Lakeside Homes Transportation Impact Analysis

Prepared for:
Tri Pointe Homes

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OC21-0795

FEHR PEERS

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Executive Summary

Fehr & Peers has completed a transportation impact analysis (TIA) for the proposed Lakeside Homes development project (Project) in Lake Elsinore, California. The Project would construct 140 single-family homes north of State Route 74 (SR-74) between Grand Avenue and Hill Street. The Project would generate 1,322 daily vehicle trips, 104 vehicle trips during the AM peak hour, and 139 vehicle trips during the PM peak hour.

Project access would be provided at the SR-74 & Jamieson Street intersection. The Project proposes to widen SR-74 to two lanes along the Project frontage to meet the future roadway buildout of the Lake Elsinore General Plan and to construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. Left-turns to the Project site and Jamieson Street would be possible from dedicated storage for eastbound and westbound left-turns. Project traffic wanting to make a left-turn to SR-74 would make a U-turn at the intersection of SR-74 and Grand Avenue.

Consistent with the guidelines documented in the *City of Lake Elsinore Traffic Impact Analysis Preparation Guide* (June 2020) and documented in the *Tri Point Homes – Lakeside Transportation Impact Analysis Methodologies and Assumptions Memorandum*, approved by the City on June 3, 2021, the following scenarios were analyzed:

- **Existing Year (2021):** Existing traffic volumes factored from 2018 to 2021 conditions and existing lane geometries.
- **Project Completion with Project (2023):** Traffic volumes reflecting 2021 conditions were grown by an annual growth rate of 2% to reflect 2023 conditions. Traffic generated by the Project was then added to the 2023 traffic volumes.
- **Cumulative with Project (2023):** Trips generated from pending and approved projects within a two-mile radius of the Project site were added to Project Completion with Project traffic volumes.

Findings

Under the Existing Conditions scenario, two intersections were found to operate below Level of Service (LOS) D: the SR-74 & Jamieson Street intersection and the SR-74 & Lincoln Street intersection. Poor existing operations at the SR-74 & Jamieson Street are due to the high delays experienced by drivers turning left on SR-74 who must wait for gaps in traffic due to the high traffic volume on SR-74 at this unsignalized intersection. At the SR-74 & Lincoln Street intersection, LOS D operations are due to high turning movements, particularly the southbound left-turn.

Under the Project Completion with Project (2023) scenario, the roadway frontage along the project site is improved to the ultimate condition by the Project. Additionally, the project proposes median modifications to reduce delays at the SR-74 & Jamieson Street intersection by controlling specific turning movements from the side streets. Finally, this study identifies the need for standard signal timing

optimization (e.g. the need to adjust signal timings as traffic volumes change – typically implemented periodically as standard maintenance by the City and/or Caltrans). The median modification, signal timing improvements, and frontage improvements decrease delay such that all study intersections operate LOS D or better.

Under the Cumulative with Project (2023) scenario, additional traffic from pending and approved development projects were added to the traffic volume and roadway configuration of the Project Completion with Project (2023) scenario. The Cumulative with Project (2023) scenario resulted in degraded operations at the SR-74 & Lincoln Street and SR-74 & Lakeshore Drive intersections to LOS E. Additional signal timing improvements including cycle length optimization and optimized splits were found to improve operations at these two intersections under Cumulative with Project Conditions. As such, the project is responsible for a 26% and 17% fair-share contribution toward those signal timing improvements, respectively.

Introduction

The purpose of this report is to document the methodology, analysis, findings, and identification of recommended measures needed to provide acceptable traffic operations with the Project in place. This chapter describes the Project and scope of the study area evaluated as part of the analysis.

Project Description

The Project would construct 140 single-family homes on the northeast side of SR-74 in Lake Elsinore. The Project site begins north of Grand Avenue and is bounded by Hill Street on the south. Access to the Project will be provided at Jamieson Street as shown on the site plan **()** below. The Project proposes to widen SR-74 to two lanes along the Project frontage to meet the future roadway buildout of the Lake Elsinore General Plan and to construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. Left-turns to the Project site and Jamieson Street would be possible from dedicated storage for eastbound and westbound left-turns. Project traffic wanting to make a left-turn to SR-74 would make a U-turn at the intersection of SR-74 and Grand Avenue.

Study Area

To determine the scope of the study area and the intersections that should be analyzed, trip generation, trip distribution, and trip assignment was completed for the proposed Project. This information was provided to the City in the *Tri Point Homes – Lakeside Transportation Impact Analysis Methodologies and Assumptions Memorandum*, included as **Appendix A**, and was approved by the City on June 3, 2021. The study area is also consistent with guidelines documented in the Riverside County Congestion Management Program (CMP).

Five intersections, listed below and shown on **Figure 2**, were evaluated as part of this TIA. The study intersections include:

1. SR-74 & Jamieson Street/Project Access (Unsignalized)
2. SR-74 & Grand Avenue (Signalized)
3. SR-74 & Lakeside High School Stadium Way (Signalized)
4. SR-74 & Lincoln Street (Signalized)
5. SR-74 & Lakeshore Drive (Signalized)

Analysis Scenarios

To understand the effect of Project traffic and assess if the Level of Service (LOS) required by the General Plan will be maintained within the study area, three analysis scenarios were evaluated. The scenarios evaluated include:

- **Existing Year (2021):** Existing traffic volumes collected in 2018 that are factored to 2021[1] conditions and existing lane geometries (e.g. existing conditions with no pandemic bias included).
- **Project Completion with Project (2023):** Traffic volumes reflecting 2021 conditions were grown by an annual growth rate of 2% to reflect 2023 conditions. Traffic generated by the Project was then added to the 2023 traffic volumes.
- **Cumulative with Project (2023):** Trips generated from pending and approved projects within a two-mile radius of the Project site were added to Project Completion with Project volumes.

Analysis for each scenario was completed for two time periods representing the AM and PM peak hour conditions on a typical weekday.

[1] Intersections 2-5 utilized factored counts collected in 2018. Intersection 1 did not have count data available; as such, Fehr & Peers collected a new count at that location. The count was factored up based on the other count data collected in 2018 to "correct" for pandemic affected counts.

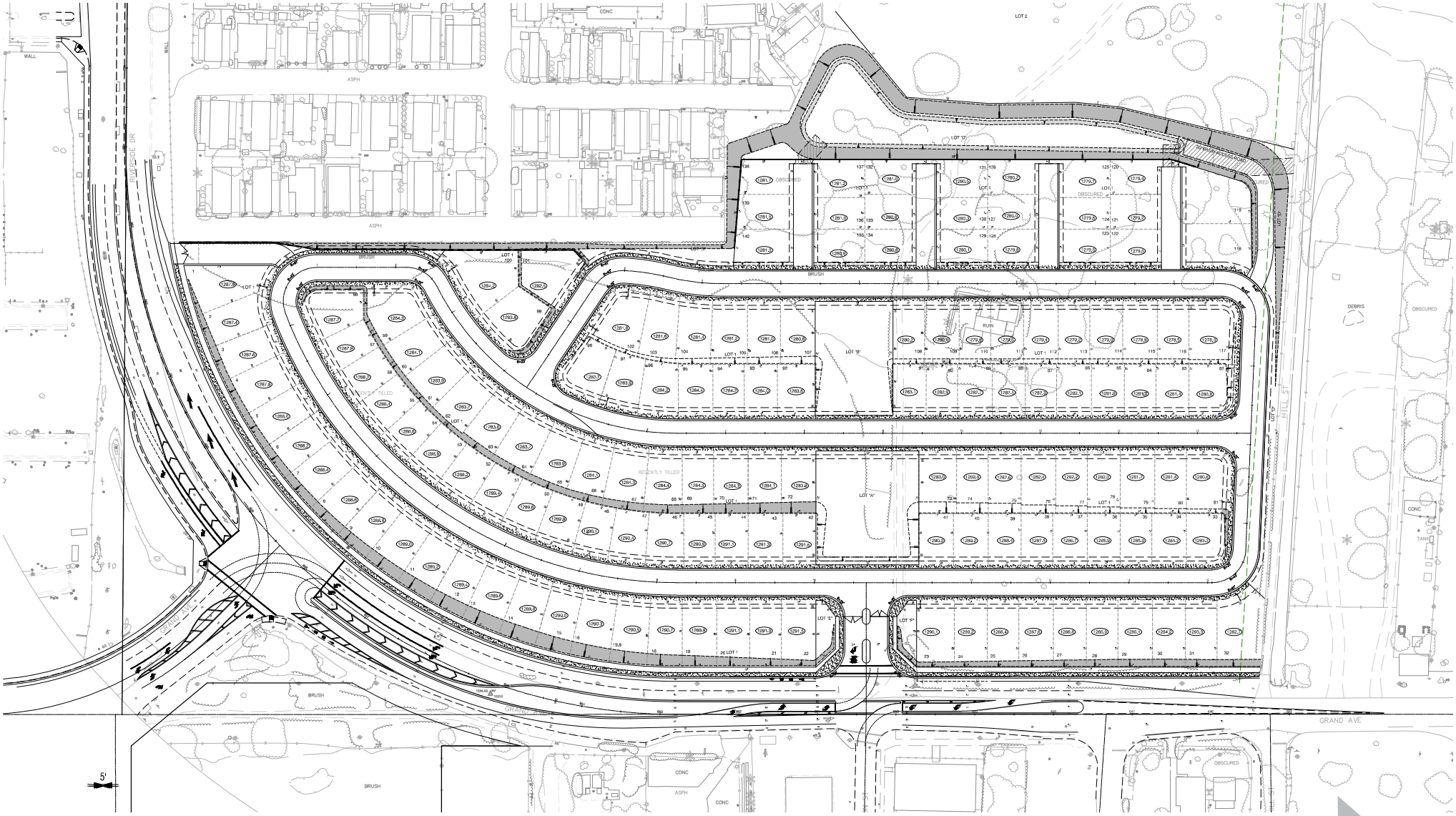

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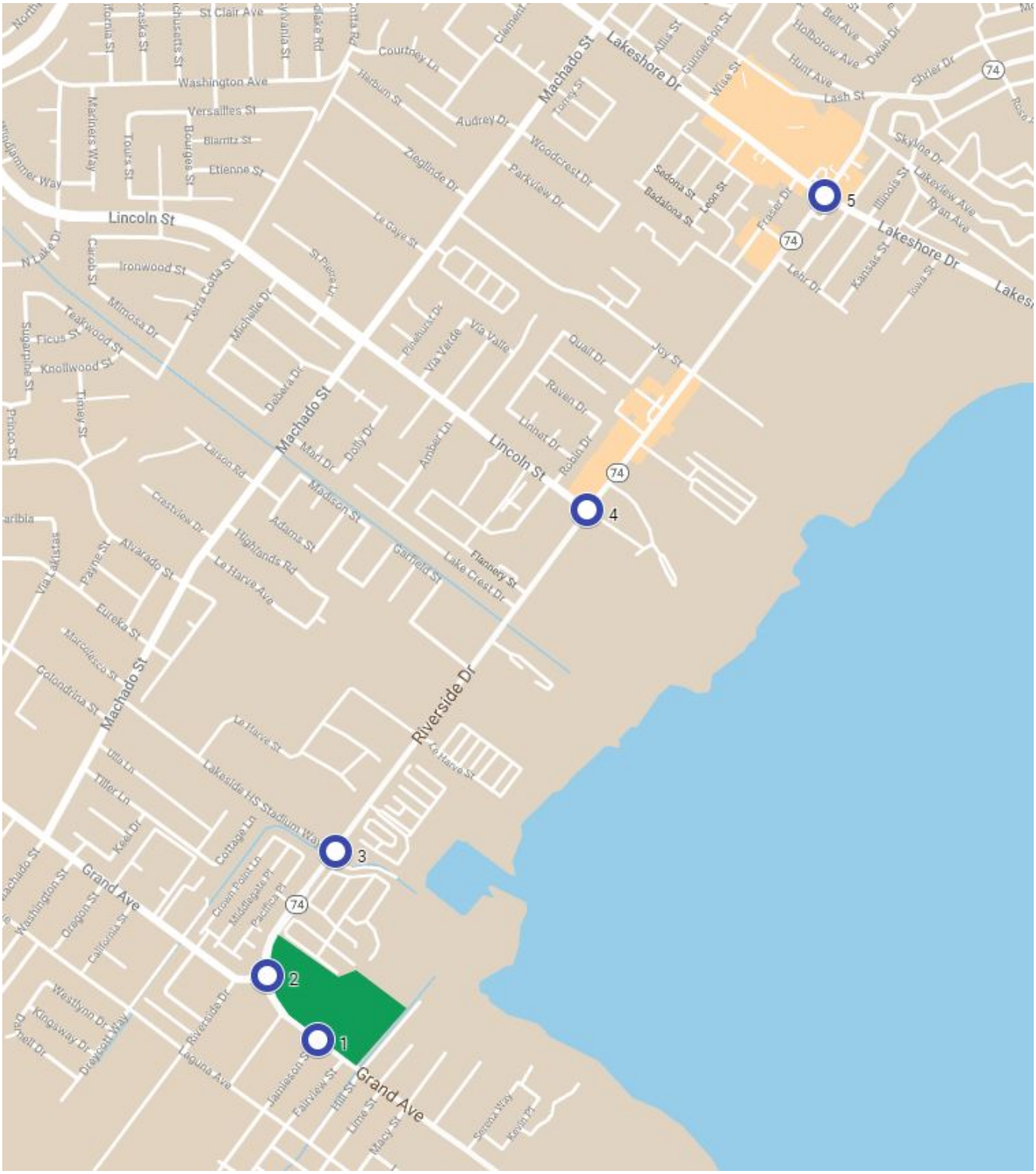
Figure 1
Site Plan



Legend

- Study Intersections
- Project Site

Figure 2
Study Area

Analysis Methodology

This chapter presents the methodology used to complete the analysis including intersection operations analysis, development of future traffic volumes, and Project trip generation, distribution, and assignment.

Intersection Analysis

Intersection operations were evaluated based on information collected in the field using the Trafficware Synchro 10 software package. Synchro calculates vehicle delay and LOS based on procedures identified in Chapter 19 Section 3 Approach A of the Highway Capacity Manual, 6th Edition (HCM) (Transportation Research Board, 2016), which is considered the state-of-the-practice methodology for evaluating intersection operations and is consistent with the requirements of the City of Lake Elsinore, Caltrans, and Riverside County CMP.

LOS is a measure of traffic operating conditions, which varies from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity resulting in long queues and delays). These ratings represent the perspective of drivers and indicate the comfort and convenience associated with driving. Peak hour traffic volumes, lane configurations, and signal timing plans were used as inputs for the LOS calculations. **Table 1** summarizes the relationship between the average control delay per vehicle and LOS for signalized and unsignalized intersections. Results from Synchro were used to determine delay and LOS at all intersections.

Table 1. Intersection LOS Criteria

Level of Service	Description	Signalized Delay (Seconds)	Unsignalized Delay (Seconds)
A	Little to no congestion or delays.	< 10	< 10
B	Limited congestion. Short delays.	> 10.0 to 20.0	>10.0 to 15.0
C	Some congestion with average delays.	> 20.0 to 35.0	>15.0 to 25.0
D	Significant congestion and delays.	> 35.0 to 55.0	>25.0 to 35.0
E	Severe congestion and delays.	> 55.0 to 80.0	>35.0 to 50.0

Source: Trip Generation Manual, 10th Edition (Institute of Transportation Engineers, 2017)

The following factors were applied in the intersection analysis:

- Peak Hour Factor (PHF) was based on traffic counts collected in the field for all Existing Conditions

- Given the amount of time from when counts were collected for this project (generally three years ago given COVID), the Opening Year PHF utilized either the existing PHF at intersections with limited congestion or was set to 0.95 for intersections where operations were approaching capacity with the addition of traffic from regional growth (e.g. when traffic conditions approach capacity, the peak hour factor typically approaches 1.0)
- PHF for the cumulative analysis was set to 0.95 consistent with County guidelines
- Heavy vehicle percentage was to set to 2% for all analysis scenarios
- Base Saturation Flow Rate set to 1,900 passenger cars/hour/lane

LOS Standards

Intersection analysis criteria consistent with the City of Lake Elsinore *Traffic Impact Analysis Preparation Guide* was applied for this Project. Exhibit E of the *Traffic Impact Analysis Preparation Guide* identifies LOS C as the target for intersection operations. However, LOS D may be allowed in Community Development areas at intersections with any combination of secondary highways, major highways, arterials, urban arterials, expressways, conventional state highways or at freeway ramp intersections. Based on the classifications of the study area roadways the intersections of SR-74 & Grand Avenue (Intersection 2), SR-74 & Lincoln Street (Intersection 4) and SR-74 & Lakeshore Drive (Intersection 5) can use a criteria of LOS D. The remaining intersections can use a criteria of LOS C. An addition of Project traffic that degrades operations from LOS C or better to LOS D or worse or increases delay on a facility operating at LOS D or worse will be considered deficient and need to identify an improvement to return to LOS C or better.

Existing Traffic Counts

Due to the COVID-19 pandemic and the impact to travel patterns, historical count data was identified as the preferred data source where available. Traffic count data collected in May 2018 was available for the following study intersections:

2. SR-74 & Grand Avenue (Signalized)
3. SR-74 & Lakeside High School Stadium Way (Signalized)
4. SR-74 & Lincoln Street (Signalized)
5. SR-74 & Lakeshore Drive (Signalized)

Because no historical data was available for the SR-74 & Jamieson Street intersection traffic counts were collected at that intersection in May 2021. To compare 2021 traffic count data to data collected in 2018, new counts were also collected at the SR-74 & Grand Avenue intersection. A comparison between 2018 and 2021 counts found that during the AM peak hour, traffic volumes were on average 75% lower in 2021 than in 2018 during the AM peak hour and 30% lower during the PM peak hour.

To develop traffic volumes for the 2021 baseline year that reflect normal travel patterns, all counts collected in 2021 were adjusted based on the historical comparison. A 2% per year growth rate was also

applied to historical counts to reflect growth that would have been likely to occur between 2018 and 2021 under normal conditions.

The final adjustment made to historical traffic counts was the addition of project trips from a new development that was constructed after 2018. Since 2018, the Launch Point RV Park has been opened at the SR-74 & Lincoln Street intersection. To account for the addition of these trips, trip rates documented in the *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers [ITE], 2017) were used to calculate the number of trips generated by an RV park with 204 spaces. A total of 43 AM peak hour trips and 55 PM peak hour trips were manually assigned and added to the adjusted count data.

Traffic volume data is provided in **Appendix B**.

Future Traffic Forecasts

Project Completion Year (2023) with Project

Traffic forecasts for the Project Completion Year (2023), were developed by applying an ambient growth rate of 2% per year to 2021 traffic volumes. Trips generated by the Project were then added to the 2023 forecasts to reflect with Project conditions.

Cumulative (2023) with Project

This scenario includes the addition of traffic generated by other approved projects within the study area. A list of projects provided by the City was reviewed to determine which projects should be included in the analysis. Approved and pending projects within a two-mile radius of the Project site were included in the analysis. The full list of projects provided by the City can be found in **Appendix C**. When available, previously completed TIAs were used as a source for trip generation and assignment for pending and approved projects. If no sources were available, trip rates documented in the *ITE Trip Generation Manual* were used to estimate new trips for pending and approved projects.

Project Traffic Volumes

Project Trip Generation

The number of new trips the Project would generate was calculated using trip rates documented in the *ITE Trip Generation Manual*. Trip generation rates and the number of expected trips for the Project are shown in Table 2 and Table 3, respectively.

Table 2. Trip Generation Rates

Land Use	ITE Code	Size	Unit	Trip Generation Rates						
				Daily Trips	AM Peak Hour			PM Peak Hour		
					Rate	% In	% Out	Rate	% In	% Out
Single Family	210	140	Units	9.44	0.74	25%	75%	0.99	63%	37%

Source: Trip Generation Manual, 10th Edition (Institute of Transportation Engineers, 2017)

Table 3. Trip Generation Estimates

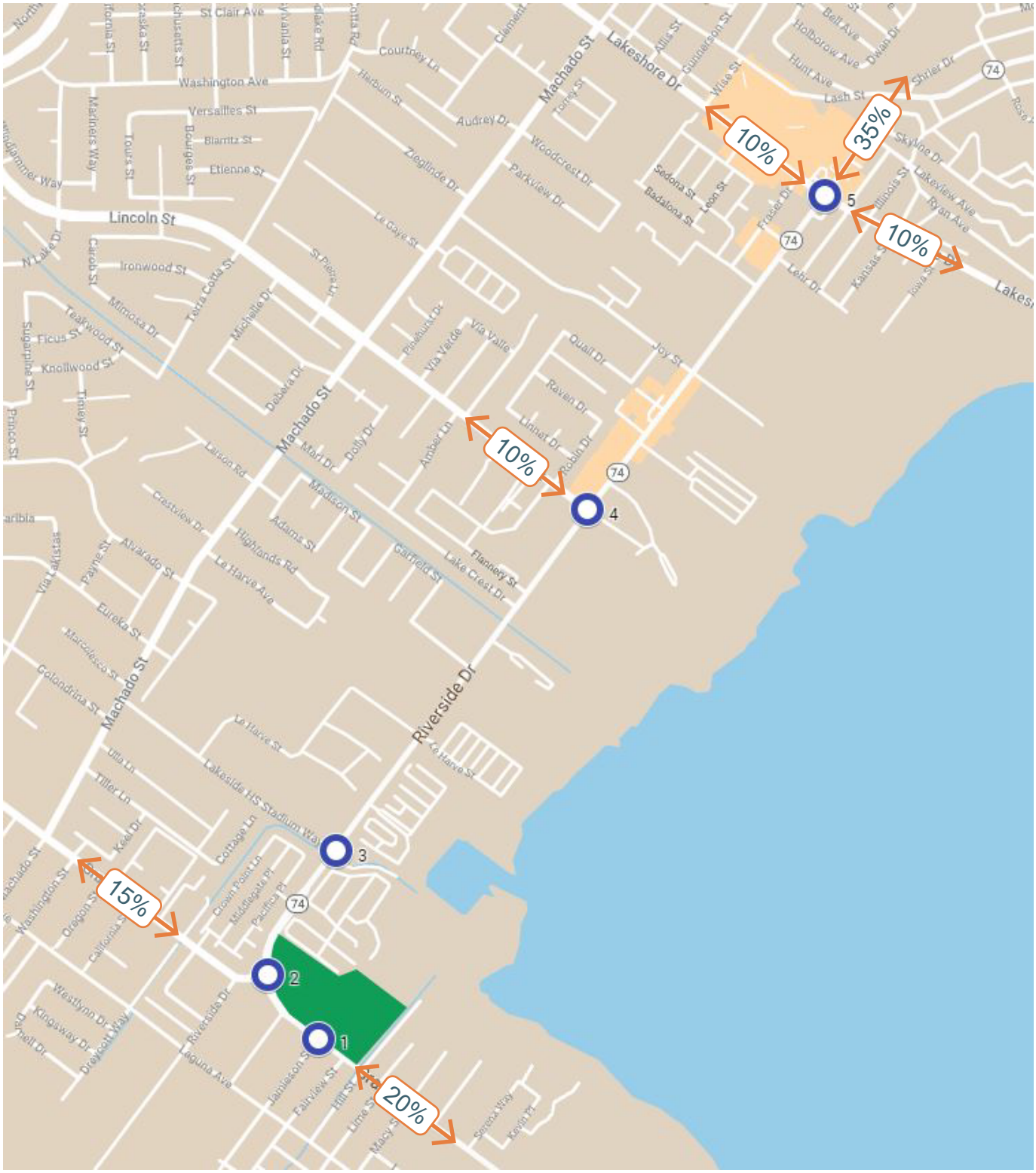
Land Use	ITE Code	Size	Unit	Estimated Trip Generation						
				Daily Trips	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Single Family	210	140	Units	1,322	104	26	78	139	88	51

Source: Trip Generation Manual, 10th Edition (Institute of Transportation Engineers, 2017)

Project Trip Assignment

Using the trip generation estimates and trip distribution described above, Project trips were assigned to the study area roadway network. The Project proposes to widen SR-74 to two lanes along the Project frontage and construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. This median would restrict left-turns onto SR-74 from Jamieson Street. With the Project in place, trips that would make a left-turn from Jamieson Street to SR-74 would use Laguna Avenue and Grand Avenue to make a left-turn at the signalized intersection of Grand Avenue and SR-74. For this analysis scenario, the left-turn traffic from Jamieson Street to SR-74 was reassigned to Grand Avenue. The assignment of "Project Only" trips for the proposed Project is shown on **Figure 4.**

Project trips wishing to travel west on SR-74 will need to make a U-turn at the Grand Avenue intersection. As shown on **Figure 1**, there is 50 feet of space between the left edge of the left-turn pocket and the outside curb of the receiving lane. AASHTO turning templates note a minimum 32-feet of distance to allow for U-turns of a passenger car and our professional experience has identified that 36-feet is more appropriate to account for longer wheel-based vehicles (such as pick up trucks and SUVs. The 50 feet of available space is sufficient to serve vehicles making a U-turn to travel west on SR-74.



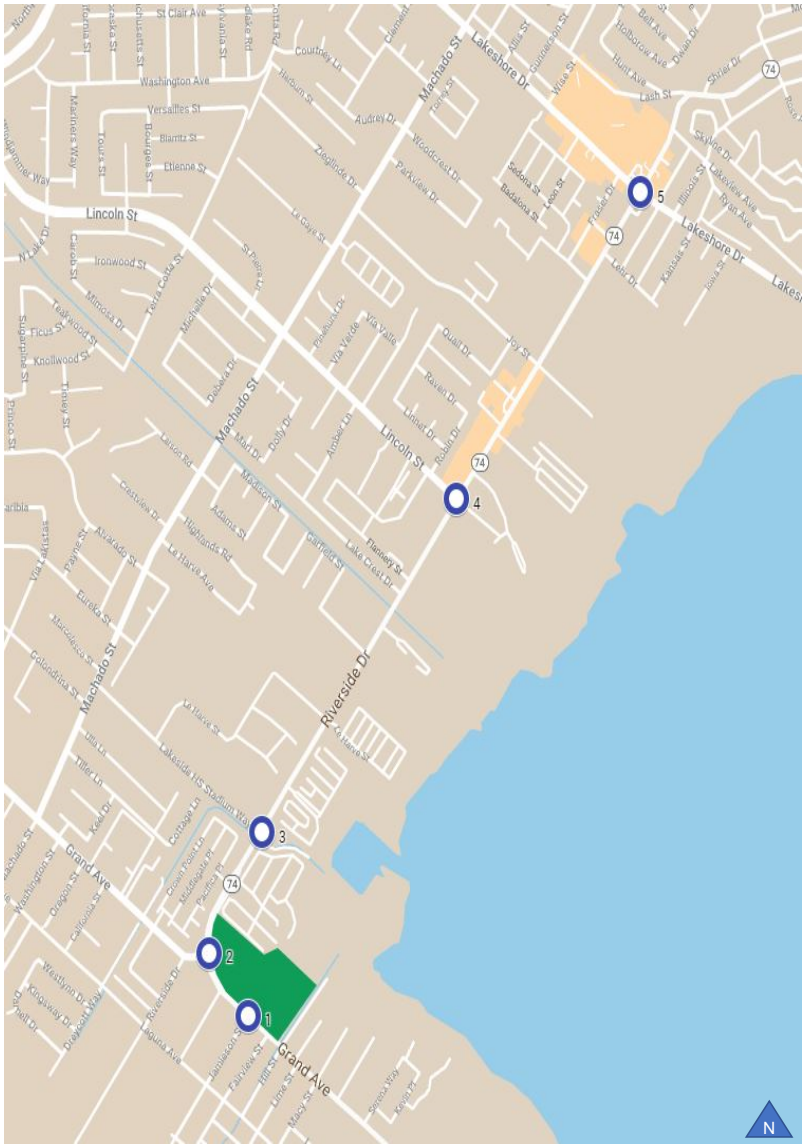
Legend

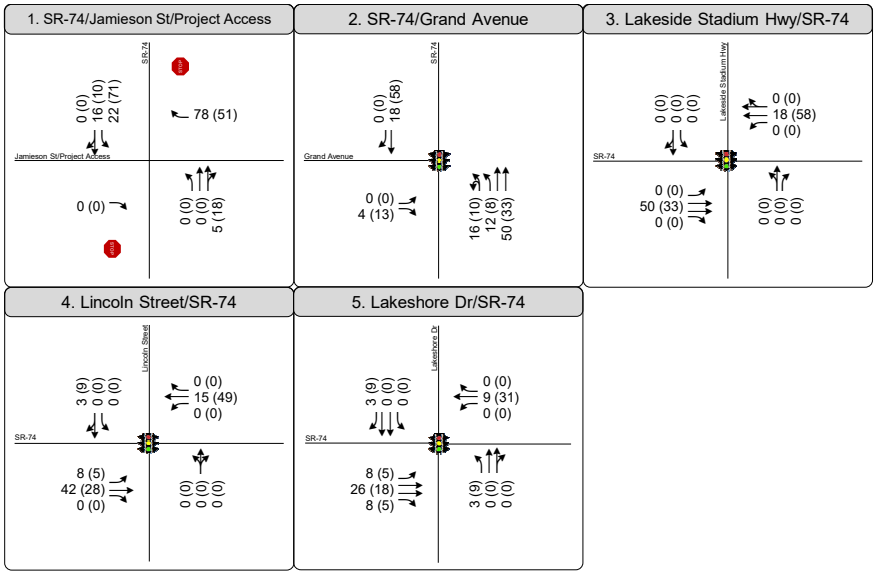
XX% Trip Distribution

Study Intersections

Project Site

Figure 3
Project Trip Distribution





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#	Study Intersection	AM (PM)	Peak Hour Traffic Volume
	Lane Configuration		Stop Sign
			Signalized

Figure 4
Project Only Peak Hour
Traffic Volumes & Lane Configurations

Existing Year (2021) Conditions

Existing Roadway Facilities

Regional Roads

Regional roads in the Project vicinity include:

State Route 74 (SR-74): SR-74 traverses in a generally east/west direction along the north side of the lake and central city. To the west, SR-74, known as Ortega Highway through the mountainous Cleveland National Forest, connects with Interstate 5 (I-5) and is the link to the coast and Orange County. To the east, SR-74 connects with I-215 and is the link to Perris and Hemet. SR 74 is mostly a two-lane roadway, except for the segment north of I-15, which has been widened to a four-lane divided roadway to accommodate recent development in the area. In the Project vicinity, it is generally a two-lane facility (one in each direction).

Local Access Roads

Lakeshore Drive is a north-south road. Between SR-74 and Viscaya Street, Lakeshore Drive is a six-lane roadway. South of SR-74, Lakeshore Drive narrows to a two-lane roadway. Lakeshore Drive provides access to residential and commercial uses. Lakeshore Drive is designated as an Urban Arterial by the City of Lake Elsinore General Plan, which provides service to a maximum of 53,900 vehicles per day.

Lincoln Street is a north-south, two-lane facility. It runs parallel to Lakeshore Drive and provides access to primarily residential uses. It is designated as a Secondary roadway by the City of Lake Elsinore General Plan, which when built out to full right-of-way provides service to a maximum of 25,900 vehicles per day.

Lakeside High School Stadium Way is a north-south, two-lane facility. It runs parallel to Lakeshore Drive and Lincoln Street and provides access to Lakeside High School.

Grand Avenue is a north-south, two-lane facility. It is designated as a major roadway by the City of Lake Elsinore General Plan, which when built out to full right-of-way provides service to a maximum of 34,100 vehicles per day.

Bicycle Facilities

Bicycle facilities in the City of Lake Elsinore are classified as follows:

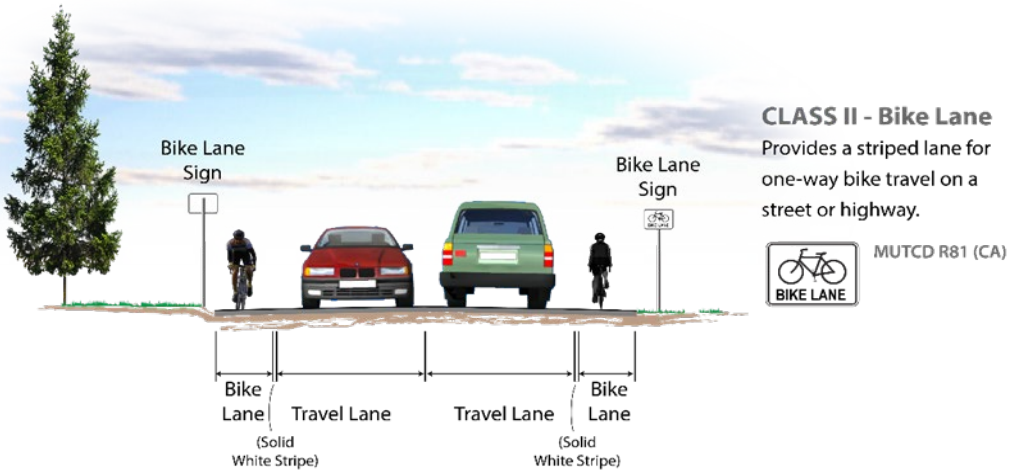
Class I Bikeways (Bike Paths)

Class I bicycle facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be

a separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.

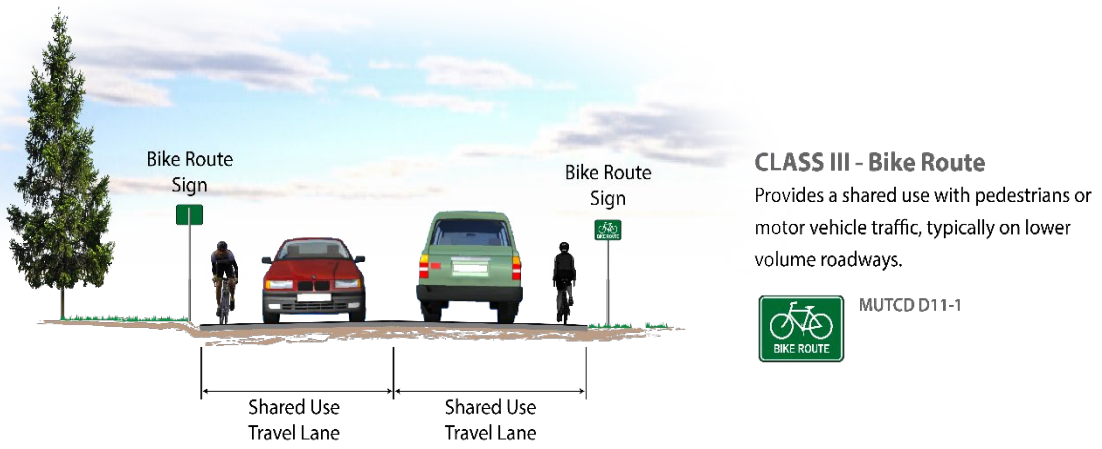
Class II Bikeways (Bike Lanes)

Class II bicycle facilities are striped lanes that provide bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.



Class III Bikeways (Bike Routes)

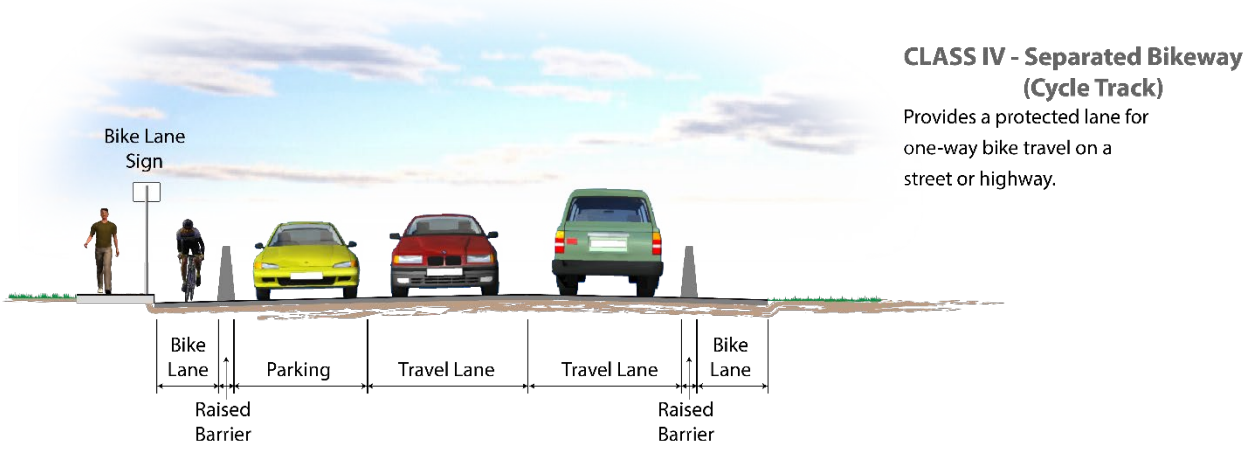
Class III Bikeways are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official



bike route.

Class IV Bikeways (Cycle Tracks)

Class IV bicycle facilities, sometimes called cycle tracks or separated bikeways, provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g. grade separation, flexible posts, inflexible physical barriers, on-street parking). California Assembly Bill 1193 (AB 1193) legalized and established design standards for Class IV bikeways in 2015.



There is an existing Class II facility on SR-74 in the Project vicinity. There are some gaps in the facility, particularly at intersection approaches. There are no existing bicycle facilities on Grand Avenue, Lakeside High School Stadium Way, Lincoln Street, or Lakeshore Drive.

The City of Lake Elsinore General Plan (adopted December 2011) proposes new Class II bike facilities on Grand Avenue, Lincoln Street, and Lakeshore Drive.

Pedestrian Facilities

Pedestrian facilities are defined as any infrastructure designed for pedestrians, including sidewalks, curb ramps, crosswalks, pedestrian signals, and trails.

Near the Project site, only the south side of SR-74 has sidewalks west of Lakeshore High School Stadium Way. There are sidewalks on the westbound side of SR-74 from Lakeshore High School Stadium Way to Joy Street. Sidewalks on the westbound side of SR-74 continue with gaps in various undeveloped parcels from Joy Street to Lakeshore Drive.

There are existing striped crossings on SR-74 at the signalized intersections with Lakeshore High School Stadium Way, Lincoln Street, and Lakeshore Drive. There is a striped crossing on Grand Avenue at the unsignalized intersection with SR-74.

Transit Facilities

The following transit facilities are provided in the City of Lake Elsinore.

Rail

Commuter train service in Riverside County is provided by Metrolink, which operates seven commuter rail lines throughout Southern California. The nearest Metrolink stations to the City of Lake Elsinore are in the City of Perris (approximately 11 miles from the site) and City of Corona (approximately 20 miles from the site).

Bus Transit

The Riverside Transit Agency (RTA) provides 36 local fixed-routes services that connect local communities, nine Commuter Link express bus routes, and a Rapid Link Gold Line for long-distance commuters traveling to Metrolink, Coaster and Sprinter stations, business parks, shopping malls and regional transit facilities. Bus routes that run through the City include RTA routes 8, 9, 22, 40, 205/206. These routes also serve major destinations in the region, including Wildomar, Downtown Riverside, Perris Station Transit Center, Lake Elsinore Outlet Center, Canyon Lake, Quail Valley, Sun City, Temecula, Murrieta, Lake Elsinore Outlet Center Park and Ride, Tom's Farms, Dos Lagos, Corona Transit Center, and the Village at Orange.

- Route 8 (Lake Elsinore - Wildomar): This route runs from the Lake Elsinore Outlet Center south to Wildomar and circulates the City of Lake Elsinore. It serves Riverside and Lakeshore as well as

Riverside and Grand Avenue via Grand Avenue and. It operates Monday through Friday from 4:40 AM to 8:00 PM with one hour headways. This route operates on weekends from 7:00 AM to 6:00 PM with one-hour headways. This route has bus stops on either side of SR-74. The closest stops to the Project are located at Lakeside High School Stadium Way and at Grand Avenue.

- Route 9 (Perris Station – Lake Elsinore Outlet Center): This route runs from the Lake Elsinore Outlet Center to the Perris Station Transit Center. It operates Monday through Friday from 6:00 AM to 10:00 PM with one-hour headways, and on the weekends from 7:00 AM to 8:00 PM with one-hour headways. There are no bus stops serving this route in the Project vicinity.
- Route 22 (Downtown Riverside – Perris Station – Lake Elsinore Outlet Center): Route 22 runs from the Lake Elsinore Outlet Center to the City of Riverside via the Perris Station Transit Center. It operates Monday through Friday from 6:00 AM to 6:30 PM, with 90-minute headways. This route operates on weekends from 6:00 AM to 6:30 PM with one-hour headways. There are no bus stops serving this route in the Project vicinity.
- Route 40 (Lake Elsinore – Canyon Lake – Quail Valley – Sun City/Menifee): This route runs from the Lake Elsinore Walmart to Sun City via Quail Valley. It operates Monday through Friday from 4:00 AM to 8:30 PM with varying headways ranging from about 30 minutes to 1 hour. There is no service on this route on weekends. There are no bus stops serving this route in the Project vicinity.
- Route 205/206 (Temecula – Murrieta – Lake Elsinore – Corona Transit Center – Orange): This route is a CommuterLink Express which runs from Temecula to the Corona Transit Center and Orange. The Lake Elsinore Park & Ride is located at the Lake Elsinore Outlets. It operates Monday through Friday from 4:00 AM to 6:30 PM with varying headways. There are seven northbound buses departing from Lake Elsinore between 4:30 AM and 6:30 AM, and nine southbound buses arriving between 5:30 PM and 8:30 AM. There is no service on this route on weekends. The Lake Elsinore Park & Ride is located on Collier Avenue, approximately 4 miles from the Project.

Traffic Volumes and Lane Configurations

The Existing Conditions analysis was completed using 2021 traffic volumes developed based on historical counts as described in the previous chapter. Lane configurations for the study intersections were collected as part of field observations. The traffic volumes and lane configurations analyzed for the Existing Conditions assessment are shown on **Figure 5** below.

Intersection Operations

As shown in **Table 4**, two intersections currently operate below the LOS C/D target for intersections on SR-74. Poor operations at the SR-74 & Lincoln intersection are due to high turning movement volumes, particularly the southbound left-turn during the AM peak hour. Poor operations at the SR-74 & Jamieson Street intersection are a result of delay experienced by vehicles turning onto SR-74 from Jamieson Street that have few gaps in traffic due to the high volume on SR-74. Detailed LOS results are provided in **Appendix D.**

Table 4. Existing Conditions Intersection LOS

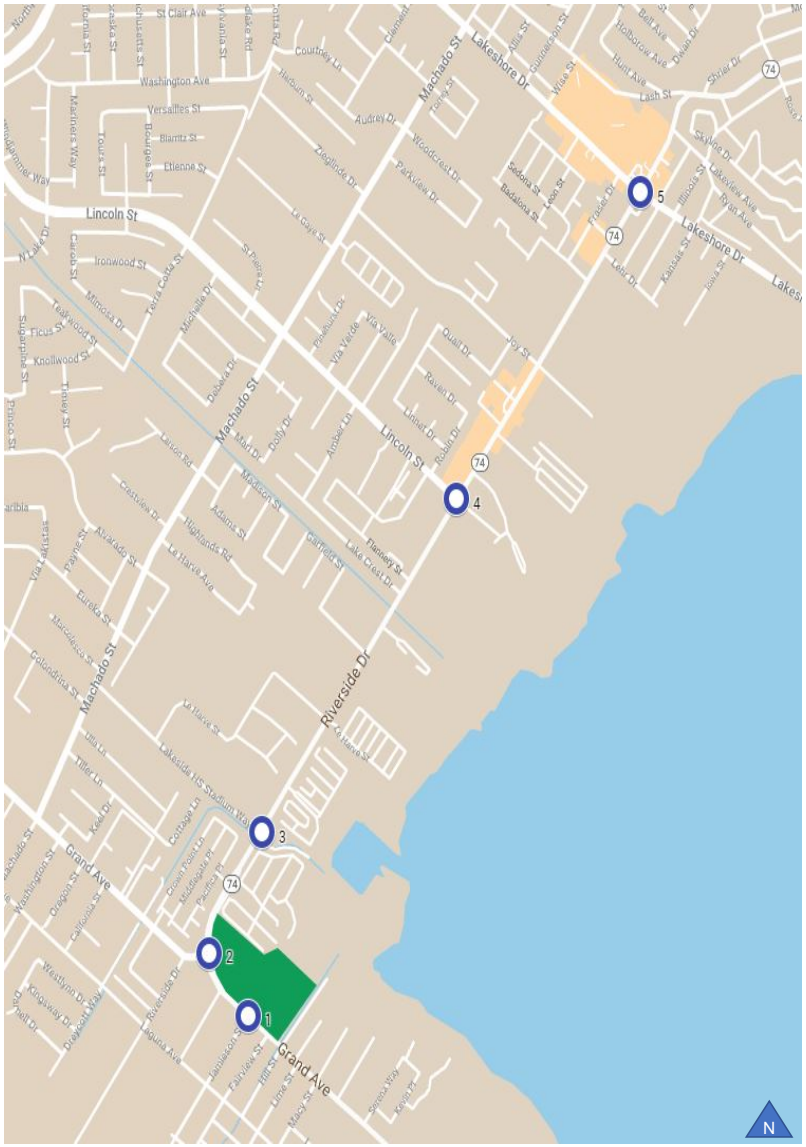
	Intersection	Control[3]	Peak Hour	Existing	
				Delay[1]	LOS[2]
1	SR-74 & Jamieson Street	TWSC	AM	**40**	**E**
			PM	**53**	**F**
2	SR-74 & Grand Avenue	Signal	AM	13	B
			PM	11	B
3	SR-74 & Lakeside High School Stadium Way	Signal	AM	13	B
			PM	7	A
4	SR-74 & Lincoln Street	Signal	AM	**70**	**E**
			PM	30	C
5	SR-74 & Lakeshore Drive	Signal	AM	40	D
			PM	37	D

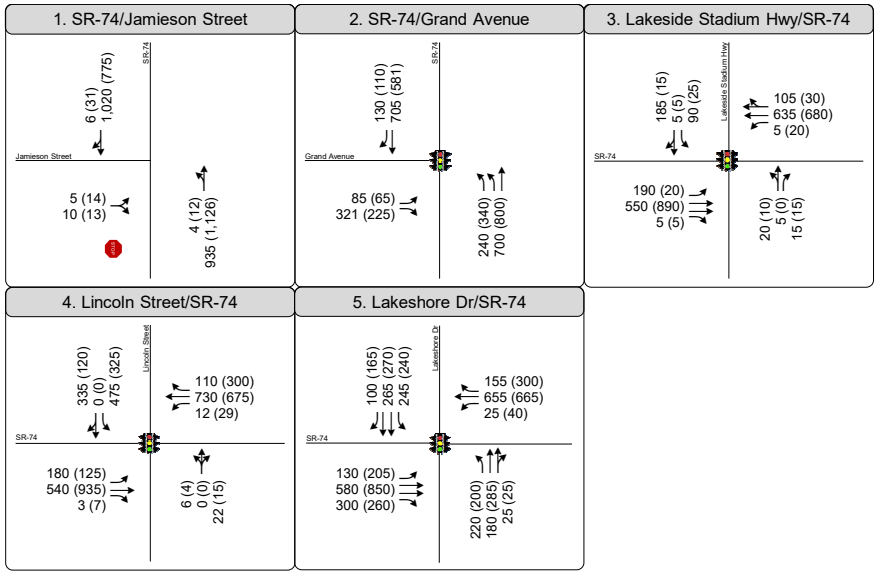
Notes:
1. Delay is calculated using Synchro using HCM 6th Edition Methodology
2. **Bold** type indicates an unacceptable LOS.
3. TWSC indicates that this is a two-way stop control, also known as a side-street stop control, where the minor street has a stop sign and the major street does not.

Traffic Signal Warrants

The SR-74 & Jamieson Street intersection was evaluated to determine if the conditions during the AM and PM peak hour would meet the Warrant 3 from the *California Manual on Uniform Traffic Control Devices* (MUTCD).

Based on the Existing Conditions traffic volumes and the delay per vehicle experienced during the AM and PM peak hour, the SR-74 & Jamieson Street does not meet signal warrants. Detailed signal warrant sheets are provided in **Appendix E**.





LEGEND

#	Study Intersection	AM (PM)	Peak Hour Traffic Volume
	Lane Configuration		Stop Sign
			Signalized

Figure 5
Existing (2021) Peak Hour
Traffic Volumes & Lane Configurations

Project Completion (2023)

Analysis for the Project Completion with Project scenario reflects conditions that are expected to be present at the time the proposed Project is complete and can be used to determine the effects associated with the project.

Traffic Volumes & Lane Configurations

As described in the previous chapter, all traffic forecasts were developed by applying an annual growth rate of 2% to 2021 traffic volumes. As the Project is expected to be complete by 2023, two years of growth was applied to existing counts and the Project trips, shown on **Figure 4**, were added.

The Project proposes to widen SR-74 to two lanes along the Project frontage and construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. Left-turns to the Project site and Jamieson Street would be possible from dedicated storage for eastbound and westbound left-turns. This median would restrict left-turns onto SR-74 from Jamieson Street. With the Project in place, trips that would make a left-turn from Jamieson Street to SR-74 would use Laguna Avenue and Grand Avenue to make a left-turn at the signalized intersection of Grand Avenue and SR-74. For this analysis scenario, the future left-turn traffic from Jamieson Street to SR-74 was reassigned to Grand Avenue. No other intersection improvements within the study area assumed to be constructed by 2023. Traffic volumes and lane configurations analyzed under the Project Completion scenario are shown on **Figure 6**.

Intersection Operations

As shown in **Table 5**, with the Project improvements in place, all study intersections would operate at LOS D or better.

Traffic signal timing adjustments are considered standard maintenance for local and state agencies. Therefore, it is assumed that the owner/operators of the study intersections would regularly optimize the traffic signals depending on the traffic volumes in the study area. For the purpose of this analysis, cycle lengths were held constant through the study area; however, intersection splits were optimized (e.g. timing allocated to each turning movement) to reflect that maintenance that would otherwise occur. Detailed LOS results are provided in **Appendix D.**

Traffic Signal Warrants

The SR-74 & Jamieson Street intersection was evaluated to determine if the conditions during the AM and PM peak hour would meet the Warrant 3 from the *California Manual on Uniform Traffic Control Devices* (MUTCD).

Based on the forecast traffic volumes and the delay per vehicle experienced during the AM and PM peak hour, the SR-74 & Jamieson Street does not meet signal warrants. Detailed signal warrant sheets are provided in **Appendix E**.

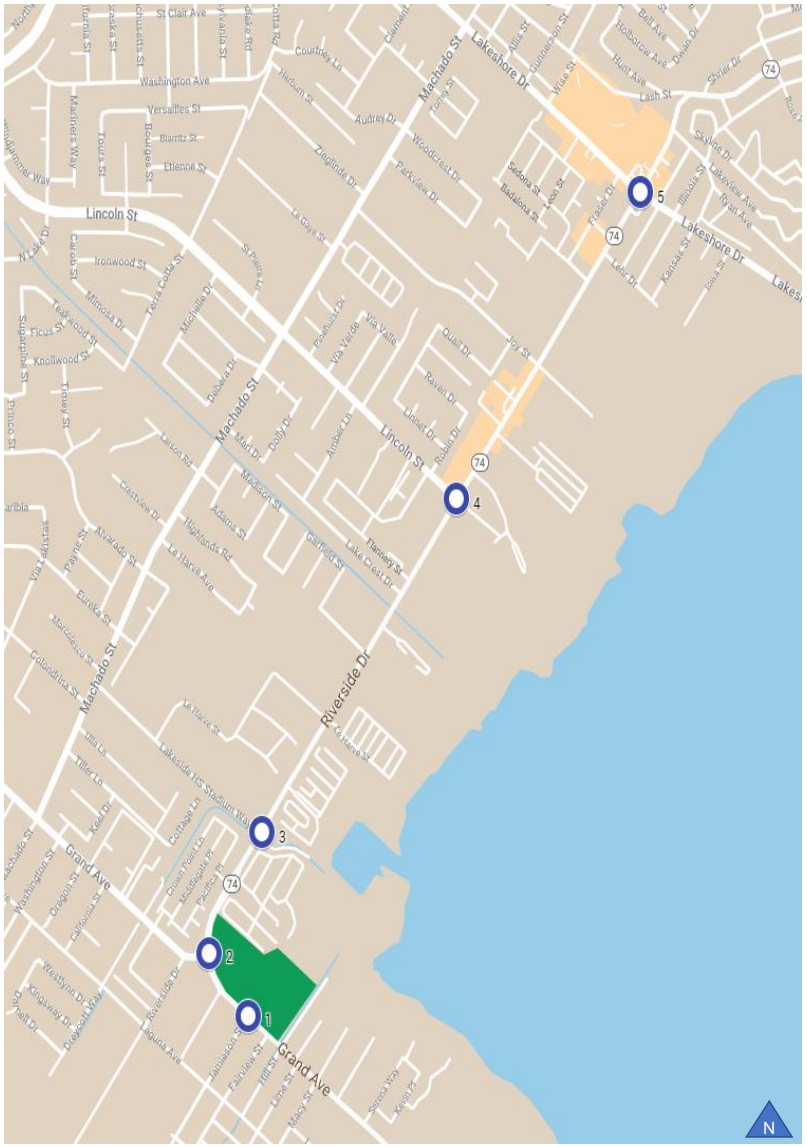
Project Specific Effects

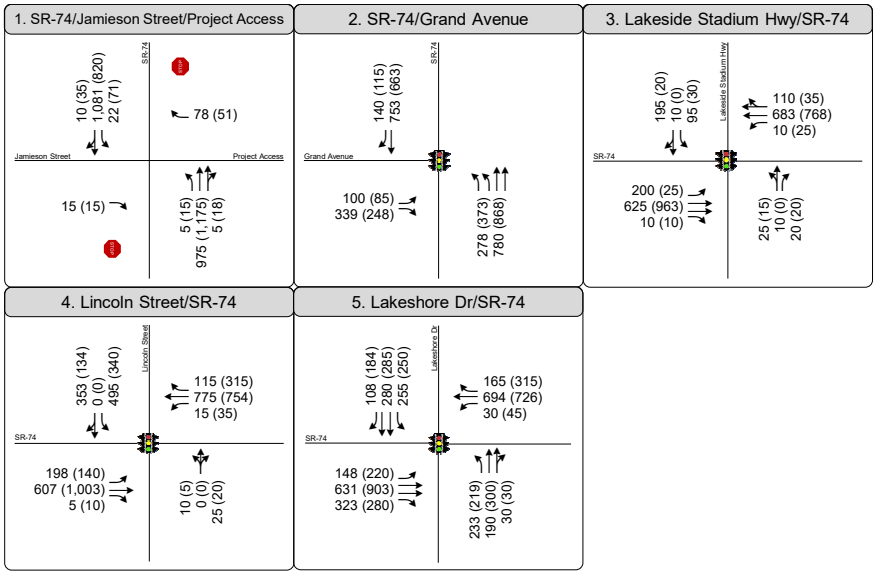
As the addition of Project traffic would not degrade operations at any of the study intersections to below the LOS threshold, no additional Project improvements were identified.

Table 5. Project Completion Conditions Intersection LOS

Intersection		Control[3]	Peak Hour	Project Completion	
				Delay[1]	LOS[2]
1	SR-74 & Jamieson Street/Project Access[4]	TWSC	AM	21	C
			PM	16	C
2	SR-74 & Grand Avenue	Signal	AM	34	C
			PM	11	B
3	SR-74 & Lakeside High School Stadium Way	Signal	AM	16	B
			PM	7	A
4	SR-74 & Lincoln Street	Signal	AM	55	D
			PM	51	D
5	SR-74 & Lakeshore Drive	Signal	AM	41	D
			PM	51	D

Notes:
1. Delay is calculated using Synchro using HCM 6th Edition Methodology
2. **Bold** type indicates an unacceptable LOS.
3. TWSC indicates that this is a two-way stop control, also known as a side-street stop control, where the minor street has a stop sign and the major street does not.
4. The Project proposes to widen SR-74 to two lanes along the Project frontage to meet the future roadway buildout of the Lake Elsinore General Plan and to construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. Left-turns to the Project site and Jamieson Street would be possible from dedicated storage for eastbound and westbound left-turns.





LEGEND

# Study Intersection	AM (PM) Peak Hour Traffic Volume
Lane Configuration	Stop Sign
	Signalized

Figure 6
Project Completion (2023) Peak Hour
Traffic Volumes & Lane Configurations

Cumulative Conditions (2023)

This scenario reflects conditions expected to be present in the Project opening year with the addition of other approved and pending projects.

Traffic Volumes & Lane Configurations

As described in the previous chapter, all traffic forecasts were developed by applying an annual growth rate of 2% to 2021 traffic volumes. The addition of traffic from approved and pending projects was based on available TIAs and ITE trip generation rates as needed.

The Project proposes to widen SR-74 to two southbound lanes along the Project frontage and construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. Left-turns to the Project site and Jamieson Street would be possible from dedicated storage for eastbound and westbound left-turns. This median would restrict left-turns onto SR-74 from Jamieson Street. With the Project in place, trips that would make a left-turn from Jamieson Street to SR-74 would use Laguna Avenue and Grand Avenue to make a left-turn at the signalized intersection of Grand Avenue and SR-74. For this analysis scenario, the future left-turn traffic from Jamieson Street to SR-74 was reassigned to Grand Avenue. No other intersection improvements within the study area assumed to be constructed by 2023. No other intersection improvements within the study area assumed to be constructed by 2023. Traffic volumes and lane configurations analyzed under the Cumulative Conditions scenario are shown on **Figure 7.**

Intersection Operations

As shown in **Table 6**, the addition of trips from pending and approved projects causes two intersections, SR-74 & Lincoln Street and SR-74 & Lakeshore Drive, to operate at LOS E during one or both of the peak hours. Detailed LOS results are provided in **Appendix D**.

Traffic Signal Warrants

The SR-74 & Jamieson Street intersection was evaluated to determine if the conditions during the AM and PM peak hour would meet the Warrant 3 from the California Manual on Uniform Traffic Control Devices (MUTCD).

Based on the forecast traffic volumes and the delay per vehicle experienced during the AM and PM peak hour, the SR-74 & Jamieson Street does not meet signal warrants. Detailed signal warrant sheets are provided in **Appendix E**.

Project Specific Effects

Only the SR-74 & Lincoln Street and SR-74 & Lakeshore Drive intersections were found to operate below the LOS standard. Signal timing improvements including cycle length optimization and optimized splits will improve operations at these two intersections.

At the SR-74 & Lincoln Street intersection, signal timing optimization, including cycle length optimization and signal split optimization, would result in LOS D operations under Cumulative Conditions. The Project would be responsible for a 26% fair share contribution toward implementation of the timing improvements at the intersection to adjust cycle lengths along the corridor. At the SR-74 & Lakeshore Drive, signal timing optimization would result in a 6 second decrease in delay. However, this still results in LOS E operations under Cumulative Conditions. The Project would be responsible for a 17% fair share contribution toward the implementation of the timing improvements at the intersection.

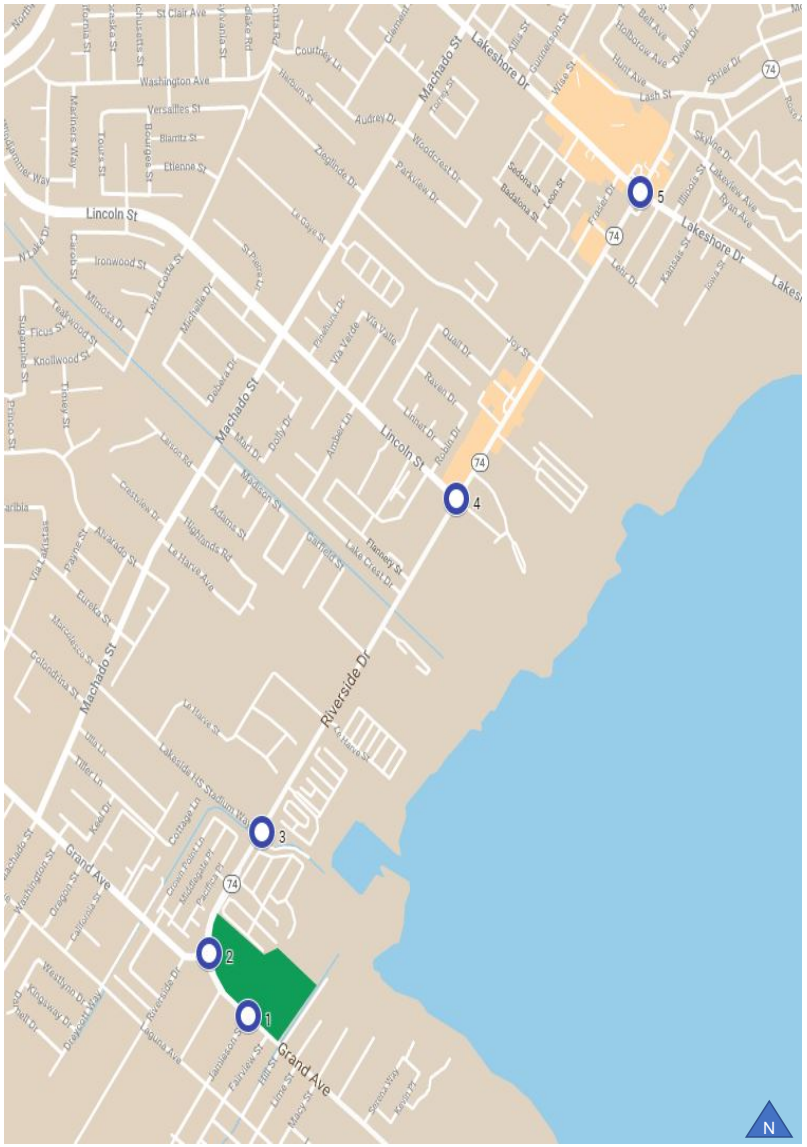
Table 6. Cumulative Conditions Intersection LOS

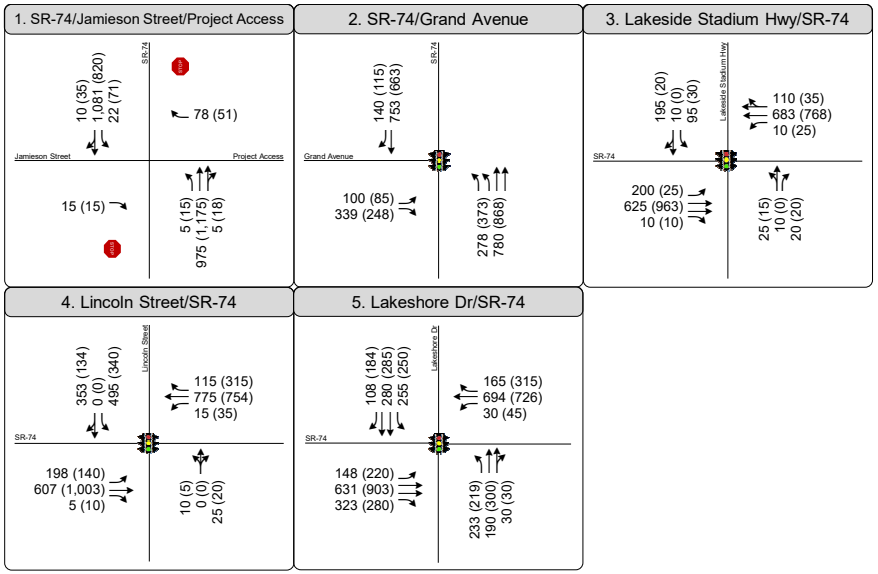
Intersection		Control[3]	Peak Hour	Project Completion	
				Delay[1]	LOS[2]
1	SR-74 & Jamieson Street/Project Access[4]	TWSC	AM	22	C
			PM	17	C
2	SR-74 & Grand Avenue	Signal	AM	16	B
			PM	13	B
3	SR-74 & Lakeside High School Stadium Way	Signal	AM	14	B
			PM	7	A
4	SR-74 & Lincoln Street	Signal	AM	**59**	**E**
			PM	**59**	**E**
5	SR-74 & Lakeshore Drive	Signal	AM	45	D
			PM	**58**	**E**

Notes:
1. Delay is calculated using Synchro using HCM 6th Edition Methodology
2. **Bold** type indicates an unacceptable LOS.
3. TWSC indicates that this is a two-way stop control, also known as a side-street stop control, where the minor street has a stop sign and the major street does not.
4. The Project proposes to widen SR-74 to two lanes along the Project frontage to meet the future roadway buildout of the Lake Elsinore General Plan and to construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. Left-turns to the Project site and Jamieson Street would be possible from dedicated storage for eastbound and westbound left-turns.

Table 7. Project Fair Share

	Intersection	AM Peak Hour			PM Peak Hour		
		Growth (2021 to 2023)	Project Trips	Percent Contribution	Growth (2021 to 2023)	Project Trips	Percent Contribution
1	SR-74 & Jamieson Street/Project Access	283	121	43%	317	150	47%
2	SR-74 & Grand Avenue	306	84	27%	333	112	34%
3	SR-74 & Lakeside High School Stadium Way	310	68	22%	324	91	28%
4	SR-74 & Lincoln Street	286	68	24%	344	91	26%
5	SR-74 & Lakeshore Drive	381	57	15%	461	77	17%





LEGEND

# Study Intersection	AM (PM) Peak Hour Traffic Volume
Lane Configuration	Stop Sign
	Signalized

Figure 7
Cumulative (2023) Peak Hour
Traffic Volumes & Lane Configurations

Site Plan Review

This chapter provides an overview of the Project site plan, related to internal and external circulation for the Project. Issues considered include site access, parking, and on-site circulation.

On-Site Circulation

On-site circulation is provided by an internal system of two-way roadways that provide access from the Project access to the residential driveways.

Project Site Access

Vehicle Access

Access to the Project is provided by a driveway on SR-74 located at the Jamieson Street intersection. The Project proposes to construct a median to prohibit left-turns onto SR-74 from the Project site and Jamieson Street. Left-turns to the Project site and Jamieson Street would be possible from dedicated storage for eastbound and westbound left-turns. Project traffic wanting to make a left-turn to SR-74 would make a U-turn at the intersection of SR-74 and Grand Avenue. With the Project in place, trips that would make a left-turn from Jamieson Street to SR-74 would use Laguna Avenue and Grand Avenue to make a left-turn at the signalized intersection of Grand Avenue and SR-74.

Queueing during both peak hours was also evaluated to confirm that adequate capacity is provided for vehicles exiting the project site. The maximum queue based on peak hour traffic volumes is expected to be four vehicles, which can be accommodated without affecting circulation.

Emergency Vehicle Access

Another consideration related to the Project site plan review is the provision of adequate emergency vehicle access. Providing adequate emergency vehicle access ensures that these vehicles can easily and quickly respond to service calls. Therefore, it is recommended that the Fire Department review the site plan to determine if adequate emergency accessibility is provided.

Pedestrian Access

Pedestrians can access the Project site via sidewalks on the south side of SR-74. It is recommended that the Project consult with the City to evaluate solutions to complete the sidewalk network on the north side of SR-74 between the Project and Lakeside High School Stadium Way.

Bicycle Access

Along with pedestrian facilities, the Project will encourage the use of this active and sustainable mode of transportation. Access to the Project site is provided by an existing Class II bicycle facility SR-74.

Transit Access

Transit facilities are located on SR-74. The Project does not change or prohibit the bus route.

Parking

The City of Lake Elsinore Municipal Code requires single-family dwellings to provide two spaces per dwelling unit in a garage, plus two open spaces, which may be in the driveway in a tandem position, in front of the garage door. In lieu of two open spaces in the driveway, one open space per dwelling unit may be provided elsewhere on the lot or in a common area.

This project will provide the required number of parking spaces at each dwelling unit and provide a mixture of driveway and on-street parking for the open spaces.

Appendix A. Methodology Memorandum

FEHR PEERS

MEMORANDUM

Date: May 18, 2021

To: Nicholas Lowe, PE, City of Lake Elsinore

From: Spencer Reed, PE and Jason Pack, PE

Subject: Tri Pointe Homes – Lakeside Transportation Impact Analysis Methodologies and Assumptions

OC21-0795

Fehr & Peers is assisting with the transportation impact assessment for the proposed Tri Pointe Homes – Lakeside Project (Project), in Lake Elsinore, California. The purpose of this memorandum is to summarize the methodologies and assumptions that will be used in the Transportation Impact Analysis. A copy of the City of Lake Elsinore Scoping Agreement for Traffic Impact Study form is included as an attachment to this memorandum.

The remainder of this memorandum is divided into the following sections:

1. Study Area
2. Project Description
3. VMT Screening
4. Data Collection
5. LOS Analysis Scenarios
6. Trip Generation
7. Trip Distribution
8. Traffic Forecasting
9. Operations Methodology and Assumptions
10. Intersection Analysis Guidelines
11. Next Steps
12. Attachments

Study Area

The Project is located on the east side of the intersection of SR-74 and Grand Avenue. Within the study area, the land use is generally residential. The study area is composed of the following five intersections along State Route 74 (SR-74):

1. SR-74 & Jamieson Street/Project Access (Unsignalized)
2. SR-74 & Grand Avenue (Signalized)
3. SR-74 & Lakeside High School Stadium Way (Signalized)

4. SR-74 & Lincoln Street (Signalized)
5. SR-74 & Lakeshore Drive (Signalized)

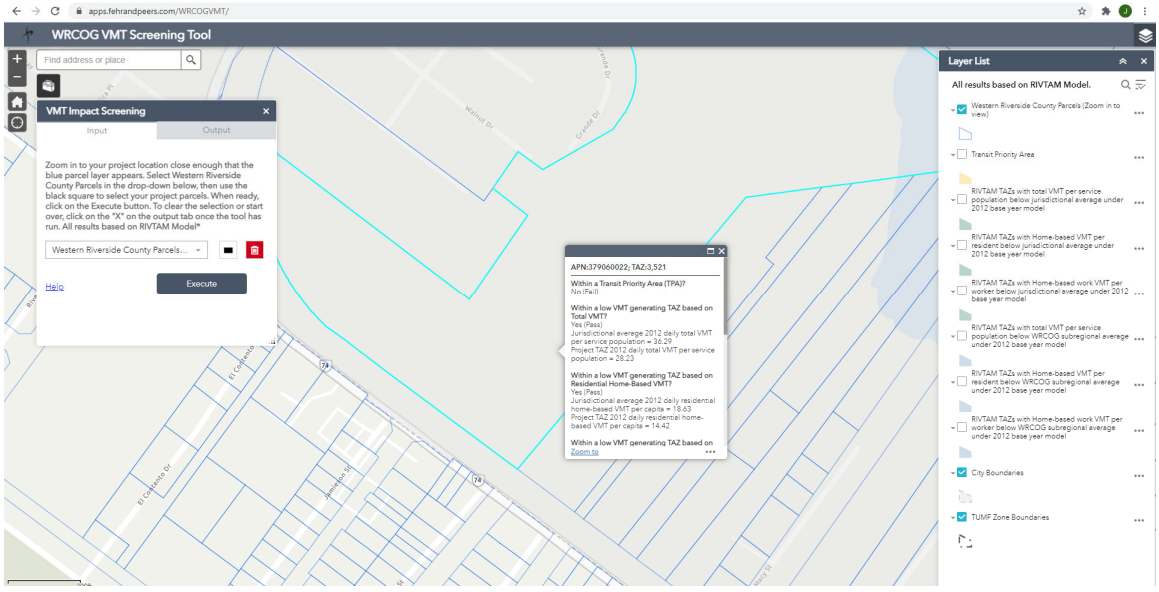
These intersections are shown on the attached Figure 1. The study intersections were selected for this assessment because they are located near the Project and on the primary routes to and from the Project.

Project Description

The proposed Project is a 138 unit low-rise residential development. The Project site plan is shown on the attached Figure 2. The Project driveway will be located on SR-74.

VMT Screening

The City of Lake Elsinore *Traffic Impact Analysis Preparation Guide* (June 2020) provides a process for projects to be screened from full Vehicle Miles Traveled (VMT) assessment under the assumption that the Project will result in a less-than-significant transportation impact related to VMT. There are three types of screening criteria included in the *Traffic Impact Analysis Preparation Guide*. The Project qualifies for Low VMT Area Screening based on the outputs of the Western Riverside Council of Governments (WRCOG) VMT screening tool. Below is a capture of the screening assessment from the WRCOG screening tool which will be further documented in the traffic impact analysis. A separate VMT screening memorandum will be prepared documenting the Low VMT Area Screening assessment of the Project and included as an appendix to the traffic study.



Data Collection

Due to the changes in travel patterns as a result of the COVID-19 pandemic, AM peak period (7:00 to 9:00 AM) and PM peak period (4:00 to 6:00 PM) intersection counts collected in May 2018 will be used to establish the existing baseline counts. The 2018 counts will be increased by 6% (2%/year) to account for ambient growth from 2018 to 2021.

The 2018 counts were conducted Thursday, May 17th, 2018 as part of another Tri Pointe project completed along SR-74. The counts were conducted at all of the study intersections except SR-74 and Jamieson Street (Intersection 1). AM and PM peak period counts will be conducted at SR-74 and Jamieson Street and compared against the 2021 baseline at SR-74 and Grand Avenue to determine what adjustment is appropriate to the raw 2021 count data.

In addition, one day will be spent in the field observing traffic conditions, identifying lane configurations, reviewing signal operations, and identifying the locations of bicycle, pedestrian, and transit facilities. Finally, Fehr & Peers will request signal timing information from Caltrans for the study intersections of SR-74 and Lakeside High School Stadium Way, SR-74 and Lincoln Street, and SR-74 and Lakeshore Drive.

Analysis Scenarios

The following scenarios will be analyzed as part of Level of Service (LOS) analysis for this study:

1. Existing Year (2021) Conditions: Existing traffic volumes factored up to 2021 conditions and existing lane geometeries will be used to evaluate existing conditions.
2. Project Completion (2023) with Project: A 4% (2%/year) ambient growth rate will be applied to the baseline 2021 counts to develop project completeion 2023 intersection volumes. Traffic generated by the Project will be added to the project completion (2023) traffic volumes.
3. Cumulative (2023) With Project: A 4% (2%/year) ambient growth rate will be applied to the baseline 2021 counts and trips from pending and approved development projects will be manually assigned to the network to develop cumulative 2023 intersection volumes. Fehr & Peers will reach out to The City to obtain a list of pending and approved development projects to be included in the study. Traffic generated by the Project will be added to the cumulative (2023) traffic volumes.

Trip Generation

Fehr & Peers used the *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers [ITE], 2017) to obtain the trip rates for calculating the approximate number of trips that the Project would generate. The attached Table 1 identifies the trip generation rates and the attached Table 2 identifies the trip generation estimates for the Project.

Trip Distribution

For the purposes of this analysis, Fehr & Peers assumed that trips entering and exiting the Project would be distributed along the following routes:

- 65% on SR-74 to/from the northeast
- 20% on SR-74 to/from the southeast
- 15% on Grand Avenue to/from the northwest

This trip distribution is shown on the attached Figure 3.

Traffic Forecasting

Project completion 2023 traffic volumes will be developed by applying a 4% (2%/year) ambient growth rate to the baseline 2021 counts. Cumulative 2023 traffic volumes will be developed by applying a 4% (2%/year) ambient growth rate to the baseline 2021 counts and trips from pending and approved development projects will be manually assigned to the network. Fehr & Peers will reach out to The City to obtain a list of pending and approved development projects to be included in the study.

Operations and Methodology Assumptions

Fehr & Peers will perform intersection operations analysis utilizing information collected in the field and the Synchro level of service analysis. Synchro calculates vehicle delay and level of service (LOS) based on procedures identified in Chapter 19 Section 3 Approach A of the *Highway Capacity Manual, 6th Edition* (HCM) (Transportation Research Board, 2016). LOS is a measure of traffic operating conditions, which varies from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity resulting in long queues and delays). These ratings represent the perspective of drivers and indicate the comfort and convenience associated with driving. Peak hour traffic volumes, lane configurations, and signal timing plans were used as inputs for the LOS calculations. The attached

Table 3 summarizes the relationship between the average control delay per vehicle and LOS for signalized and unsignalized intersections. Results from Synchro will be used to determine delay and LOS at all intersections.

Intersection Analysis Guidelines

Intersection analysis criteria consistent with the City of Lake Elsinore *Traffic Impact Analysis Preparation Guide* will be applied for this Project. Exhibit E of the *Traffic Impact Analysis Preparation Guide* identifies LOS C as the target for intersection operations. However, LOS D may be allowed in Community Development areas at intersections with any combination of secondary highways, major highways, arterials, urban arterials, expressways, conventional state highways or at freeway ramp intersections. Based on the classifications of the study area roadways the intersections of SR-74 & Grand Avenue (Intersection 2) and SR-74 & Lakeshore Drive (Intersection 5) can use a criteria of LOS D. The remaining intersections can use a criteria of LOS C. An addition of Project traffic that degrades operations from LOS C or better to LOS D or worse or increases delay on a facility operating at LOS D or worse will be considered deficient and need to identify an improvement to return to LOS C or better.

Next Steps

Once the proposed study locations, assumptions, and methodology are approved, Fehr & Peers will circulate this scoping memorandum with the County of Riverside and Caltrans District 8. Once the scope is approved by the City, Fehr & Peers will begin the traffic operations analysis for this Project to identify potential significant impacts and proposed mitigation measures. The completed traffic study will be provide to the City, County, and Caltrans District 8 for review.

Attachments

Table 1 – Trip Generation Rates

Table 2 – Trip Generation Estimate

Table 3 – LOS Thresholds for Signalized and Unsignalized Intersections

Figure 1 – Study Area

Figure 2 – Site Plan

Figure 3 – Trip Distribution

Scoping Agreement for Traffic Impact Study

Table 1
Trip Generation Rates

				Trip Generation Rates [a]						
				Daily	AM Peak Hour			PM Peak Hour		
Land Use	ITE Code	Size	Unit	Trips	Rate	% In	% Out	Rate	% In	% Out
Single Family	210	138	Units	9.44	0.74	25%	75%	0.99	63%	37%

Notes:

[a] Source: *Trip Generation Manual, 10th Edition (Institute of Transportation Engineers,* 2017) unless otherwise noted.

Table 2
Trip Generation Estimate

				Estimated Trip Generation [a]						
				Daily	AM Peak Hour			PM Peak Hour		
Land Use	ITE Code	Size	Unit	Trips	Total	In	Out	Total	In	Out
Single Family	210	138	Units	1,303	102	26	76	137	86	51

Notes:

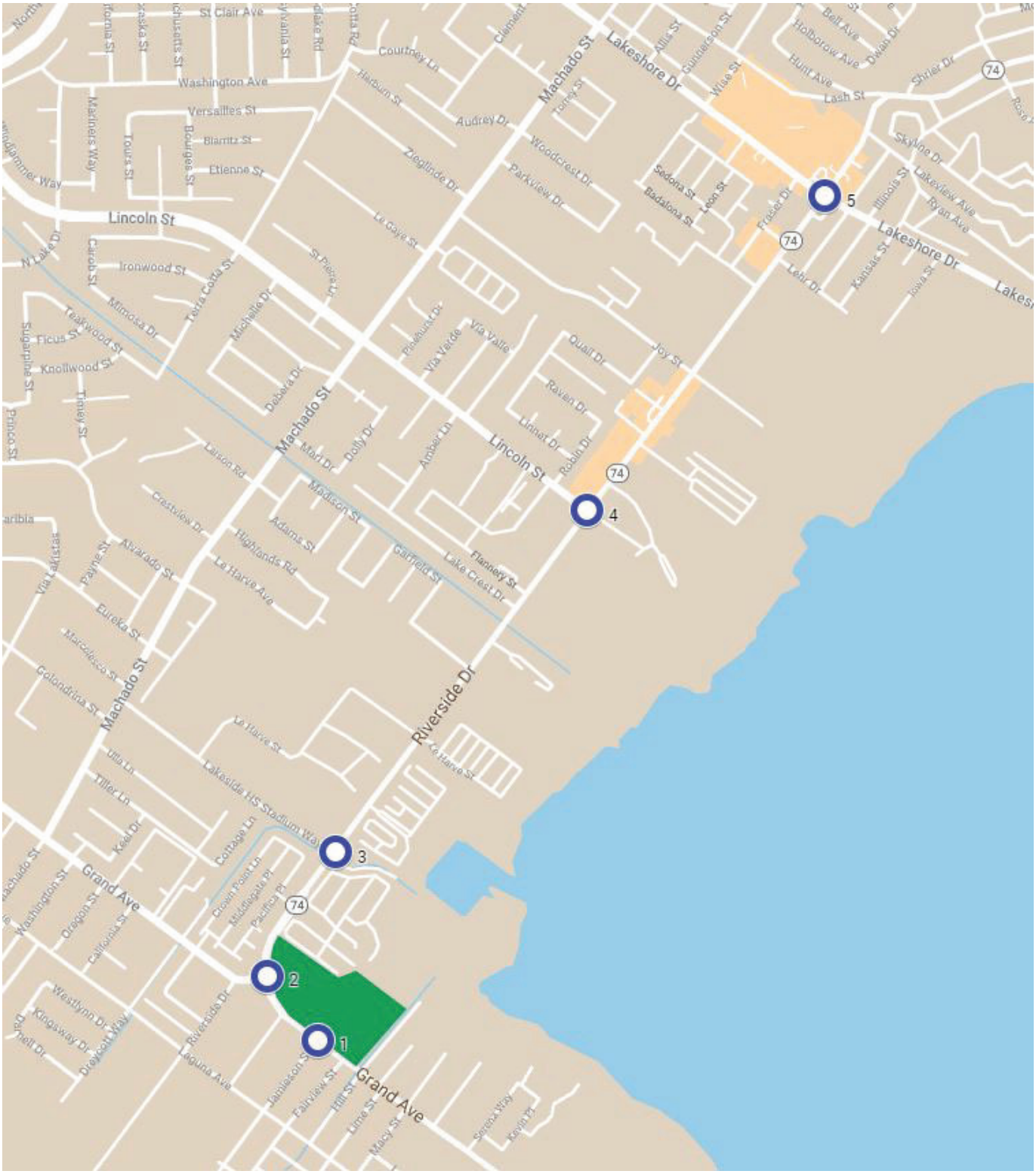
[a] Source: *Trip Generation Manual, 10th Edition (Institute of Transportation Engineers,* 2017) unless otherwise noted.

Table 3
LOS Thresholds for Signalized and Unsignalized Intersections

LOS	Signalized Intersection Average Control Delay (sec/veh)	Unsignalized Intersection Average Control Delay (sec/veh)	General Description
A	≤ 10	≤ 10	Little to no congestion or delays.
B	> 10 to 20	> 10 to 15	Limited congestion. Short delays.
C	> 20 to 35	> 15 to 25	Some congestion with average delays.
D	> 35 to 55	> 25 to 35	Significant congestion and delays.
E	> 55 to 80	> 35 to 50	Severe congestion and delays.

Notes

Source: *Highway Capacity Manual, 6th Edition (* Transportation Research Board, 2016)



Legend

- Study Intersections
- Project Site

Figure 1
Study Area

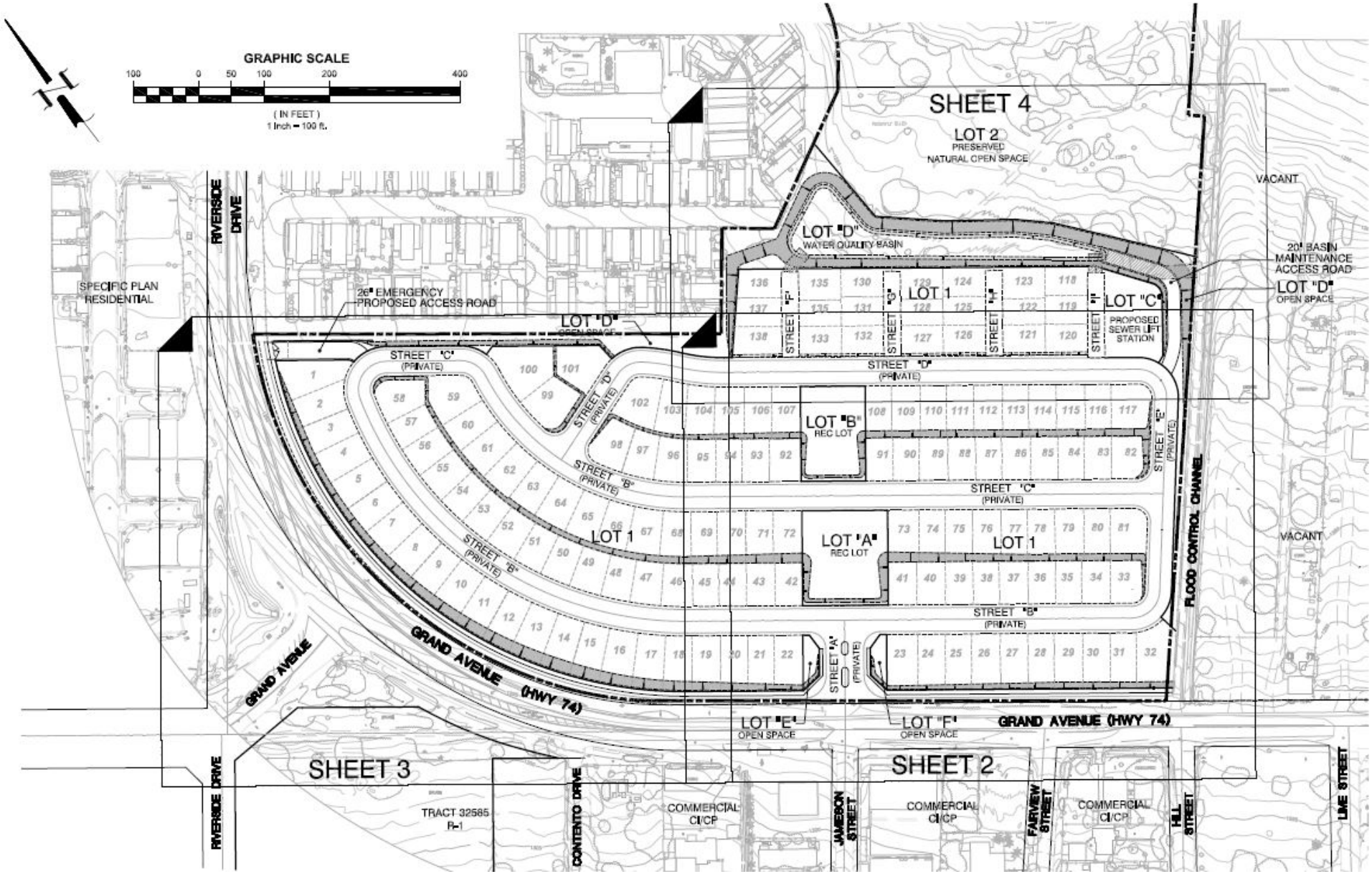
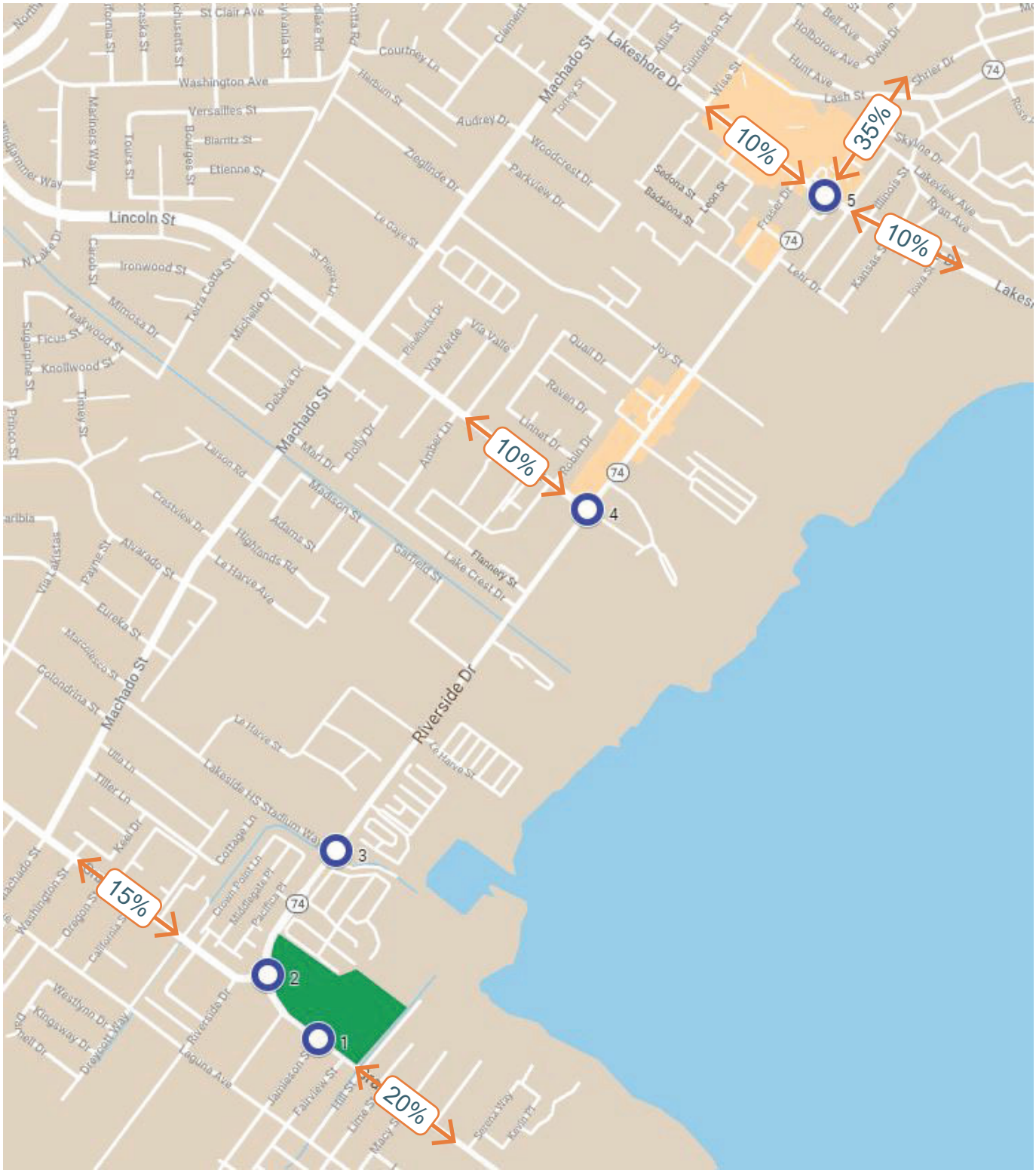


Figure 2

Site Plan



Legend

XX% Trip Distribution

Study Intersections

Project Site

Figure 3

Trip Distribution

Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Lake Elsinore requirements for traffic impact analysis of the following project. The analysis must follow the City of Lake Elsinore Traffic Study Guidelines dated May 2020.

Case No. _____
Related Cases -
SP No. _____
EIR No. _____
GPA No. _____
CZ No. _____
Project Name: Tri Pointe Homes - Lakeside
Project Address: Eastern side of State Route 74 (Riverside Drive) at Grand Avenue
Project Description: 138 unit development

	Consultant	Developer
Name:	Fehr & Peers	Tri Pointe Homes
Address:	3850 University Avenue, Suite 225	1250 Corona Pointe Court, Suite 600
	Riverside, CA 92501	Corona, CA 92879
Telephone:	951-274-4800	951-428-4400

A. Trip Generation Source: Institute of Transportation Engineers (ITE) Trip Generation 10th Edition (2017)

Current GP Land Use: Lake Edge District - High Density Residential
Proposed Land Use: Lake Edge District - High Density Residential
Current Zoning: R-1, R-2, R-3, or MC
Proposed Zoning: R-3

	Current Trip Generation			Proposed Trip Generation (PCE)		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	26	76	102
PM Trips	0	0	0	86	51	137

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

Internal and Pass-By trip allowance percentages shall be per NCHRP 684 and the ITE Trip Generation Manual. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure. Internal trips that use external streets shall be indicated on a report figure.

B. Trip Geographic Distribution: N 15 % S 20 % E 65 % W 0 %
(Attach exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year: 2023
Annual Ambient Growth Rate: 2%/year
Phase Year(s), if needed: _____
Other area projects to be analyzed: (to be provided by the City planning department)

Model/Forecast methodology: Ambient growth rate and manual assignment of pending and approved development projects.

Exhibit B – Scoping Agreement – Page 2

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

1. SR-74 & Jamieson Street/Project Access (Unsignalized)
2. SR-74 & Grand Avenue (Unsignalized)
3. SR-74 & Lakeside High School Stadium Way (Signalized)
4. SR-74 & Lincoln Street (Signalized)
5. SR-74 & Lakeshore Drive (Signalized)
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. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

E. Other Jurisdictional Impacts

Is this project within one-mile radius of another jurisdiction or a State Highway? ☑ Yes ☐ No

If so, name of Agency: Caltrans and County of Riverside

F. Site Plan (please attach figure) See Methodologies and Assumptions Memoradnum

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

_____

_____

_____

H. Existing Conditions

Traffic count data must be new or recent within 1 calendar year. Provide traffic count dates if using other than new counts. Date of counts: May 2018. See Methodologies and Assumptions Memorandum.

I. Traffic Study Requirements

Traffic Study Required: X _____

Focused Study Required: ___ _____

Except from Analysis: ___ _____

Recommended by:

_____ 5/18/21

Consultant's Representative — Date

Approved Scoping Agreement:

Nicholas Lowe 6/3/2021

City of Lake Elsinore Engineering Department — Date

Scoping Agreement Submitted on _____

Revised on _____

Appendix B. Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, May 5, 21

LOCATION: Lake Elsinore
NORTH & SOUTH: Grand
EAST & WEST: Jamieson

PROJECT #: SC
LOCATION #: 1
CONTROL: STOP E

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Grand			SOUTHBOUND Grand			EASTBOUND Jamieson			WESTBOUND Jamieson				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	103	0	0	181	1	2	0	3	0	0	0	291	0	0	0	0	0
	7:15 AM	1	123	0	0	173	1	1	0	2	0	0	0	301	0	0	0	0	0
	7:30 AM	0	117	0	0	176	2	1	0	4	0	0	0	300	0	0	0	0	0
	7:45 AM	2	137	0	0	171	2	1	0	1	0	0	0	314	0	0	0	0	0
	8:00 AM	2	141	0	0	125	3	3	0	3	0	0	0	277	0	0	0	0	0
	8:15 AM	1	121	0	0	116	3	4	0	1	0	0	0	246	0	0	0	0	0
	8:30 AM	0	119	0	0	142	4	0	0	2	0	0	0	267	0	0	0	0	0
	8:45 AM	0	108	0	0	132	4	7	0	0	0	0	0	251	0	0	0	0	0
	VOLUMES	7	969	0	0	1,216	20	19	0	16	0	0	0	2,247	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	98%	2%	54%	0%	46%	0%	0%	0%						
	APP/DEPART	976	/	988	1,236	/	1,232	35	/	0	0	/	27	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	4	480	0	0	701	6	5	0	10	0	0	0	1,206					
	APPROACH %	1%	99%	0%	0%	99%	1%	33%	0%	67%	0%	0%	0%						
	PEAK HR FACTOR		0.871			0.971			0.750			0.000		0.960					
	APP/DEPART	484	/	485	707	/	711	15	/	0	0	/	10	0					
PM	04:00 PM	3	143	0	0	147	4	1	0	2	0	0	0	300	0	0	0	0	0
	4:15 PM	1	126	0	0	171	5	1	0	2	0	0	0	306	0	0	0	0	0
	4:30 PM	3	152	0	0	166	13	4	0	2	0	0	0	340	0	0	0	0	0
	4:45 PM	6	149	0	0	161	8	5	0	2	0	0	0	331	0	0	0	0	0
	5:00 PM	1	133	0	0	174	5	1	0	5	0	0	0	319	0	0	0	0	0
	5:15 PM	2	155	0	0	173	5	4	0	4	0	0	0	343	0	0	0	0	0
	5:30 PM	3	137	0	0	174	7	2	0	2	0	0	0	325	0	0	0	0	0
	5:45 PM	1	129	0	0	171	4	2	0	0	0	0	0	307	0	0	0	0	0
	VOLUMES	20	1,124	0	0	1,337	51	20	0	19	0	0	0	2,571	0	0	0	0	0
	APPROACH %	2%	98%	0%	0%	96%	4%	51%	0%	49%	0%	0%	0%						
	APP/DEPART	1,144	/	1,144	1,388	/	1,356	39	/	0	0	/	71	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	12	589	0	0	674	31	14	0	13	0	0	0	1,333					
	APPROACH %	2%	98%	0%	0%	96%	4%	52%	0%	48%	0%	0%	0%						
	PEAK HR FACTOR		0.957			0.985			0.844			0.000		0.972					
	APP/DEPART	601	/	603	705	/	687	27	/	0	0	/	43	0					

Grand

NORTH SIDE

Jamieson WEST SIDE EAST SIDE **Jamieson**

SOUTH SIDE

Grand

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	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	0	0
	4:30 PM	0	0	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	0	0
	5:00 PM	0	0	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	0	0
	5:30 PM	0	0	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	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 17, 18

LOCATION: Lake Elsinore
NORTH & SOUTH: Grand
EAST & WEST: Riverside

PROJECT #: SC1737
LOCATION #: 1
CONTROL: STOP S

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Grand			SOUTHBOUND Grand			EASTBOUND Riverside			WESTBOUND Riverside				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	0	0	29	0	67	40	151	0	0	135	21	443	0	0	0	0	0
	7:15 AM	0	0	0	16	0	76	57	185	0	0	177	44	555	0	0	0	0	0
	7:30 AM	0	0	0	21	0	79	51	133	0	0	198	36	518	0	0	0	0	0
	7:45 AM	0	0	0	18	0	80	52	136	0	0	152	28	466	0	0	0	0	0
	8:00 AM	0	0	0	11	0	68	42	118	0	0	124	14	377	0	0	0	0	0
	8:15 AM	0	0	0	16	0	60	34	92	0	0	120	21	343	0	0	0	0	0
	8:30 AM	0	0	0	18	0	34	26	66	0	0	113	9	266	0	0	0	0	0
	8:45 AM	0	0	0	19	0	43	31	90	0	0	101	15	299	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	148	0	507	333	971	0	0	1,120	188	3,267	0	0	0	0	0
	APPROACH %	0%	0%	0%	23%	0%	77%	26%	74%	0%	0%	86%	14%						
	APP/DEPART	0	/	521	655	/	0	1,304	/	1,119	1,308	/	1,627	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	84	0	302	200	605	0	0	662	129	1,982					
	APPROACH %	0%	0%	0%	22%	0%	78%	25%	75%	0%	0%	84%	16%						
	PEAK HR FACTOR		0.000			0.965			0.832			0.845		0.893					
	APP/DEPART	0	/	329	386	/	0	805	/	689	791	/	964	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	11	0	55	74	194	0	0	128	30	492	0	0	0	0	0
	4:15 PM	0	0	0	11	0	39	83	195	0	0	129	22	479	0	0	0	0	0
	4:30 PM	0	0	0	21	0	50	77	195	0	0	138	26	507	0	0	0	0	0
	4:45 PM	0	0	0	12	0	42	95	204	0	0	127	29	509	0	1	0	0	1
	5:00 PM	0	0	0	17	0	57	86	205	0	0	144	30	539	0	0	0	0	0
	5:15 PM	0	0	0	12	0	75	80	193	0	0	140	25	525	0	0	0	0	0
	5:30 PM	0	0	0	13	0	62	79	195	0	0	117	23	489	0	0	0	0	0
	5:45 PM	0	0	0	18	0	56	90	195	0	0	123	33	515	0	1	0	0	1
	VOLUMES	0	0	0	115	0	436	664	1,576	0	0	1,046	218	4,055	0	2	0	0	2
	APPROACH %	0%	0%	0%	21%	0%	79%	30%	70%	0%	0%	83%	17%						
	APP/DEPART	0	/	884	551	/	0	2,240	/	1,689	1,264	/	1,482	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	62	0	224	338	797	0	0	549	110	2,080					
	APPROACH %	0%	0%	0%	22%	0%	78%	30%	70%	0%	0%	83%	17%						
	PEAK HR FACTOR		0.000			0.822			0.949			0.947		0.965					
	APP/DEPART	0	/	449	286	/	0	1,135	/	858	659	/	773	0					

Grand

NORTH SIDE

Riverside WEST SIDE EAST SIDE **Riverside**

SOUTH SIDE

Grand

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	4	0	0	0	4	4	0	0	0	4	0	0	0	0	0
	7:15 AM	4	0	0	0	4	3	0	0	0	3	1	0	0	0	1
	7:30 AM	9	2	0	0	11	8	2	0	0	10	1	0	0	0	1
	7:45 AM	2	1	1	0	4	2	0	0	0	2	0	1	1	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:30 AM	5	0	0	0	5	3	0	0	0	3	2	0	0	0	2
	8:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	26	3	1	0	30	22	2	0	0	24	4	1	1	0	6
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	4:15 PM	3	0	0	0	3	1	0	0	0	1	2	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	5	0	0	0	5	5	0	0	0	5	0	0	0	0	0
	5:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	5:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:30 PM	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
	5:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	TOTAL	15	0	0	0	15	10	0	0	0	10	5	0	0	0	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 17, 18

LOCATION: Lake Elsinore
NORTH & SOUTH: Lakeside Stadium
EAST & WEST: Riverside

PROJECT #: SC1737
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Lakeside Stadium			SOUTHBOUND Lakeside Stadium			EASTBOUND Riverside			WESTBOUND Riverside				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 0	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	2	1	6	17	0	30	41	131	0	0	124	27	379	0	0	0	0	0
	7:15 AM	2	0	3	38	0	94	98	110	1	0	124	48	518	0	0	0	0	0
	7:30 AM	9	1	2	23	0	45	29	128	0	1	171	16	425	0	0	0	0	0
	7:45 AM	2	0	3	5	1	5	7	145	0	1	177	4	350	0	0	0	0	0
	8:00 AM	1	0	1	1	0	0	2	128	1	0	135	3	272	0	0	0	0	0
	8:15 AM	0	0	2	0	0	0	1	108	0	2	142	5	260	0	0	0	1	1
	8:30 AM	0	0	2	0	0	0	1	87	0	2	127	1	220	0	0	0	0	0
	8:45 AM	1	0	2	1	0	0	0	110	0	0	111	0	225	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	17	2	21	85	1	174	179	947	2	6	1,111	104	2,649	0	0	0	1	1
	APPROACH %	43%	5%	53%	33%	0%	67%	16%	84%	0%	0%	91%	9%						
	APP/DEPART	40	/	285	260	/	8	1,128	/	1,054	1,221	/	1,302	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	15	2	14	83	1	174	175	514	1	2	596	95	1,672					
	APPROACH %	48%	6%	45%	32%	0%	67%	25%	74%	0%	0%	86%	14%						
	PEAK HR FACTOR		0.646			0.489			0.825			0.922		0.807					
	APP/DEPART	31	/	272	258	/	4	690	/	611	693	/	785	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	7	5	0	8	4	205	0	3	151	9	392	0	0	0	0	0
	4:15 PM	0	0	2	6	0	4	3	198	0	4	147	7	371	0	0	0	0	0
	4:30 PM	1	0	3	6	0	3	3	205	0	1	163	4	389	0	0	0	0	0
	4:45 PM	0	0	2	6	0	1	7	221	1	7	159	10	414	0	0	0	0	0
	5:00 PM	1	0	5	5	0	6	4	212	1	6	157	6	403	0	0	0	0	0
	5:15 PM	4	0	4	5	0	4	1	196	0	3	159	7	383	0	0	0	0	0
	5:30 PM	0	0	1	3	0	4	4	207	0	1	135	8	363	0	0	0	0	0
	5:45 PM	0	0	3	2	0	1	1	209	1	2	160	8	387	0	0	0	0	0
	VOLUMES	6	0	27	38	0	31	27	1,653	3	27	1,231	59	3,102	0	0	0	0	0
	APPROACH %	18%	0%	82%	55%	0%	45%	2%	98%	0%	2%	93%	4%						
	APP/DEPART	33	/	86	69	/	30	1,683	/	1,718	1,317	/	1,268	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	6	0	14	22	0	14	15	834	2	17	638	27	1,589					
	APPROACH %	30%	0%	70%	61%	0%	39%	2%	98%	0%	2%	94%	4%						
	PEAK HR FACTOR		0.625			0.818			0.929			0.969		0.960					
	APP/DEPART	20	/	42	36	/	19	851	/	870	682	/	658	0					

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	0	11	0	12	1	0	11	0	12	0	0	0	0	0
	7:15 AM	0	0	4	0	4	0	0	4	0	4	0	0	0	0	0
	7:30 AM	3	0	5	0	8	3	0	5	0	8	0	0	0	0	0
	7:45 AM	6	0	1	0	7	6	0	1	0	7	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	8:30 AM	5	1	1	0	7	3	1	1	0	5	2	0	0	0	2
	8:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	18	1	22	0	41	16	1	22	0	39	2	0	0	0	2
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	4:15 PM	2	0	4	0	6	2	0	4	0	6	0	0	0	0	0
	4:30 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:45 PM	7	1	3	0	11	6	0	3	0	9	1	1	0	0	2
	5:00 PM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	5:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:30 PM	1	0	1	0	2	0	0	1	0	1	1	0	0	0	1
	5:45 PM	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
	TOTAL	16	1	10	0	27	11	0	10	0	21	5	1	0	0	6

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, May 5, 21

LOCATION: Lake Elsinore
NORTH & SOUTH: Riverside
EAST & WEST: Grand

PROJECT #: SC
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Riverside			SOUTHBOUND Riverside			EASTBOUND Grand			WESTBOUND Grand				U-TURNS				
	LANES:	NL 2	NT 1	NR X	SL X	ST 1	SR 1	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	44	58	0	0	137	8	20	0	57	0	0	0	324	0	0	0	0	0
	7:15 AM	47	78	0	0	116	9	15	0	54	0	0	0	319	0	0	0	0	0
	7:30 AM	41	73	0	0	107	11	25	0	76	0	0	0	333	0	0	0	0	0
	7:45 AM	42	102	0	0	96	7	18	0	72	0	0	0	337	0	0	0	0	0
	8:00 AM	44	100	0	0	78	8	22	0	47	0	0	0	299	0	0	0	0	0
	8:15 AM	29	89	0	0	80	10	15	0	45	0	0	0	268	0	0	0	0	0
	8:30 AM	29	89	0	0	104	18	18	0	44	0	0	0	302	0	0	0	0	0
	8:45 AM	34	84	0	0	93	16	24	0	45	0	0	0	296	0	0	0	0	0
	VOLUMES	310	673	0	0	811	87	157	0	440	0	0	0	2,478	0	0	0	0	0
	APPROACH %	32%	68%	0%	0%	90%	10%	26%	0%	74%	0%	0%	0%						
	APP/DEPART	983	/	830	898	/	1,251	597	/	0	0	/	397	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	174	311	0	0	456	35	78	0	259	0	0	0	1,313					
	APPROACH %	36%	64%	0%	0%	93%	7%	23%	0%	77%	0%	0%	0%						
	PEAK HR FACTOR		0.842			0.847			0.834			0.000		0.974					
	APP/DEPART	485	/	389	491	/	715	337	/	0	0	/	209	0					
PM	04:00 PM	52	106	0	0	122	17	22	0	42	0	0	0	361	0	0	0	0	0
	4:15 PM	44	84	0	0	129	26	20	0	48	0	0	0	351	0	0	0	0	0
	4:30 PM	38	115	0	0	114	20	23	0	61	0	0	0	371	0	0	0	0	0
	4:45 PM	52	118	0	0	113	31	21	0	52	0	0	0	387	0	0	0	0	0
	5:00 PM	44	81	0	0	119	28	31	0	68	0	0	0	371	0	0	0	0	0
	5:15 PM	48	109	0	0	132	11	14	0	47	0	0	0	361	0	0	0	0	0
	5:30 PM	35	99	0	0	119	31	14	0	62	0	0	0	360	0	0	0	0	0
	5:45 PM	43	95	0	0	124	25	22	0	43	0	0	0	352	0	0	0	0	0
	VOLUMES	356	807	0	0	972	189	167	0	423	0	0	0	2,914	0	0	0	0	0
	APPROACH %	31%	69%	0%	0%	84%	16%	28%	0%	72%	0%	0%	0%						
	APP/DEPART	1,163	/	974	1,161	/	1,395	590	/	0	0	/	545	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	182	423	0	0	478	90	89	0	228	0	0	0	1,490					
	APPROACH %	30%	70%	0%	0%	84%	16%	28%	0%	72%	0%	0%	0%						
	PEAK HR FACTOR		0.890			0.966			0.801			0.000		0.963					
	APP/DEPART	605	/	512	568	/	706	317	/	0	0	/	272	0					

Riverside

NORTH SIDE

Grand WEST SIDE EAST SIDE **Grand**

SOUTH SIDE

Riverside

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	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	0	0
	4:30 PM	0	0	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	0	0
	5:00 PM	0	0	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	0	0
	5:30 PM	0	0	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	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Lake Elsinore	PROJECT #:	SC1737
Thu, May 17, 18	NORTH & SOUTH:	Lincoln	LOCATION #:	3
	EAST & WEST:	Riverside	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Lincoln			SOUTHBOUND Lincoln			EASTBOUND Riverside			WESTBOUND Riverside				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	0	0	76	0	91	23	93	0	0	149	13	445	0	0	0	0	0
	7:15 AM	0	0	0	105	0	135	59	152	0	0	181	22	654	0	0	0	0	0
	7:30 AM	0	0	0	138	0	57	52	131	0	0	187	24	589	0	0	0	0	0
	7:45 AM	0	0	0	124	0	29	32	129	0	0	168	42	524	0	0	0	0	0
	8:00 AM	0	0	0	89	0	16	17	122	0	0	154	28	426	0	0	0	0	0
	8:15 AM	0	0	0	71	0	13	14	110	0	0	124	25	357	0	0	0	0	0
	8:30 AM	0	0	0	67	0	15	16	104	0	0	113	27	342	0	0	0	0	0
	8:45 AM	0	0	0	65	0	17	12	115	0	0	108	30	347	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	735	0	373	225	956	0	0	1,184	211	3,684	0	0	0	0	0
	APPROACH %	0%	0%	0%	66%	0%	34%	19%	81%	0%	0%	85%	15%						
	APP/DEPART	0	/	436	1,108	/	0	1,181	/	1,691	1,395	/	1,557	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	443	0	312	166	505	0	0	685	101	2,212					
	APPROACH %	0%	0%	0%	59%	0%	41%	25%	75%	0%	0%	87%	13%						
	PEAK HR FACTOR		0.000			0.786			0.795			0.931		0.846					
	APP/DEPART	0	/	267	755	/	0	671	/	948	786	/	997	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	40	0	21	17	220	0	0	138	58	494	0	0	0	0	0
	4:15 PM	0	0	0	72	0	23	20	217	0	0	149	64	545	0	0	0	0	0
	4:30 PM	0	0	0	75	0	28	23	222	0	0	151	59	558	0	0	0	0	0
	4:45 PM	0	0	0	73	0	29	25	235	0	0	156	67	585	0	0	0	0	0
	5:00 PM	0	0	0	74	0	31	26	227	0	0	160	72	590	0	0	0	0	0
	5:15 PM	0	0	0	78	0	27	29	207	0	0	157	68	566	0	0	0	0	0
	5:30 PM	0	0	0	81	0	25	34	208	0	0	163	74	585	0	0	0	0	0
	5:45 PM	0	0	0	69	0	21	27	210	0	0	170	79	576	0	0	0	0	0
	VOLUMES	0	0	0	562	0	205	201	1,746	0	0	1,244	541	4,499	0	0	0	0	0
	APPROACH %	0%	0%	0%	73%	0%	27%	10%	90%	0%	0%	70%	30%						
	APP/DEPART	0	/	742	767	/	0	1,947	/	2,308	1,785	/	1,449	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	306	0	112	114	877	0	0	636	281	2,326					
	APPROACH %	0%	0%	0%	73%	0%	27%	12%	88%	0%	0%	69%	31%						
	PEAK HR FACTOR		0.000			0.986			0.953			0.967		0.986					
	APP/DEPART	0	/	395	418	/	0	991	/	1,183	917	/	748	0					

Lincoln

NORTH SIDE

Riverside WEST SIDE EAST SIDE **Riverside**

SOUTH SIDE

Lincoln

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	7	0	0	8	15	7	0	0	8	15	0	0	0	0	0
	7:15 AM	9	0	0	6	15	7	0	0	6	13	2	0	0	0	2
	7:30 AM	3	0	1	4	8	3	0	1	4	8	0	0	0	0	0
	7:45 AM	1	1	0	3	5	1	0	0	3	4	0	1	0	0	1
	8:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:15 AM	2	0	0	2	4	1	0	0	2	3	1	0	0	0	1
	8:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:45 AM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	23	1	1	26	51	19	0	1	24	44	4	1	0	2	7
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	4:15 PM	2	0	0	2	4	2	0	0	0	2	0	0	0	2	2
	4:30 PM	4	0	0	3	7	3	0	0	2	5	1	0	0	1	2
	4:45 PM	2	0	1	3	6	2	0	1	3	6	0	0	0	0	0
	5:00 PM	6	0	0	1	7	5	0	0	1	6	1	0	0	0	1
	5:15 PM	1	0	0	1	2	1	0	0	0	1	0	0	0	1	1
	5:30 PM	2	0	0	2	4	2	0	0	2	4	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	17	0	1	14	32	15	0	1	10	26	2	0	0	4	6

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 17, 18

LOCATION: Lake Elsinore
NORTH & SOUTH: Lakeshore
EAST & WEST: Riverside

PROJECT #: SC1737
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

Add U-Turns to Left Turns

		NORTHBOUND Lakeshore			SOUTHBOUND Lakeshore			EASTBOUND Riverside			WESTBOUND Riverside				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 1	WT 1	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	28	27	3	43	34	18	19	149	46	4	187	22	580	0	0	0	0	0
	7:15 AM	52	28	5	58	56	24	29	158	61	7	145	31	654	0	0	0	0	0
	7:30 AM	56	65	4	60	81	22	41	132	89	5	145	48	748	0	0	0	0	0
	7:45 AM	67	48	7	67	78	29	29	106	83	4	137	42	697	0	0	0	0	0
	8:00 AM	48	43	5	53	75	24	26	72	76	6	119	25	572	0	0	0	0	0
	8:15 AM	43	41	2	50	63	19	27	87	60	6	103	28	529	0	0	0	0	0
	8:30 AM	36	39	6	47	52	21	24	70	54	4	109	28	490	0	0	0	0	0
	8:45 AM	37	34	4	49	43	18	19	89	47	3	117	23	483	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	367	325	36	427	482	175	214	863	516	39	1,062	247	4,753	0	0	0	0	0
	APPROACH %	50%	45%	5%	39%	44%	16%	13%	54%	32%	3%	79%	18%						
	APP/DEPART	728	/	786	1,084	/	1,037	1,593	/	1,326	1,348	/	1,604	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	203	168	19	228	249	93	118	545	279	20	614	143	2,679					
	APPROACH %	52%	43%	5%	40%	44%	16%	13%	58%	30%	3%	79%	18%						
	PEAK HR FACTOR		0.780			0.819			0.899			0.912		0.895					
	APP/DEPART	390	/	429	570	/	548	942	/	792	777	/	910	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	32	42	5	41	44	39	30	171	62	8	153	31	658	0	0	0	0	0
	4:15 PM	49	59	4	55	57	40	37	201	64	10	136	54	766	0	0	0	0	0
	4:30 PM	58	61	8	57	63	43	49	202	72	7	142	69	831	0	0	0	0	0
	4:45 PM	54	68	5	53	62	37	47	198	66	10	149	71	820	0	0	0	0	0
	5:00 PM	53	72	3	58	67	36	50	196	54	11	168	68	836	0	0	0	0	0
	5:15 PM	19	63	4	56	59	39	43	201	53	8	165	72	782	0	0	0	0	0
	5:30 PM	50	61	5	51	53	40	34	211	56	4	159	76	800	0	0	0	0	0
	5:45 PM	57	59	4	43	47	45	26	223	48	6	165	81	804	0	0	0	0	0
	VOLUMES	372	485	38	414	452	319	316	1,603	475	64	1,237	522	6,297	0	0	0	0	0
	APPROACH %	42%	54%	4%	35%	38%	27%	13%	67%	20%	4%	68%	29%						
	APP/DEPART	895	/	1,323	1,185	/	991	2,394	/	2,055	1,823	/	1,928	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	184	264	20	224	251	155	189	797	245	36	624	280	3,269					
	APPROACH %	39%	56%	4%	36%	40%	25%	15%	65%	20%	4%	66%	30%						
	PEAK HR FACTOR		0.914			0.966			0.953			0.951		0.978					
	APP/DEPART	468	/	733	630	/	532	1,231	/	1,041	940	/	963	0					

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	2	0	0	2	4	1	0	0	2	3	1	0	0	0	1
	7:15 AM	1	2	5	1	9	0	2	5	0	7	1	0	0	1	2
	7:30 AM	3	1	3	1	8	3	1	3	1	8	0	0	0	0	0
	7:45 AM	2	2	0	0	4	2	1	0	0	3	0	1	0	0	1
	8:00 AM	2	0	2	0	4	1	0	2	0	3	1	0	0	0	1
	8:15 AM	0	2	0	2	4	0	2	0	1	3	0	0	0	1	1
	8:30 AM	1	1	1	1	4	1	0	1	1	3	0	1	0	0	1
	8:45 AM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	11	9	12	7	39	8	7	12	5	32	3	2	0	2	7
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	3	2	1	0	6	2	2	1	0	5	1	0	0	0	1
	4:15 PM	0	3	9	1	13	0	3	8	1	12	0	0	1	0	1
	4:30 PM	3	6	4	2	15	3	5	4	1	13	0	1	0	1	2
	4:45 PM	4	0	4	0	8	3	0	2	0	5	1	0	2	0	3
	5:00 PM	3	1	1	0	5	2	1	0	0	3	1	0	1	0	2
	5:15 PM	1	1	3	0	5	1	1	3	0	5	0	0	0	0	0
	5:30 PM	0	0	1	1	2	0	0	1	0	1	0	0	0	1	1
	5:45 PM	1	1	0	2	4	1	0	0	1	2	0	1	0	1	2
	TOTAL	15	14	23	6	58	12	12	19	3	46	3	2	4	3	12

Appendix C. Pending & Approved Projects

Project Number	City / County	Project Name	Location	Land Use	Quantity	Units[1]	Included in Analysis (Yes/No)
1	Lake Elsinore	Ramsgate	1,300 Acre project area. Project is bounded by Riverside Street to the north, La Strada to the South, Greenwald to the east, and Highway 74 to the west.	Single Family Residential	1306.00	DU	No
				Condos/Townhomes	120.00	DU	
2	Lake Elsinore	Spyglass Ranch	APN's: 377-250-011, 377-350-004, 007, 008, 010, 014, 015, 016, 017, 377-260-004, 005, 006.	Single Family	523	DU	No
				Condominiums	171	DU	
				Shopping Center	145.000	TSF	
3	Lake Elsinore	South Shore I (Tract 31593)	Directly west of South Shore II	Single Family	521	DU	No
		South Shore II (Tract 36567)	East side of I-15 from Main Street adjacent to and east of TTM 35337. APNs: 363-020-012, 363-020-013, 363-020-014, 363-020-014, 363-020-015, 363-020-018, 363-020-002 and 363-020-003	Single Family	400	DU	
4	Lake Elsinore	La Strada (Tract 32077)	Aproximately 1,500 feet east of the intersection of La Strada and Summerhill	Single Family	134	DU	No
5	Lake Elsinore	Marina Village Condos (Tract: 33820).	Spring St.and Lakeshore Dr. APN: 374-271-007,004,013,015,003.	Condominiums	94	DU	No
6	Lake Elsinore	Diamond Specific Plan	The Project Site consists of 87.2 acres in the southeast portion of the city, generally located along Diamond Drive between Lakeshore Drive and a point approximately 600 feet south of Malaga Road	Condominiums	600	DU	No
				Hotel	150	RM	
				General Office	425.000	TSF	
				Shopping Center	472.000	TSF	
7	Lake Elsinore	The Colony	East Lake is located in the City of Lake Elsinore along the eastern shore of Lake Elsinore	Apartments	211	DU	No
		TAG Property		Single Family	2407	DU	
				Condominiums	324	DU	
		John Laing Homes (Phase 2)		Single Family	506	DU	
				Condominiums	1141	DU	
				Apartments	308	DU	
				Shopping Center	117.000	TSF	
8	Lake Elsinore	Beazer		Single Family	72	DU	
		KB Homes		Single Family	106	DU	
		McMillin Homes		Single Family	143	DU	
		Richmond American		Single Family	74	DU	
9	Lake Elsinore	Lakeshore Town Center	Located at the northwest corner of Lakeshore Drive and Main Street and is located on Lake Elsinore (APNs: 374-281-001, 002, 003, 004, 005, 006, 007, 008, 009, and 010/374-282-001, 002, 003, and 004/373-162-001, 002, 003, 004, and 005).	Mixed-Use Commercial	237.400	TSF	No

Project Number	City / County	Project Name	Location	Land Use	Quantity	Units[1]	Included in Analysis (Yes/No)
10	Lake Elsinore	Canyon Hills Estates	APN: 365-220-026; 365-230-001, 005 thru 007, 009 thru 013	Single Family	302	DU	No
11	Lake Elsinore	Canyon Hills	Generally located east of the intersection of Railroad Canyon and Canyon Hills	Single Family	2700	DU	No
				Apartments	1575	DU	
				Single Family	1003	DU	
12	Lake Elsinore	Alberhill Ridge	APN's: 389-020-035 & 036, 389-080-040, 390-130-026 & 028, 390-160-003 & 006, 390-190-013, 014 & 015, 390-200-008 & 010, 390-210-021	Single Family	1056	DU	No
				Apartments	345	DU	
				Shopping Center	679.000	TSF	
				General Office	679.000	TSF	
13	Lake Elsinore	Alberhill Ranch	APN: 391-800-001, 391-230-009, 391-240-001, 389-020-063, 390-130-021, 390-160-012, 390-190-019, 391-200-012, 391-230-005, 390-170-001, 390-160-001, 390-160-002-390-190-011, 391-230-002, 391-200-007, 391-230-002, 391-200-004, 391-230-004, 390-130-020, 390-130-006, 391-170-005, 391-170-007,391-200-010, 391-200-003, 391-230-010	Single Family	1986	DU	No
14	Lake Elsinore	Terracina	APNs: 378-040-004, 378-040-005, 378-040-006, 378-040-012, 378-040-012, 389-040-012, 389-180-002, 389-190-002.	Single Family	365	DU	No
15	Lake Elsinore	Village at Lakeshore (Tract 33267)	APNs:387-180-001, 387-170-004, 387-170-006, 387-080-003, 387-080-004, 379-050-034, 379-050-006.	Condominiums	163	DU	Yes
16	Lake Elsinore	Alberhill Villages	Assessor's Parcel Numbers (APNs): 389-020-032, 390-130-006, 390-130-015, 390-130-016, 390-130-017, 390-130-020, 390-130-021, 390-130-024, 390-160-001, 390-160-002, 390-160-011, 390-160-012, 390-170-001, 390-190-011, 390-190-019, 391-170-005, 391-170-007, 391-200-003, 391-200-004, 391-200-007, 391-200-010, 391-200-011, 391-200-012, 391-200-017, 391-230-002, 391-230-003, 391-230-004, 391-230-005, 391-230-007, 391-230-009, 391-230-010, 391-240-001, 391-800-011.	Single Family Residential	8,244	DU	No
				Non-Residential	4,007.00	TSF	
				University or similar use	6,000	STU	
17	Lake Elsinore	Fairway Business Park	APN: 377-140-124	Heavy Industrial	216.6	TSF	No
18	Lake Elsinore	LE Sports Complex	APN: 373-210-378, 389,390, 433 363-161-035-2, 363-161-034-1 363-161-033-0, 363-161-032-9 363-161-031-8, 363-161-030-7, 363-161-029-7, 363-161-032 450	Recreational	525	TSF	No
19	Lake Elsinore	Artisan Alley	APN: 365-280-022 & 373-210-041	Commercial	95.1	TSF	No
20	Lake Elsinore	Running Deer (TR 31957)	APN: 391-790-002 & 003	Single Family Residential	101	DU	No
21	Lake Elsinore	Lakeview Manor	APN: 379-230-001	Condominiums	104	DU	Yes

Project Number	City / County	Project Name	Location	Land Use	Quantity	Units[1]	Included in Analysis (Yes/No)
22	Lake Elsinore	Tige Watersports	APN: 378-030-031	Boat dealership	34.5	TSF	No
23	Lake Elsinore	Kassab Travel Center	APN: 378-030-007 & 009	Gas Station, resturants	17.2	TSF	No
24	Lake Elsinore	North Peak Plaza	APN: 347-110-048, 057, 059, 070, 077, and 089	Hotel	97	RM	No
				Commercial	37.5	TSF	
25	Lake Elsinore	Nichols Ranch	APN: 389-200-038	Single Family Residential	141	DU	No
				Hotel	130	RM	
				Commercial	29.5	TSF	
26	Lake Elsinore	Lake Street Storage	APN: 390-130-018	Indoor RV & Boat Storage	90	TSF	No
				Gas station, mini-mart	3	TSF	
27	Lake Elsinore	Bamiyan Marketplace	APN: 381-320-020, 027	Multi-Family Residential	80	DU	Yes
				C-store, restaurant	6.3	TSF	
				Restaurants with drive-thru	7.2	TSF	
				Gas station, car wash	6	TSF	
				Commercial	19.5	TSF	
28	Lake Elsinore	Pennington Industrial Park	APN: 377-160-014	Industrial	90	TSF	No
29	Lake Elsinore	The Lakeview Plaza	APNs: 375-092-002 thru 006	Commercial retail center	43	TSF	Yes
30	Lake Elsinore	Corydon Gateway	APN: 370-050-026	Fast-Food with Drive-Thru	2.3	TSF	No
				C-store with gas station	4	TSF	
				Carwash	4.3	TSF	
				Tire store	5.2	TSF	
				flex-condos (retail/offices)	22.08	TSF	
31	Lake Elsinore	Berri Brothers	APN: 363-172-016	C-store with gas station	3	TSF	No
				Carwash	4.4	TSF	
32	Lake Elsinore	Golcheh Group	APN: 370-080-024	Fast-Food with Drive-Thru	4.5	TSF	No
				C-store with gas station	4.6	TSF	
				Carwash	3.9	TSF	
				Self-storage	38	TSF	
33	Lake Elsinore	Lake and Mountain Commercial Center	APNs: 389-030-012 thru 018	Fast-Food with Drive-Thru	5.8	TSF	No
				C-store with gas station	4.9	TSF	
				Carwash	3.1	TSF	
				retail buildings	3.2	TSF	
34	Lake Elsinore	Xebec Building Company	APN: 371-120-059	Industrial	51	TSF	No
35	Lake Elsinore	Pacific Coral	APN: 389-290-009, 010, 013, 014, 020, 022, 023, 025, 026, & 027	Single Family Residential	205	DU	No
36	Lake Elsinore	Sunny Express carwash	APN: 379-160-002	Carwash	5.4	TSF	Yes
37	Lake Elsinore	Tommy's Express carwash	APN: 363-171-005	Carwash	4.3	TSF	No
38	Lake Elsinore	North Elsinore Business Park	APN: 389-220-003, 004, 005, 006	Industrial	95	TSF	No

1. TSF= Thousand Square Feet; DU= Dwelling Unit; AC = Acres; STU = Student; RM= Rooms.

Appendix D. Level of Service Calculations

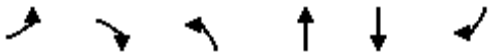
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	4	935	1020	6
Future Vol, veh/h	5	10	4	935	1020	6
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	10	4	974	1063	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2048	1066	1069	0	-	0
Stage 1	1066	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	61	270	652	-	-	-
Stage 1	331	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	60	270	652	-	-	-
Mov Cap-2 Maneuver	60	-	-	-	-	-
Stage 1	327	-	-	-	-	-
Stage 2	363	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.9	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	652	-	125	-	-
HCM Lane V/C Ratio	0.006	-	0.125	-	-
HCM Control Delay (s)	10.6	0	37.9	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	321	240	700	705	130
Future Volume (veh/h)	85	321	240	700	705	130
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	86	270	787	792	103
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	160	142	407	1354	974	795
Arrive On Green	0.09	0.09	0.12	0.72	0.52	0.52
Sat Flow, veh/h	1781	1585	3456	1870	1870	1526
Grp Volume(v), veh/h	96	86	270	787	792	103
Grp Sat Flow(s),veh/h/ln	1781	1585	1728	1870	1870	1526
Q Serve(g_s), s	3.0	3.0	4.3	11.5	20.2	2.0
Cycle Q Clear(g_c), s	3.0	3.0	4.3	11.5	20.2	2.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	160	142	407	1354	974	795
V/C Ratio(X)	0.60	0.60	0.66	0.58	0.81	0.13
Avail Cap(c_a), veh/h	685	610	848	2839	2220	1811
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	25.2	25.2	24.3	3.8	11.4	7.1
Incr Delay (d2), s/veh	3.6	4.1	1.9	0.4	1.7	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	1.3	0.2	1.7	2.2	7.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.7	29.2	26.1	4.2	13.1	7.1
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	182			1057	895	
Approach Delay, s/veh	29.0			9.8	12.4	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		47.4		10.1	11.7	35.7
Change Period (Y+Rc), s		5.8		4.9	4.9	5.8
Max Green Setting (Gmax), s		87.2		22.1	14.1	68.2
Max Q Clear Time (g_c+I1), s		13.5		5.0	6.3	22.2
Green Ext Time (p_c), s		7.3		0.5	0.6	7.7

Intersection Summary		
HCM 6th Ctrl Delay		12.5
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	550	5	5	635	105	20	5	15	90	5	185
Future Volume (veh/h)	190	550	5	5	635	105	20	5	15	90	5	185
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	0.97		1.00	0.97		0.96
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	679	4	6	784	121	25	6	0	111	6	58
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	1826	815	14	1095	169	287	56	280	400	26	249
Arrive On Green	0.17	0.51	0.51	0.01	0.36	0.36	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3079	475	891	315	1585	1366	146	1409
Grp Volume(v), veh/h	235	679	4	6	452	453	31	0	0	111	0	64
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1777	1206	0	1585	1366	0	1555
Q Serve(g_s), s	6.4	5.8	0.1	0.2	11.0	11.0	0.3	0.0	0.0	1.0	0.0	1.8
Cycle Q Clear(g_c), s	6.4	5.8	0.1	0.2	11.0	11.0	2.1	0.0	0.0	3.1	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.27	0.81		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	296	1826	815	14	632	632	343	0	280	400	0	275
V/C Ratio(X)	0.79	0.37	0.00	0.42	0.72	0.72	0.09	0.00	0.00	0.28	0.00	0.23
Avail Cap(c_a), veh/h	1066	3544	1581	711	1418	1418	649	0	632	1058	0	1024
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	1.00
Uniform Delay (d), s/veh	20.1	7.3	5.9	24.8	14.0	14.0	17.6	0.0	0.0	18.2	0.0	17.7
Incr Delay (d2), s/veh	1.8	0.0	0.0	7.2	0.6	0.6	0.0	0.0	0.0	0.1	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	2.5	1.6	0.0	0.1	3.8	3.8	0.3	0.0	0.0	1.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	7.4	5.9	31.9	14.5	14.5	17.7	0.0	0.0	18.3	0.0	17.9
LnGrp LOS	C	A	A	C	B	B	B	A	A	B	A	B
Approach Vol, veh/h		918			911			31			175	
Approach Delay, s/veh		11.1			14.7			17.7			18.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	31.1		13.8	13.2	23.1		13.8
Change Period (Y+Rc), s	4.9	5.3		4.9	4.9	5.3		4.9
Max Green Setting (Gmax), s	20.0	50.0		33.0	30.0	40.0		20.0
Max Q Clear Time (g_c+I1), s	2.2	7.8		5.1	8.4	13.0		4.1
Green Ext Time (p_c), s	0.0	3.5		0.4	0.3	4.1		0.1

Intersection Summary		
HCM 6th Ctrl Delay	13.4	
HCM 6th LOS	B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	540	3	12	730	110	6	0	22	475	0	335
Future Volume (veh/h)	180	540	3	12	730	110	6	0	22	475	0	335
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		0.96	0.97		1.00	1.00		0.94
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	635	2	14	859	90	7	0	2	559	0	103
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	1038	861	28	810	658	288	8	67	469	0	411
Arrive On Green	0.14	0.55	0.55	0.02	0.43	0.43	0.28	0.00	0.28	0.28	0.00	0.28
Sat Flow, veh/h	1781	1870	1552	1781	1870	1518	822	28	243	1413	0	1492
Grp Volume(v), veh/h	212	635	2	14	859	90	9	0	0	559	0	103
Grp Sat Flow(s),veh/h/ln	1781	1870	1552	1781	1870	1518	1093	0	0	1413	0	1492
Q Serve(g_s), s	12.1	23.8	0.1	0.8	45.0	3.7	0.0	0.0	0.0	23.0	0.0	5.6
Cycle Q Clear(g_c), s	12.1	23.8	0.1	0.8	45.0	3.7	5.6	0.0	0.0	28.6	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	0.78		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	245	1038	861	28	810	658	363	0	0	469	0	411
V/C Ratio(X)	0.86	0.61	0.00	0.49	1.06	0.14	0.02	0.00	0.00	1.19	0.00	0.25
Avail Cap(c_a), veh/h	429	1038	861	429	810	658	368	0	0	469	0	411
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	1.00
Uniform Delay (d), s/veh	43.9	15.6	10.3	50.7	29.4	17.7	27.5	0.0	0.0	39.5	0.0	29.3
Incr Delay (d2), s/veh	3.6	0.8	0.0	4.8	48.9	0.0	0.0	0.0	0.0	106.2	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	5.5	9.8	0.0	0.4	30.2	1.3	0.2	0.0	0.0	26.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	16.4	10.3	55.5	78.3	17.8	27.6	0.0	0.0	145.7	0.0	29.4
LnGrp LOS	D	B	B	E	F	B	C	A	A	F	A	C
Approach Vol, veh/h		849			963			9			662	
Approach Delay, s/veh		24.1			72.3			27.6			127.6	
Approach LOS		C			E			C			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	63.4		33.7	19.4	50.8		33.7
Change Period (Y+Rc), s	5.1	5.8		5.1	5.1	5.8		* 5.1
Max Green Setting (Gmax), s	25.0	45.0		28.6	25.0	45.0		* 29
Max Q Clear Time (g_c+I1), s	2.8	25.8		30.6	14.1	47.0		7.6
Green Ext Time (p_c), s	0.0	2.7		0.0	0.2	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	580	300	25	655	155	220	180	25	245	265	100
Future Volume (veh/h)	130	580	300	25	655	155	220	180	25	245	265	100
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		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	644	172	28	728	104	244	200	18	272	294	17
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	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	1645	723	49	732	610	292	382	34	305	437	191
Arrive On Green	0.10	0.46	0.46	0.03	0.39	0.39	0.16	0.12	0.12	0.17	0.12	0.12
Sat Flow, veh/h	1781	3554	1561	1781	1870	1557	1781	3294	293	1781	3554	1552
Grp Volume(v), veh/h	144	644	172	28	728	104	244	107	111	272	294	17
Grp Sat Flow(s),veh/h/ln	1781	1777	1561	1781	1870	1557	1781	1777	1810	1781	1777	1552
Q Serve(g_s), s	7.5	11.2	3.1	1.5	36.6	2.2	12.5	5.3	5.5	14.1	7.5	0.7
Cycle Q Clear(g_c), s	7.5	11.2	3.1	1.5	36.6	2.2	12.5	5.3	5.5	14.1	7.5	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	176	1645	723	49	732	610	292	206	210	305	437	191
V/C Ratio(X)	0.82	0.39	0.24	0.57	0.99	0.17	0.83	0.52	0.53	0.89	0.67	0.09
Avail Cap(c_a), veh/h	283	1645	723	283	732	610	339	677	690	339	1354	591
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	41.7	16.6	3.6	45.4	28.6	5.4	38.2	39.3	39.3	38.3	39.6	21.2
Incr Delay (d2), s/veh	4.2	0.1	0.1	3.8	31.7	0.0	12.8	0.8	0.8	21.4	0.7	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	3.5	4.4	1.9	0.7	22.1	1.4	6.3	2.3	2.4	7.7	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	16.7	3.7	49.2	60.3	5.4	51.0	40.0	40.1	59.7	40.3	21.3
LnGrp LOS	D	B	A	D	E	A	D	D	D	E	D	C
Approach Vol, veh/h		960			860			462			583	
Approach Delay, s/veh		18.8			53.3			45.9			48.8	
Approach LOS		B			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	49.2	20.6	17.0	14.5	42.4	21.3	16.4
Change Period (Y+Rc), s	5.1	5.4	5.1	5.4	5.1	5.4	5.1	5.4
Max Green Setting (Gmax), s	15.0	37.0	18.0	36.0	15.0	37.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	13.5	13.2	14.5	9.5	9.5	38.6	16.1	7.5
Green Ext Time (p_c), s	0.0	3.4	0.1	1.2	0.1	0.0	0.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

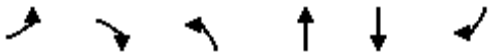
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	13	12	1126	775	31
Future Vol, veh/h	14	13	12	1126	775	31
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	14	13	1173	807	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2022	823	839	0	-	0
Stage 1	823	-	-	-	-	-
Stage 2	1199	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	64	373	796	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	61	373	796	-	-	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	411	-	-	-	-	-
Stage 2	286	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	53.2	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	796	-	102	-	-
HCM Lane V/C Ratio	0.016	-	0.276	-	-
HCM Control Delay (s)	9.6	0	53.2	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0	-	1	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	225	340	800	581	110
Future Volume (veh/h)	65	225	340	800	581	110
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	30	354	833	605	63
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	138	123	537	1289	799	677
Arrive On Green	0.08	0.08	0.16	0.69	0.43	0.43
Sat Flow, veh/h	1781	1585	3456	1870	1870	1585
Grp Volume(v), veh/h	68	30	354	833	605	63
Grp Sat Flow(s),veh/h/ln	1781	1585	1728	1870	1870	1585
Q Serve(g_s), s	1.7	0.8	4.4	11.5	12.6	1.1
Cycle Q Clear(g_c), s	1.7	0.8	4.4	11.5	12.6	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	138	123	537	1289	799	677
V/C Ratio(X)	0.49	0.24	0.66	0.65	0.76	0.09
Avail Cap(c_a), veh/h	858	763	1062	3553	2779	2355
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	20.3	19.9	18.2	4.0	11.1	7.8
Incr Delay (d2), s/veh	2.7	1.0	1.4	0.5	1.5	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	0.7	0.8	1.7	1.8	4.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.0	20.9	19.6	4.5	12.6	7.9
LnGrp LOS	C	C	B	A	B	A
Approach Vol, veh/h	98			1187	668	
Approach Delay, s/veh	22.3			9.0	12.2	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.4		8.5	12.0	25.4
Change Period (Y+Rc), s		5.8		4.9	4.9	5.8
Max Green Setting (Gmax), s		87.2		22.1	14.1	68.2
Max Q Clear Time (g_c+I1), s		13.5		3.7	6.4	14.6
Green Ext Time (p_c), s		8.1		0.2	0.8	5.0

Intersection Summary		
HCM 6th Ctrl Delay		10.8
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	890	5	20	680	30	10	0	15	25	5	15
Future Volume (veh/h)	20	890	5	20	680	30	10	0	15	25	5	15
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	1099	4	25	840	35	12	0	0	31	6	4
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	1708	762	55	1671	70	269	0	75	282	49	33
Arrive On Green	0.03	0.48	0.48	0.03	0.48	0.48	0.05	0.00	0.00	0.05	0.05	0.05
Sat Flow, veh/h	1781	3554	1585	1781	3476	145	1241	0	1585	1418	1047	698
Grp Volume(v), veh/h	25	1099	4	25	429	446	12	0	0	31	0	10
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1844	1241	0	1585	1418	0	1745
Q Serve(g_s), s	0.5	8.0	0.0	0.5	5.7	5.7	0.3	0.0	0.0	0.1	0.0	0.2
Cycle Q Clear(g_c), s	0.5	8.0	0.0	0.5	5.7	5.7	0.5	0.0	0.0	0.6	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	55	1708	762	55	854	887	269	0	75	282	0	82
V/C Ratio(X)	0.45	0.64	0.01	0.45	0.50	0.50	0.04	0.00	0.00	0.11	0.00	0.12
Avail Cap(c_a), veh/h	1561	5192	2316	1041	2077	2156	1024	0	926	1582	0	1682
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	1.00
Uniform Delay (d), s/veh	16.3	6.7	4.6	16.3	6.1	6.1	15.9	0.0	0.0	15.8	0.0	15.6
Incr Delay (d2), s/veh	2.2	0.2	0.0	2.2	0.2	0.2	0.0	0.0	0.0	0.1	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	0.2	1.7	0.0	0.2	1.2	1.2	0.1	0.0	0.0	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	6.8	4.6	18.5	6.3	6.2	15.9	0.0	0.0	15.9	0.0	15.9
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	B
Approach Vol, veh/h		1128			900			12			41	
Approach Delay, s/veh		7.1			6.6			15.9			15.9	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	21.8		6.5	6.0	21.8		6.5
Change Period (Y+Rc), s	4.9	5.3		4.9	4.9	5.3		4.9
Max Green Setting (Gmax), s	20.0	50.0		33.0	30.0	40.0		20.0
Max Q Clear Time (g_c+I1), s	2.5	10.0		2.6	2.5	7.7		2.5
Green Ext Time (p_c), s	0.0	6.5		0.1	0.0	3.9		0.0

Intersection Summary		
HCM 6th Ctrl Delay		7.1
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	935	7	29	675	300	4	0	15	325	0	120
Future Volume (veh/h)	125	935	7	29	675	300	4	0	15	325	0	120
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	147	1100	4	34	794	289	5	0	2	382	0	39
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	970	822	56	838	710	333	11	112	482	0	447
Arrive On Green	0.10	0.52	0.52	0.03	0.45	0.45	0.28	0.00	0.28	0.28	0.00	0.28
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	952	38	396	1415	0	1585
Grp Volume(v), veh/h	147	1100	4	34	794	289	7	0	0	382	0	39
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1386	0	0	1415	0	1585
Q Serve(g_s), s	7.7	49.3	0.1	1.8	38.7	11.7	0.0	0.0	0.0	22.9	0.0	1.7
Cycle Q Clear(g_c), s	7.7	49.3	0.1	1.8	38.7	11.7	1.7	0.0	0.0	24.6	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.71		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	181	970	822	56	838	710	456	0	0	482	0	447
V/C Ratio(X)	0.81	1.13	0.00	0.61	0.95	0.41	0.02	0.00	0.00	0.79	0.00	0.09
Avail Cap(c_a), veh/h	469	970	822	469	886	750	489	0	0	508	0	477
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	1.00
Uniform Delay (d), s/veh	41.8	22.9	11.1	45.5	25.2	17.7	24.6	0.0	0.0	33.1	0.0	25.1
Incr Delay (d2), s/veh	3.4	73.5	0.0	4.0	17.8	0.1	0.0	0.0	0.0	7.2	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	3.5	39.6	0.0	0.8	20.3	4.2	0.1	0.0	0.0	9.3	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	96.3	11.1	49.5	43.0	17.8	24.6	0.0	0.0	40.4	0.0	25.1
LnGrp LOS	D	F	B	D	D	B	C	A	A	D	A	C
Approach Vol, veh/h		1251			1117			7			421	
Approach Delay, s/veh		90.1			36.7			24.6			38.9	
Approach LOS		F			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	55.1		31.9	14.7	48.4		31.9
Change Period (Y+Rc), s	5.1	5.8		5.1	5.1	5.8		* 5.1
Max Green Setting (Gmax), s	25.0	45.0		28.6	25.0	45.0		* 29
Max Q Clear Time (g_c+I1), s	13.8	51.3		26.6	9.7	40.7		3.7
Green Ext Time (p_c), s	0.0	0.0		0.2	0.2	1.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	850	260	40	665	300	200	285	25	240	270	165
Future Volume (veh/h)	205	850	260	40	665	300	200	285	25	240	270	165
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	944	193	44	739	205	222	317	22	267	300	27
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	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1675	747	62	676	573	313	411	28	297	401	179
Arrive On Green	0.14	0.47	0.47	0.03	0.36	0.36	0.18	0.12	0.12	0.17	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	1781	1870	1585	1781	3372	233	1781	3554	1585
Grp Volume(v), veh/h	228	944	193	44	739	205	222	166	173	267	300	27
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	1781	1777	1828	1781	1777	1585
Q Serve(g_s), s	12.9	19.6	3.6	2.5	37.0	5.6	12.0	9.3	9.4	15.0	8.4	1.1
Cycle Q Clear(g_c), s	12.9	19.6	3.6	2.5	37.0	5.6	12.0	9.3	9.4	15.0	8.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	258	1675	747	62	676	573	313	217	223	297	401	179
V/C Ratio(X)	0.88	0.56	0.26	0.71	1.09	0.36	0.71	0.77	0.77	0.90	0.75	0.15
Avail Cap(c_a), veh/h	261	1675	747	261	676	573	313	625	643	313	1249	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	1.00	1.00
Uniform Delay (d), s/veh	42.9	19.5	3.7	48.9	32.7	8.0	39.7	43.6	43.6	41.8	44.0	21.3
Incr Delay (d2), s/veh	26.8	0.3	0.1	5.4	62.9	0.1	6.2	2.2	2.2	25.2	1.1	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	7.5	7.9	2.4	1.2	28.0	3.3	5.6	4.1	4.3	8.5	3.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	19.8	3.7	54.3	95.6	8.2	46.0	45.7	45.8	67.0	45.1	21.5
LnGrp LOS	E	B	A	D	F	A	D	D	D	E	D	C
Approach Vol, veh/h		1365			988			561			594	
Approach Delay, s/veh		25.8			75.6			45.8			53.9	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	53.7	23.1	17.0	19.9	42.4	22.2	17.9
Change Period (Y+Rc), s	5.1	5.4	5.1	5.4	5.1	5.4	5.1	5.4
Max Green Setting (Gmax), s	15.6	37.0	18.0	36.0	15.0	37.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	14.5	21.6	14.0	10.4	14.9	39.0	17.0	11.4
Green Ext Time (p_c), s	0.0	4.6	0.1	1.2	0.0	0.0	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

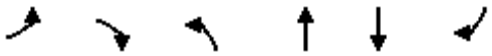
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	15	0	0	78	5	975	5	22	1081	10
Future Vol, veh/h	0	0	15	0	0	78	5	975	5	22	1081	10
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	125	-	-	125	-	-
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	0	0	16	0	0	81	5	1016	5	23	1126	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1131	-	-	511	1136	0	0	1021	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.23	-	-	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.319	-	-	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	0	0	247	0	0	509	613	-	-	678	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	247	-	-	509	613	-	-	678	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.6	13.4	0.1	0.2
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	613	-	-	247	509	678	-	-
HCM Lane V/C Ratio	0.008	-	-	0.063	0.16	0.034	-	-
HCM Control Delay (s)	10.9	-	-	20.6	13.4	10.5	-	-
HCM Lane LOS	B	-	-	C	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.6	0.1	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	339	278	780	753	140
Future Volume (veh/h)	100	339	278	780	753	140
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	381	312	876	846	111
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	402	358	388	2362	940	766
Arrive On Green	0.23	0.23	0.11	0.66	0.50	0.50
Sat Flow, veh/h	1781	1585	3456	3647	1870	1525
Grp Volume(v), veh/h	112	381	312	876	846	111
Grp Sat Flow(s),veh/h/ln	1781	1585	1728	1777	1870	1525
Q Serve(g_s), s	5.1	22.1	8.6	10.7	40.2	3.8
Cycle Q Clear(g_c), s	5.1	22.1	8.6	10.7	40.2	3.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	402	358	388	2362	940	766
V/C Ratio(X)	0.28	1.06	0.80	0.37	0.90	0.14
Avail Cap(c_a), veh/h	402	358	498	3167	1304	1063
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	31.3	37.9	42.4	7.3	22.1	13.1
Incr Delay (d2), s/veh	0.4	65.6	7.3	0.1	6.8	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	6.5	4.0	3.4	17.5	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.7	103.5	49.7	7.4	28.9	13.1
LnGrp LOS	C	F	D	A	C	B
Approach Vol, veh/h	493			1188	957	
Approach Delay, s/veh	87.1			18.5	27.0	
Approach LOS	F			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		70.8		27.0	15.9	55.0
Change Period (Y+Rc), s		5.8		4.9	4.9	5.8
Max Green Setting (Gmax), s		87.2		22.1	14.1	68.2
Max Q Clear Time (g_c+I1), s		12.7		24.1	10.6	42.2
Green Ext Time (p_c), s		7.1		0.0	0.4	7.0

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	625	10	10	683	110	25	10	20	95	10	195
Future Volume (veh/h)	200	625	10	10	683	110	25	10	20	95	10	195
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	0.98		0.97	0.98		0.97
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	247	772	5	12	843	125	31	12	2	117	12	72
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	302	1793	800	27	1084	161	291	97	350	361	51	308
Arrive On Green	0.17	0.50	0.50	0.02	0.35	0.35	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	3097	459	821	425	1541	1366	226	1355
Grp Volume(v), veh/h	247	772	5	12	484	484	43	0	2	117	0	84
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1780	1246	0	1541	1366	0	1581
Q Serve(g_s), s	8.0	8.2	0.1	0.4	14.5	14.5	0.5	0.0	0.1	4.6	0.0	2.6
Cycle Q Clear(g_c), s	8.0	8.2	0.1	0.4	14.5	14.5	3.1	0.0	0.1	7.7	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.26	0.72		1.00	1.00		0.86
Lane Grp Cap(c), veh/h	302	1793	800	27	622	623	387	0	350	361	0	359
V/C Ratio(X)	0.82	0.43	0.01	0.45	0.78	0.78	0.11	0.00	0.01	0.32	0.00	0.23
Avail Cap(c_a), veh/h	896	2978	1328	597	1191	1193	539	0	517	806	0	874
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	9.4	7.3	29.1	17.3	17.3	18.7	0.0	17.8	22.1	0.0	18.8
Incr Delay (d2), s/veh	2.1	0.1	0.0	4.2	0.8	0.8	0.0	0.0	0.0	0.2	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	3.2	2.4	0.0	0.2	5.1	5.1	0.5	0.0	0.0	1.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	9.4	7.4	33.4	18.1	18.1	18.7	0.0	17.8	22.3	0.0	18.9
LnGrp LOS	C	A	A	C	B	B	B	A	B	C	A	B
Approach Vol, veh/h		1024			980			45			201	
Approach Delay, s/veh		13.4			18.3			18.7			20.9	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	35.4		18.5	15.0	26.2		18.5
Change Period (Y+Rc), s	4.9	5.3		4.9	4.9	5.3		4.9
Max Green Setting (Gmax), s	20.0	50.0		33.0	30.0	40.0		20.0
Max Q Clear Time (g_c+I1), s	2.4	10.2		9.7	10.0	16.5		5.1
Green Ext Time (p_c), s	0.0	3.6		0.5	0.3	3.8		0.1

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	607	5	15	775	115	10	0	25	495	0	353
Future Volume (veh/h)	198	607	5	15	775	115	10	0	25	495	0	353
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		0.96	0.97		1.00	1.00		0.94
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	639	3	16	816	82	11	0	0	521	0	97
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	241	1032	856	32	812	659	354	0	0	481	0	412
Arrive On Green	0.14	0.55	0.55	0.02	0.43	0.43	0.28	0.00	0.00	0.28	0.00	0.28
Sat Flow, veh/h	1781	1870	1552	1781	1870	1519	1030	0	0	1415	0	1492
Grp Volume(v), veh/h	208	639	3	16	816	82	11	0	0	521	0	97
Grp Sat Flow(s),veh/h/ln	1781	1870	1552	1781	1870	1519	1030	0	0	1415	0	1492
Q Serve(g_s), s	11.8	24.1	0.1	0.9	45.0	3.3	0.7	0.0	0.0	22.7	0.0	5.2
Cycle Q Clear(g_c), s	11.8	24.1	0.1	0.9	45.0	3.3	5.9	0.0	0.0	28.6	0.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	1032	856	32	812	659	354	0	0	481	0	412
V/C Ratio(X)	0.86	0.62	0.00	0.50	1.00	0.12	0.03	0.00	0.00	1.08	0.00	0.24
Avail Cap(c_a), veh/h	430	1032	856	430	812	659	359	0	0	481	0	412
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	1.00
Uniform Delay (d), s/veh	43.9	15.8	10.4	50.4	29.3	17.5	31.3	0.0	0.0	39.1	0.0	29.0
Incr Delay (d2), s/veh	3.6	0.8	0.0	4.5	32.7	0.0	0.0	0.0	0.0	65.4	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	5.3	9.5	0.0	0.4	26.0	1.1	0.2	0.0	0.0	21.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	16.7	10.4	55.0	62.0	17.6	31.4	0.0	0.0	104.5	0.0	29.2
LnGrp LOS	D	B	B	D	F	B	C	A	A	F	A	C
Approach Vol, veh/h		850			914			11			618	
Approach Delay, s/veh		24.2			57.9			31.4			92.7	
Approach LOS		C			E			C			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	63.0		33.7	19.1	50.8		33.7
Change Period (Y+Rc), s	5.1	5.8		5.1	5.1	5.8		* 5.1
Max Green Setting (Gmax), s	25.0	45.0		28.6	25.0	45.0		* 29
Max Q Clear Time (g_c+I1), s	2.9	26.1		30.6	13.8	47.0		7.9
Green Ext Time (p_c), s	0.0	2.4		0.0	0.2	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		54.8
HCM 6th LOS		D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	631	323	30	694	165	233	190	30	255	280	108
Future Volume (veh/h)	148	631	323	30	694	165	233	190	30	255	280	108
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		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	156	664	181	32	731	106	245	200	20	268	295	17
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	189	1650	725	53	726	605	289	379	38	301	437	191
Arrive On Green	0.11	0.46	0.46	0.03	0.39	0.39	0.16	0.12	0.12	0.17	0.12	0.12
Sat Flow, veh/h	1781	3554	1561	1781	1870	1557	1781	3259	322	1781	3554	1552
Grp Volume(v), veh/h	156	664	181	32	731	106	245	108	112	268	295	17
Grp Sat Flow(s),veh/h/ln	1781	1777	1561	1781	1870	1557	1781	1777	1804	1781	1777	1552
Q Serve(g_s), s	8.2	11.7	3.3	1.7	37.0	2.3	12.7	5.4	5.6	14.0	7.6	0.7
Cycle Q Clear(g_c), s	8.2	11.7	3.3	1.7	37.0	2.3	12.7	5.4	5.6	14.0	7.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	189	1650	725	53	726	605	289	207	210	301	437	191
V/C Ratio(X)	0.83	0.40	0.25	0.60	1.01	0.18	0.85	0.52	0.53	0.89	0.67	0.09
Avail Cap(c_a), veh/h	280	1650	725	280	726	605	337	671	682	337	1343	586
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	41.7	16.8	3.7	45.6	29.1	5.7	38.8	39.6	39.7	38.7	39.9	21.0
Incr Delay (d2), s/veh	7.6	0.1	0.1	4.0	35.0	0.1	14.3	0.8	0.8	21.3	0.7	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	3.9	4.4	2.1	0.8	22.3	1.4	6.5	2.3	2.4	7.7	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	16.9	3.8	49.6	64.1	5.7	53.1	40.4	40.4	60.0	40.6	21.1
LnGrp LOS	D	B	A	D	F	A	D	D	D	E	D	C
Approach Vol, veh/h		1001			869			465			580	
Approach Delay, s/veh		19.6			56.5			47.1			49.0	
Approach LOS		B			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	49.6	20.6	17.1	15.2	42.4	21.2	16.5
Change Period (Y+Rc), s	5.1	5.4	5.1	5.4	5.1	5.4	5.1	5.4
Max Green Setting (Gmax), s	15.0	37.0	18.0	36.0	15.0	37.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	10.7	13.7	14.7	9.6	10.2	39.0	16.0	7.6
Green Ext Time (p_c), s	0.0	3.1	0.1	1.2	0.1	0.0	0.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

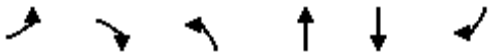
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	15	0	0	51	15	1175	18	71	820	35
Future Vol, veh/h	0	0	15	0	0	51	15	1175	18	71	820	35
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	125	-	-	125	-	-
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	0	0	16	0	0	53	16	1224	19	74	854	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	872	-	-	622	890	0	0	1243	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.23	-	-	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.319	-	-	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	0	0	349	0	0	430	759	-	-	558	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	349	-	-	430	759	-	-	558	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.8	14.5	0.1	1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	759	-	-	349	430	558	-	-
HCM Lane V/C Ratio	0.021	-	-	0.045	0.124	0.133	-	-
HCM Control Delay (s)	9.8	-	-	15.8	14.5	12.4	-	-
HCM Lane LOS	A	-	-	C	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.4	0.5	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	248	373	868	663	115
Future Volume (veh/h)	85	248	373	868	663	115
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	31	389	904	691	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	141	126	551	2539	861	730
Arrive On Green	0.08	0.08	0.16	0.71	0.46	0.46
Sat Flow, veh/h	1781	1585	3456	3647	1870	1585
Grp Volume(v), veh/h	89	31	389	904	691	75
Grp Sat Flow(s),veh/h/ln	1781	1585	1728	1777	1870	1585
Q Serve(g_s), s	2.5	1.0	5.5	5.1	16.4	1.4
Cycle Q Clear(g_c), s	2.5	1.0	5.5	5.1	16.4	1.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	141	126	551	2539	861	730
V/C Ratio(X)	0.63	0.25	0.71	0.36	0.80	0.10
Avail Cap(c_a), veh/h	759	675	939	5974	2459	2084
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	23.1	22.4	20.6	2.8	12.0	7.9
Incr Delay (d2), s/veh	4.6	1.0	1.7	0.1	1.8	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	1.2	0.9	2.0	0.5	5.3	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.7	23.4	22.3	2.9	13.8	8.0
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	120			1293	766	
Approach Delay, s/veh	26.6			8.8	13.2	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.9		9.0	13.2	29.7
Change Period (Y+Rc), s		5.8		4.9	4.9	5.8
Max Green Setting (Gmax), s		87.2		22.1	14.1	68.2
Max Q Clear Time (g_c+I1), s		7.1		4.5	7.5	18.4
Green Ext Time (p_c), s		7.4		0.3	0.8	5.5

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	963	10	25	768	35	15	0	20	30	0	20
Future Volume (veh/h)	25	963	10	25	768	35	15	0	20	30	0	20
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	1189	6	31	948	42	19	0	2	37	0	4
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	1746	779	66	1703	75	265	0	74	247	0	74
Arrive On Green	0.04	0.49	0.49	0.04	0.49	0.49	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1781	3554	1585	1781	3466	154	1340	0	1585	1415	0	1585
Grp Volume(v), veh/h	31	1189	6	31	486	504	19	0	2	37	0	4
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1843	1340	0	1585	1415	0	1585
Q Serve(g_s), s	0.6	9.1	0.1	0.6	6.8	6.8	0.5	0.0	0.0	0.9	0.0	0.1
Cycle Q Clear(g_c), s	0.6	9.1	0.1	0.6	6.8	6.8	0.5	0.0	0.0	1.5	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1746	779	66	873	905	265	0	74	247	0	74
V/C Ratio(X)	0.47	0.68	0.01	0.47	0.56	0.56	0.07	0.00	0.03	0.15	0.00	0.05
Avail Cap(c_a), veh/h	1503	4999	2230	1002	1999	2074	994	0	892	1494	0	1472
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	16.8	6.9	4.6	16.8	6.3	6.3	16.5	0.0	16.2	17.1	0.0	16.2
Incr Delay (d2), s/veh	1.9	0.2	0.0	1.9	0.2	0.2	0.0	0.0	0.1	0.1	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	0.2	1.5	0.0	0.2	1.2	1.2	0.1	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	7.1	4.6	18.7	6.5	6.5	16.5	0.0	16.2	17.2	0.0	16.3
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h		1226			1021			21			41	
Approach Delay, s/veh		7.4			6.9			16.5			17.1	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	22.8		6.6	6.2	22.8		6.6				
Change Period (Y+Rc), s	4.9	5.3		4.9	4.9	5.3		4.9				
Max Green Setting (Gmax), s	20.0	50.0		33.0	30.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	2.6	11.1		3.5	2.6	8.8		2.5				
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	4.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	7.4	
HCM 6th LOS	A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1003	10	35	754	315	5	0	20	340	0	134
Future Volume (veh/h)	140	1003	10	35	754	315	5	0	20	340	0	134
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	147	1056	6	37	794	273	5	0	2	358	0	39
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	182	974	826	60	846	717	322	11	106	466	0	424
Arrive On Green	0.10	0.52	0.52	0.03	0.45	0.45	0.27	0.00	0.27	0.27	0.00	0.27
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	947	42	396	1415	0	1585
Grp Volume(v), veh/h	147	1056	6	37	794	273	7	0	0	358	0	39
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1385	0	0	1415	0	1585
Q Serve(g_s), s	7.3	46.9	0.2	1.8	36.4	10.3	0.0	0.0	0.0	20.1	0.0	1.7
Cycle Q Clear(g_c), s	7.3	46.9	0.2	1.8	36.4	10.3	1.7	0.0	0.0	21.7	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.71		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	182	974	826	60	846	717	439	0	0	466	0	424
V/C Ratio(X)	0.81	1.08	0.01	0.62	0.94	0.38	0.02	0.00	0.00	0.77	0.00	0.09
Avail Cap(c_a), veh/h	495	974	826	495	935	792	517	0	0	536	0	504
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	1.00
Uniform Delay (d), s/veh	39.6	21.6	10.4	42.9	23.4	16.3	24.2	0.0	0.0	31.9	0.0	24.7
Incr Delay (d2), s/veh	3.2	54.3	0.0	3.9	15.1	0.1	0.0	0.0	0.0	4.8	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	3.2	32.3	0.1	0.8	17.8	3.4	0.1	0.0	0.0	8.0	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	75.9	10.4	46.8	38.6	16.4	24.2	0.0	0.0	36.7	0.0	24.8
LnGrp LOS	D	F	B	D	D	B	C	A	A	D	A	C
Approach Vol, veh/h		1209			1104			7			397	
Approach Delay, s/veh		71.5			33.4			24.2			35.5	
Approach LOS		E			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	52.7		29.2	14.3	46.5		29.2
Change Period (Y+Rc), s	5.1	5.8		5.1	5.1	5.8		* 5.1
Max Green Setting (Gmax), s	25.0	45.0		28.6	25.0	45.0		* 29
Max Q Clear Time (g_c+I1), s	3.8	48.9		23.7	9.3	38.4		3.7
Green Ext Time (p_c), s	0.0	0.0		0.4	0.2	2.4		0.0

Intersection Summary		
HCM 6th Ctrl Delay		50.6
HCM 6th LOS		D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	903	280	45	726	315	219	300	30	250	285	184
Future Volume (veh/h)	220	903	280	45	726	315	219	300	30	250	285	184
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	951	195	47	764	208	231	316	25	263	300	29
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	261	1676	748	64	676	573	311	410	32	293	402	179
Arrive On Green	0.15	0.47	0.47	0.04	0.36	0.36	0.17	0.12	0.12	0.16	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	1781	1870	1585	1781	3337	263	1781	3554	1585
Grp Volume(v), veh/h	232	951	195	47	764	208	231	167	174	263	300	29
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	1781	1777	1823	1781	1777	1585
Q Serve(g_s), s	13.1	19.8	3.6	2.7	37.0	5.8	12.6	9.3	9.5	14.8	8.4	1.2
Cycle Q Clear(g_c), s	13.1	19.8	3.6	2.7	37.0	5.8	12.6	9.3	9.5	14.8	8.4	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	261	1676	748	64	676	573	311	218	224	293	402	179
V/C Ratio(X)	0.89	0.57	0.26	0.73	1.13	0.36	0.74	0.77	0.78	0.90	0.75	0.16
Avail Cap(c_a), veh/h	261	1676	748	261	676	573	313	624	641	313	1249	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	1.00	1.00
Uniform Delay (d), s/veh	42.9	19.5	3.7	48.9	32.7	8.1	40.1	43.5	43.6	41.9	44.0	21.2
Incr Delay (d2), s/veh	28.2	0.3	0.1	5.9	76.6	0.1	8.1	2.1	2.2	24.6	1.1	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	7.6	7.7	2.4	1.3	30.1	3.3	6.0	4.1	4.3	8.3	3.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.1	19.8	3.8	54.8	109.3	8.3	48.2	45.7	45.8	66.5	45.1	21.4
LnGrp LOS	E	B	A	D	F	A	D	D	D	E	D	C
Approach Vol, veh/h		1378			1019			572			592	
Approach Delay, s/veh		26.2			86.2			46.7			53.4	
Approach LOS		C			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	53.7	23.0	17.0	20.1	42.4	22.0	18.0
Change Period (Y+Rc), s	5.1	5.4	5.1	5.4	5.1	5.4	5.1	5.4
Max Green Setting (Gmax), s	15.0	37.0	18.0	36.0	15.0	37.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	11.7	21.8	14.6	10.4	15.1	39.0	16.8	11.5
Green Ext Time (p_c), s	0.0	4.2	0.1	1.2	0.0	0.0	0.1	1.1

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

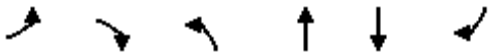
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	15	0	0	78	5	1015	5	22	1113	10
Future Vol, veh/h	0	0	15	0	0	78	5	1015	5	22	1113	10
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	125	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	16	0	0	82	5	1068	5	23	1172	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1178	-	-	537	1183	0	0	1073	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.23	-	-	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.319	-	-	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	0	0	232	0	0	489	588	-	-	648	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	232	-	-	489	588	-	-	648	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	13.8	0.1	0.2
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	588	-	-	232	489	648	-	-
HCM Lane V/C Ratio	0.009	-	-	0.068	0.168	0.036	-	-
HCM Control Delay (s)	11.2	-	-	21.6	13.8	10.8	-	-
HCM Lane LOS	B	-	-	C	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.6	0.1	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	138	343	285	813	781	143
Future Volume (veh/h)	138	343	285	813	781	143
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	145	85	300	856	822	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	202	180	408	2492	932	759
Arrive On Green	0.11	0.11	0.12	0.70	0.50	0.50
Sat Flow, veh/h	1781	1585	3456	3647	1870	1525
Grp Volume(v), veh/h	145	85	300	856	822	108
Grp Sat Flow(s),veh/h/ln	1781	1585	1728	1777	1870	1525
Q Serve(g_s), s	4.5	2.9	4.8	5.5	22.7	2.2
Cycle Q Clear(g_c), s	4.5	2.9	4.8	5.5	22.7	2.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	202	180	408	2492	932	759
V/C Ratio(X)	0.72	0.47	0.74	0.34	0.88	0.14
Avail Cap(c_a), veh/h	281	250	425	2785	1077	878
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	24.7	24.0	24.6	3.4	13.0	7.8
Incr Delay (d2), s/veh	5.3	1.9	6.3	0.1	7.9	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	2.1	2.7	2.2	1.1	9.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.9	25.9	30.8	3.5	20.9	7.9
LnGrp LOS	C	C	C	A	C	A
Approach Vol, veh/h	230			1156	930	
Approach Delay, s/veh	28.4			10.6	19.4	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.2		11.4	11.7	34.5
Change Period (Y+Rc), s		5.8		4.9	4.9	5.8
Max Green Setting (Gmax), s		45.2		9.1	7.1	33.2
Max Q Clear Time (g_c+I1), s		7.5		6.5	6.8	24.7
Green Ext Time (p_c), s		7.3		0.2	0.0	4.0

Intersection Summary		
HCM 6th Ctrl Delay		15.9
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	696	10	10	739	110	25	10	20	95	10	195
Future Volume (veh/h)	200	696	10	10	739	110	25	10	20	95	10	195
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	0.98		0.97	0.97		0.97
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	211	733	5	11	778	107	26	11	1	100	11	61
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	268	1715	765	25	1084	149	291	104	322	373	51	280
Arrive On Green	0.15	0.48	0.48	0.01	0.35	0.35	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3132	431	821	494	1537	1365	241	1339
Grp Volume(v), veh/h	211	733	5	11	441	444	37	0	1	100	0	72
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1785	1315	0	1537	1365	0	1580
Q Serve(g_s), s	5.9	6.9	0.1	0.3	11.1	11.1	0.0	0.0	0.0	3.4	0.0	1.9
Cycle Q Clear(g_c), s	5.9	6.9	0.1	0.3	11.1	11.1	2.0	0.0	0.0	5.3	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.24	0.70		1.00	1.00		0.85
Lane Grp Cap(c), veh/h	268	1715	765	25	615	618	395	0	322	373	0	331
V/C Ratio(X)	0.79	0.43	0.01	0.44	0.72	0.72	0.09	0.00	0.00	0.27	0.00	0.22
Avail Cap(c_a), veh/h	1040	3457	1542	693	1383	1389	651	0	598	964	0	1015
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	21.0	8.7	6.9	25.1	14.6	14.6	16.4	0.0	16.1	19.1	0.0	16.8
Incr Delay (d2), s/veh	1.9	0.1	0.0	4.4	0.6	0.6	0.0	0.0	0.0	0.1	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	2.4	2.1	0.0	0.2	3.9	3.9	0.3	0.0	0.0	1.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	8.7	6.9	29.5	15.2	15.2	16.4	0.0	16.1	19.2	0.0	16.9
LnGrp LOS	C	A	A	C	B	B	B	A	B	B	A	B
Approach Vol, veh/h		949			896			38			172	
Approach Delay, s/veh		11.9			15.4			16.4			18.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.6	30.1		15.7	12.6	23.1		15.7
Change Period (Y+Rc), s	4.9	5.3		4.9	4.9	5.3		4.9
Max Green Setting (Gmax), s	20.0	50.0		33.0	30.0	40.0		20.0
Max Q Clear Time (g_c+I1), s	2.3	8.9		7.3	7.9	13.1		4.0
Green Ext Time (p_c), s	0.0	3.8		0.4	0.3	4.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	672	5	15	803	115	10	0	25	495	0	355
Future Volume (veh/h)	204	672	5	15	803	115	10	0	25	495	0	355
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		0.96	0.97		1.00	1.00		0.94
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	215	707	3	16	845	82	11	0	0	521	0	99
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	248	1036	860	32	809	656	350	0	0	479	0	410
Arrive On Green	0.14	0.55	0.55	0.02	0.43	0.43	0.27	0.00	0.00	0.27	0.00	0.27
Sat Flow, veh/h	1781	1870	1552	1781	1870	1518	1021	0	0	1415	0	1492
Grp Volume(v), veh/h	215	707	3	16	845	82	11	0	0	521	0	99
Grp Sat Flow(s),veh/h/ln	1781	1870	1552	1781	1870	1518	1021	0	0	1415	0	1492
Q Serve(g_s), s	12.3	28.2	0.1	0.9	45.0	3.4	0.7	0.0	0.0	22.5	0.0	5.4
Cycle Q Clear(g_c), s	12.3	28.2	0.1	0.9	45.0	3.4	6.1	0.0	0.0	28.6	0.0	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	248	1036	860	32	809	656	350	0	0	479	0	410
V/C Ratio(X)	0.87	0.68	0.00	0.50	1.05	0.12	0.03	0.00	0.00	1.09	0.00	0.24
Avail Cap(c_a), veh/h	428	1036	860	428	809	656	355	0	0	479	0	410
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	1.00
Uniform Delay (d), s/veh	43.9	16.7	10.4	50.7	29.5	17.7	31.7	0.0	0.0	39.3	0.0	29.3
Incr Delay (d2), s/veh	3.8	1.5	0.0	4.6	44.1	0.0	0.0	0.0	0.0	66.8	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	5.6	11.8	0.0	0.5	29.1	1.2	0.2	0.0	0.0	21.3	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	18.2	10.4	55.2	73.6	17.8	31.7	0.0	0.0	106.1	0.0	29.4
LnGrp LOS	D	B	B	E	F	B	C	A	A	F	A	C
Approach Vol, veh/h		925			943			11			620	
Approach Delay, s/veh		25.0			68.4			31.7			93.8	
Approach LOS		C			E			C			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	63.4		33.7	19.6	50.8		33.7
Change Period (Y+Rc), s	5.1	5.8		5.1	5.1	5.8		* 5.1
Max Green Setting (Gmax), s	25.0	45.0		28.6	25.0	45.0		* 29
Max Q Clear Time (g_c+I1), s	2.9	30.2		30.6	14.3	47.0		8.1
Green Ext Time (p_c), s	0.0	2.9		0.0	0.2	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	651	374	30	700	165	260	213	30	255	317	112
Future Volume (veh/h)	154	651	374	30	700	165	260	213	30	255	317	112
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		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	685	235	32	737	106	274	224	20	268	334	21
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	194	1611	708	53	700	582	305	401	35	326	474	207
Arrive On Green	0.11	0.45	0.45	0.03	0.37	0.37	0.17	0.12	0.12	0.18	0.13	0.13
Sat Flow, veh/h	1781	3554	1561	1781	1870	1557	1781	3296	291	1781	3554	1553
Grp Volume(v), veh/h	162	685	235	32	737	106	274	120	124	268	334	21
Grp Sat Flow(s),veh/h/ln	1781	1777	1561	1781	1870	1557	1781	1777	1811	1781	1777	1553
Q Serve(g_s), s	8.8	12.9	4.7	1.8	37.0	2.4	14.9	6.3	6.4	14.3	8.9	0.9
Cycle Q Clear(g_c), s	8.8	12.9	4.7	1.8	37.0	2.4	14.9	6.3	6.4	14.3	8.9	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	194	1611	708	53	700	582	305	216	220	326	474	207
V/C Ratio(X)	0.84	0.43	0.33	0.61	1.05	0.18	0.90	0.55	0.56	0.82	0.70	0.10
Avail Cap(c_a), veh/h	270	1611	708	270	700	582	324	647	659	326	1293	565
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	43.2	18.3	4.2	47.4	31.0	6.0	40.1	40.9	41.0	38.8	41.0	21.3
Incr Delay (d2), s/veh	10.8	0.1	0.1	4.1	49.0	0.1	24.3	0.8	0.8	14.4	0.7	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	4.4	5.2	2.9	0.8	25.5	1.5	8.3	2.7	2.8	7.3	3.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	18.4	4.3	51.6	79.9	6.1	64.4	41.8	41.8	53.2	41.7	21.4
LnGrp LOS	D	B	A	D	F	A	E	D	D	D	D	C
Approach Vol, veh/h		1082			875			518			623	
Approach Delay, s/veh		20.7			69.9			53.8			46.0	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	50.2	22.0	18.6	15.9	42.4	23.2	17.4
Change Period (Y+Rc), s	5.1	5.4	5.1	5.4	5.1	5.4	5.1	5.4
Max Green Setting (Gmax), s	15.0	37.0	18.0	36.0	15.0	37.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	10.8	14.9	16.9	10.9	10.8	39.0	16.3	8.4
Green Ext Time (p_c), s	0.0	3.7	0.1	1.3	0.1	0.0	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

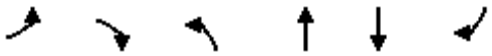
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	15	0	0	51	15	1219	18	71	864	35
Future Vol, veh/h	0	0	15	0	0	51	15	1219	18	71	864	35
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	125	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	16	0	0	54	16	1283	19	75	909	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	928	-	-	651	946	0	0	1302	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.23	-	-	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.319	-	-	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	0	0	324	0	0	412	723	-	-	530	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	324	-	-	412	723	-	-	530	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.7	15	0.1	0.9
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	723	-	-	324	412	530	-	-
HCM Lane V/C Ratio	0.022	-	-	0.049	0.13	0.141	-	-
HCM Control Delay (s)	10.1	-	-	16.7	15	12.9	-	-
HCM Lane LOS	B	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.4	0.5	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	107	253	386	899	702	117
Future Volume (veh/h)	107	253	386	899	702	117
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	37	406	946	739	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	165	147	549	2568	896	760
Arrive On Green	0.09	0.09	0.16	0.72	0.48	0.48
Sat Flow, veh/h	1781	1585	3456	3647	1870	1585
Grp Volume(v), veh/h	113	37	406	946	739	78
Grp Sat Flow(s),veh/h/ln	1781	1585	1728	1777	1870	1585
Q Serve(g_s), s	3.6	1.3	6.5	5.8	19.7	1.6
Cycle Q Clear(g_c), s	3.6	1.3	6.5	5.8	19.7	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	165	147	549	2568	896	760
V/C Ratio(X)	0.68	0.25	0.74	0.37	0.82	0.10
Avail Cap(c_a), veh/h	679	604	840	5344	2200	1864
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	25.5	24.4	23.2	3.0	13.0	8.3
Incr Delay (d2), s/veh	4.9	0.9	2.0	0.1	2.0	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	1.6	1.2	2.5	0.8	6.6	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.4	25.3	25.2	3.1	15.0	8.3
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	150			1352	817	
Approach Delay, s/veh	29.1			9.8	14.4	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		47.7		10.3	14.1	33.6
Change Period (Y+Rc), s		5.8		4.9	4.9	5.8
Max Green Setting (Gmax), s		87.2		22.1	14.1	68.2
Max Q Clear Time (g_c+I1), s		7.8		5.6	8.5	21.7
Green Ext Time (p_c), s		7.9		0.3	0.7	6.1

Intersection Summary		
HCM 6th Ctrl Delay		12.6
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1016	10	25	838	35	15	0	20	30	0	20
Future Volume (veh/h)	25	1016	10	25	838	35	15	0	20	30	0	20
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	1069	6	26	882	36	16	0	1	32	0	3
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	57	1641	732	57	1606	66	278	0	66	262	0	66
Arrive On Green	0.03	0.46	0.46	0.03	0.46	0.46	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1781	3554	1585	1781	3480	142	1352	0	1585	1416	0	1585
Grp Volume(v), veh/h	26	1069	6	26	450	468	16	0	1	32	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1845	1352	0	1585	1416	0	1585
Q Serve(g_s), s	0.5	7.5	0.1	0.5	5.9	5.9	0.4	0.0	0.0	0.7	0.0	0.1
Cycle Q Clear(g_c), s	0.5	7.5	0.1	0.5	5.9	5.9	0.4	0.0	0.0	1.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	1641	732	57	820	852	278	0	66	262	0	66
V/C Ratio(X)	0.45	0.65	0.01	0.45	0.55	0.55	0.06	0.00	0.02	0.12	0.00	0.05
Avail Cap(c_a), veh/h	1644	5466	2438	1096	2186	2270	1089	0	975	1641	0	1609
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	15.5	6.7	4.7	15.5	6.3	6.3	15.2	0.0	14.9	15.7	0.0	15.0
Incr Delay (d2), s/veh	2.1	0.2	0.0	2.1	0.2	0.2	0.0	0.0	0.0	0.1	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	0.2	1.2	0.0	0.2	1.0	1.0	0.1	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	6.9	4.7	17.5	6.5	6.5	15.2	0.0	15.0	15.8	0.0	15.1
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h		1101			944			17			35	
Approach Delay, s/veh		7.1			6.8			15.2			15.7	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	20.3		6.3	5.9	20.3		6.3
Change Period (Y+Rc), s	4.9	5.3		4.9	4.9	5.3		4.9
Max Green Setting (Gmax), s	20.0	50.0		33.0	30.0	40.0		20.0
Max Q Clear Time (g_c+I1), s	2.5	9.5		3.1	2.5	7.9		2.4
Green Ext Time (p_c), s	0.0	5.5		0.0	0.0	3.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1053	10	35	818	315	5	0	20	340	0	140
Future Volume (veh/h)	143	1053	10	35	818	315	5	0	20	340	0	140
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	151	1108	6	37	861	273	5	0	2	358	0	45
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	184	1004	851	58	871	738	311	11	103	457	0	420
Arrive On Green	0.10	0.54	0.54	0.03	0.47	0.47	0.27	0.00	0.27	0.27	0.00	0.27
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	931	40	388	1415	0	1585
Grp Volume(v), veh/h	151	1108	6	37	861	273	7	0	0	358	0	45
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1359	0	0	1415	0	1585
Q Serve(g_s), s	8.0	51.9	0.2	2.0	44.0	10.7	0.0	0.0	0.0	21.2	0.0	2.1
Cycle Q Clear(g_c), s	8.0	51.9	0.2	2.0	44.0	10.7	2.1	0.0	0.0	23.3	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	0.71		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	184	1004	851	58	871	738	424	0	0	457	0	420
V/C Ratio(X)	0.82	1.10	0.01	0.64	0.99	0.37	0.02	0.00	0.00	0.78	0.00	0.11
Avail Cap(c_a), veh/h	461	1004	851	461	871	738	474	0	0	501	0	469
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	1.00
Uniform Delay (d), s/veh	42.4	22.4	10.4	46.2	25.5	16.6	26.2	0.0	0.0	34.4	0.0	26.9
Incr Delay (d2), s/veh	3.4	61.2	0.0	4.3	27.4	0.1	0.0	0.0	0.0	6.3	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	3.6	36.8	0.1	0.9	24.1	3.6	0.1	0.0	0.0	8.8	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	83.6	10.4	50.4	53.0	16.8	26.2	0.0	0.0	40.7	0.0	26.9
LnGrp LOS	D	F	B	D	D	B	C	A	A	D	A	C
Approach Vol, veh/h		1265			1171			7			403	
Approach Delay, s/veh		78.7			44.5			26.2			39.2	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	57.7		30.7	15.1	50.8		30.7
Change Period (Y+Rc), s	5.1	5.8		5.1	5.1	5.8		* 5.1
Max Green Setting (Gmax), s	25.0	45.0		28.6	25.0	45.0		* 29
Max Q Clear Time (g_c+I1), s	4.0	53.9		25.3	10.0	46.0		4.1
Green Ext Time (p_c), s	0.0	0.0		0.3	0.2	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		58.9
HCM 6th LOS		E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	915	324	45	746	315	269	336	30	250	320	191
Future Volume (veh/h)	225	915	324	45	746	315	269	336	30	250	320	191
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	963	241	47	785	208	283	354	25	263	337	36
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	257	1651	736	64	666	564	310	450	32	293	441	197
Arrive On Green	0.14	0.46	0.46	0.04	0.36	0.36	0.17	0.13	0.13	0.16	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	1870	1585	1781	3368	237	1781	3554	1585
Grp Volume(v), veh/h	237	963	241	47	785	208	283	186	193	263	337	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	1781	1777	1828	1781	1777	1585
Q Serve(g_s), s	13.7	20.7	4.9	2.7	37.0	5.9	16.2	10.5	10.6	15.0	9.5	1.5
Cycle Q Clear(g_c), s	13.7	20.7	4.9	2.7	37.0	5.9	16.2	10.5	10.6	15.0	9.5	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	257	1651	736	64	666	564	310	237	244	293	441	197
V/C Ratio(X)	0.92	0.58	0.33	0.74	1.18	0.37	0.91	0.78	0.79	0.90	0.76	0.18
Avail Cap(c_a), veh/h	257	1651	736	257	666	564	310	615	633	308	1231	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)	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	43.9	20.4	4.2	49.6	33.5	8.6	42.2	43.6	43.6	42.6	44.1	21.2
Incr Delay (d2), s/veh	35.4	0.4	0.1	6.1	95.7	0.1	29.6	2.2	2.2	25.5	1.1	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	8.4	8.1	3.1	1.3	33.5	3.4	9.4	4.6	4.8	8.5	4.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.3	20.8	4.3	55.7	129.1	8.7	71.8	45.8	45.8	68.1	45.1	21.3
LnGrp LOS	E	C	A	E	F	A	E	D	D	E	D	C
Approach Vol, veh/h		1441			1040			662			636	
Approach Delay, s/veh		27.7			101.7			56.9			53.3	
Approach LOS		C			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	53.7	23.2	18.3	20.1	42.4	22.2	19.3
Change Period (Y+Rc), s	5.1	5.4	5.1	5.4	5.1	5.4	5.1	5.4
Max Green Setting (Gmax), s	15.0	37.0	18.0	36.0	15.0	37.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	11.7	22.7	18.2	11.5	15.7	39.0	17.0	12.6
Green Ext Time (p_c), s	0.0	4.2	0.0	1.4	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	57.5
HCM 6th LOS	E

Appendix E. Traffic Signal Warrants

FEHR PEERS

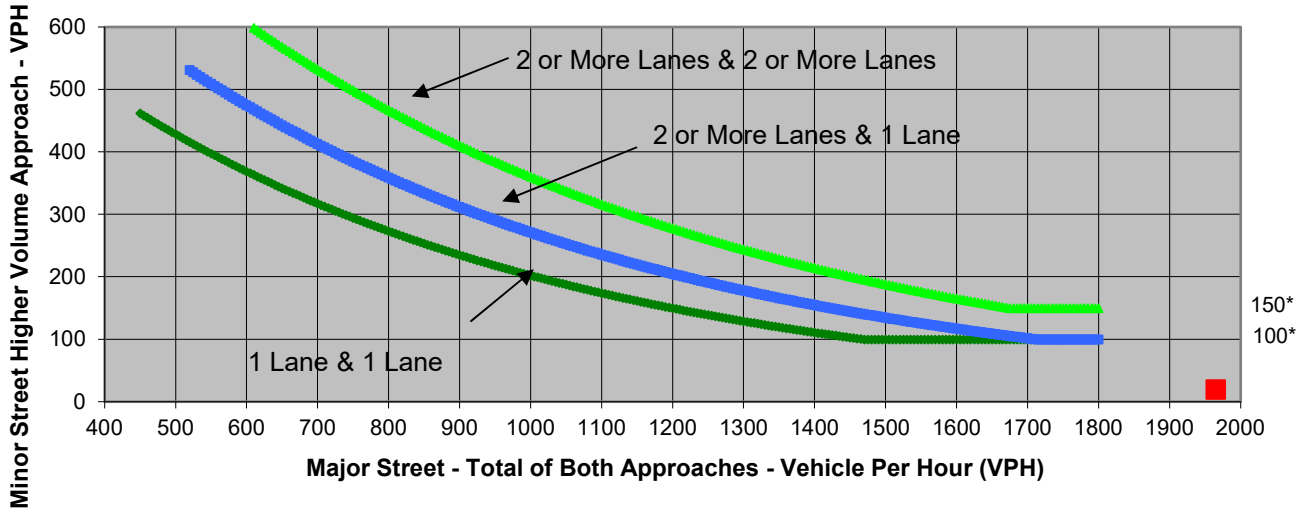
Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Existing
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	4	0	5	0
Through	935	1,020	0	
Right	0	6	15	0
Total	939	1,026	20	0

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Grand Avenue	Jamieson Drive	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,965**	**20**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Existing
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	4	0	5	0
Through	935	1,020	0	0
Right	0	6	15	0
Total	939	1,026	20	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	37.9
Approach with Worst Case Delay	EB
Total Vehicles on Approach	20

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing	**0.2**	**20**	**1,985**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

Major Street	SR-74
Minor Street	Jamieson Drive

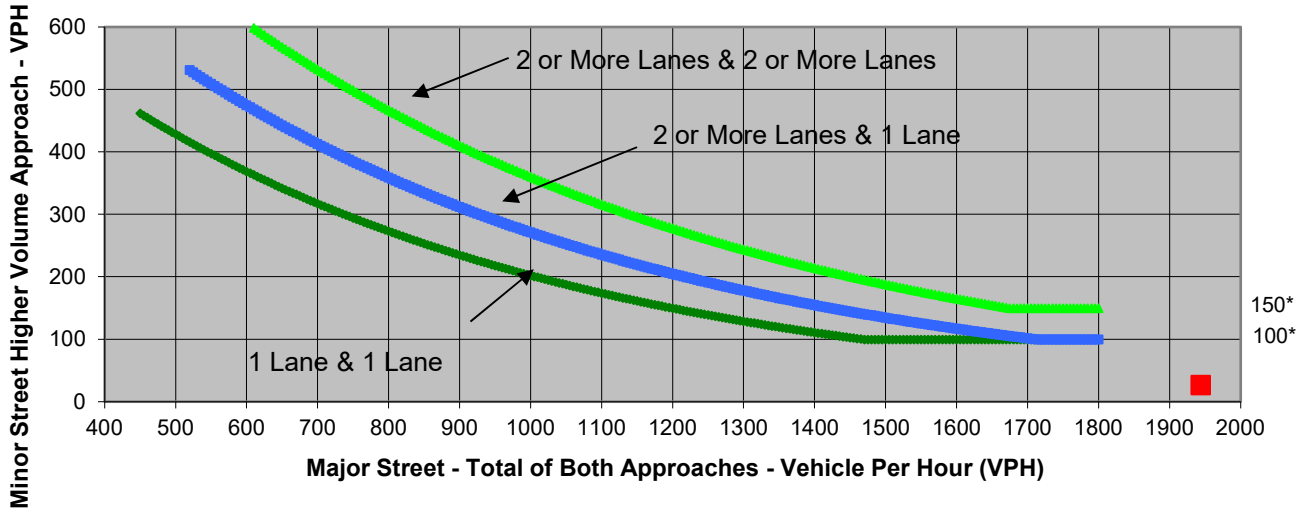
Project	Lakeside TIA
Scenario	Existing
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	14	0
Through	1,126	775	0	
Right	0	31	13	0
Total	1,138	806	27	0

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Grand Avenue	Jamieson Drive	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,944**	**27**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Existing
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	14	0
Through	1,126	775	0	0
Right	0	31	13	0
Total	1,138	806	27	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	53.2
Approach with Worst Case Delay	EB
Total Vehicles on Approach	27

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing	**0.4**	**27**	**1,971**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

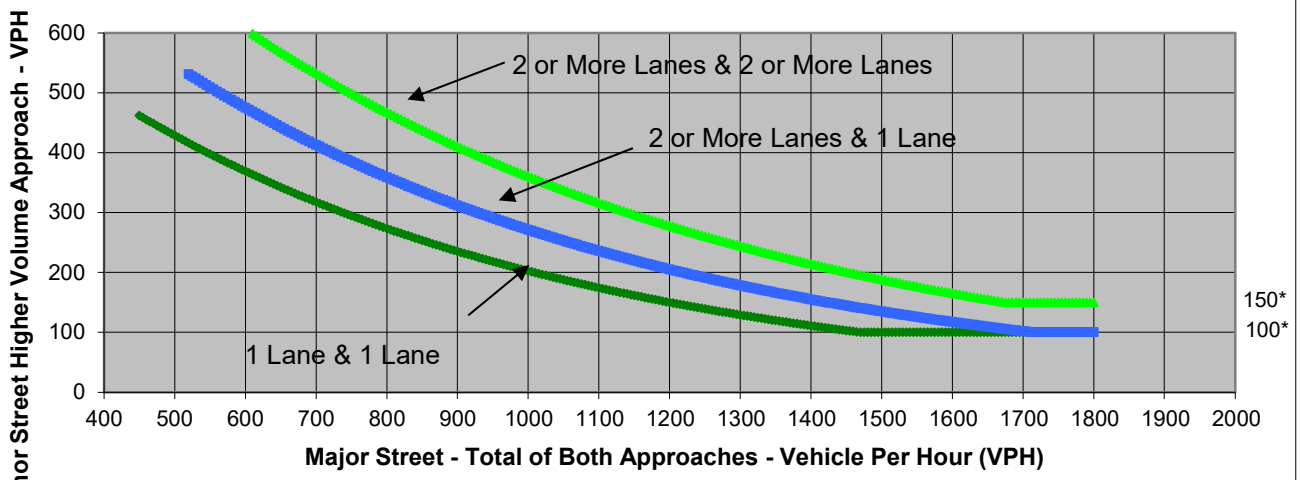
Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Project Completion
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	22		
Through	975	1,081		
Right	5	10	15	78
Total	985	1,113	15	78

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Grand Avenue	Jamieson Drive	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,098**	**78**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Project Completion
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	22	0	0
Through	975	1,081	0	0
Right	5	10	15	78
Total	985	1,113	15	78

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	21
Approach with Worst Case Delay	EB
Total Vehicles on Approach	15

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Project Completion	**0.1**	**78**	**2,191**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

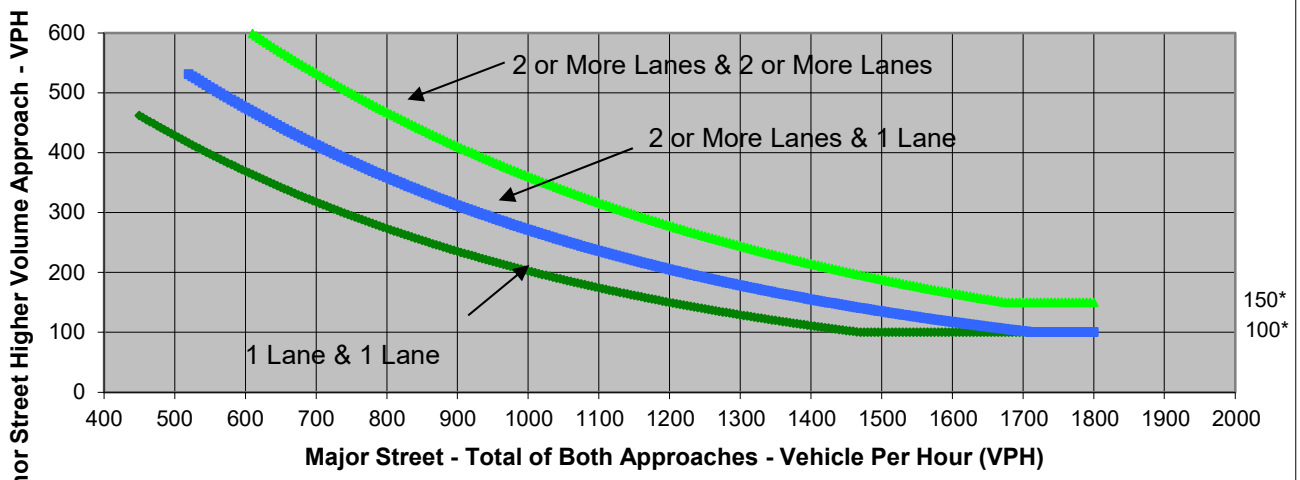
Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Project Completion
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	15	71		
Through	1,175	820		
Right	18	35	15	51
Total	1,208	926	15	51

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Grand Avenue	Jamieson Drive	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,134**	**51**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Project Completion
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	15	71	0	0
Through	1,175	820	0	0
Right	18	35	15	51
Total	1,208	926	15	51

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	16
Approach with Worst Case Delay	EB
Total Vehicles on Approach	15

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Project Completion	**0.1**	**51**	**2,200**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

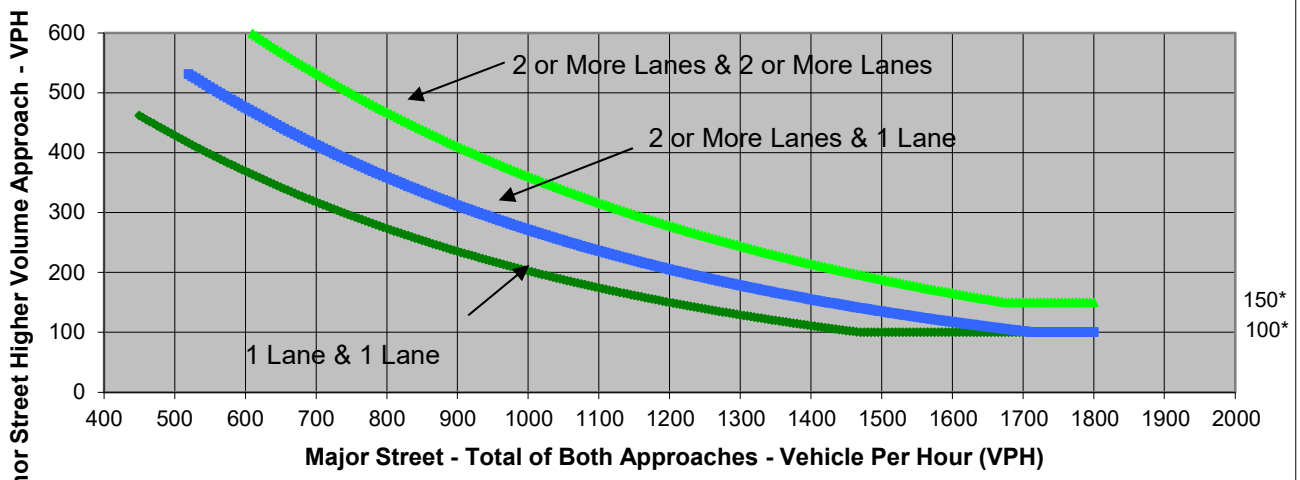
Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Cumulative
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	22		
Through	1,015	1,113		
Right	5	10	15	78
Total	1,025	1,145	15	78

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Grand Avenue	Jamieson Drive	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,170**	**78**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Cumulative
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	22	0	0
Through	1,015	1,113	0	0
Right	5	10	15	78
Total	1,025	1,145	15	78

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	22
Approach with Worst Case Delay	EB
Total Vehicles on Approach	15

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative	**0.1**	**78**	**2,263**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

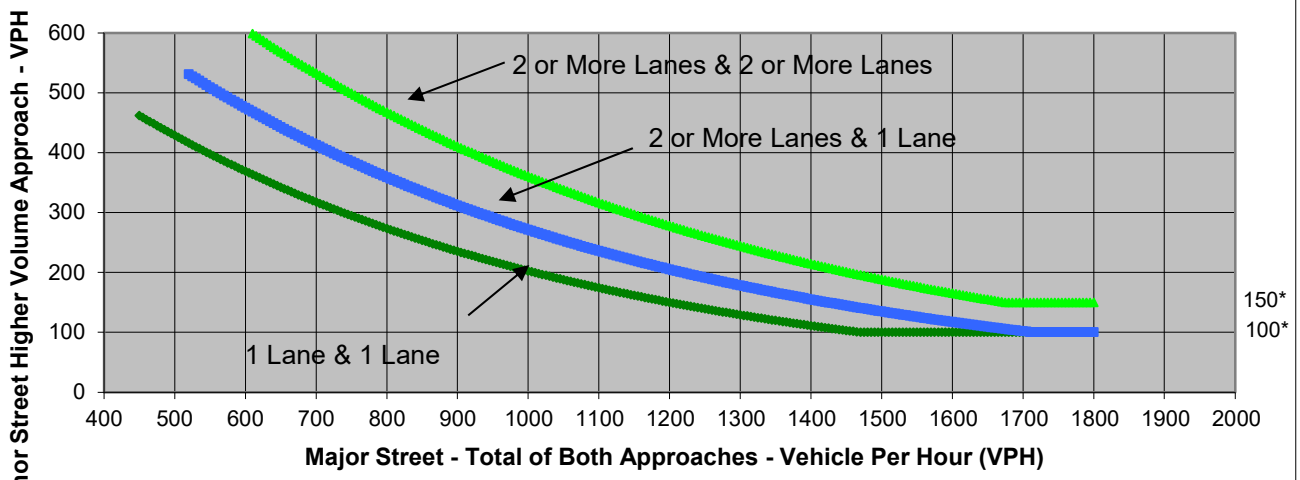
Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Cumulative
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	18	71		
Through	1,219	864		
Right	15	35	15	51
Total	1,252	970	15	51

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Grand Avenue	Jamieson Drive	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,222**	**51**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	SR-74	Project	Lakeside TIA
Minor Street	Jamieson Drive	Scenario	Cumulative
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	18	71		
Through	1,219	864		
Right	15	35	15	51
Total	1,252	970	15	51

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	17
Approach with Worst Case Delay	EB
Total Vehicles on Approach	15

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative	**0.1**	**51**	**2,288**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		