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

2021 Cumulative Saturday Midday Mitigated

Queues
1: Nutmeg St & Clinton Keith Rd

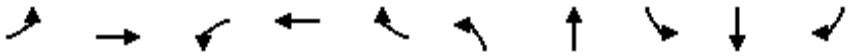
01/10/2020

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	38	893	302	885	82	48	331	113	61
v/c Ratio	0.26	0.70	0.73	0.44	0.32	0.14	0.58	0.45	0.19
Control Delay	48.5	27.5	42.9	12.3	34.1	30.3	8.2	37.4	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	27.5	42.9	12.3	34.1	30.3	8.2	37.4	31.2
Queue Length 50th (ft)	18	182	133	124	35	20	0	50	26
Queue Length 95th (ft)	66	403	315	281	88	55	63	116	67
Internal Link Dist (ft)		329		1941		331			178
Turn Bay Length (ft)	125		225		175			50	
Base Capacity (vph)	162	1782	676	2678	660	920	946	654	832
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.50	0.45	0.33	0.12	0.05	0.35	0.17	0.07

Intersection Summary

Queues
4: Murrieta Oaks Ave & Clinton Keith Rd

01/10/2020

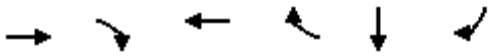


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	93	1790	216	1543	106	22	197	122	6	96
v/c Ratio	0.58	0.65	0.86	0.51	0.11	0.18	0.61	0.61	0.02	0.31
Control Delay	59.7	18.4	72.3	4.9	0.3	66.7	15.7	78.4	51.7	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	18.4	72.3	4.9	0.3	66.7	15.7	78.4	51.7	4.6
Queue Length 50th (ft)	86	205	216	68	1	19	6	58	6	0
Queue Length 95th (ft)	m121	567	#332	116	m2	52	70	#100	16	18
Internal Link Dist (ft)		1618		1039			433		254	
Turn Bay Length (ft)	150		150		160			150		150
Base Capacity (vph)	185	2759	276	3053	962	122	530	204	523	501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.65	0.78	0.51	0.11	0.18	0.37	0.60	0.01	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

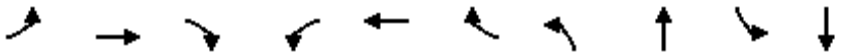


Lane Group	EBT	EBR	WBT	WBR	SBT	SBR
Lane Group Flow (vph)	1748	619	1481	553	573	689
v/c Ratio	0.63	0.73	0.53	0.65	0.90	0.65
Control Delay	15.2	21.3	11.0	14.5	60.2	38.0
Queue Delay	0.2	0.4	0.0	0.1	0.0	0.0
Total Delay	15.4	21.6	11.0	14.6	60.2	38.0
Queue Length 50th (ft)	237	388	150	153	498	285
Queue Length 95th (ft)	360	449	183	208	634	339
Internal Link Dist (ft)	570		676		584	
Turn Bay Length (ft)		385				400
Base Capacity (vph)	2756	844	2784	847	718	1189
Starvation Cap Reductn	261	33	0	20	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.76	0.53	0.67	0.80	0.58

Intersection Summary

Queues
8: Creighton Ave & Clinton Keith Rd

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	379	1914	60	8	1703	154	59	13	148	318
v/c Ratio	0.76	0.56	0.05	0.09	0.64	0.17	0.32	0.04	0.85	0.72
Control Delay	62.7	10.6	0.1	60.3	11.3	0.3	67.1	0.2	100.4	14.1
Queue Delay	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	10.7	0.1	60.3	11.4	0.3	67.1	0.2	100.4	14.1
Queue Length 50th (ft)	194	138	0	8	107	0	53	0	141	0
Queue Length 95th (ft)	247	#765	m0	m13	#729	m0	103	0	#318	66
Internal Link Dist (ft)		453			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	601	3429	1104	192	2659	907	184	602	175	690
Starvation Cap Reductn	0	483	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	111	0	0	0	0	6
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.65	0.05	0.04	0.67	0.17	0.32	0.02	0.85	0.46

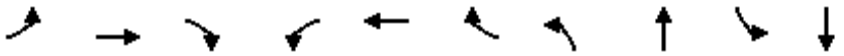
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
8: Creighton Ave & Clinton Keith Rd

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	317	1977	60	8	1761	154	59	13	148	259
v/c Ratio	0.54	0.55	0.05	0.11	0.67	0.17	0.42	0.04	2.35	0.40
Control Delay	41.0	6.6	0.1	67.7	28.4	6.7	70.3	0.2	680.3	1.8
Queue Delay	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	6.8	0.1	67.7	28.6	6.7	70.3	0.2	680.3	1.9
Queue Length 50th (ft)	146	80	0	7	371	9	53	0	~220	0
Queue Length 95th (ft)	m165	423	m0	26	#769	68	99	0	#364	0
Internal Link Dist (ft)		453			668			529		243
Turn Bay Length (ft)	250		250	235		150	100			
Base Capacity (vph)	588	3608	1154	71	2623	880	306	689	63	838
Starvation Cap Reductn	0	538	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	293	0	0	0	0	32
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.64	0.05	0.11	0.76	0.17	0.19	0.02	2.35	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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95th percentile volume exceeds capacity, queue may be longer.
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m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	169	1583	42	1358	145	71	12	158	129
v/c Ratio	0.58	0.57	0.33	0.66	0.20	0.17	0.03	0.51	0.20
Control Delay	49.3	19.6	56.0	27.1	8.6	39.0	0.2	44.1	0.7
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	19.7	56.0	27.1	8.6	39.0	0.2	44.1	0.7
Queue Length 50th (ft)	77	187	21	194	8	17	0	70	0
Queue Length 95th (ft)	#271	514	#74	458	64	46	0	193	0
Internal Link Dist (ft)		432		463			438		85
Turn Bay Length (ft)	200		315		85				
Base Capacity (vph)	289	2840	128	2266	769	1640	1086	463	972
Starvation Cap Reductn	0	263	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.61	0.33	0.60	0.19	0.04	0.01	0.34	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Murrieta Costco

Intersection Improvement Costs

Costco

Engineer's Conceptual Estimate

Prepared By: Joey Bansen	*Date: 1/9/2020*
This Estimate has a Rating of:	**3C** *(See rating scale guide below.)*

		Clinton Keith Rd & Nutmeg Rd - Westbound Turn Lane Improvements			Clinton Keith Rd & Nutmeg Rd - Southbound Turn Lane Improvements			Clinton Keith Rd & Murrieta Oaks Ave - Turn Lane Improvements			Clinton Keith Rd & Whitewood Road - eastbound		
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$5,000.00	$5,000.00	ALL	$2,000.00	$2,000.00
Traffic Control	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$3,000.00	$3,000.00	ALL	$1,000.00	$1,000.00
Erosion Control	LS	ALL	$0.00	$0.00	ALL	$0.00	$0.00	ALL	$1,000.00	$1,000.00	ALL	$1,000.00	$1,000.00
Removal of Structures and Obstructions	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$4,000.00	$4,000.00	ALL	$2,000.00	$2,000.00
Clearing and Grubbing	LS	ALL	$500.00	$500.00	ALL	$500.00	$500.00	ALL	$1,000.00	$1,000.00	ALL	$1,000.00	$1,000.00
General Earthworks	CY	0	$25.00	$0.00	0	$25.00	$0.00	250	$25.00	$6,250.00	70	$25.00	$1,750.00
Remove Concrete Curb	LF	0	$16.00	$0.00	0	$16.00	$0.00	220	$16.00	$3,520.00	60	$16.00	$952.00
Asphalt Roadway - Full Depth	SF	0	$7.50	$0.00	0	$0.00	$0.00	1,625	$7.50	$12,187.50	455	$7.50	$3,412.50
Concrete Curbs - Standard Curb	LF	0	$50.00	$0.00	0	$50.00	$0.00	220	$50.00	$11,000.00	60	$50.00	$2,975.00
Permanent Landscaping	SF	0	$3.70	$0.00	0	$0.00	$0.00	750	$3.70	$2,775.00	210	$3.70	$777.00
Irrigation, Complete	SF	0	$2.50	$0.00	0	$2.50	$0.00	750	$2.50	$1,875.00	210	$2.50	$525.00
6" Thermoplastic Traffic Stripe	LF	200	$0.85	$170.00	300	$0.85	$255.00	250	$0.85	$212.50	70	$0.85	$59.50
8" Thermoplastic Traffic Stripe	LF	75	$1.50	$112.50	100	$1.50	$150.00	125	$1.50	$187.50	35	$1.50	$52.50
Thermoplastic Pavement Marking	Sq Ft	30	$6.50	$195.00	30	$6.50	$195.00	30	$6.50	$195.00	15	$6.50	$97.50
Pavement Marker (Retroreflective)	EA	9	$5.00	$45.00	9	$5.00	$45.00	6	$5.00	$30.00	3	$5.00	$15.00
Remove Thermoplastic Traffic Stripe	LF	200	$0.55	$110.00	300	$0.55	$165.00	0	$0.55	$0.00	0	$0.55	$0.00
Remove Thermoplastic Pavement Marking	Sq Ft	30	$4.00	$120.00	30	$4.00	$120.00	30	$4.00	$120.00	15	$4.00	$60.00
Remove Roadside Sign	EA	0	$125.00	$0.00	0	$125.00	$0.00	1	$125.00	$125.00	1	$125.00	$125.00
Roadside Sign - One Post	EA	0	$300.00	$0.00	0	$300.00	$0.00	1	$300.00	$300.00	1	$300.00	$300.00
Inductive Loop Detector	EA	1	$600.00	$600.00	1	$600.00	$600.00	1	$600.00	$600.00	1	$600.00	$600.00
TOTAL CONSTRUCTION COST				**$ 3,353**			**$ 3,530**			**$ 53,378**			**$ 18,701**
25% Contingency				**$ 840**			**$ 890**			**$ 13,350**			**$ 4,680**
TOTAL ESTIMATED PROJECT COST				**$ 4,193**			**$ 4,420**			**$ 66,728**			**$ 23,381**

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.