Appendix H:
Transportation Supporting Information

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Transportation Impact Study

Shiloh Mixed Use Project

Windsor, California

January 2020

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CHAPTER 1 - INTRODUCTION & STUDY METHODOLOGY

This report summarizes the results of the transportation impact study (TIS) for the proposed Shiloh Road Mixed Use development at 1200 Shiloh Road in Windsor, California.

Purpose & Report Overview

The purpose of the TIS is to evaluate potential operational impacts from the addition of project-related traffic, identify short- and long-term roadway circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process. The study was conducted in accordance with the transportation impact criteria established by the Town of Windsor, and is consistent with standard transportation engineering guidelines.

This report is organized into the following chapters:

- Chapter 1 Introduction & Study Methodology
- Chapter 2 Existing Conditions
- Chapter 3 Project Impacts
- Chapter 4 Cumulative Impacts

Site Location & Project Description

The project site is located at the southwest corner of Shiloh Road and Skylane Boulevard. **Figure 1A** shows the project site location and adjacent streets. **Figure 1B** provides an image of the project site. The project site is currently occupied by an existing single-family dwelling.

The proposed project would provide 27 multi-family dwellings and a 2,844 square foot (sf) corner market on the ground floor. The project proposes to provide 80 off-street motor vehicle parking spaces, including 28 covered spaces, and 42 bicycle parking spaces including 30 long-term bicycle parking spaces and bicycle racks providing 12 short-term bicycle parking spaces. The proposed building plan and provision of parking is illustrated by the architectural site plan on **Figure 2A** and **Appendix A**. Site access would be provided from both Shiloh Road and Skylane Boulevard as shown on the engineering site plan provided as **Figure 2B**. Sidewalks would be installed on both street frontages, providing direct access to the market and connections to internal walkways. Motor vehicle and bicycle access would be provided via proposed driveways on both streets.

- The project would provide a left-turn pocket for vehicles approaching the driveway westbound on Shiloh Road with approximately 75 to 100 feet of left-turn storage. The existing eastbound left-turn pocket would be reduced in length from 260 feet to approximately 150 feet to accommodate the proposed westbound left-turn pocket into the project site.
- The project would provide an eastbound right-turn lane on Shiloh Road, approaching both the project driveway and Skylane Boulevard, along the project frontage, approximately 350 feet in length.

Vicinity Map

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X Study Intersection

Project Site

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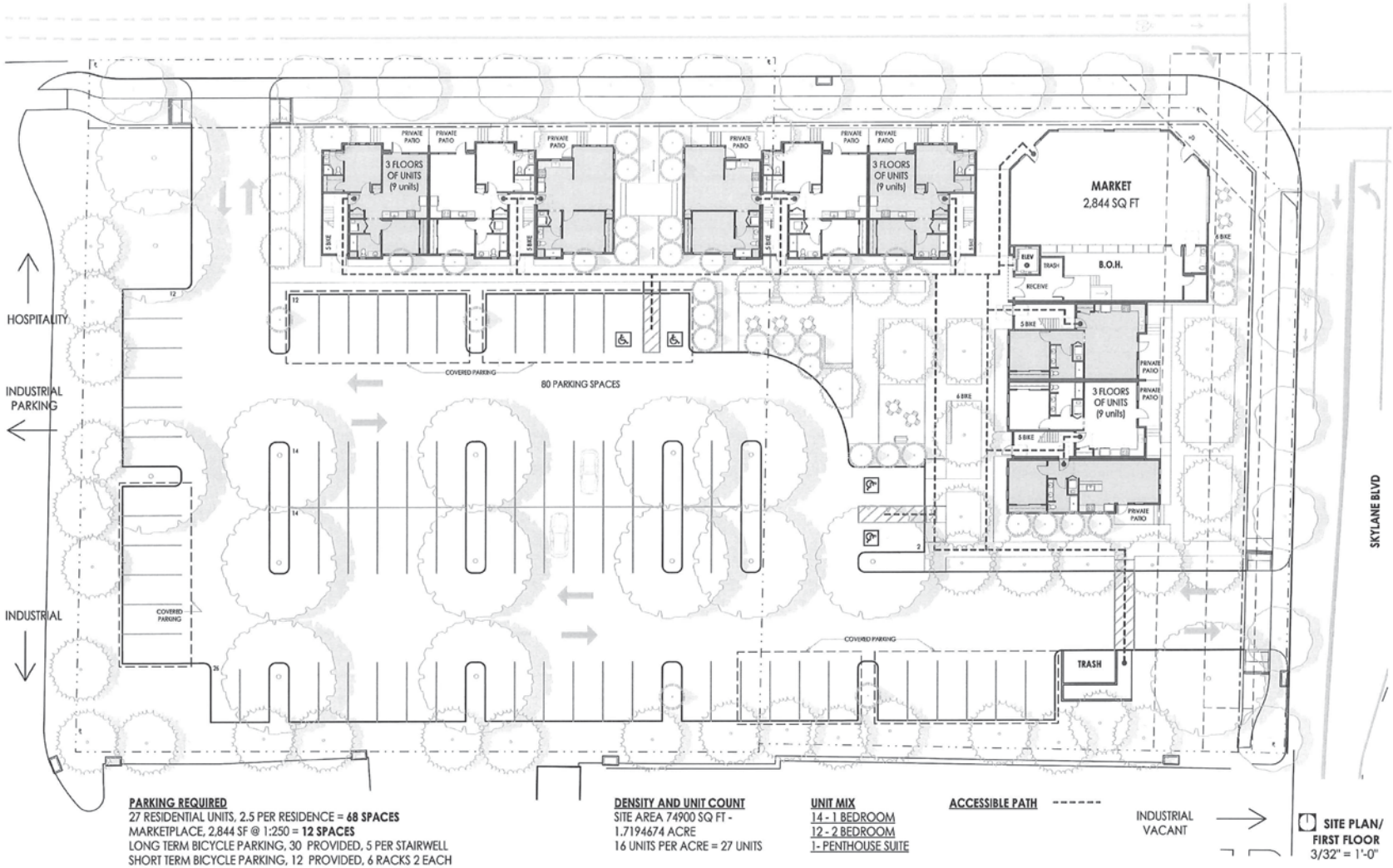
Figure 1B: Project Site

Architectural Site Plan



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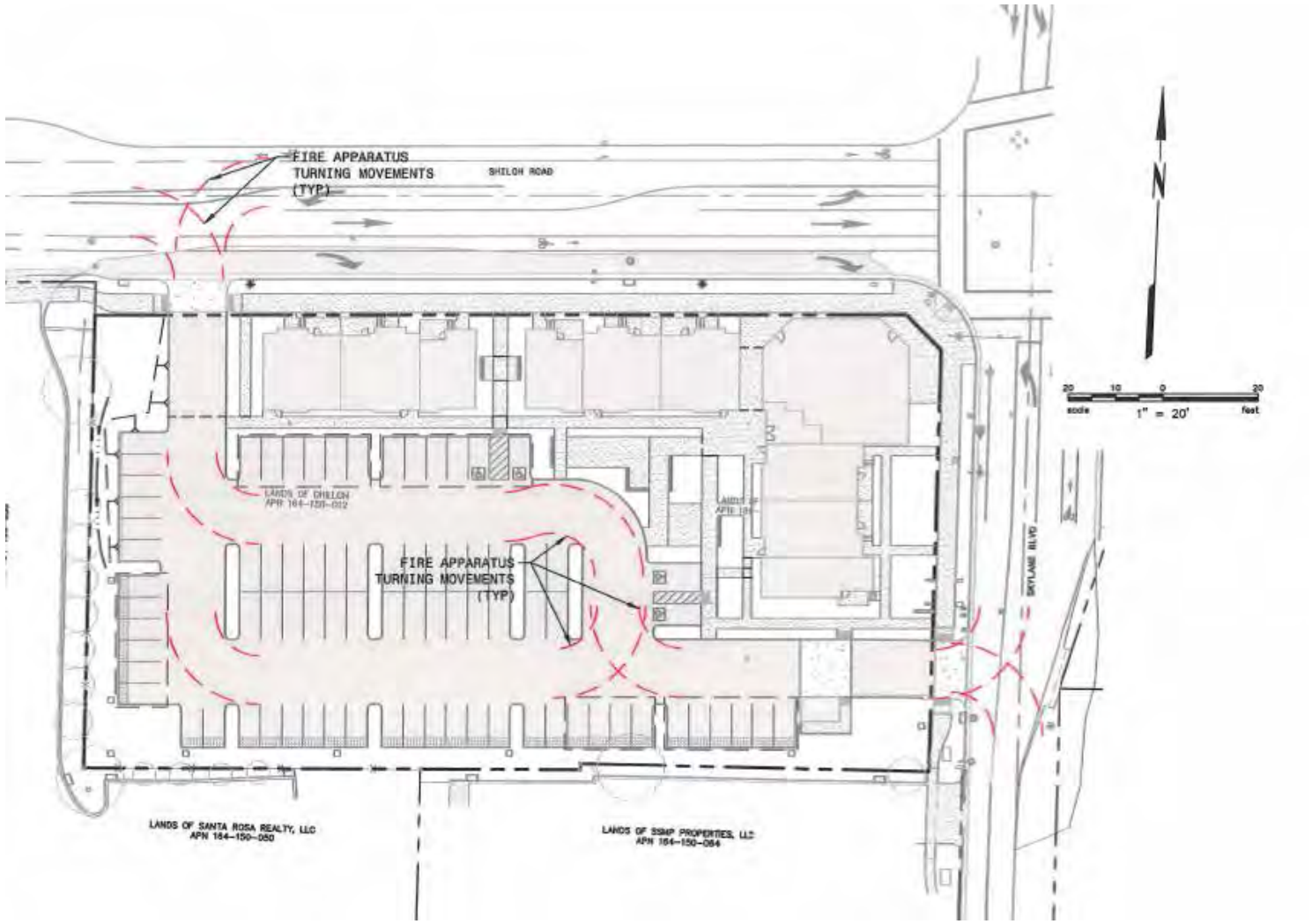
Engineering Site Plan



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Analysis Scenarios

This study addresses the following four traffic scenarios:

1. **Existing Traffic Conditions** – This scenario evaluates the study intersections based on existing traffic volumes, lane geometry and traffic controls.
2. **Existing plus Project Traffic Conditions** – This scenario is identical to Existing Conditions, but with the addition of traffic from the proposed project.
3. **Cumulative No Project Traffic Conditions** – This scenario evaluates total traffic volumes and roadway conditions based on the *Windsor 2040 General Plan* horizon year 2040 without the proposed project.
4. **Cumulative plus Project Traffic Conditions** – This scenario is similar to Cumulative Conditions but includes traffic generated by the proposed project.

Level of Service Analysis Methodology

LOS is a qualitative index of the performance of an element of the transportation system. It is a rating scale running from A to F, with LOS A indicating no congestion, and LOS F indicating unacceptable congestion and delays. LOS in this study describes the operating conditions for unsignalized and signalized intersections. The *Highway Capacity Manual (HCM)* is the standard reference published by the Transportation Research Board, and contains the specific criteria and methods to be used in assessing LOS. There are several software packages that have been developed to implement HCM methodologies. For this study, Vistro software is used to calculate the LOS at the study intersections.

Tables 1 and 2 provide LOS definitions for both signalized and stop-controlled intersections. The study intersections were evaluated using the signalized methodology from HCM. This methodology is based on factors including intersection geometries, traffic volumes, signal timing, phasing, whether or not the signals are coordinated, truck traffic, and bicycle and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this methodology. For purposes of this study, delays were calculated using signal timings consistent with the *Windsor General Plan EIR*.

Table 1: - Intersection Level of Service Definitions for Signalized Intersections

LOS	Description
A	Very low control delay, up to 10 seconds per vehicle. Progression is extremely favorable, and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	Control delay greater than 10 and up to 20 seconds per vehicle. There is good progression or short cycle lengths or both. More vehicles stop causing higher levels of delay.
C	Control delay greater than 20 and up to 35 seconds per vehicle. Higher delays are caused by fair progression or longer cycle lengths or both. Individual cycle failures may begin to appear. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflow occurs. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	Control delay greater than 35 and up to 55 seconds per vehicle. The influence of congestions becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volumes. Many vehicles stop, the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Control delay greater than 55 and up to 80 seconds per vehicle. The limit of acceptable delay. High delays usually indicate poor progression, long cycle lengths, and high volumes. Individual cycle failures are frequent.
F	Control delay in excess of 80 seconds per vehicle. Unacceptable to most drivers. Oversaturation, arrival flow rates exceed the capacity of the intersection. Many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to higher delay.

Source: Highway Capacity Manual (HCM)

Table 2: Level of Service Definitions for Stop-controlled Intersections

LOS	Description
A	Very low control delay less than 10 seconds per vehicle for each movement subject to delay.
B	Low control delay greater than 10 and up to 15 seconds per vehicle for each movement subject to delay.
C	Acceptable control delay greater than 15 and up to 25 seconds per vehicle for each movement subject to delay.
D	Tolerable control delay greater than 25 and up to 35 seconds per vehicle for each movement subject to delay.
E	Limit of tolerable control delay greater than 35 and up to 50 seconds per vehicle for each movement subject to delay.
F	Unacceptable control delay in excess of 50 seconds per vehicle for each movement subject to delay.

Source: HCM

Significant Impact Criteria/Level of Service Standards

The Town of Windsor's adopted LOS Standard is contained in the Town's General Plan and reads as follows:

> The Town shall adopt a level of services standard D for crosstown streets and signalized intersections. The Town shall recognize that reducing congestion must be balanced against improvements costs and community character concerns. The standard shall be used for planning new facilities and for monitoring proposed changes to the General Plan. The standard for local streets should be based on volume threshold instead of level of service designations.

For purposes of this study, off-site traffic impacts are considered potentially significant if:

- The project results in unacceptable LOS E or F at any study intersection; or
- At study intersections operating at an unacceptable LOS E or F without the project, impacts will be potentially significant if the Project adds more than five seconds of average delay to the intersection.

Impacts to left-turn vehicle queues would be significant if:

a) The 95th percentile queue length can be contained within the available stacking length without the project, and the project causes the queue to exceed the stacking length; or

b) The queue length exceeds the available stacking length without the project and the project increases he 95th percentile queue by more than 10 feet, or approximately one-half a car-length.

CHAPTER 2 - EXISTING CONDITIONS

Roadway Network

The *Windsor 2040 General Plan* street network designations are shown on **Figure 4**. The key roadways adjacent to the project site are discussed below.

Shiloh Road is designated as a 2-lane Crosstown street bordering the project site that provides one motor vehicle lane and one bicycle lane in both directions for east-west travel, connecting with U.S. 101 to the east and Windsor Road to the west. The *Windsor 2040 General Plan* identifies the segments east of Skylane Road for future expansion to five motor lanes (two per direction plus a center turn-lane or median) and bicycle lanes. The Windsor *Bicycle and Pedestrian Master Plan* identifies Shiloh Road as an existing Class II bikeway with bicycle lanes .An existing sidewalk is provided on the north side of Shiloh Road across from the site but no sidewalks are provided on segments to the east or west. The south side of Shiloh Road, bordering the project site, is not yet equipped with a sidewalk. The posted speed limit is 45 miles per hour (mph) approaching the project site on the eastbound segment to the west of the project site, and 40 mph approaching the project site on westbound segment to the east of the project site.

Skylane Boulevard is designated as a 2-lane Crosstown street bordering the project site to the east that provides one motor vehicle lane in each direction for north-west travel with a 40 mph posted speed limit, connecting with Airport Boulevard to the south. Skylane Boulevard terminates at Shiloh Road where it becomes Golf Course Drive to the north. A sidewalk is provided on the west side of Skylane Boulevard immediately south of the project site but currently terminates at the south edge of the project site. Bicycle lanes are not yet provided on segments of Skylane Boulevard bordering the project site. The Windsor *Bicycle and Pedestrian Master Plan* identifies Skylane Boulevard as a proposed Class II bikeway with bicycle lanes.

Golf Course Drive is a 2-lane north-south local street, provided access to residential areas to the north of the project site. Golf Course Drive becomes Skylane Boulevard to the south of Shiloh Road. A sidewalk is provided on the east side of Golf Course Drive.

Conde Lane is a two-lane Crosstown street north of Mitchell Lane, and a three-lane Crosstown street south of Mitchell Lane, with one through lane in each direction, bicycle lanes and center medians with left-turn pockets at intersections south of Mitchell Lane that runs parallel to U.S. 101 between Windsor River Road and Shiloh Road. Conde Lane has a posted speed limit of 40 mph and provides a sidewalk on one side for most of its length.

U.S. 101 is the largest regional freeway in the area, providing north-south access throughout Sonoma County and to the adjacent counties of Marin (south) and Mendocino (north). To the north of Old Redwood Highway, US 101 provides two travel lanes in each direction, and to the south of Old Redwood Highway it provides three lanes in each direction (one of which is a high occupancy vehicle (HOV) lane). The posted speed limit is 65 miles per hour (mph), and access points in the Town of Windsor are found at Arata Lane and Old Redwood Highway in the north and Shiloh Road in the south.

Transit Service

The project site is located approximately 1,100 feet (less than one-fourth mile) from the nearest bus stop on the south side of Shiloh Road just east of Conde Lane, served by Sonoma County Transit (SCT) Route 66 that is named the "Windsor Shuttle". Route 66 operates weekdays between 7:15 a.m. and 5:08 p.m., and Saturdays between 9:35 a.m. and 3:27 p.m., with frequencies averaging roughly one bus per hour. From the project site: there is no sidewalk on the south side of Shiloh Road between Skylane Boulevard and Conde lane, but the bus stop can be accessed via an existing sidewalk on the north side of Shiloh Road.

Figure 3: Windsor 2040 General Plan Circulation System Map

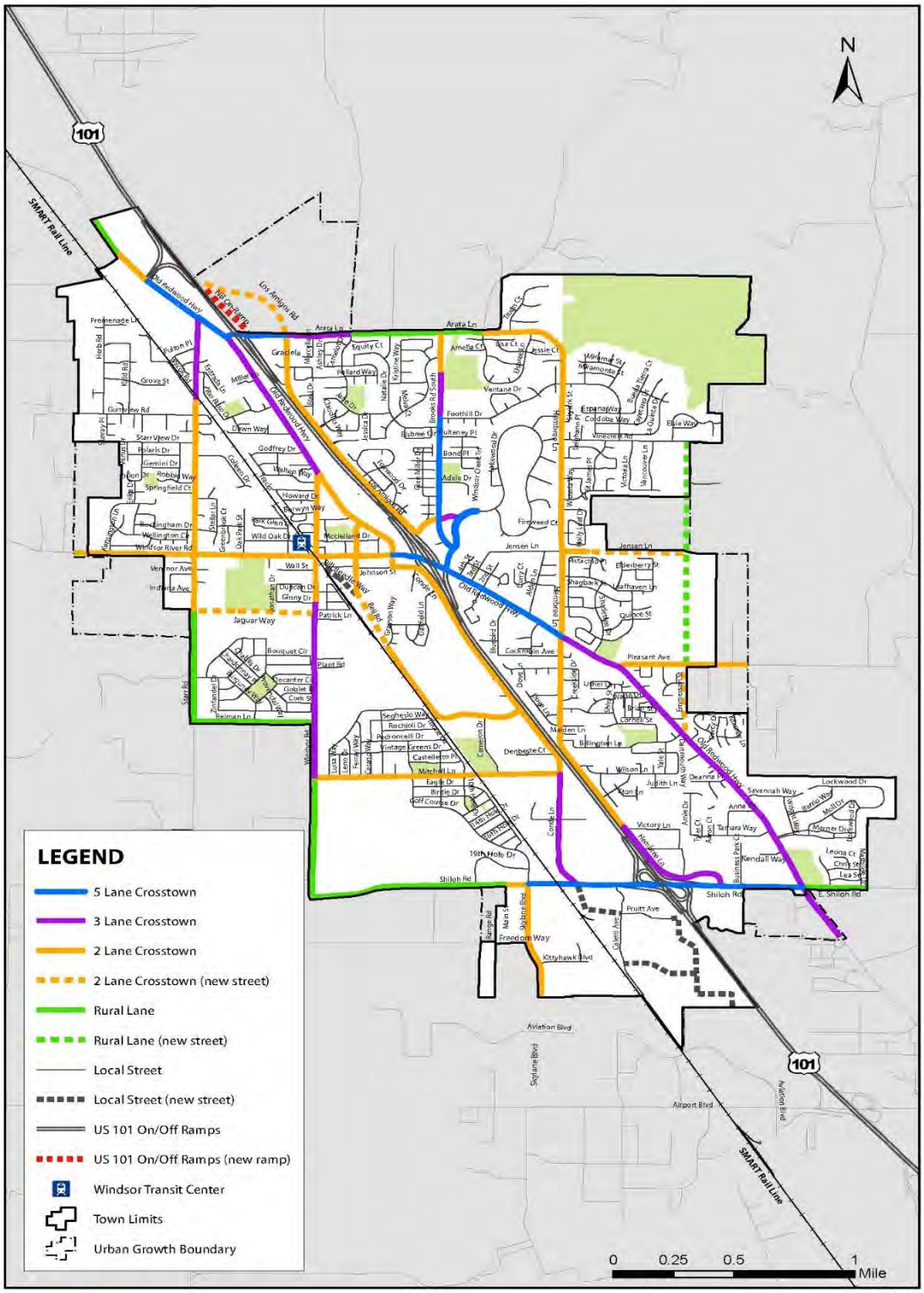


Figure M-1: Windsor 2040 General Plan Circulation System

Study Intersections

TJKM evaluated traffic conditions for study intersections, selected based on input from Town of Windsor staff, during the a.m. (7:00 a.m.-9:00 a.m.) and p.m. (4:00 p.m.-6:00 p.m.) peak periods for a typical weekday. All four study intersections are signalized. The study intersections, as shown on **Figure 1**, are as follows:

1. Shiloh Road & Skylane Boulevard/Golf Course Drive
2. Shiloh Road & Conde Lane
3. Shiloh Road & US 101 Southbound Off-Ramp
4. Shiloh Road & US 101 Northbound Off-Ramp

Existing Intersection Levels of Service

Peak period counts of motor vehicle, pedestrian and bicycle volumes at each study intersection were conducted on Thursday, December 13, 2018, a weekday with clear weather. Detailed data sheets from the intersection counts are provided in **Appendix B**.

Figure 4 shows the existing motor vehicle lane configurations at each study intersection**. Figure 5** summarizes the existing peak hour motor vehicle turning movement volumes at the study intersections. HCM 6th Edition methodology was used to evaluate intersection LOS utilizing Vistro software. Levels of Service worksheets for existing traffic conditions are provided in **Appendix C**.

Table 3 summarizes the existing motor vehicle levels of service (LOS) at the study intersections under existing conditions based on the counts conducted, and current lane geometries and intersection controls. All study intersections operate acceptably at LOS D or better under Existing Conditions during both the a.m. and p.m. peak hours.

Table 3: Existing Conditions - Intersection Level of Service

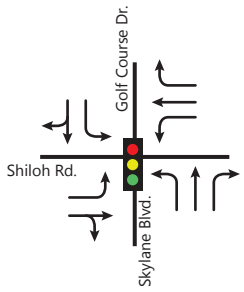
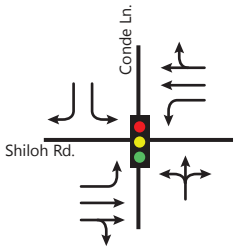
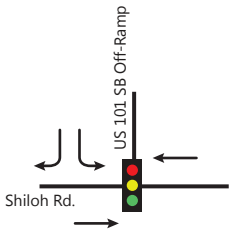
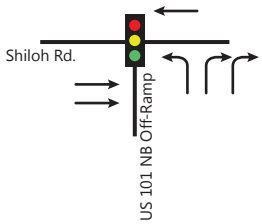
ID	Intersection	Intersection Control	A.M. Peak Hour		P.M. Peak Hour	
			LOS[1]	*Average Delay* [2]	LOS[1]	*Average Delay* [2]
1	Skylane Boulevard/Golf Course Drive & Shiloh Road	Signalized	D	35.4	B	13.4
2	Conde Lane & Shiloh Road	Signalized	B	18.0	C	28.6
3	US 101 Southbound Off-ramp & Shiloh Road	Signalized	B	10.1	A	7.6
4	US 101 Northbound Off-ramp & Shiloh Road	Signalized	C	22.2	B	13.8

Notes: **Bold indicates unacceptable Level of Service (LOS).**

1. LOS = Level of Service;

2. Average intersection delay expressed in seconds per vehicle for signalized intersections and all way stop controlled intersections.

Existing Lane Geometries & Traffic Controls

Intersection #1 Shiloh Rd. / Skylane Blvd. & Golf Course Dr.	**Intersection #2** Shiloh Rd. / Conde Ln.	**Intersection #3** Shiloh Rd. / US 101 SB Off-Ramp	**Intersection #4** Shiloh Rd. / US 101 NB Off-Ramp
			

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- X — Study Intersection
- Project Site
- Traffic Signal

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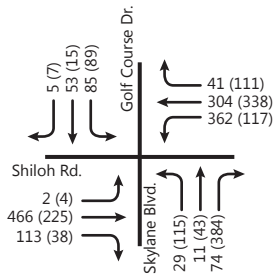
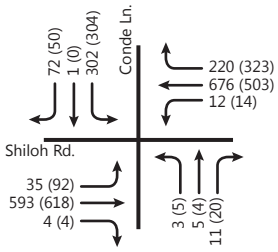
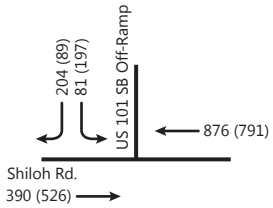
Existing Traffic Volumes

Intersection #1 Shiloh Rd. / Skylane Blvd. & Golf Course Dr.	**Intersection #2** Shiloh Rd. / Conde Ln.	**Intersection #3** Shiloh Rd. / US 101 SB Off-Ramp	**Intersection #4** Shiloh Rd. / US 101 NB Off-Ramp
			

LEGEND

- X — Study Intersection
- Project Site
- XX — AM Peak Hour Traffic Volume
- (XX) — PM Peak Hour Traffic Volume

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CHAPTER 3 - PROJECT IMPACTS

This chapter describes potential impacts under Existing plus Project Conditions, including a review of the proposed site access and on-site circulation.

Project Vehicle Trip Generation

Vehicle trip generation is defined as the number of "vehicle trips" produced by a particular land use or project. A vehicle trip is defined as a one-direction vehicle movement. The total number of vehicle trips generated by each land use includes inbound and outbound trips. Project vehicle trip generation was forecasted based on the Institute of Transportation Engineer's (ITE) publication *Trip Generation, 10th Edition*.

- The trip generation forecast for the residential portion of the development is based on the trip generation rate for Multifamily Housing – Low Rise (ITE land use code 220), consistent with the rate used by both the Windsor General Plan traffic forecast and the Windsor traffic mitigation fee program to forecast vehicle trips resulting from multi-family housing.
- The trip reduction forecast for the proposed 2,900-square foot market is based on the vehicle trip generation rate for convenience markets (ITE land use code 851). The convenience markets surveyed by ITE had an average size of 3,000 square feet, similar to the proposed market. A 51 percent reduction for pass-by trips was applied for trips to/from the market during the p.m. peak hour consistent with ITE data for convenience markets. ITE does not provide pass-by data for convenience markets during the a.m. peak hour, but at locations where ITE data provides both a.m. and p.m. peak hour pass-by rates for convenience markets with gas pumps: ITE data indicates that the a.m. pass-by rate is six percent higher than the p.m. rate. Based on that data: a 54 percent reduction for pass-by trips to/from the market was applied during the a.m. peak hour. For daily trips: a conservative pass-by rate of 45 percent was applied.
- An internal trip credit was applied to reflect a reduction in vehicle trips to/from the proposed residences, given proximity to the proposed market: the residential trip forecast was reduced by 5 percent, a conservatively low reduction. ITE data contained in the *Trip Generation Handbook* identifies internal reductions ranging from five to nine percent for residential development as part of mixed-use developments.

Table 4 summarizes the peak hour vehicle trip generation forecast. As shown, the proposed project is forecasted to generate a net increase of 94 vehicle trips during the a.m. peak hour, 78 vehicle trips during the p.m. peak hours and 1,390 daily vehicle trips.

Vehicle Trip Distribution and Assignment

Trip distribution is the process of determining the proportion of vehicles that would travel between the project site and various origins and destinations near the study area. Trip assignment is the process of determining the various paths vehicles would take between the project site and each origin and destination. The trip distribution assumptions for the proposed project were derived from a general knowledge of the study area, and the presumption that the majority of trips to/from the proposed market

would be from adjacent neighborhoods. Based on the overall distribution, the assignment of trips to specific routes was predicted based on field review at the proposed project location and existing travel patterns. The Vehicle Trip Distribution pattern is shown on **Table 5**. Vehicle trip assignment at each study intersection for the proposed project are illustrated in **Figure 6**.

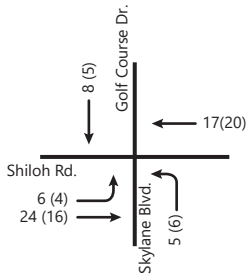
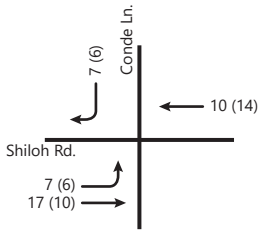
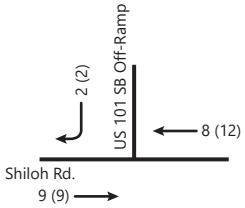
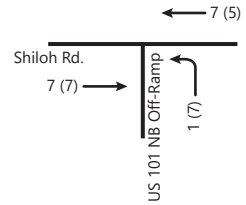
Table 4: Project Vehicle Trip Generation Forecast

Land Use (ITE Code)	Size	Daily		AM Peak Hour					PM Peak Hour				
		Rate	Trips	Rate	In %	In	Out	Total	Rate	In %	In	Out	Total
Multi-family Housing (220)	27 dwelling units	7.32	198	0.46	23%	3	9	12	0.56	63%	9	6	15
Market (851)	2,900 sq ft		2,211	62.54	50%	91	90	181	49.11	51%	72	70	142
Pass-by trip reduction applied to Market		*-45%*	*-995*	*-54%*		*-49*	*-49*	*-98*	*-51%*		*-36*	*-36*	*-72*
Mixed use trip reduction applied to Multi-family Housing		*-5%*	*-10*	*-5%*			*-1*	*-1*	*-5%*			*-1*	*-1*
Subtotal		*-*	*1,404*	*-*	*-*	*44*	*50*	*94*			*45*	*39*	*84*
Existing Land Use			*14*			*0*	*0*	*0*			*4*	*2*	*6*
Net Vehicle Trips			**1,390**			44	50	**94**			41	37	**78**

Table 5: Vehicle Trip Distribution

Origin/Destination	***Percent of Project Trips***
US 101 - South of Shiloh Road	10%
US 101 – North of Shiloh Road	5%
East of US 101	15%
Conde Lane – north of Shiloh Road	15%
Golf Course Drive – north of Shiloh Road	15%
Shiloh Road – west of project site	15%
Skylane Boulevard – south of project site	25%
Total	**100%**

Project Trips

Intersection #1 Shiloh Rd. / Skylane Blvd. & Golf Course Dr.	**Intersection #2** Shiloh Rd. / Conde Ln.	**Intersection #3** Shiloh Rd. / US 101 SB Off-Ramp	**Intersection #4** Shiloh Rd. / US 101 NB Off-Ramp
			

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- X — Study Intersection
- Project Site
- XX — AM Peak Hour Traffic Volume
- (XX) — PM Peak Hour Traffic Volume

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Traffic Impact Findings – Existing plus Project Conditions

Table 6 summarizes the results of the intersection LOS analysis under Existing plus Project conditions, and provides a comparison with Existing Conditions. Detailed LOS calculations and left-turn queue lengths at each intersection for Existing plus Project volumes are shown in **Appendix C**.

The results indicate all study intersections would continue to operate acceptably at LOS D or better under Existing plus Project Conditions. The proposed installation of an eastbound right-turn lane on Shiloh Road, approaching Skylane Boulevard, would reduce delay at the Shiloh Road intersection with Skylane Boulevard/Golf Course Drive with the project. At all study intersections, the project impact on LOS would be less than significant based on the Town's LOS threshold of D or better.

Table 7 summarizes the results of the left-turn queue comparison under Existing plus Project Conditions. The project's contribution to left-turn volumes at intersections with left-turn pockets is relatively small at most intersections. At all study intersections, the project contribution to left-turn queues is less than significant because the project does not cause the 95th percentile queue length to exceed the available stacking length or increase by more than 10 feet where the queue length exceeds the available stacking length without the project. Based on the above findings, traffic impacts resulting from the project under Existing plus Project Conditions considered ***less than significant***.

Table 6: Existing plus Project Conditions - Intersection Level of Service

ID #	*Intersection*	*Control*	*Peak Hour*	*Existing Conditions*		*Existing Plus Project Conditions*	
				LOS[1]	*Average Delay[2]*	*LOS[1]*	*Average Delay[2]*
1	Skylane Boulevard/Golf Course Drive & Shiloh Road	Signalized	A.M.	D	35.4	C[3]	22.9[3]
			P.M.	B	13.4	B	13.1[3]
2	Conde Lane & Shiloh Road	Signalized	A.M.	B	18.0	B	18.5
			P.M.	C	28.6	C	29.0
3	US 101 Southbound Off-ramp & Shiloh Road	Signalized	A.M.	B	10.1	B	10.4
			P.M.	A	7.6	A	7.4
4	US 101 Northbound Off-ramp & Shiloh Road	Signalized	A.M.	C	22.2	C	22.9
			P.M.	B	13.8	B	14.2

Notes: **Bold indicates unacceptable Level of Service (LOS).**

1. LOS = Level of Service
2. Average intersection delay expressed in seconds per vehicle.
3. Improvement in LOS during the a.m. peak hour, and reduction in delay during the p.m. peak hour, reflects proposed installation of an eastbound right-turn lane on Shiloh Road, approaching Skylane Boulevard, with the proposed project under Existing plus Project Conditions.

Table 7: Existing plus Project Conditions – 95th Percentile Left-turn Queue Comparison

ID #	Intersection	Left-turn movement	Stacking Capacity (feet)	Existing Conditions		Existing Plus Project Conditions	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1	Skylane Boulevard/Golf Course Drive & Shiloh Road	Eastbound	*150 ft (with Project)*	3 ft	7 ft	9 ft	4 ft
		Westbound	180 ft	**322 ft**	35 ft	**264 ft[1]**	33 ft
		Northbound	100 ft	32 ft	44 ft	32 ft	44 ft
		Southbound	50 ft	**87 ft**	36 ft	**74 ft[1]**	35 ft
2	Conde Lane & Shiloh Road	Eastbound	85 ft	22 ft	53 ft	27 ft	57 ft
		Westbound	125 ft	9 ft	9 ft	9 ft	9 ft
N/A	Proposed Project Driveway & Shiloh Road	Westbound	*>50 ft (with Project)*	N/A	N/A	<20 ft	<20 ft

Notes: **Bold indicates 95th percentile queues exceeding storage length.**

1. Reduction in left-turn queue lengths at Skylane Boulevard/Golf Course Drive & Shiloh Drive with the project occurs due to provision of eastbound right-turn pocket.

Vehicle Miles Traveled

The residential portion of the project is anticipated to generate a lower rate of vehicle miles traveled (VMT) per capita compared to the town-wide average since (1) multi-family residences typically generate lower rates of vehicle trips than single-family dwellings; and (2) the project includes a mixed-use component with ground-floor commercial space that is anticipated to reduce the frequency of off-site trips by residents.

In addition, by providing a community market in a neighborhood not currently served by other similar markets: the project is anticipated to reduce VMT by area residents that would otherwise travel further by motor vehicle to/from existing markets in other areas further from the site.

Site Access Impact Findings and On-Site Circulation Review

This section assesses the proposed site access and circulation provisions for vehicles, pedestrians, bikes and parking based on the plan set prepared by the project applicant.

The project site is located at the southwest corner of Shiloh Road and Skylane Boulevard. Site access would be provided from both Shiloh Road and Skylane Boulevard as shown on the engineering site plan provided as **Figure 2B** and in the site plan set provided in **Appendix A**.

Based on review of the plan set provided, adequate sight distance would be provided and ***potential transportation impacts related to site design and emergency access would be considered less than significant***:

- **Motor vehicle access will be adequately accommodated.** Motor vehicle and bicycle access would be provided via proposed driveways on both streets. The project would provide a left-turn pocket for vehicles approaching the driveway westbound on Shiloh Road with approximately 75 to 100 feet of storage, which will be more than adequate to accommodate inbound volumes.
- **Bicycle and pedestrian circulation and access.** Bicycle and pedestrian access would be adequately provided to both the residences and market. The project would provide sidewalks with landscape buffers on both street frontages, allowing direct access to the market and connections with internal on-site walkways. A curbside bicycle lane would be provided southbound on Skylane Boulevard along the project frontage, while the existing eastbound bicycle lane on Shiloh Road would be reconfigured to accommodate the proposed eastbound right-turn pocket Precise dimensions of the sidewalks and bicycle lanes are not specified on the site plans, but the proposed sidewalk provisions appear consistent with the Windsor *Complete Street Guidelines* that specify six-foot to eight-foot wide clear pedestrian travel ways are needed on crosstown streets, while identifying a desired bicycle lane "concept" width of six feet. Although bicycle lanes on other portions of Shiloh Road include buffer treatments: such treatments are generally not practical adjacent to right-turn pockets and would result in increased pedestrian crossing distances if installed adjacent to the project site, and are therefore not required at this location. **Recommendations concerning bicycle & pedestrian circulation:**
    - **A) Provision of a high-visibility green-colored bicycle lane treatment is recommended where the eastbound bicycle lane would cross paths with motorists entering the proposed eastbound right-turn lane.**
    - **B) Provision of enhanced crosswalk markings is recommended on the west leg of the Shiloh Road/Skylane Boulevard-Golf Course Road intersection to help calm traffic and ease pedestrian street crossings consistent with the Windsor *Complete Street Guidelines*.**
    - ***C)* Proposed curb ramp(s) at the southwest corner of Shiloh Road/Skylane Boulevard-Golf Golf Course will need to be designed to current ADA standards that now require provision of two separate ramps (one for each crosswalk).**
- **Emergency vehicle access will be adequate.** The project will provide adequate emergency access, given direct access to the market and residences from Shiloh Road and Skylane Boulevard

and the proposed provision of two driveways with adequate width to accommodate emergency vehicles. As shown on **Figure 2B** and **Appendix A**, the proposed design of the internal circulation aisles will adequately accommodate fire vehicles.

- **Truck access is anticipated to be adequate.** Based on the fire truck turning movements shown on **Figure 2B** and **Appendix A**, the proposed design of the internal circulation aisles will adequately accommodate large vehicles including trucks.
- **Stopping sight distance is anticipated to be adequate** given the direct connection of the project driveways with Shiloh Road and Skylane Boulevard with straight segments in both directions, while the proposed internal street layout is not anticipated to obstruct internal visibility. The proposed driveway location on Shiloh Road is visible for over 400 feet from the west (approaching eastbound), exceeding the standard of 360 feet based on the 45 mph speed limit west of the site. The proposed driveway on Skylane Boulevard is visible from over 400 feet from the north (approaching southbound), exceeding the standard of 300 feet based on the 40 mph speed limit on Skylane Boulevard.
- **On-site motor circulation will be adequately accommodated.** The proposed driveway widths and parking lot aisles would provide adequate width to accommodate on-site motor vehicle and bicycle movements. Proposed internal pathways would accommodate on-site pedestrian circulation.

CHAPTER 4 – CUMULATIVE IMPACTS

This chapter evaluates the project's contribution to potential cumulative impacts based on a comparison of Year 2040 conditions, with and without the proposed project.

Cumulative (Year 2040) Traffic Growth with Windsor 2040 General Plan

Cumulative baseline traffic volumes (without the proposed project) were derived from the *Town of Windsor 2040 General Plan EIR* (October 2017). The forecasted a.m. and p.m. turning movements at each study intersection under "Cumulative No Project" traffic volume is shown on **Figure 8**.

Traffic Impact Findings – Cumulative (Year 2040) Conditions

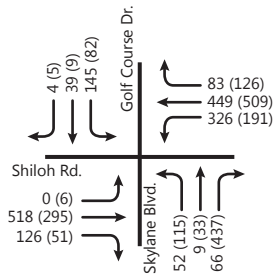
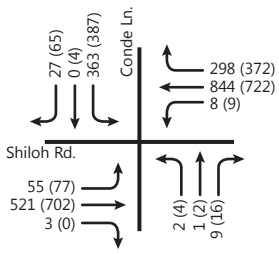
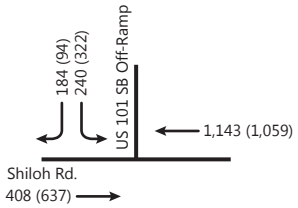
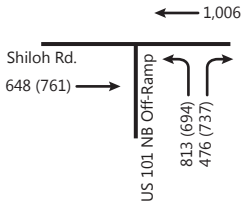
Table 7 summarizes the results of the intersection LOS analysis under Cumulative (Year 2040) Conditions, with and without the proposed project. The results indicate all study intersections would continue to operate acceptably at LOS D or better under Cumulative (Year 2040) Conditions, with or without the proposed project. The project would have a negligible effect on average vehicle delay. Therefore, the cumulative impact of the project on year 2040 traffic conditions would be considered less than significant. Detailed LOS calculations and left-turn queue reports for year 2040 conditions without the project are provided in **Appendix D.**

Table 9 summarizes the results of the left-turn queue comparison under Cumulative Conditions. At all study intersections, the project contribution to left-turn queues is less than significant because the project would not cause the 95th percentile queue length to exceed the available stacking length or increase by more than 10 feet where the queue length exceeds the available stacking length without the project.

Based on the above findings, cumulative traffic impacts resulting from the project are considered ***less than significant***.

.

Cumulative No Project Volumes

Intersection #1 Shiloh Rd. / Skylane Blvd. & Golf Course Dr.	**Intersection #2** Shiloh Rd. / Conde Ln.	**Intersection #3** Shiloh Rd. / US 101 SB Off-Ramp	**Intersection #4** Shiloh Rd. / US 101 NB Off-Ramp
			

LEGEND

- X — Study Intersection
- Project Site
- XX — AM Peak Hour Traffic Volume
- (XX) — PM Peak Hour Traffic Volume

N

TJKM

Table 8: Cumulative (Year 2040) Conditions - Intersection Level of Service Comparison

ID #	Intersection	Control	Peak Hour	Cumulative No Project Conditions		Existing Plus Project Conditions	
				LOS[1]	Average Delay[2]	LOS[1]	Average Delay[2]
1	Skylane Boulevard/Golf Course Drive & Shiloh Road	Signalized	A.M.	C	23.6	C	17.8
			P.M.	B	14.2	B	13.8
2	Conde Lane & Shiloh Road	Signalized	A.M.	C	20.3	C	20.9
			P.M.	C	23.4	C	24.0
3	US 101 Southbound Off-ramp & Shiloh Road	Signalized	A.M.	A	6.6	A	6.6
			P.M.	A	6.9	A	6.9
4	US 101 Northbound Off-ramp & Shiloh Road	Signalized	A.M.	B	10.6	B	10.7
			P.M.	B	18.3	B	18.4

Notes: **Bold indicates unacceptable Level of Service (LOS).**

1. LOS = Level of Service;
2. Average intersection delay expressed in seconds per vehicle.

Table 9: Cumulative Conditions – 95th Percentile Left-turn Queue Comparison

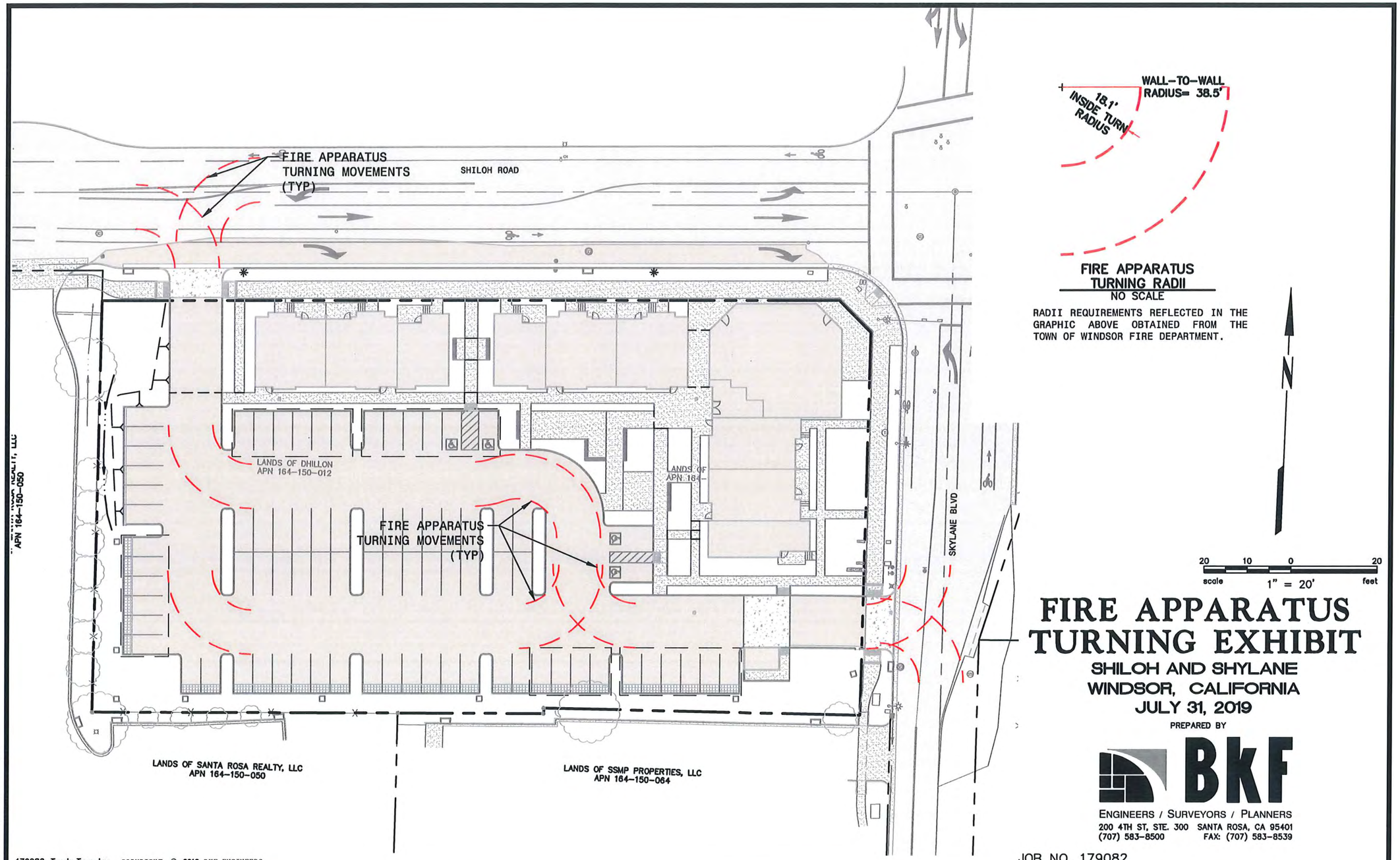
ID #	Intersection	Left-turn movement	Stacking Capacity (feet)	Cumulative No Project Conditions		Cumulative Plus Project Conditions	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1	Skylane Boulevard/Golf Course Drive & Shiloh Road	Eastbound	*150 ft (with Project)*	0 ft	4 ft	4 ft	5 ft
		Westbound	180 ft	**206 ft**	64 ft	168 ft[1]	58 ft
		Northbound	100 ft	45 ft	49 ft	40 ft	48 ft
		Southbound	50 ft	**100 ft**	38 ft	**81 ft[1]**	36 ft
2	Conde Lane & Shiloh Road	Eastbound	85 ft	34 ft	54 ft	39 ft	59 ft
		Westbound	125 ft	6 ft	7 ft	6 ft	8 ft

Notes: **Bold indicates 95th percentile queues exceeding storage length.**

1. Reduction in left-turn queue lengths at Skylane Boulevard/Golf Course Drive & Shiloh Drive with the project occurs due to provision of eastbound right-turn pocket.

Technical Appendices

Appendix A: Project Plans & Perspectives



FIRE APPARATUS TURNING RADII
NO SCALE

RADII REQUIREMENTS REFLECTED IN THE GRAPHIC ABOVE OBTAINED FROM THE TOWN OF WINDSOR FIRE DEPARTMENT.

20 10 0 20
scale 1" = 20' feet

FIRE APPARATUS TURNING EXHIBIT

SHILOH AND SHYLANE
WINDSOR, CALIFORNIA
JULY 31, 2019

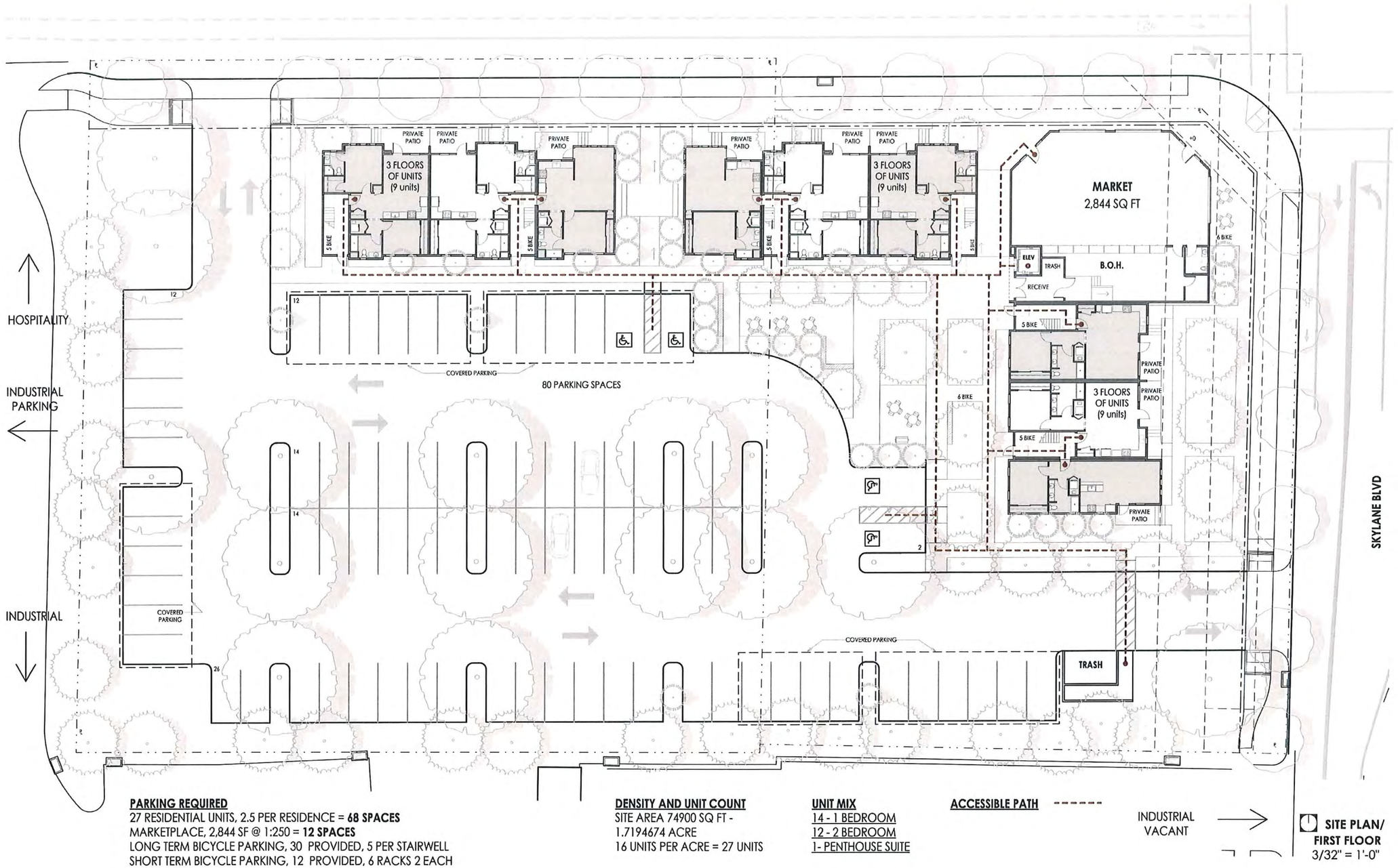
PREPARED BY

BkF
ENGINEERS / SURVEYORS / PLANNERS
200 4TH ST, STE. 300 SANTA ROSA, CA 95401
(707) 583-8500 FAX: (707) 583-8539

JOB NO. 179082

Plot Jul 31, 2019 at 2:13pm

ARCHITECTURAL SITE PLAN



PARKING REQUIRED
27 RESIDENTIAL UNITS, 2.5 PER RESIDENCE = **68 SPACES**
MARKETPLACE, 2,844 SF @ 1:250 = **12 SPACES**
LONG TERM BICYCLE PARKING, 30 PROVIDED, 5 PER STAIRWELL
SHORT TERM BICYCLE PARKING, 12 PROVIDED, 6 RACKS 2 EACH

DENSITY AND UNIT COUNT
SITE AREA 74900 SQ FT -
1.7194674 ACRE
16 UNITS PER ACRE = 27 UNITS

UNIT MIX
14 - 1 BEDROOM
12 - 2 BEDROOM
1- PENTHOUSE SUITE

ACCESSIBLE PATH ------

SITE PLAN/ FIRST FLOOR
3/32" = 1'-0"

ARCHILOGIX DESIGN DEVELOPMENT STRATEGIES
QUADRIGA landscape architecture and planning, inc. sacramento | santa rosa
BKF

PERSPECTIVE VIEW

VIEW FROM SHILOH RD.

ARCHILOGIX
DESIGN · DEVELOPMENT STRATEGIES

SHILOH ROAD MIXED USE DEVELOPMENT
1200 SHILOH ROAD
WINDSOR, CA 95492

TOWN OF WINDSOR
CONCEPT REVIEW PACKAGE
07/18/2018

Appendix B: Intersection Data Collection Sheets

Prepared by National Data & Surveying Services

Golf Course Dr/Skylane Blvd & Shiloh Rd

Peak Hour Turning Movement Count

ID: 18-08659-007
City: Windsor

Day: Thursday
Date: 12/13/2018

PEAK HOURS		COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Golf Course Dr/Skylane Blvd — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing
AM	5	53	85	0	54
NOON	0	0	0	0	0
PM	7	15	89	0	158
Lanes	0.5	0.5	1	0	

Shiloh Rd — EASTBOUND

	AM	NOON	PM	Lanes
Departing	338	0	460	
U-Turn	0	0	0	0
Left	2	0	4	1
Thru	466	0	225	1
Right	113	0	38	0

Shiloh Rd — WESTBOUND

	Lanes	PM	NOON	AM
Left	1	111	0	41
Thru	1	338	0	304
Right	1	117	0	362
U-Turn	0	0	0	0
Departing		698	0	625

Golf Course Dr/Skylane Blvd — NORTHBOUND

	Departing	U-Turn	Left	Thru	Right
Lanes		0	1	1	1
PM	170	0	115	43	384
NOON	0	0	0	0	0
AM	528	0	29	11	74

CONTROL

Signalized

	AM	NOON	PM
TEV	1545	0	1486
PHF	0.83		0.92

Total Vehicles (AM)

	Left	Thru	Right
Southbound	85	53	5
Westbound	41	304	362
Northbound	29	11	74
Eastbound	2	466	113

Total Vehicles (Noon)

	Left	Thru	Right
Southbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A

Total Vehicles (PM)

	Left	Thru	Right
Southbound	89	15	7
Westbound	111	338	117
Northbound	115	43	384
Eastbound	4	225	38

Bikes (AM)

	Left	Thru	Right
Southbound	0	0	0
Westbound	1	0	0
Northbound	0	0	1
Eastbound	0	0	0

Bikes (NOON)

	Left	Thru	Right
Southbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A

Bikes (PM)

	Left	Thru	Right
Southbound	0	0	0
Westbound	0	0	0
Northbound	0	0	0
Eastbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (westward)	0	0	1
North leg (eastward)	1	0	0
West leg (southward)	0	0	0
West leg (northward)	0	0	0
East leg (southward)	0	0	0
East leg (northward)	0	0	0
South leg (eastward)	0	0	0
South leg (westward)	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

Prepared by National Data & Surveying Services

Conde Ln & Shiloh Rd

Peak Hour Turning Movement Count

ID: 18-08659-006
City: Windsor

Day: Thursday
Date: 12/13/2018

Period	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Conde Ln – SOUTHBOUND

	Right	Thru	Left	U-Turn	Out
AM	72	1	302	0	260
NOON	0	0	0	0	0
PM	50	0	304	0	419
Lanes	1	0.5	0.5	0	

Shiloh Rd – EASTBOUND

	AM	NOON	PM	Lanes
Out	751	0	558	
U-Turn	0	0	0	0
Left	35	0	92	1
Thru	593	0	618	2
Right	4	0	4	0

Shiloh Rd – WESTBOUND

	Lanes	PM	NOON	AM
Right	0	323	0	220
Thru	2	503	0	676
Left	1	14	0	12
U-Turn	0	0	0	0
Out		942	0	906

Conde Ln – NORTHBOUND

	Out	U-Turn	Left	Thru	Right
Lanes		0	0	1	0
PM	18	0	5	4	20
NOON	0	0	0	0	0
AM	17	0	3	5	11

CONTROL

Signalized

	AM	NOON	PM
TEV	1934	0	1937
PHF	0.88		0.97

Total Vehicles (AM)

Approach	Left	Thru	Right
Southbound	302	1	72
Eastbound	35	593	4
Westbound	12	676	220
Northbound	3	5	11

Total Vehicles (Noon)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Thru	Right
Southbound	304	0	50
Eastbound	92	618	4
Westbound	14	503	323
Northbound	5	4	20

Bikes (AM)

Approach	Left	Thru	Right
Southbound	0	1	0
Eastbound	0	0	0
Westbound	0	1	1
Northbound	0	0	0

Bikes (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Thru	Right
Southbound	2	0	0
Eastbound	0	0	0
Westbound	0	1	1
Northbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North leg	Eastbound	0	0	0
North leg	Westbound	0	0	0
West leg	Southbound	1	0	0
West leg	Northbound	0	0	0
East leg	Southbound	0	0	0
East leg	Northbound	0	0	0
South leg	Eastbound	1	0	0
South leg	Westbound	0	0	0
NW diagonal		0	0	0
NE diagonal		0	0	0
SW diagonal		0	0	0
SE diagonal		0	0	0

Prepared by National Data & Surveying Services

US 101 SB Off-ramp & Shiloh Rd

Peak Hour Turning Movement Count

ID: 18-08659-005
City: Windsor
Day: Thursday
Date: 12/13/2018

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

US 101 SB Off-ramp — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing
Lanes	1	0	1	0	
AM	204	0	81	0	388
NOON	0	0	0	0	0
PM	89	0	197	0	383

Shiloh Rd — WESTBOUND

	Lanes	PM	NOON	AM
Right	1	383	0	388
Thru	1	791	0	876
Left	0	0	0	0
U-Turn	0	0	0	0
Departing		723	0	471

Shiloh Rd — EASTBOUND

	AM	NOON	PM	Lanes
Departing	1080	0	881	
U-Turn	0	0	1	0
Left	0	0	0	0
Thru	390	0	526	1
Right	647	0	581	1

US 101 SB Off-ramp — NORTHBOUND

	Departing	U-Turn	Left	Thru	Right
Lanes		0	0	0	0
PM	581	0	0	0	0
NOON	0	0	0	0	0
AM	647	0	0	0	0

CONTROL

Signalized

	AM	NOON	PM
TEV	2586	0	2568
PHF	0.91		0.97

Total Vehicles (AM)

Approach	Left	Thru	Right
Southbound	81	0	204
Westbound	0	876	388
Northbound	0	0	0
Eastbound	0	390	647

Total Vehicles (Noon)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Thru	Right
Southbound	197	0	89
Westbound	0	791	383
Northbound	0	0	0
Eastbound	0	526	581

Bikes (AM)

Approach	Left	Thru	Right
Southbound	0	0	1
Westbound	0	3	0
Northbound	0	0	0
Eastbound	0	2	0

Bikes (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Thru	Right
Southbound	0	0	0
Westbound	0	2	0
Northbound	0	0	0
Eastbound	0	4	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	Eastbound (→)	0	0	1
North	Westbound (←)	0	0	0
West	Southbound (↓)	0	0	0
West	Northbound (↑)	0	0	0
East	Southbound (↓)	0	0	0
East	Northbound (↑)	0	0	0
South	Eastbound (→)	0	0	0
South	Westbound (←)	0	0	0
NW diagonal		0	0	0
NE diagonal		0	0	0
SW diagonal		0	0	0
SE diagonal		0	0	0

Prepared by National Data & Surveying Services

US 101 NB Off-ramp & Shiloh Rd

Peak Hour Turning Movement Count

ID: 18-08659-004
City: Windsor

Day: Thursday
Date: 12/13/2018

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

US 101 NB Off-ramp — SOUTHBOUND

AM	0	0	0	0	117	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	224	PM

Shiloh Rd — EASTBOUND

AM	NOON	PM		
1279	0	1184	⇦	
0	0	0	↶	0
0	0	0	↱	0
356	0	545	→	2
110	0	187	↴	1
AM	NOON	PM		

WESTBOUND — Shiloh Rd

PM	NOON	AM		
224	0	117	↰	1
633	0	667	←	1
0	0	0	↰	0
0	0	0	↶	0
1139	0	659	⇨	
PM	NOON	AM		

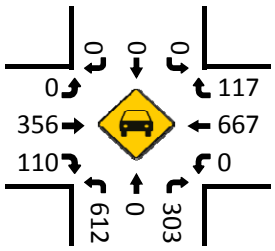
CONTROL			
Signalized			
TEV	2165 AM	0 NOON	2734 PM
PHF	0.88		0.97

US 101 NB Off-ramp — NORTHBOUND

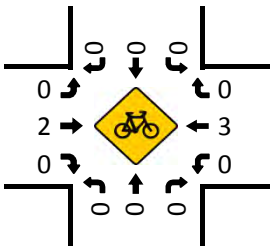
PM	187	0	551	0	594	PM
NOON	0	0	0	0	0	NOON
AM	110	0	612	0	303	AM

⇩	0	1	0	2
	↶	↰	↑	↱

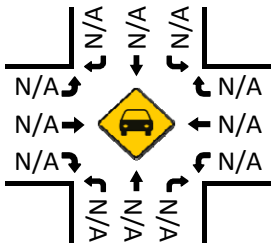
Total Vehicles (AM)



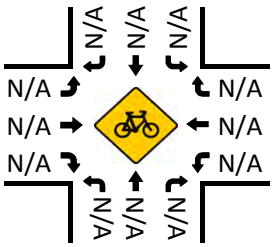
Bikes (AM)



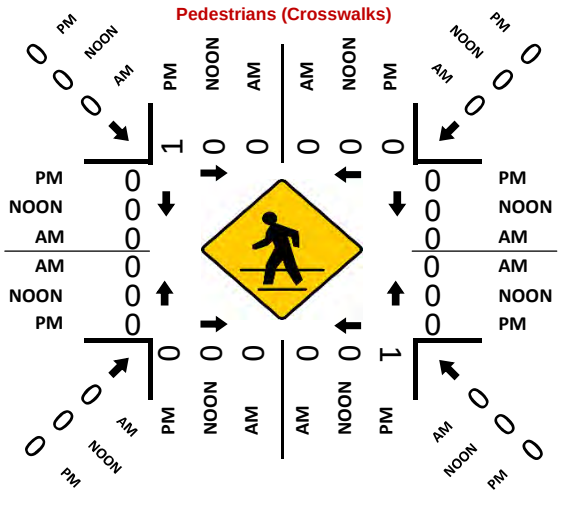
Total Vehicles (Noon)



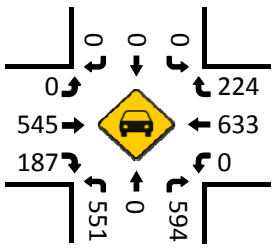
Bikes (NOON)



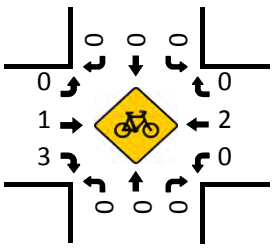
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Driveway In & Out

Location: Shiloh Road & Driveway A (East)
City: Windsor

Date: 12/13/2018
Day: Thursday

TIME	In	Out	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
Totals	***0***	***0***	***0***
4:00 PM	0	0	***0***
4:15 PM	0	0	***0***
4:30 PM	1	0	***1***
4:45 PM	0	1	***1***
5:00 PM	2	1	***3***
5:15 PM	0	0	***0***
5:30 PM	0	1	***1***
5:45 PM	0	0	***0***
Totals	***3***	***3***	***6***
Grand Total	***3***	***3***	***6***

AM Peak Hr	0	0	**0**	
PM Peak Hr	3	2	**5**	4:30 - 5:30

Prepared by National Data & Surveying Services

Driveway In & Out

Location: Shiloh Road & Driveway A (West)
City: Windsor

Date: 12/13/2018
Day: Thursday

TIME	In	Out	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
Totals	***0***	***0***	***0***
4:00 PM	1	0	***1***
4:15 PM	1	0	***1***
4:30 PM	0	0	***0***
4:45 PM	0	0	***0***
5:00 PM	0	0	***0***
5:15 PM	1	0	***1***
5:30 PM	1	0	***1***
5:45 PM	0	1	***1***
Totals	***4***	***1***	***5***
Grand Total	***4***	***1***	***5***

AM Peak Hr	0	0	0
PM Peak Hr	**2**	**1**	**3**
4:30-5:30 pm	**1**	**0**	**1**

Appendix C: Existing Conditions Results

Vistro File: J:\...\Existing Conditions.vistro
Report File: J:\...\Existing AM.pdf

Scenario 1 Existing AM
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Signalized	HCM 6th Edition	EB Left	0.866	35.4	D
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	WB Left	0.664	18.0	B
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Right	0.789	10.1	B
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	WB Thru	0.884	22.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Generated with PTV VISTRO

Version 7.00-06

Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Drive

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	260.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	29	11	74	85	53	5	2	466	113	362	304	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	11	74	85	53	5	2	466	113	362	304	41
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	3	22	26	16	2	1	141	34	109	92	12
Total Analysis Volume [veh/h]	35	13	89	103	64	6	2	563	137	438	368	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	2	4	29	6	7	0	30	21	51	51
g / C, Green / Cycle	0.03	0.05	0.37	0.07	0.09	0.00	0.39	0.27	0.66	0.66
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.06	0.06	0.04	0.00	0.39	0.25	0.20	0.03
s, saturation flow rate [veh/h]	1781	1870	1583	1781	1842	1781	1808	1781	1870	1557
c, Capacity [veh/h]	49	87	584	134	173	4	700	484	1228	1022
d1, Uniform Delay [s]	37.33	35.46	16.30	35.16	33.06	38.58	23.71	27.24	5.68	4.71
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.42	0.13	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.70	0.59	0.04	3.50	1.14	28.88	31.21	7.71	0.10	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.15	0.15	0.77	0.41	0.48	1.00	0.91	0.30	0.05
d, Delay for Lane Group [s/veh]	44.03	36.04	16.34	38.65	34.20	67.46	54.93	34.96	5.78	4.73
Lane Group LOS	D	D	B	D	C	E	D	C	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.72	0.24	0.97	1.94	1.23	0.07	17.27	8.19	1.88	0.21
50th-Percentile Queue Length [ft/ln]	17.96	5.96	24.25	48.42	30.70	1.74	431.70	204.75	47.03	5.31
95th-Percentile Queue Length [veh/ln]	1.29	0.43	1.75	3.49	2.21	0.13	24.08	12.88	3.39	0.38
95th-Percentile Queue Length [ft/ln]	32.33	10.73	43.65	87.16	55.26	3.13	602.07	322.08	84.65	9.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.03	36.04	16.34	38.65	34.20	34.20	67.46	54.93	54.93	34.96	5.78	4.73
Movement LOS	D	D	B	D	C	C	E	D	D	C	A	A
d_A, Approach Delay [s/veh]	25.29			36.85			54.96			20.65		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	35.39											
Intersection LOS	D											
Intersection V/C	0.866											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16843.16	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.383	2.043	2.421	2.654
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	1.786	1.845	2.718	2.972
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Generated with PTV VISTRO

Version 7.00-06

Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	230.00	125.00	100.00	100.00
Speed [mph]	25.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	3	5	11	302	1	72	35	593	4	12	676	220
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	5	11	302	1	72	35	593	4	12	676	220
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	3	86	0	20	10	169	1	3	192	63
Total Analysis Volume [veh/h]	3	6	13	344	1	82	40	675	5	14	769	250
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	54	54	54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	13	13	4	21	21	2	19	19
g / C, Green / Cycle	0.05	0.24	0.24	0.07	0.39	0.39	0.03	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.19	0.05	0.02	0.18	0.18	0.01	0.28	0.29
s, saturation flow rate [veh/h]	1683	1781	1569	1781	1870	1865	1781	1870	1694
c, Capacity [veh/h]	88	424	373	120	723	721	51	650	589
d1, Uniform Delay [s]	24.70	19.56	16.63	24.16	12.49	12.49	25.84	16.15	16.23
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.45	3.85	0.29	1.61	0.48	0.48	2.93	2.60	3.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.81	0.22	0.33	0.47	0.47	0.28	0.82	0.83
d, Delay for Lane Group [s/veh]	26.15	23.41	16.92	25.78	12.97	12.97	28.76	18.75	19.29
Lane Group LOS	C	C	B	C	B	B	C	B	B
Critical Lane Group	Yes	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.29	3.93	0.73	0.49	2.55	2.54	0.20	5.28	4.94
50th-Percentile Queue Length [ft/ln]	7.35	98.29	18.33	12.28	63.72	63.58	5.00	132.03	123.43
95th-Percentile Queue Length [veh/ln]	0.53	7.08	1.32	0.88	4.59	4.58	0.36	9.05	8.58
95th-Percentile Queue Length [ft/ln]	13.23	176.93	33.00	22.11	114.70	114.45	9.01	226.25	214.52

Movement, Approach, & Intersection Results

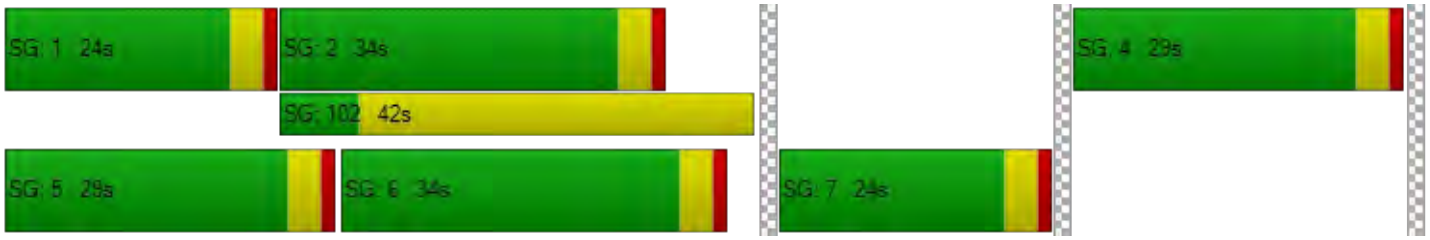
d_M, Delay for Movement [s/veh]	26.15	26.15	26.15	23.41	23.41	16.92	25.78	12.97	12.97	28.76	18.91	19.29
Movement LOS	C	C	C	C	C	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	26.15			22.16			13.68			19.14		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.01											
Intersection LOS	B											
Intersection V/C	0.664											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	8726.80	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.731	0.000	2.723	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.48	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.596	2.264	2.154	2.412
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.789

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	1	0	0	0	0
Pocket Length [ft]	100.00	300.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	81	204	0	390	876	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	204	0	390	876	0
Peak Hour Factor	0.9110	0.9110	1.0000	0.9110	0.9110	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	56	0	107	240	0
Total Analysis Volume [veh/h]	89	224	0	428	962	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	21	21
g / C, Green / Cycle	0.20	0.20	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.05	0.14	0.23	0.51
s, saturation flow rate [veh/h]	1781	1569	1870	1870
c, Capacity [veh/h]	359	316	1079	1079
d1, Uniform Delay [s]	12.13	13.41	4.19	6.65
k, delay calibration	0.11	0.11	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	2.93	0.24	4.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.71	0.40	0.89
d, Delay for Lane Group [s/veh]	12.48	16.34	4.43	10.97
Lane Group LOS	B	B	A	B
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.49	1.53	0.57	3.07
50th-Percentile Queue Length [ft/ln]	12.31	38.22	14.19	76.65
95th-Percentile Queue Length [veh/ln]	0.89	2.75	1.02	5.52
95th-Percentile Queue Length [ft/ln]	22.16	68.80	25.54	137.97

Movement, Approach, & Intersection Results

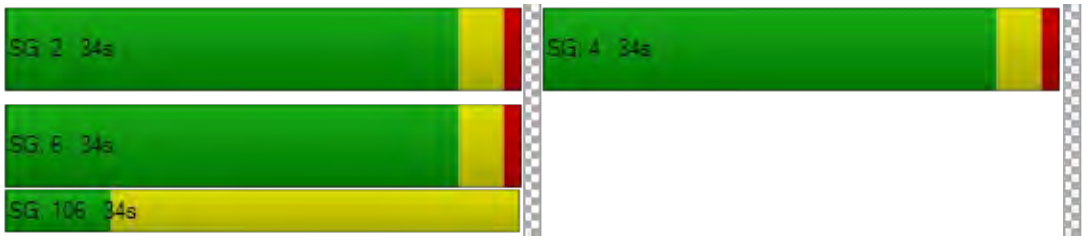
d_M, Delay for Movement [s/veh]	12.48	16.34	0.00	4.43	10.97	0.00
Movement LOS	B	B		A	B	
d_A, Approach Delay [s/veh]	15.24		4.43		10.97	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	10.11					
Intersection LOS	B					
Intersection V/C	0.789					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.892	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
I_b,int, Bicycle LOS Score for Intersection	4.132	4.839	5.720
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	612	303	356	0	0	667
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	612	303	356	0	0	667
Peak Hour Factor	0.8800	0.8830	0.8800	1.0000	1.0000	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	174	86	101	0	0	189
Total Analysis Volume [veh/h]	695	343	405	0	0	758
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26	26	26	26
g / C, Green / Cycle	0.43	0.43	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.39	0.12	0.11	0.41
s, saturation flow rate [veh/h]	1781	2813	3560	1870
c, Capacity [veh/h]	766	1210	1558	818
d1, Uniform Delay [s]	16.10	11.18	10.79	16.09
k, delay calibration	0.29	0.11	0.11	0.32
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.74	0.13	0.09	12.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.28	0.26	0.93
d, Delay for Lane Group [s/veh]	26.85	11.31	10.88	28.78
Lane Group LOS	C	B	B	C
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.62	1.28	1.41	10.64
50th-Percentile Queue Length [ft/ln]	240.56	31.96	35.25	266.07
95th-Percentile Queue Length [veh/ln]	14.71	2.30	2.54	15.99
95th-Percentile Queue Length [ft/ln]	367.74	57.53	63.44	399.83

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Movement, Approach, & Intersection Results

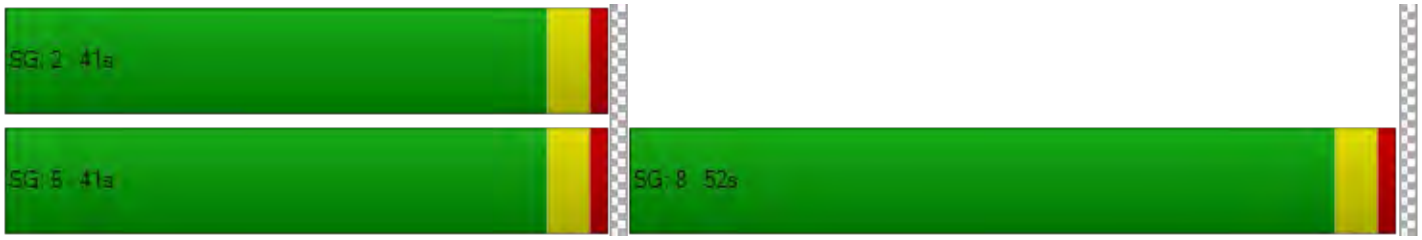
d_M, Delay for Movement [s/veh]	26.85	11.31	10.88	0.00	0.00	28.78
Movement LOS	C	B	B			C
d_A, Approach Delay [s/veh]	21.71		10.88		28.78	
Approach LOS	C		B		C	
d_I, Intersection Delay [s/veh]	22.15					
Intersection LOS	C					
Intersection V/C	0.884					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.467	5.383
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Report File: J:\...\Existing AM.pdf

Scenario 1 Existing AM
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	29	11	74	85	53	5	2	466	113	362	304	41	1545

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	3	5	11	302	1	72	35	593	4	12	676	220	1934

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	81	204	390	876	1551

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	612	303	356	667	1938

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Scenario 1 Existing AM
1/6/2020

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Final Base	29	11	74	85	53	5	2	466	113	362	304	41	1545
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**29**	**11**	**74**	**85**	**53**	**5**	**2**	**466**	**113**	**362**	**304**	**41**	**1545**

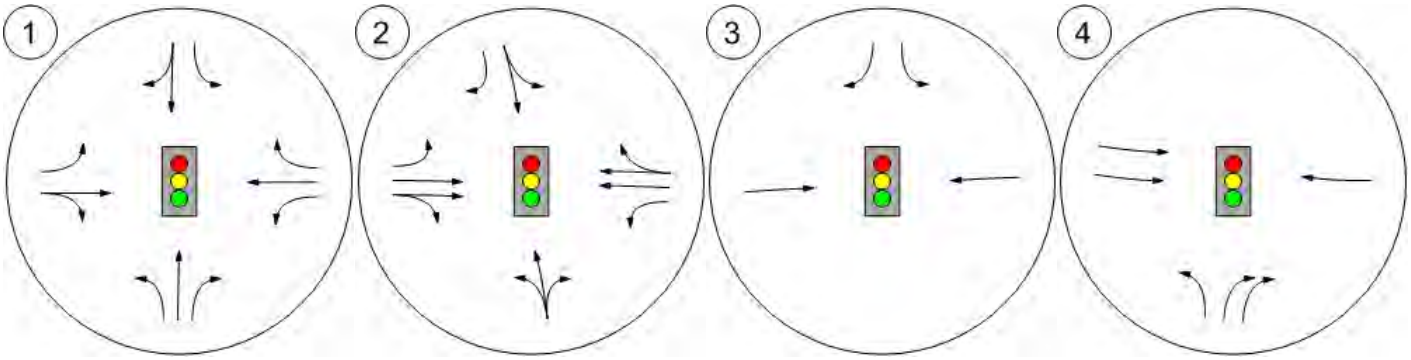
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	3	5	11	302	1	72	35	593	4	12	676	220	1934
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**3**	**5**	**11**	**302**	**1**	**72**	**35**	**593**	**4**	**12**	**676**	**220**	**1934**

ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	81	204	390	876	1551
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**81**	**204**	**390**	**876**	**1551**

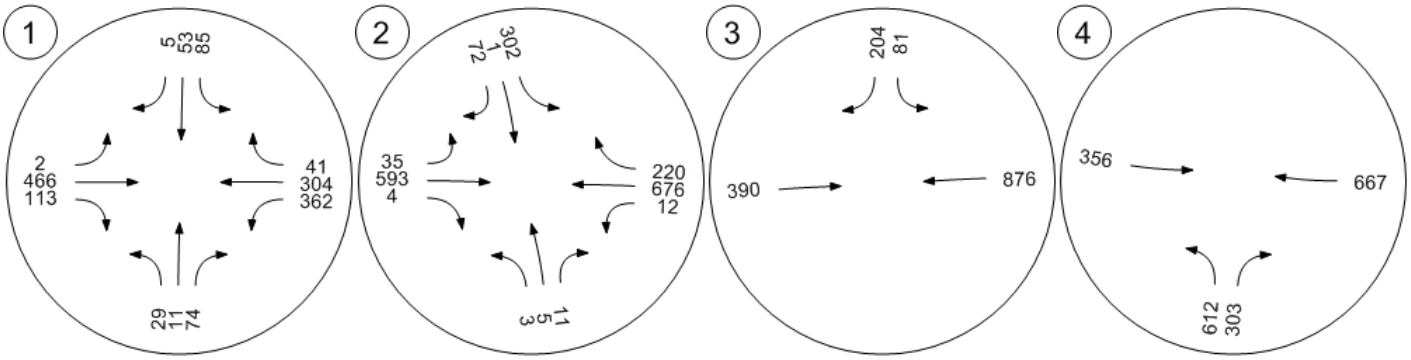
ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	612	303	356	667	1938
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**612**	**303**	**356**	**667**	**1938**

Study Intersections

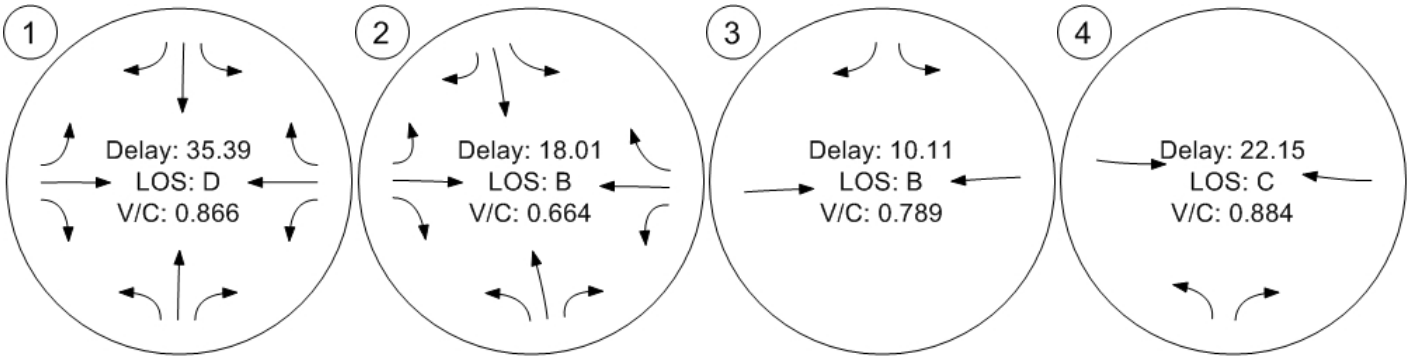
Lane Configuration and Traffic Control



Traffic Volume - Base Volume



Traffic Conditions



Vistro File: J:\...\Existing Conditions.vistro
Report File: J:\...\Existing PM.pdf

Scenario 2 Existing PM
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Signalized	HCM 6th Edition	EB Left	0.706	13.4	B
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	SB Left	0.439	28.6	C
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Left	0.703	7.6	A
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	WB Thru	0.813	13.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Generated with PTV VISTRO

Version 7.00-06

Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Drive

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	260.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	115	43	384	89	15	7	4	225	38	117	338	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	43	384	89	15	7	4	225	38	117	338	111
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	12	104	24	4	2	1	61	10	32	91	30
Total Analysis Volume [veh/h]	124	47	416	96	16	8	4	244	41	127	366	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	4	4	15	3	4	0	8	7	15	15
g / C, Green / Cycle	0.09	0.12	0.39	0.07	0.09	0.00	0.20	0.18	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.26	0.05	0.01	0.00	0.16	0.07	0.20	0.08
s, saturation flow rate [veh/h]	1781	1870	1575	1781	1763	1781	1824	1781	1870	1556
c, Capacity [veh/h]	162	215	621	123	164	8	368	316	701	584
d1, Uniform Delay [s]	17.31	15.65	9.65	17.84	16.24	19.35	14.71	14.19	9.46	8.23
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.08	0.04	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.84	0.37	0.47	3.98	0.30	17.71	2.62	0.31	0.45	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.22	0.67	0.78	0.15	0.51	0.77	0.40	0.52	0.21
d, Delay for Lane Group [s/veh]	20.14	16.02	10.12	21.82	16.54	37.06	17.32	14.50	9.91	8.36
Lane Group LOS	C	B	B	C	B	D	B	B	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.99	0.32	1.88	0.82	0.17	0.07	2.05	0.79	1.64	0.46
50th-Percentile Queue Length [ft/ln]	24.77	8.05	47.00	20.43	4.26	1.71	51.28	19.63	41.06	11.61
95th-Percentile Queue Length [veh/ln]	1.78	0.58	3.38	1.47	0.31	0.12	3.69	1.41	2.96	0.84
95th-Percentile Queue Length [ft/ln]	44.59	14.49	84.61	36.77	7.68	3.07	92.30	35.34	73.91	20.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.14	16.02	10.12	21.82	16.54	16.54	37.06	17.32	17.32	14.50	9.91	8.36
Movement LOS	C	B	B	C	B	B	D	B	B	B	A	A
d_A, Approach Delay [s/veh]	12.71			20.76			17.60			10.56		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	13.37											
Intersection LOS	B											
Intersection V/C	0.706											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16808.93	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.381	2.066	2.281	2.576
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	2.528	1.758	2.036	2.571
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Version 7.00-06

Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	230.00	125.00	100.00	100.00
Speed [mph]	25.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	5	4	20	304	0	50	92	618	4	14	503	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	4	20	304	0	50	92	618	4	14	503	323
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	5	78	0	13	24	159	1	4	130	83
Total Analysis Volume [veh/h]	5	4	21	313	0	52	95	637	4	14	519	333
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			2			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	57	57	57	57	57	57	57	57	57
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	6	22	22	2	17	17
g / C, Green / Cycle	0.38	0.38	0.38	0.11	0.38	0.38	0.03	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.05	0.67	0.03	0.05	0.17	0.17	0.01	0.24	0.25
s, saturation flow rate [veh/h]	665	469	1569	1781	1870	1866	1781	1870	1597
c, Capacity [veh/h]	323	302	589	198	721	719	53	569	486
d1, Uniform Delay [s]	12.85	22.39	11.56	23.95	13.08	13.08	27.22	18.35	18.48
k, delay calibration	0.11	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	61.76	0.06	1.81	0.43	0.43	2.63	2.66	3.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	1.04	0.09	0.48	0.45	0.45	0.27	0.80	0.82
d, Delay for Lane Group [s/veh]	12.97	84.15	11.62	25.76	13.51	13.51	29.85	21.01	21.91
Lane Group LOS	B	F	B	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	8.97	0.36	1.18	2.58	2.58	0.21	5.07	4.55
50th-Percentile Queue Length [ft/ln]	5.81	224.19	9.09	29.59	64.57	64.45	5.23	126.83	113.77
95th-Percentile Queue Length [veh/ln]	0.42	14.19	0.65	2.13	4.65	4.64	0.38	8.77	8.05
95th-Percentile Queue Length [ft/ln]	10.46	354.83	16.35	53.27	116.23	116.00	9.42	219.17	201.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.97	12.97	12.97	84.15	84.15	11.62	25.76	13.51	13.51	29.85	21.12	21.91
Movement LOS	B	B	B	F	F	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	12.97			73.82			15.09			21.57		
Approach LOS	B			E			B			C		
d_I, Intersection Delay [s/veh]	28.60											
Intersection LOS	C											
Intersection V/C	0.439											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.734	0.000	2.662	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.50	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.609	2.162	2.167	2.274
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	7.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	197	89	0	526	791	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	197	89	0	526	791	0
Peak Hour Factor	0.9670	0.6970	1.0000	0.9670	0.9670	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	32	0	136	204	0
Total Analysis Volume [veh/h]	204	128	0	544	818	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	15	15
g / C, Green / Cycle	0.19	0.19	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.11	0.08	0.29	0.44
s, saturation flow rate [veh/h]	1781	1589	1870	1870
c, Capacity [veh/h]	340	304	978	978
d1, Uniform Delay [s]	10.35	9.97	4.49	5.66
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	0.93	0.50	1.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.42	0.56	0.84
d, Delay for Lane Group [s/veh]	12.04	10.89	4.99	7.63
Lane Group LOS	B	B	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	0.52	0.41	1.06
50th-Percentile Queue Length [ft/ln]	22.22	12.97	10.33	26.59
95th-Percentile Queue Length [veh/ln]	1.60	0.93	0.74	1.91
95th-Percentile Queue Length [ft/ln]	40.00	23.34	18.59	47.86

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Movement, Approach, & Intersection Results

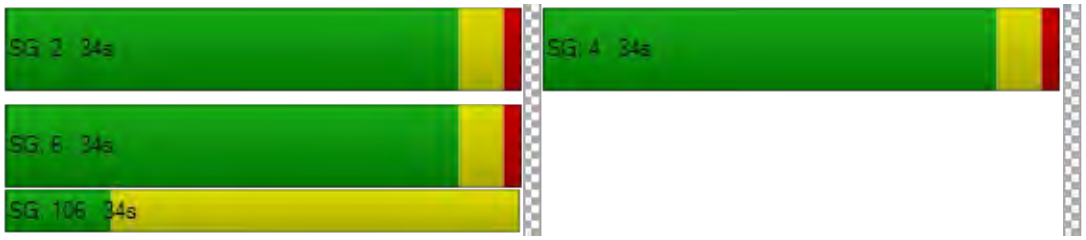
d_M, Delay for Movement [s/veh]	12.04	10.89	0.00	4.99	7.63	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	11.60		4.99		7.63	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	7.56					
Intersection LOS	A					
Intersection V/C	0.703					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.903	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	5.030	5.482
Bicycle LOS	D	F	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.813

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	551	594	545	0	0	633
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	551	594	545	0	0	633
Peak Hour Factor	0.9650	0.9650	0.9650	1.0000	1.0000	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	143	154	141	0	0	164
Total Analysis Volume [veh/h]	571	616	565	0	0	656
Presence of On-Street Parking	No	No	No	No	Yes	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		4		2	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	47	47	47	47
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	21	21
g / C, Green / Cycle	0.40	0.40	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.32	0.22	0.16	0.39
s, saturation flow rate [veh/h]	1781	2813	3560	1683
c, Capacity [veh/h]	707	1117	1549	732
d1, Uniform Delay [s]	12.75	11.09	9.03	12.45
k, delay calibration	0.11	0.11	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.25	0.43	0.14	6.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.55	0.36	0.90
d, Delay for Lane Group [s/veh]	15.01	11.52	9.18	18.80
Lane Group LOS	B	B	A	B
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.52	1.98	1.41	5.72
50th-Percentile Queue Length [ft/ln]	112.89	49.43	35.32	142.92
95th-Percentile Queue Length [veh/ln]	8.00	3.56	2.54	9.64
95th-Percentile Queue Length [ft/ln]	200.01	88.98	63.58	240.95

Movement, Approach, & Intersection Results

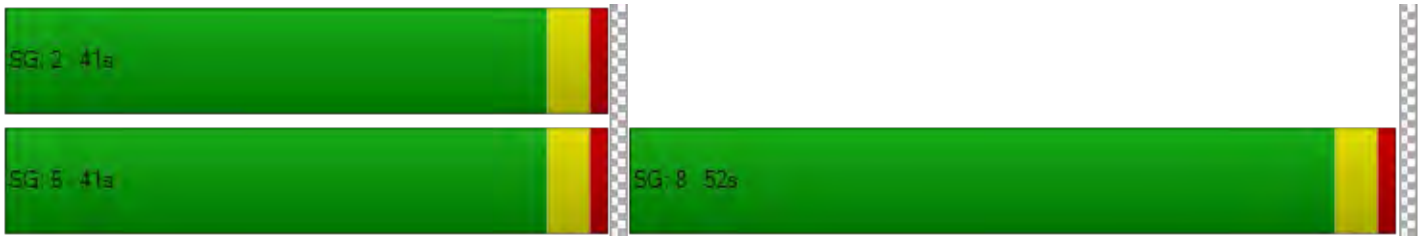
d_M, Delay for Movement [s/veh]	15.01	11.52	9.18	0.00	0.00	18.80
Movement LOS	B	B	A			B
d_A, Approach Delay [s/veh]	13.20		9.18		18.80	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	13.78					
Intersection LOS	B					
Intersection V/C	0.813					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.599	5.215
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 2 Existing PM
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	115	43	384	89	15	7	4	225	38	117	338	111	1486

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	5	4	20	304	0	50	92	618	4	14	503	323	1937

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	197	89	526	791	1603

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	551	594	545	633	2323

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Scenario 2 Existing PM
1/6/2020

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Final Base	115	43	384	89	15	7	4	225	38	117	338	111	1486
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**115**	**43**	**384**	**89**	**15**	**7**	**4**	**225**	**38**	**117**	**338**	**111**	**1486**

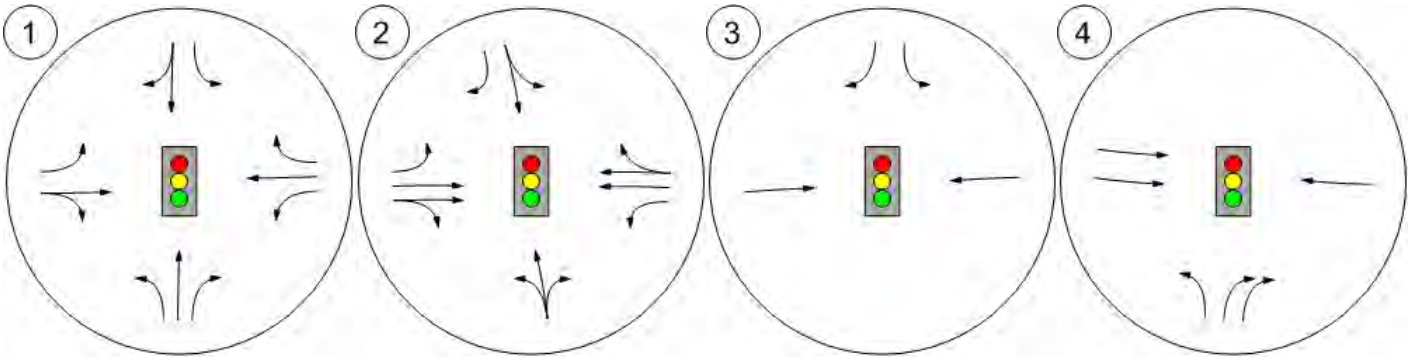
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	5	4	20	304	0	50	92	618	4	14	503	323	1937
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**5**	**4**	**20**	**304**	**0**	**50**	**92**	**618**	**4**	**14**	**503**	**323**	**1937**

ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	197	89	526	791	1603
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**197**	**89**	**526**	**791**	**1603**

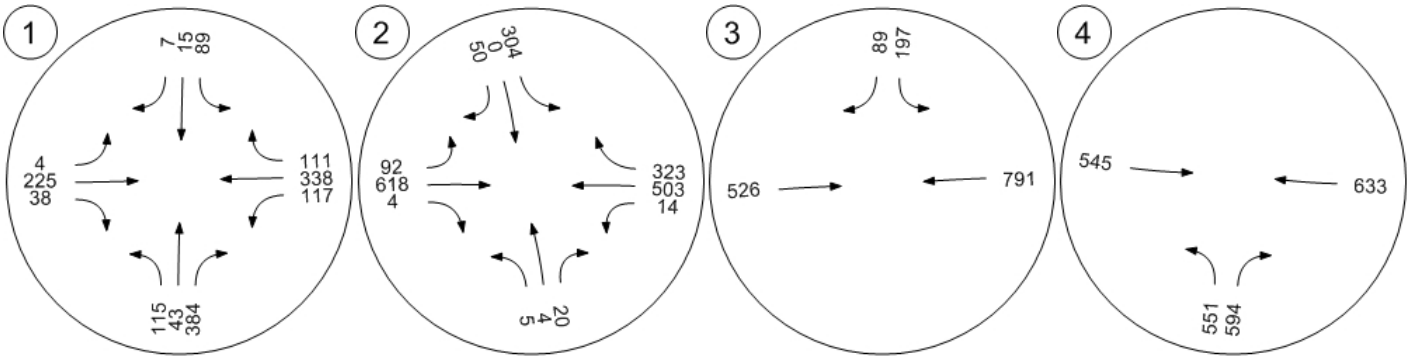
ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	551	594	545	633	2323
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**551**	**594**	**545**	**633**	**2323**

Study Intersections

Lane Configuration and Traffic Control



Traffic Volume - Base Volume



Appendix D: Existing Plus Project Conditions Results

Vistro File: J:\...\Existing Conditions.vistro
Report File: J:\...\Existing plus Project AM.pdf

Scenario 3 Existing plus Project AM
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Signalized	HCM 6th Edition	EB Left	0.804	22.9	C
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	WB Left	0.669	18.5	B
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Right	0.793	10.4	B
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	WB Thru	0.888	22.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Drive

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	150.00	100.00	350.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	29	11	74	85	53	5	2	466	113	362	304	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	5	0	0	0	8	0	6	24	0	0	17	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	11	74	85	61	5	8	490	113	362	321	41
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	3	22	26	18	2	2	148	34	109	97	12
Total Analysis Volume [veh/h]	41	13	89	103	74	6	10	593	137	438	388	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	2	3	26	5	6	1	23	23	19	41	41
g / C, Green / Cycle	0.03	0.05	0.38	0.07	0.09	0.01	0.35	0.35	0.27	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.06	0.06	0.04	0.01	0.32	0.09	0.25	0.21	0.03
s, saturation flow rate [veh/h]	1781	1870	1583	1781	1845	1781	1870	1589	1781	1870	1557
c, Capacity [veh/h]	57	95	608	134	173	18	650	553	489	1145	953
d1, Uniform Delay [s]	32.39	30.64	13.54	30.66	28.99	33.26	21.03	15.71	23.55	6.40	5.24
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.21	0.08	0.06	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.25	0.48	0.04	3.52	1.43	9.32	9.46	0.17	3.37	0.13	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.14	0.15	0.77	0.46	0.55	0.91	0.25	0.90	0.34	0.05
d, Delay for Lane Group [s/veh]	38.64	31.13	13.58	34.18	30.42	42.59	30.49	15.89	26.92	6.53	5.25
Lane Group LOS	D	C	B	C	C	D	C	B	C	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.72	0.20	0.78	1.66	1.21	0.20	9.42	1.36	6.41	1.96	0.21
50th-Percentile Queue Length [ft/ln]	17.98	5.04	19.46	41.48	30.22	5.00	235.45	33.93	160.21	49.08	5.18
95th-Percentile Queue Length [veh/ln]	1.29	0.36	1.40	2.99	2.18	0.36	14.45	2.44	10.56	3.53	0.37
95th-Percentile Queue Length [ft/ln]	32.37	9.08	35.03	74.67	54.39	8.99	361.28	61.07	264.01	88.34	9.32

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.64	31.13	13.58	34.18	30.42	30.42	42.59	30.49	15.89	26.92	6.53	5.25
Movement LOS	D	C	B	C	C	C	D	C	B	C	A	A
d_A, Approach Delay [s/veh]	22.36			32.54			27.95			16.65		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.87											
Intersection LOS	C											
Intersection V/C	0.804											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16843.16	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.388	2.051	2.512	2.670
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	1.796	1.862	2.781	3.005
Bicycle LOS	A	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	230.00	125.00	100.00	100.00
Speed [mph]	25.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	3	5	11	302	1	72	35	593	4	12	676	220
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	7	7	17	0	0	10	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	5	11	302	1	79	42	610	4	12	686	220
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	3	86	0	22	12	173	1	3	195	63
Total Analysis Volume [veh/h]	3	6	13	344	1	90	48	694	5	14	780	250
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	13	13	4	22	22	2	19	19
g / C, Green / Cycle	0.05	0.24	0.24	0.08	0.40	0.40	0.03	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.19	0.06	0.03	0.19	0.19	0.01	0.29	0.29
s, saturation flow rate [veh/h]	1683	1781	1569	1781	1870	1865	1781	1870	1695
c, Capacity [veh/h]	88	422	372	135	741	739	50	652	591
d1, Uniform Delay [s]	25.42	20.17	17.24	24.52	12.53	12.53	26.58	16.62	16.71
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.47	3.95	0.33	1.58	0.47	0.47	2.95	2.72	3.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.82	0.24	0.36	0.47	0.47	0.28	0.82	0.83
d, Delay for Lane Group [s/veh]	26.89	24.12	17.58	26.10	13.00	13.00	29.53	19.34	20.06
Lane Group LOS	C	C	B	C	B	B	C	B	C
Critical Lane Group	Yes	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.30	4.09	0.84	0.60	2.68	2.68	0.21	5.57	5.24
50th-Percentile Queue Length [ft/ln]	7.59	102.23	21.08	15.01	67.11	66.96	5.16	139.36	131.01
95th-Percentile Queue Length [veh/ln]	0.55	7.36	1.52	1.08	4.83	4.82	0.37	9.45	8.99
95th-Percentile Queue Length [ft/ln]	13.66	184.01	37.94	27.01	120.80	120.52	9.29	236.16	224.86

Movement, Approach, & Intersection Results

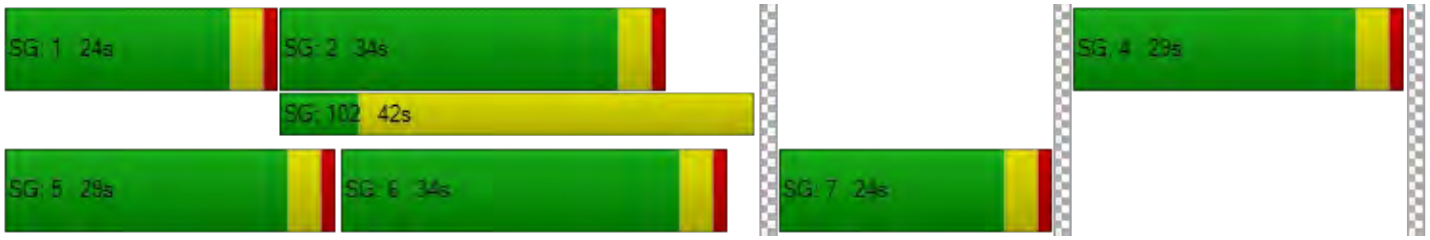
d_M, Delay for Movement [s/veh]	26.89	26.89	26.89	24.12	24.12	17.58	26.10	13.00	13.00	29.53	19.57	20.06
Movement LOS	C	C	C	C	C	B	C	B	B	C	B	C
d_A, Approach Delay [s/veh]	26.89			22.77			13.84			19.82		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.47											
Intersection LOS	B											
Intersection V/C	0.669											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	8726.80	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.731	0.000	2.734	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.48	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.596	2.277	2.176	2.421
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	1	0	0	0	0
Pocket Length [ft]	100.00	300.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	81	204	0	390	876	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	2	0	9	8	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	206	0	399	884	0
Peak Hour Factor	0.9110	0.9110	1.0000	0.9110	0.9110	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	57	0	109	243	0
Total Analysis Volume [veh/h]	89	226	0	438	970	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	21	21
g / C, Green / Cycle	0.20	0.20	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.05	0.14	0.23	0.52
s, saturation flow rate [veh/h]	1781	1569	1870	1870
c, Capacity [veh/h]	360	317	1084	1084
d1, Uniform Delay [s]	12.30	13.62	4.23	6.73
k, delay calibration	0.11	0.11	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	2.97	0.24	4.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.71	0.40	0.89
d, Delay for Lane Group [s/veh]	12.65	16.59	4.47	11.41
Lane Group LOS	B	B	A	B
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.50	1.58	0.61	3.29
50th-Percentile Queue Length [ft/ln]	12.59	39.45	15.19	82.32
95th-Percentile Queue Length [veh/ln]	0.91	2.84	1.09	5.93
95th-Percentile Queue Length [ft/ln]	22.66	71.02	27.34	148.18

Movement, Approach, & Intersection Results

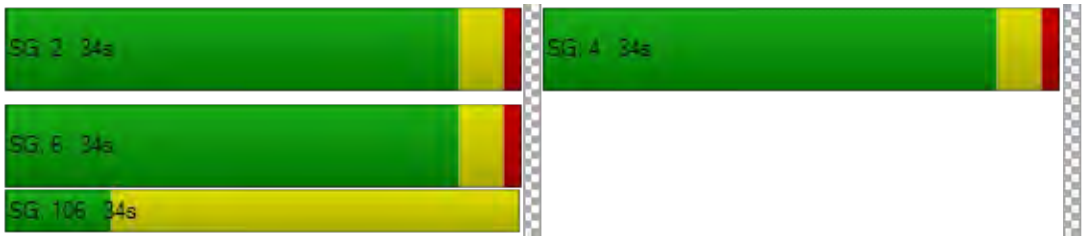
d_M, Delay for Movement [s/veh]	12.65	16.59	0.00	4.47	11.41	0.00
Movement LOS	B	B		A	B	
d_A, Approach Delay [s/veh]	15.47		4.47		11.41	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	10.39					
Intersection LOS	B					
Intersection V/C	0.793					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.894	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.855	5.733
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.888

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	612	303	356	0	0	667
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	1	0	7	0	0	7
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	613	303	363	0	0	674
Peak Hour Factor	0.8800	0.8800	0.8800	1.0000	1.0000	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	174	86	103	0	0	191
Total Analysis Volume [veh/h]	697	344	413	0	0	766
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	61	61	61	61
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26	26	27	27
g / C, Green / Cycle	0.43	0.43	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.39	0.12	0.12	0.41
s, saturation flow rate [veh/h]	1781	2813	3560	1870
c, Capacity [veh/h]	765	1209	1567	823
d1, Uniform Delay [s]	16.40	11.37	10.88	16.30
k, delay calibration	0.30	0.11	0.11	0.33
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.41	0.13	0.09	13.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.28	0.26	0.93
d, Delay for Lane Group [s/veh]	27.81	11.50	10.97	29.91
Lane Group LOS	C	B	B	C
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.97	1.31	1.46	11.14
50th-Percentile Queue Length [ft/ln]	249.26	32.82	36.61	278.48
95th-Percentile Queue Length [veh/ln]	15.15	2.36	2.64	16.61
95th-Percentile Queue Length [ft/ln]	378.72	59.07	65.91	415.31

Movement, Approach, & Intersection Results

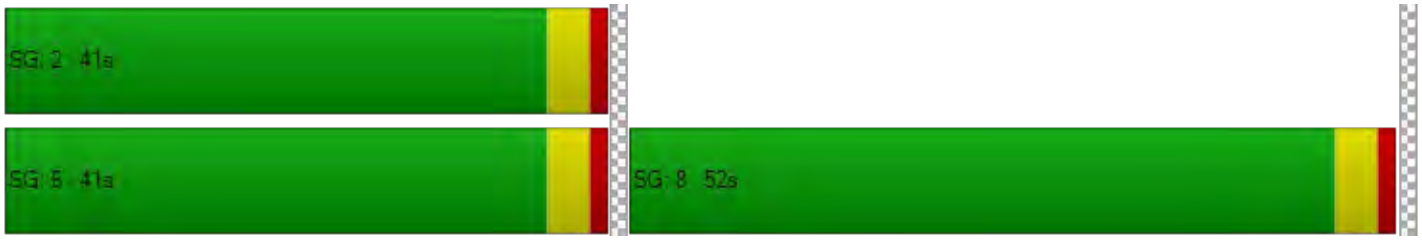
d_M, Delay for Movement [s/veh]	27.81	11.50	10.97	0.00	0.00	29.91
Movement LOS	C	B	B			C
d_A, Approach Delay [s/veh]	22.42		10.97		29.91	
Approach LOS	C		B		C	
d_I, Intersection Delay [s/veh]	22.87					
Intersection LOS	C					
Intersection V/C	0.888					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.473	5.396
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 3 Existing plus Project AM
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	34	11	74	85	61	5	8	490	113	362	321	41	1605

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	3	5	11	302	1	79	42	610	4	12	686	220	1975

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	81	206	399	884	1570

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	613	303	363	674	1953

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Scenario 3 Existing plus Project AM
1/6/2020

Turning Movement Volume: Detail

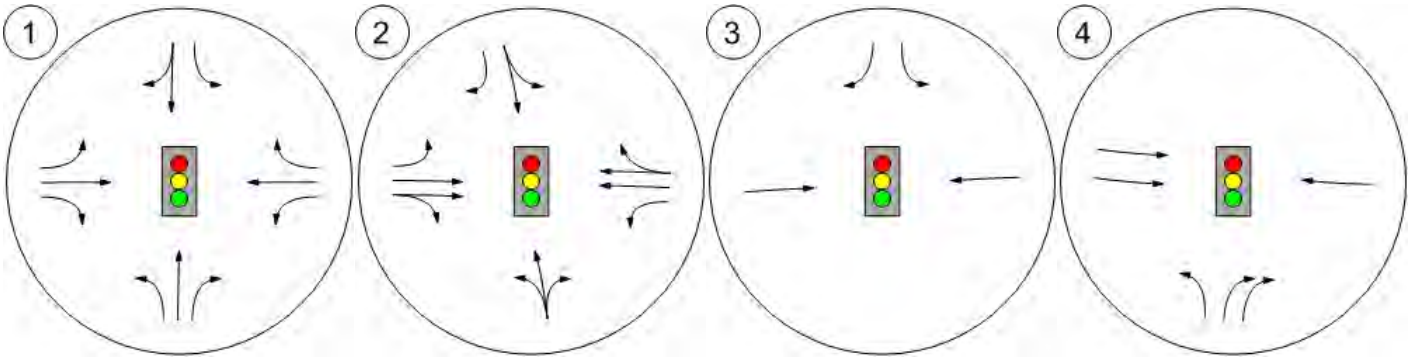
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Final Base	29	11	74	85	53	5	2	466	113	362	304	41	1545
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	5	0	0	0	8	0	6	24	0	0	17	0	60
		Future Total	**34**	**11**	**74**	**85**	**61**	**5**	**8**	**490**	**113**	**362**	**321**	**41**	**1605**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	3	5	11	302	1	72	35	593	4	12	676	220	1934
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	7	7	17	0	0	10	0	41
		Future Total	**3**	**5**	**11**	**302**	**1**	**79**	**42**	**610**	**4**	**12**	**686**	**220**	**1975**

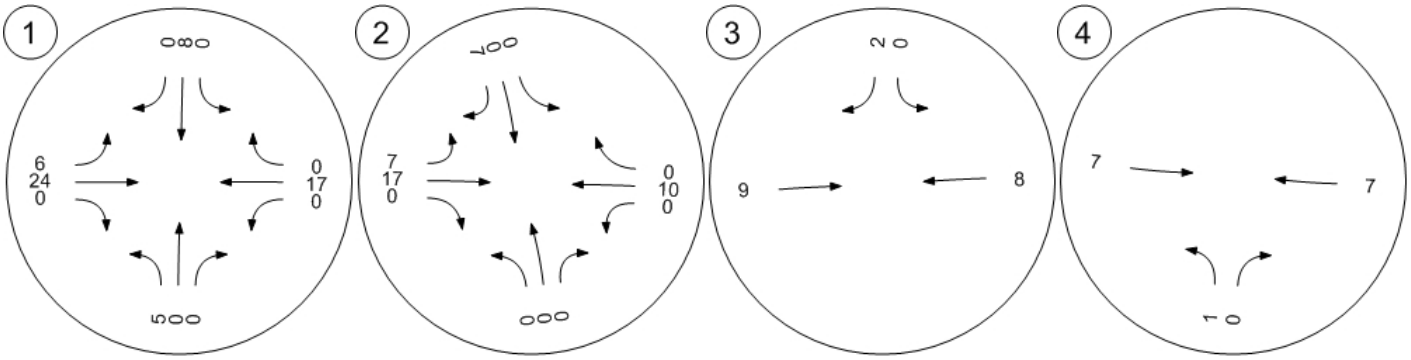
ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	81	204	390	876	1551
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	2	9	8	19
		Future Total	**81**	**206**	**399**	**884**	**1570**

ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	612	303	356	667	1938
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	1	0	7	7	15
		Future Total	**613**	**303**	**363**	**674**	**1953**

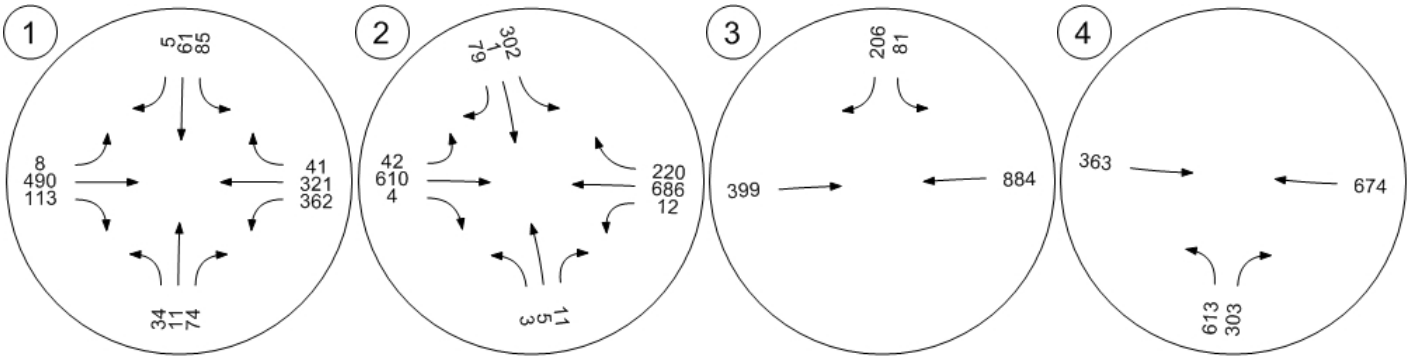
Lane Configuration and Traffic Control



Traffic Volume - Other Volume (Project Trips)



Traffic Volume - Future Total Volume



Vistro File: J:\...\Existing Conditions.vistro
Report File: J:\...\Existing plus Project PM.pdf

Scenario 4 Existing plus Project PM
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Signalized	HCM 6th Edition	EB Left	0.691	13.1	B
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	SB Left	0.447	29.0	C
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Left	0.711	7.4	A
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	WB Thru	0.819	14.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Version 7.00-06

Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Drive

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	150.00	100.00	350.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	115	43	384	89	15	7	4	225	38	117	338	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	6	0	0	0	5	0	4	16	0	0	20	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	43	384	89	20	7	8	241	38	117	358	111
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	12	104	24	5	2	2	65	10	32	97	30
Total Analysis Volume [veh/h]	131	47	416	96	22	8	9	261	41	127	387	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	4	4	15	3	3	0	7	7	7	13	13
g / C, Green / Cycle	0.10	0.11	0.40	0.07	0.09	0.01	0.19	0.19	0.18	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.26	0.05	0.02	0.01	0.14	0.03	0.07	0.21	0.08
s, saturation flow rate [veh/h]	1781	1870	1575	1781	1783	1781	1870	1589	1781	1870	1556
c, Capacity [veh/h]	172	215	626	123	156	17	355	301	317	670	557
d1, Uniform Delay [s]	16.71	15.24	9.30	17.36	16.06	18.69	14.48	12.79	13.79	9.86	8.45
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.08	0.08	0.04	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.63	0.38	0.46	3.94	0.44	8.75	2.23	0.15	0.30	0.59	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.22	0.66	0.78	0.19	0.52	0.74	0.14	0.40	0.58	0.22
d, Delay for Lane Group [s/veh]	19.34	15.62	9.75	21.31	16.50	27.44	16.71	12.94	14.10	10.44	8.60
Lane Group LOS	B	B	A	C	B	C	B	B	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.00	0.31	1.76	0.79	0.21	0.11	1.79	0.23	0.75	1.78	0.47
50th-Percentile Queue Length [ft/ln]	24.89	7.74	44.01	19.71	5.24	2.65	44.74	5.76	18.79	44.39	11.63
95th-Percentile Queue Length [veh/ln]	1.79	0.56	3.17	1.42	0.38	0.19	3.22	0.41	1.35	3.20	0.84
95th-Percentile Queue Length [ft/ln]	44.80	13.93	79.22	35.48	9.43	4.76	80.53	10.37	33.81	79.91	20.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.34	15.62	9.75	21.31	16.50	16.50	27.44	16.71	12.94	14.10	10.44	8.60
Movement LOS	B	B	A	C	B	B	C	B	B	B	B	A
d_A, Approach Delay [s/veh]	12.33			20.16			16.52			10.83		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	13.13											
Intersection LOS	B											
Intersection V/C	0.691											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16808.93	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.385	2.071	2.403	2.588
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	2.540	1.768	2.073	2.606
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Version 7.00-06

Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	230.00	125.00	100.00	100.00
Speed [mph]	25.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	5	4	20	304	0	50	92	618	4	14	503	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	6	6	10	0	0	14	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	4	20	304	0	56	98	628	4	14	517	323
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	5	78	0	14	25	162	1	4	133	83
Total Analysis Volume [veh/h]	5	4	21	313	0	58	101	647	4	14	533	333
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			2			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	58	58	58	58	58	58	58	58	58
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	6	23	23	2	18	18
g / C, Green / Cycle	0.37	0.37	0.37	0.11	0.39	0.39	0.03	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.05	0.67	0.04	0.06	0.17	0.17	0.01	0.25	0.25
s, saturation flow rate [veh/h]	664	469	1569	1781	1870	1866	1781	1870	1601
c, Capacity [veh/h]	320	299	584	201	731	729	53	575	492
d1, Uniform Delay [s]	13.07	22.66	11.84	24.15	13.02	13.02	27.48	18.45	18.58
k, delay calibration	0.11	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	64.81	0.07	1.93	0.43	0.43	2.65	2.70	3.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	1.05	0.10	0.50	0.45	0.45	0.27	0.80	0.82
d, Delay for Lane Group [s/veh]	13.19	87.47	11.91	26.08	13.44	13.45	30.13	21.15	22.05
Lane Group LOS	B	F	B	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	9.18	0.42	1.28	2.63	2.63	0.21	5.21	4.68
50th-Percentile Queue Length [ft/ln]	5.93	229.60	10.40	31.90	65.85	65.72	5.29	130.35	117.09
95th-Percentile Queue Length [veh/ln]	0.43	14.55	0.75	2.30	4.74	4.73	0.38	8.96	8.23
95th-Percentile Queue Length [ft/ln]	10.67	363.87	18.72	57.42	118.52	118.29	9.52	223.98	205.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.19	13.19	13.19	87.47	87.47	11.91	26.08	13.45	13.45	30.13	21.27	22.05
Movement LOS	B	B	B	F	F	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	13.19			75.66			15.14			21.70		
Approach LOS	B			E			B			C		
d_I, Intersection Delay [s/veh]	29.00											
Intersection LOS	C											
Intersection V/C	0.447											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.734	0.000	2.671	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.50	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.609	2.172	2.180	2.286
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	197	89	0	526	791	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	2	0	9	12	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	197	91	0	535	803	0
Peak Hour Factor	0.9670	0.9670	1.0000	0.9670	0.9670	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	24	0	138	208	0
Total Analysis Volume [veh/h]	204	94	0	553	830	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	15	15
g / C, Green / Cycle	0.18	0.18	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.11	0.06	0.30	0.44
s, saturation flow rate [veh/h]	1781	1589	1870	1870
c, Capacity [veh/h]	329	293	991	991
d1, Uniform Delay [s]	10.52	9.90	4.39	5.56
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.92	0.62	0.49	1.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.32	0.56	0.84
d, Delay for Lane Group [s/veh]	12.44	10.52	4.89	7.54
Lane Group LOS	B	B	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.92	0.37	0.38	1.00
50th-Percentile Queue Length [ft/ln]	22.88	9.29	9.47	25.10
95th-Percentile Queue Length [veh/ln]	1.65	0.67	0.68	1.81
95th-Percentile Queue Length [ft/ln]	41.18	16.73	17.05	45.18

Movement, Approach, & Intersection Results

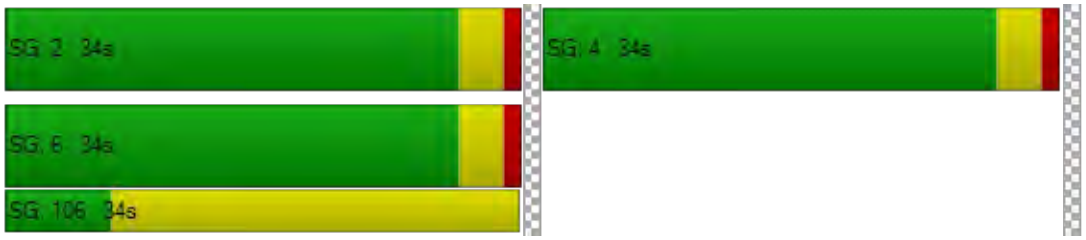
d_M, Delay for Movement [s/veh]	12.44	10.52	0.00	4.89	7.54	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	11.83		4.89		7.54	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	7.43					
Intersection LOS	A					
Intersection V/C	0.711					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.884	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	5.045	5.502
Bicycle LOS	D	F	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	551	594	545	0	0	633
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	7	0	7	0	0	5
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	558	594	552	0	0	638
Peak Hour Factor	0.9650	0.9650	0.9650	1.0000	1.0000	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	154	143	0	0	165
Total Analysis Volume [veh/h]	578	616	572	0	0	661
Presence of On-Street Parking	No	No	No	No	Yes	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		4		2	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	48	48	48	48
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	21	21
g / C, Green / Cycle	0.40	0.40	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.32	0.22	0.16	0.39
s, saturation flow rate [veh/h]	1781	2813	3560	1683
c, Capacity [veh/h]	710	1122	1555	735
d1, Uniform Delay [s]	13.02	11.26	9.19	12.70
k, delay calibration	0.11	0.11	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.33	0.42	0.15	6.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.55	0.37	0.90
d, Delay for Lane Group [s/veh]	15.35	11.68	9.33	19.65
Lane Group LOS	B	B	A	B
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.73	2.03	1.48	6.05
50th-Percentile Queue Length [ft/ln]	118.21	50.81	36.97	151.13
95th-Percentile Queue Length [veh/ln]	8.29	3.66	2.66	10.08
95th-Percentile Queue Length [ft/ln]	207.37	91.47	66.55	251.94

Movement, Approach, & Intersection Results

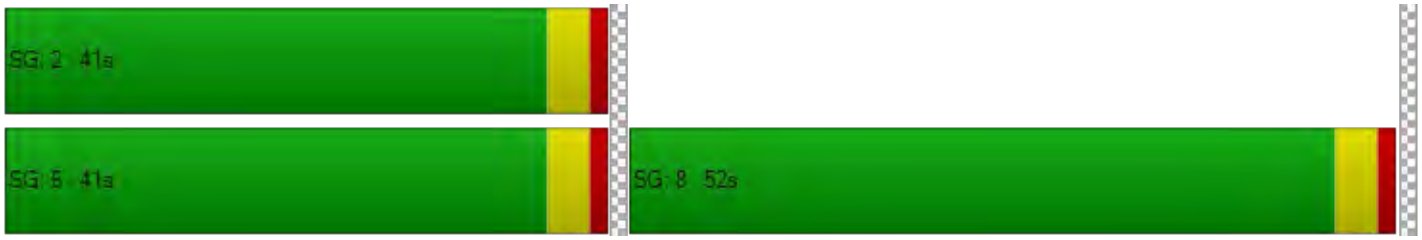
d_M, Delay for Movement [s/veh]	15.35	11.68	9.33	0.00	0.00	19.65
Movement LOS	B	B	A			B
d_A, Approach Delay [s/veh]	13.46		9.33		19.65	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	14.17					
Intersection LOS	B					
Intersection V/C	0.819					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.604	5.223
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 4 Existing plus Project PM
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	121	43	384	89	20	7	8	241	38	117	358	111	1537

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	5	4	20	304	0	56	98	628	4	14	517	323	1973

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	197	91	535	803	1626

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	558	594	552	638	2342

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Scenario 4 Existing plus Project PM
1/6/2020

Turning Movement Volume: Detail

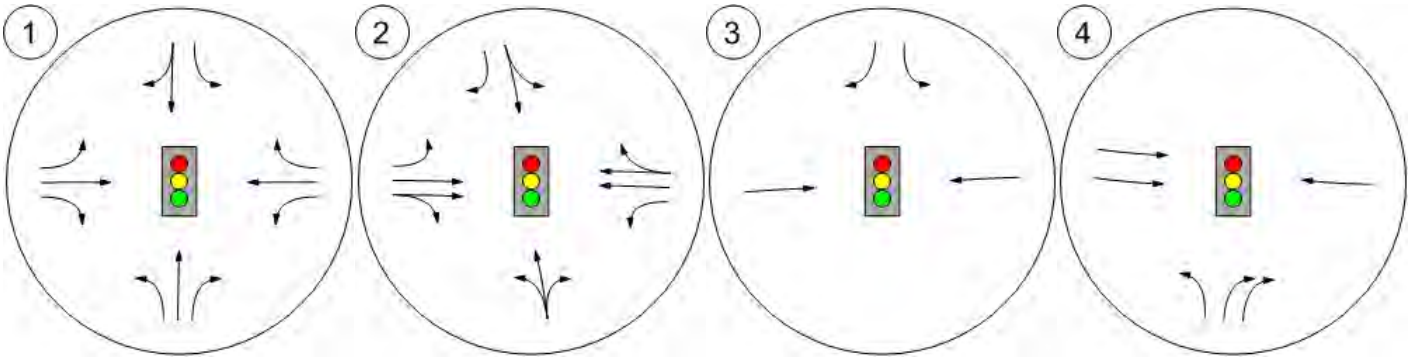
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Final Base	115	43	384	89	15	7	4	225	38	117	338	111	1486
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	6	0	0	0	5	0	4	16	0	0	20	0	51
		Future Total	**121**	**43**	**384**	**89**	**20**	**7**	**8**	**241**	**38**	**117**	**358**	**111**	**1537**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	5	4	20	304	0	50	92	618	4	14	503	323	1937
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	6	6	10	0	0	14	0	36
		Future Total	**5**	**4**	**20**	**304**	**0**	**56**	**98**	**628**	**4**	**14**	**517**	**323**	**1973**

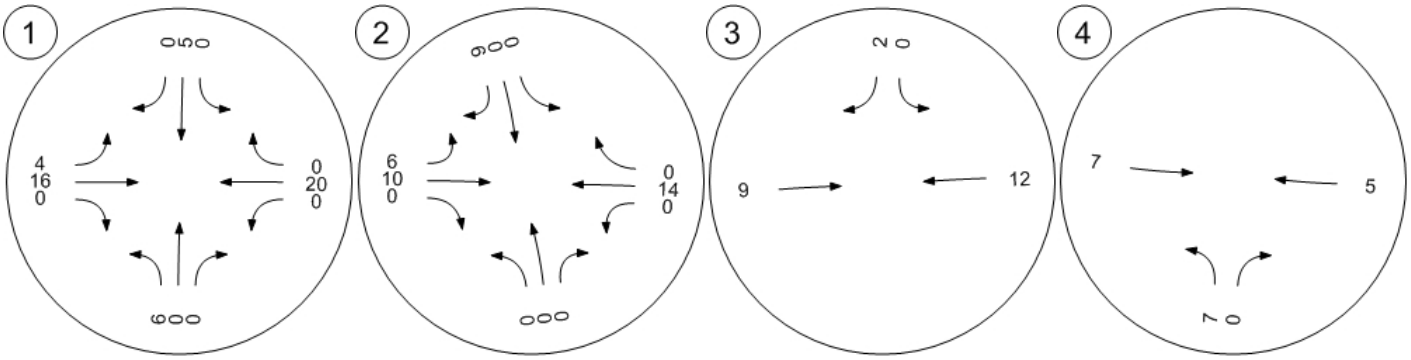
ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	197	89	526	791	1603
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	2	9	12	23
		Future Total	**197**	**91**	**535**	**803**	**1626**

ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	551	594	545	633	2323
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	7	0	7	5	19
		Future Total	**558**	**594**	**552**	**638**	**2342**

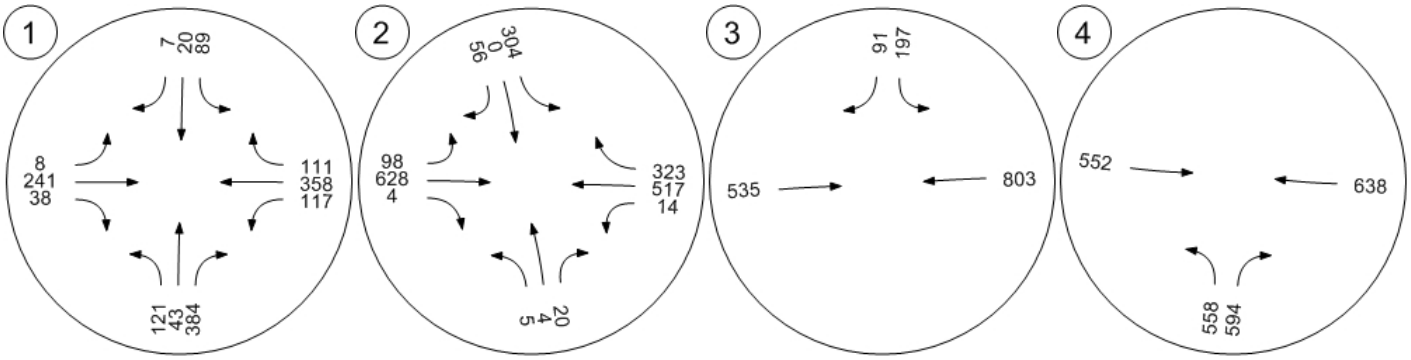
Lane Configuration and Traffic Control



Traffic Volume - Other Volume (Project Trips)



Traffic Volume - Future Total Volume



Appendix E: Cumulative No Project Conditions Results

Vistro File: J:\...\Cumulative Conditions.vistro
Report File: J:\...\Cumulative No Project AM.pdf

Scenario 1 Cumulative AM Peak
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Dr.	Signalized	HCM 6th Edition	NB Left	0.796	23.6	C
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	WB Left	0.710	20.3	C
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Left	0.587	6.6	A
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	WB Thru	0.716	10.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Version 7.00-06

Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Dr.

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.796

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	250.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	59	9	66	145	39	4	0	518	126	326	449	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	9	66	145	39	4	0	518	126	326	449	83
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	2	17	36	10	1	0	130	32	82	112	21
Total Analysis Volume [veh/h]	59	9	66	145	39	4	0	518	126	326	449	83
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	66	66	66	66	66	66	66	66	66	66
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	3	3	21	7	7	0	25	14	40	40
g / C, Green / Cycle	0.04	0.05	0.32	0.10	0.11	0.00	0.38	0.21	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.03	0.00	0.04	0.08	0.02	0.00	0.36	0.18	0.24	0.05
s, saturation flow rate [veh/h]	1781	1870	1585	1781	1839	1781	1808	1781	1870	1557
c, Capacity [veh/h]	75	85	503	184	196	0	693	378	1114	928
d1, Uniform Delay [s]	31.58	30.50	16.17	29.13	27.22	0.00	19.66	25.28	7.15	5.73
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.26	0.04	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.48	0.41	0.04	2.80	0.41	0.00	12.81	2.29	0.17	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.11	0.13	0.79	0.22	0.00	0.93	0.86	0.40	0.09
d, Delay for Lane Group [s/veh]	38.06	30.91	16.21	31.93	27.64	0.00	32.47	27.57	7.33	5.77
Lane Group LOS	D	C	B	C	C	A	C	C	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.01	0.14	0.64	2.23	0.60	0.00	10.98	4.71	2.49	0.37
50th-Percentile Queue Length [ft/ln]	25.28	3.47	16.10	55.76	15.06	0.00	274.38	117.85	62.36	9.24
95th-Percentile Queue Length [veh/ln]	1.82	0.25	1.16	4.01	1.08	0.00	16.41	8.27	4.49	0.67
95th-Percentile Queue Length [ft/ln]	45.51	6.25	28.98	100.36	27.10	0.00	410.21	206.87	112.25	16.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.06	30.91	16.21	31.93	27.64	27.64	0.00	32.47	32.47	27.57	7.33	5.77
Movement LOS	D	C	B	C	C	C	A	C	C	C	A	A
d_A, Approach Delay [s/veh]	26.82			30.95			32.47			14.87		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	23.62											
Intersection LOS	C											
Intersection V/C	0.796											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16877.40	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.334	2.061	2.412	2.712
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	1.781	1.870	2.622	2.975
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Version 7.00-06

Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	100.00	125.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	2	1	9	363	0	27	55	521	3	8	844	298
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	9	363	0	27	55	521	3	8	844	298
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	91	0	7	14	130	1	2	211	75
Total Analysis Volume [veh/h]	2	1	9	363	0	27	55	521	3	8	844	298
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	59	59	59	59	59	59	59	59	59
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	14	14	5	26	26	1	22	22
g / C, Green / Cycle	0.03	0.24	0.24	0.08	0.44	0.44	0.02	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.02	0.03	0.14	0.14	0.00	0.32	0.32
s, saturation flow rate [veh/h]	1639	1781	1569	1781	1870	1866	1781	1870	1683
c, Capacity [veh/h]	50	431	380	144	826	824	30	706	636
d1, Uniform Delay [s]	28.16	21.46	17.38	25.93	10.78	10.78	28.88	16.91	17.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.18	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.44	4.53	0.08	1.66	0.22	0.22	4.67	4.69	5.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.84	0.07	0.38	0.32	0.32	0.27	0.84	0.86
d, Delay for Lane Group [s/veh]	30.59	25.99	17.46	27.59	11.00	11.00	33.54	21.60	22.94
Lane Group LOS	C	C	B	C	B	B	C	C	C
Critical Lane Group	Yes	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	4.93	0.27	0.76	1.98	1.98	0.15	7.38	7.00
50th-Percentile Queue Length [ft/ln]	4.80	123.14	6.81	19.07	49.46	49.39	3.65	184.50	174.91
95th-Percentile Queue Length [veh/ln]	0.35	8.57	0.49	1.37	3.56	3.56	0.26	11.84	11.33
95th-Percentile Queue Length [ft/ln]	8.65	214.13	12.25	34.32	89.04	88.90	6.56	295.89	283.36

Movement, Approach, & Intersection Results

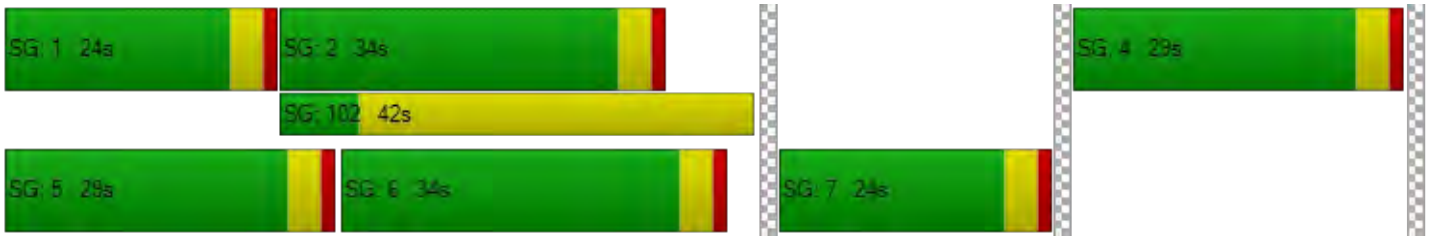
d_M, Delay for Movement [s/veh]	30.59	30.59	30.59	25.99	25.99	17.46	27.59	11.00	11.00	33.54	21.99	22.94
Movement LOS	C	C	C	C	C	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	30.59			25.40			12.58			22.32		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	20.28											
Intersection LOS	C											
Intersection V/C	0.710											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	8739.85	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.726	0.000	2.596	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.48	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.579	2.203	2.037	2.508
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	1	0	0	0	0
Pocket Length [ft]	100.00	300.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	240	184	0	408	1143	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	240	184	0	408	1143	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	46	0	102	286	0
Total Analysis Volume [veh/h]	240	184	0	408	1143	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	13	13
g / C, Green / Cycle	0.23	0.23	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.11	0.32
s, saturation flow rate [veh/h]	1781	1569	3560	3560
c, Capacity [veh/h]	406	358	1690	1690
d1, Uniform Delay [s]	9.27	9.07	4.19	5.47
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	1.14	0.07	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.51	0.24	0.68
d, Delay for Lane Group [s/veh]	10.64	10.21	4.27	5.95
Lane Group LOS	B	B	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	0.66	0.15	0.59
50th-Percentile Queue Length [ft/ln]	22.15	16.55	3.73	14.87
95th-Percentile Queue Length [veh/ln]	1.59	1.19	0.27	1.07
95th-Percentile Queue Length [ft/ln]	39.87	29.80	6.71	26.76

Movement, Approach, & Intersection Results

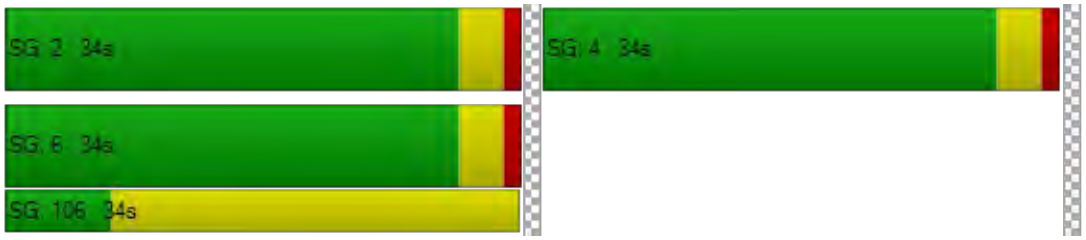
d_M, Delay for Movement [s/veh]	10.64	10.21	0.00	4.27	5.95	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	10.46		4.27		5.95	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	6.57					
Intersection LOS	A					
Intersection V/C	0.587					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.956	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.469	5.075
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	813	467	648	0	0	1006
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	813	467	648	0	0	1006
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	203	117	162	0	0	252
Total Analysis Volume [veh/h]	813	467	648	0	0	1006
Presence of On-Street Parking	No	Yes	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	40	40	40	40
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	15	15
g / C, Green / Cycle	0.43	0.43	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.24	0.33	0.18	0.28
s, saturation flow rate [veh/h]	3459	1431	3560	3560
c, Capacity [veh/h]	1481	612	1329	1329
d1, Uniform Delay [s]	8.61	9.78	9.67	11.02
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	2.00	0.28	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.76	0.49	0.76
d, Delay for Lane Group [s/veh]	8.93	11.78	9.95	11.93
Lane Group LOS	A	B	A	B
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.80	2.60	1.50	2.73
50th-Percentile Queue Length [ft/ln]	45.02	65.11	37.43	68.15
95th-Percentile Queue Length [veh/ln]	3.24	4.69	2.69	4.91
95th-Percentile Queue Length [ft/ln]	81.04	117.21	67.37	122.67

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Movement, Approach, & Intersection Results

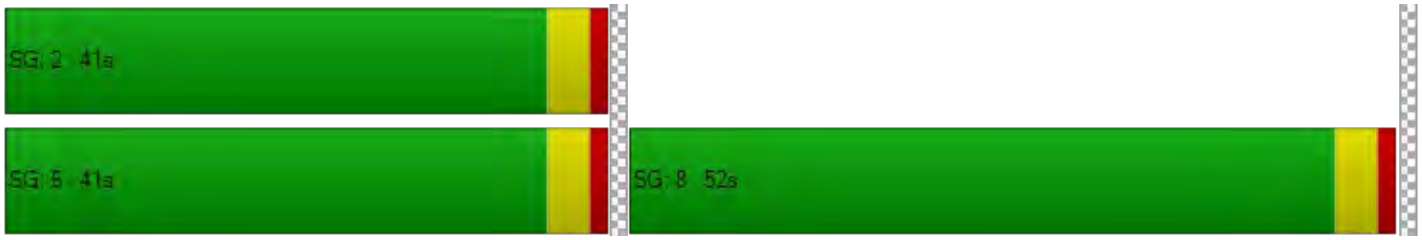
d_M, Delay for Movement [s/veh]	8.93	11.78	9.95	0.00	0.00	11.93
Movement LOS	A	B	A			B
d_A, Approach Delay [s/veh]	9.97		9.95		11.93	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	10.64					
Intersection LOS	B					
Intersection V/C	0.716					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.667	4.962
Bicycle LOS	D	E	E

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 1 Cumulative AM Peak
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Dr.	59	9	66	145	39	4	0	518	126	326	449	83	1824

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	2	1	9	363	0	27	55	521	3	8	844	298	2131

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	240	184	408	1143	1975

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	813	467	648	1006	2934

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Scenario 1 Cumulative AM Peak
1/6/2020

Turning Movement Volume: Detail

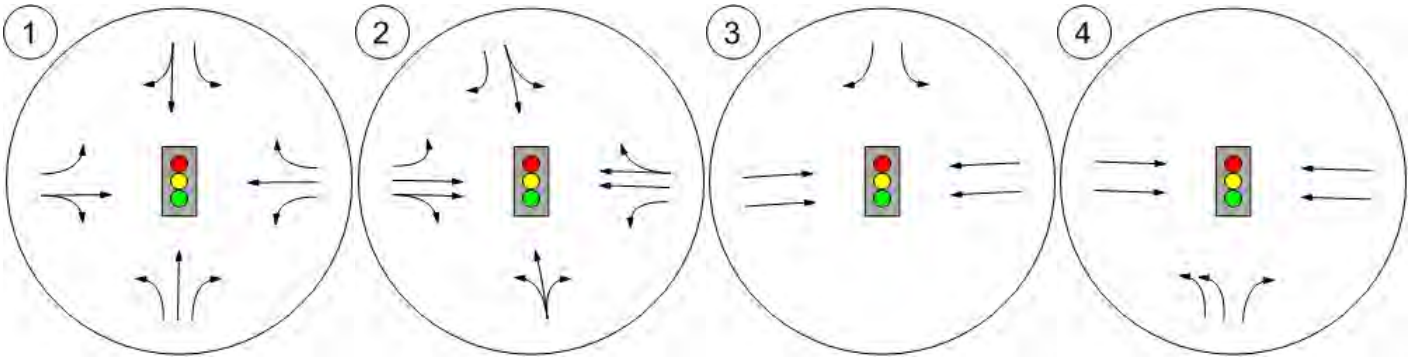
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Dr.	Final Base	59	9	66	145	39	4	0	518	126	326	449	83	1824
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**59**	**9**	**66**	**145**	**39**	**4**	**0**	**518**	**126**	**326**	**449**	**83**	**1824**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	2	1	9	363	0	27	55	521	3	8	844	298	2131
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**2**	**1**	**9**	**363**	**0**	**27**	**55**	**521**	**3**	**8**	**844**	**298**	**2131**

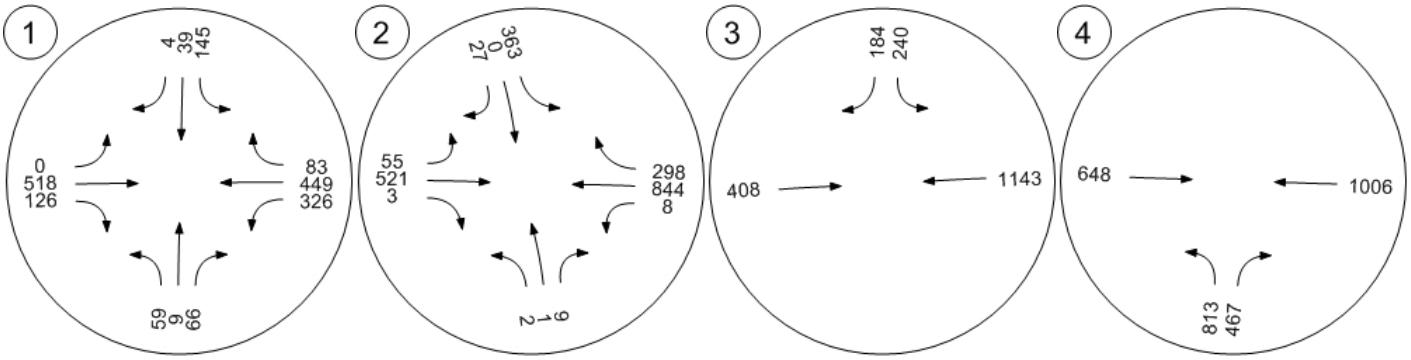
ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	240	184	408	1143	1975
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**240**	**184**	**408**	**1143**	**1975**

ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	813	467	648	1006	2934
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**813**	**467**	**648**	**1006**	**2934**

Lane Configuration and Traffic Control



Traffic Volume - Base Volume



Vistro File: J:\...\Cumulative Conditions.vistro
Report File: J:\...\Cumulative No Project PM.pdf

Scenario 2 2 Cumulative PM Peak
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Signalized	HCM 6th Edition	EB Left	0.756	14.2	B
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	WB Left	0.723	23.4	C
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Left	0.615	6.9	A
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	NB Right	0.856	18.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Version 7.00-06

Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Drive

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.756

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	250.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	115	33	437	82	9	5	6	295	51	191	509	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	33	437	82	9	5	6	295	51	191	509	126
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	8	109	21	2	1	2	74	13	48	127	32
Total Analysis Volume [veh/h]	115	33	437	82	9	5	6	295	51	191	509	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	4	5	18	3	4	0	10	9	19	19
g / C, Green / Cycle	0.08	0.12	0.41	0.06	0.09	0.01	0.23	0.21	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.06	0.02	0.28	0.05	0.01	0.00	0.19	0.11	0.27	0.08
s, saturation flow rate [veh/h]	1781	1870	1582	1781	1757	1781	1823	1781	1870	1556
c, Capacity [veh/h]	150	221	654	105	163	12	428	366	811	675
d1, Uniform Delay [s]	19.91	17.58	10.52	20.62	18.42	21.99	16.06	15.70	9.79	7.73
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.08	0.04	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.06	0.23	0.44	4.74	0.17	12.70	2.77	0.43	0.60	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.15	0.67	0.78	0.09	0.52	0.81	0.52	0.63	0.19
d, Delay for Lane Group [s/veh]	22.97	17.81	10.97	25.36	18.59	34.69	18.83	16.13	10.38	7.83
Lane Group LOS	C	B	B	C	B	C	B	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.10	0.27	2.42	0.85	0.12	0.10	3.12	1.42	2.68	0.52
50th-Percentile Queue Length [ft/ln]	27.58	6.66	60.45	21.17	2.95	2.43	78.05	35.56	67.01	12.91
95th-Percentile Queue Length [veh/ln]	1.99	0.48	4.35	1.52	0.21	0.17	5.62	2.56	4.82	0.93
95th-Percentile Queue Length [ft/ln]	49.64	11.99	108.81	38.11	5.31	4.37	140.49	64.00	120.62	23.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.97	17.81	10.97	25.36	18.59	18.59	34.69	18.83	18.83	16.13	10.38	7.83
Movement LOS	C	B	B	C	B	B	C	B	B	B	B	A
d_A, Approach Delay [s/veh]	13.71			24.37			19.10			11.32		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	14.22											
Intersection LOS	B											
Intersection V/C	0.756											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16860.28	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.402	2.053	2.370	2.726
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	2.525	1.718	2.140	2.923
Bicycle LOS	B	A	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Version 7.00-06

Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	100.00	125.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	4	2	16	387	4	65	77	702	0	9	722	372
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	2	16	387	4	65	77	702	0	9	722	372
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	4	97	1	16	19	176	0	2	181	93
Total Analysis Volume [veh/h]	4	2	16	387	4	65	77	702	0	9	722	372
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	66	66	66	66	66	66	66	66	66
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	17	17	6	29	29	1	24	24
g / C, Green / Cycle	0.05	0.25	0.25	0.09	0.43	0.43	0.02	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.04	0.04	0.19	0.19	0.01	0.31	0.32
s, saturation flow rate [veh/h]	1644	1782	1569	1781	1870	1870	1781	1870	1631
c, Capacity [veh/h]	83	453	399	164	813	813	33	676	590
d1, Uniform Delay [s]	30.27	23.60	19.21	28.56	13.03	13.03	32.08	19.57	19.74
k, delay calibration	0.11	0.14	0.11	0.11	0.11	0.11	0.11	0.22	0.23
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.66	6.25	0.19	2.09	0.36	0.36	4.30	6.35	8.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.86	0.16	0.47	0.43	0.43	0.27	0.86	0.87
d, Delay for Lane Group [s/veh]	31.93	29.85	19.40	30.65	13.40	13.40	36.38	25.92	28.12
Lane Group LOS	C	C	B	C	B	B	D	C	C
Critical Lane Group	Yes	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.36	6.20	0.75	1.21	3.32	3.32	0.18	8.62	8.03
50th-Percentile Queue Length [ft/ln]	9.07	155.09	18.84	30.13	83.05	83.05	4.42	215.38	200.63
95th-Percentile Queue Length [veh/ln]	0.65	10.29	1.36	2.17	5.98	5.98	0.32	13.43	12.67
95th-Percentile Queue Length [ft/ln]	16.33	257.21	33.92	54.23	149.49	149.49	7.95	335.73	316.78

Movement, Approach, & Intersection Results

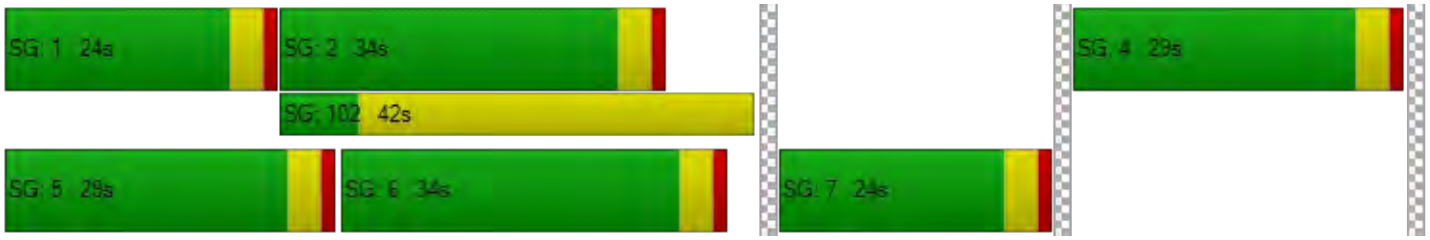
d_M, Delay for Movement [s/veh]	31.93	31.93	31.93	29.85	29.85	19.40	30.65	13.40	13.40	36.38	26.36	28.12
Movement LOS	C	C	C	C	C	B	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	31.93			28.36			15.10			27.03		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	23.40											
Intersection LOS	C											
Intersection V/C	0.723											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	8759.43	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.731	0.000	2.619	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.48	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.596	2.312	2.202	2.470
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	6.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	1	0	0	0	0
Pocket Length [ft]	100.00	300.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	322	94	0	637	1059	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	322	94	0	637	1059	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	24	0	159	265	0
Total Analysis Volume [veh/h]	322	94	0	637	1059	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	12	12
g / C, Green / Cycle	0.26	0.26	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.18	0.06	0.18	0.30
s, saturation flow rate [veh/h]	1781	1569	3560	3560
c, Capacity [veh/h]	472	416	1565	1565
d1, Uniform Delay [s]	8.93	7.78	5.18	6.05
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.75	0.27	0.17	0.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.23	0.41	0.68
d, Delay for Lane Group [s/veh]	10.68	8.05	5.35	6.57
Lane Group LOS	B	A	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.17	0.27	0.37	0.76
50th-Percentile Queue Length [ft/ln]	29.32	6.78	9.30	19.09
95th-Percentile Queue Length [veh/ln]	2.11	0.49	0.67	1.37
95th-Percentile Queue Length [ft/ln]	52.77	12.21	16.74	34.36

Movement, Approach, & Intersection Results

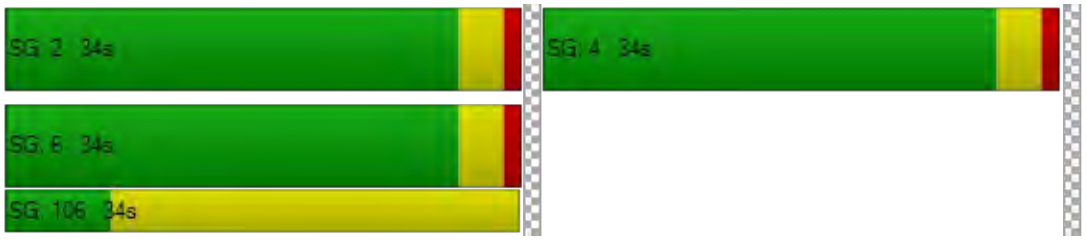
d_M, Delay for Movement [s/veh]	10.68	8.05	0.00	5.35	6.57	0.00
Movement LOS	B	A		A	A	
d_A, Approach Delay [s/veh]	10.08		5.35		6.57	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	6.90					
Intersection LOS	A					
Intersection V/C	0.615					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.951	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.658	5.006
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.856

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	694	737	761	0	0	871
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	694	737	761	0	0	871
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	174	184	190	0	0	218
Total Analysis Volume [veh/h]	694	737	761	0	0	871
Presence of On-Street Parking	No	Yes	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	54	54	54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	16	16
g / C, Green / Cycle	0.55	0.55	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.20	0.52	0.21	0.24
s, saturation flow rate [veh/h]	3459	1431	3560	3560
c, Capacity [veh/h]	1885	780	1089	1089
d1, Uniform Delay [s]	6.95	11.45	16.44	17.12
k, delay calibration	0.11	0.39	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	18.07	0.82	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.95	0.70	0.80
d, Delay for Lane Group [s/veh]	7.07	29.52	17.27	18.52
Lane Group LOS	A	C	B	B
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.62	9.47	3.51	4.24
50th-Percentile Queue Length [ft/ln]	40.44	236.68	87.67	106.05
95th-Percentile Queue Length [veh/ln]	2.91	14.51	6.31	7.62
95th-Percentile Queue Length [ft/ln]	72.79	362.84	157.80	190.49

Movement, Approach, & Intersection Results

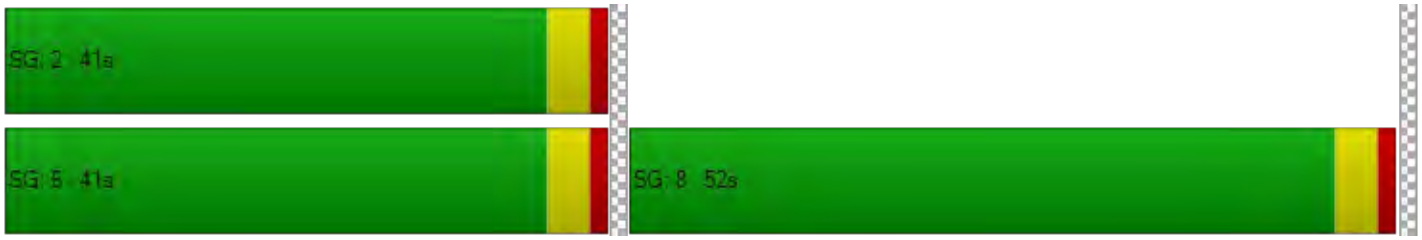
d_M, Delay for Movement [s/veh]	7.07	29.52	17.27	0.00	0.00	18.52
Movement LOS	A	C	B			B
d_A, Approach Delay [s/veh]	18.63		17.27		18.52	
Approach LOS	B		B		B	
d_I, Intersection Delay [s/veh]	18.26					
Intersection LOS	B					
Intersection V/C	0.856					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.760	4.851
Bicycle LOS	D	E	E

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 2 2 Cumulative PM Peak
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	115	33	437	82	9	5	6	295	51	191	509	126	1859

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	4	2	16	387	4	65	77	702	0	9	722	372	2360

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	322	94	637	1059	2112

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	694	737	761	871	3063

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Scenario 2 2 Cumulative PM Peak
1/6/2020

Turning Movement Volume: Detail

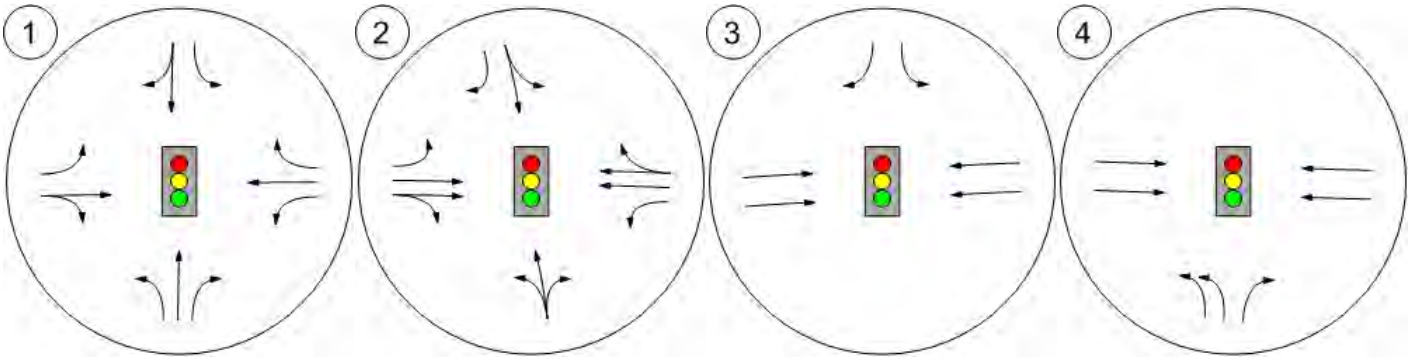
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Final Base	115	33	437	82	9	5	6	295	51	191	509	126	1859
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**115**	**33**	**437**	**82**	**9**	**5**	**6**	**295**	**51**	**191**	**509**	**126**	**1859**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	4	2	16	387	4	65	77	702	0	9	722	372	2360
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**4**	**2**	**16**	**387**	**4**	**65**	**77**	**702**	**0**	**9**	**722**	**372**	**2360**

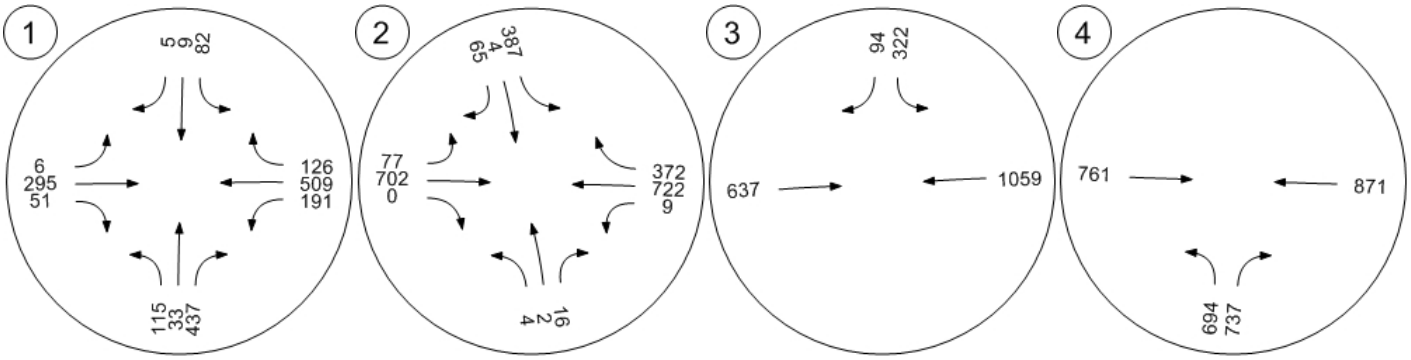
ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	322	94	637	1059	2112
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**322**	**94**	**637**	**1059**	**2112**

ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	694	737	761	871	3063
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**694**	**737**	**761**	**871**	**3063**

Lane Configuration and Traffic Control



Traffic Volume - Base Volume



Appendix E: Cumulative Plus Project Conditions Results

Vistro File: J:\...\Cumulative Conditions.vistro
Report File: J:\...\Cumulative Plus Project AM.pdf

Scenario 4 Cumulative plus Project AM
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Dr.	Signalized	HCM 6th Edition	EB Left	0.740	17.8	B
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	WB Left	0.714	20.9	C
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Left	0.589	6.6	A
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	WB Thru	0.718	10.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Version 7.00-06

Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Dr.

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	150.00	100.00	350.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	59	9	66	145	39	4	0	518	126	326	449	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	5	0	0	0	5	0	4	16	0	0	17	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	9	66	145	44	4	4	534	126	326	466	83
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	2	17	36	11	1	1	134	32	82	117	21
Total Analysis Volume [veh/h]	64	9	66	145	44	4	4	534	126	326	466	83
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	56	56	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	3	3	19	6	6	0	18	18	12	30	30
g / C, Green / Cycle	0.05	0.05	0.34	0.10	0.11	0.00	0.32	0.32	0.22	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.04	0.00	0.04	0.08	0.03	0.00	0.29	0.08	0.18	0.25	0.05
s, saturation flow rate [veh/h]	1781	1870	1584	1781	1842	1781	1870	1589	1781	1870	1557
c, Capacity [veh/h]	81	92	535	187	200	8	608	517	388	1007	838
d1, Uniform Delay [s]	26.51	25.49	12.82	24.47	22.90	27.88	17.89	13.88	21.03	7.96	6.31
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.08	0.08	0.04	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.10	0.34	0.04	2.60	0.45	18.41	3.23	0.18	1.92	0.25	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.10	0.12	0.78	0.24	0.52	0.88	0.24	0.84	0.46	0.10
d, Delay for Lane Group [s/veh]	32.61	25.82	12.86	27.07	23.35	46.30	21.12	14.06	22.95	8.21	6.35
Lane Group LOS	C	C	B	C	C	D	C	B	C	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.90	0.11	0.48	1.81	0.54	0.09	6.24	1.07	3.73	2.46	0.35
50th-Percentile Queue Length [ft/ln]	22.56	2.81	12.12	45.17	13.61	2.25	156.02	26.71	93.35	61.48	8.65
95th-Percentile Queue Length [veh/ln]	1.62	0.20	0.87	3.25	0.98	0.16	10.34	1.92	6.72	4.43	0.62
95th-Percentile Queue Length [ft/ln]	40.60	5.05	21.82	81.30	24.50	4.06	258.45	48.08	168.03	110.66	15.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.61	25.82	12.86	27.07	23.35	23.35	46.30	21.12	14.06	22.95	8.21	6.35
Movement LOS	C	C	B	C	C	C	D	C	B	C	A	A
d_A, Approach Delay [s/veh]	22.79			26.15			19.93			13.53		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.79											
Intersection LOS	B											
Intersection V/C	0.740											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16877.40	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.337	2.065	2.423	2.721
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	1.789	1.878	2.655	3.003
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Version 7.00-06

Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.714

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	100.00	125.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	2	1	9	363	0	27	55	521	3	8	844	298
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	7	7	17	0	0	10	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	9	363	0	34	62	538	3	8	854	298
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	91	0	9	16	135	1	2	214	75
Total Analysis Volume [veh/h]	2	1	9	363	0	34	62	538	3	8	854	298
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	61	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	15	15	5	27	27	1	23	23
g / C, Green / Cycle	0.03	0.24	0.24	0.09	0.45	0.45	0.02	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.02	0.03	0.14	0.14	0.00	0.32	0.33
s, saturation flow rate [veh/h]	1639	1781	1569	1781	1870	1866	1781	1870	1685
c, Capacity [veh/h]	50	430	379	153	838	836	30	709	639
d1, Uniform Delay [s]	28.82	21.98	17.88	26.34	10.84	10.84	29.55	17.30	17.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.20	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.43	4.57	0.10	1.72	0.22	0.22	4.65	5.17	6.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.84	0.09	0.40	0.32	0.32	0.27	0.85	0.86
d, Delay for Lane Group [s/veh]	31.25	26.55	17.99	28.06	11.06	11.06	34.20	22.48	23.94
Lane Group LOS	C	C	B	C	B	B	C	C	C
Critical Lane Group	Yes	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	5.06	0.35	0.88	2.09	2.08	0.15	7.75	7.36
50th-Percentile Queue Length [ft/ln]	4.91	126.56	8.87	21.94	52.14	52.06	3.72	193.67	184.08
95th-Percentile Queue Length [veh/ln]	0.35	8.75	0.64	1.58	3.75	3.75	0.27	12.31	11.81
95th-Percentile Queue Length [ft/ln]	8.84	218.81	15.97	39.49	93.85	93.70	6.69	307.79	295.34

Movement, Approach, & Intersection Results

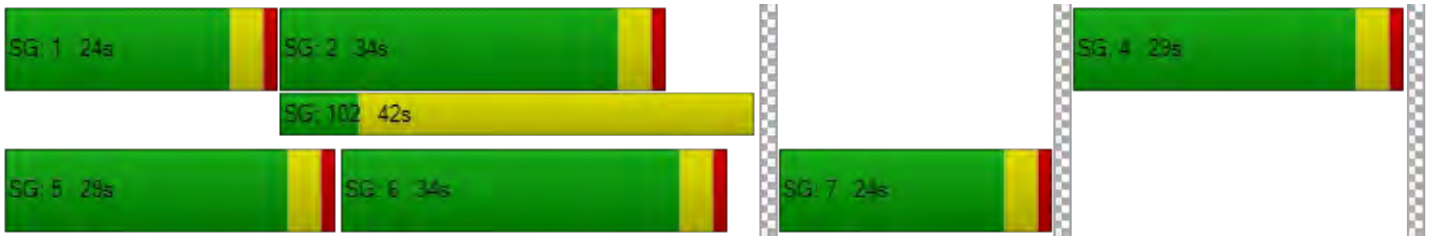
d_M, Delay for Movement [s/veh]	31.25	31.25	31.25	26.55	26.55	17.99	28.06	11.06	11.06	34.20	22.91	23.94
Movement LOS	C	C	C	C	C	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	31.25			25.82			12.81			23.25		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	20.87											
Intersection LOS	C											
Intersection V/C	0.714											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	8739.85	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.726	0.000	2.604	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.48	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.579	2.215	2.057	2.517
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.589

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	1	0	0	0	0
Pocket Length [ft]	100.00	300.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	240	184	0	408	1143	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	2	0	9	8	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	240	186	0	417	1151	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	47	0	104	288	0
Total Analysis Volume [veh/h]	240	186	0	417	1151	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	13	13
g / C, Green / Cycle	0.23	0.23	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.12	0.32
s, saturation flow rate [veh/h]	1781	1569	3560	3560
c, Capacity [veh/h]	406	357	1698	1698
d1, Uniform Delay [s]	9.33	9.15	4.20	5.48
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.38	1.17	0.07	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.52	0.25	0.68
d, Delay for Lane Group [s/veh]	10.71	10.32	4.27	5.96
Lane Group LOS	B	B	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.90	0.68	0.16	0.61
50th-Percentile Queue Length [ft/ln]	22.43	17.00	3.88	15.23
95th-Percentile Queue Length [veh/ln]	1.62	1.22	0.28	1.10
95th-Percentile Queue Length [ft/ln]	40.38	30.60	6.99	27.41

Movement, Approach, & Intersection Results

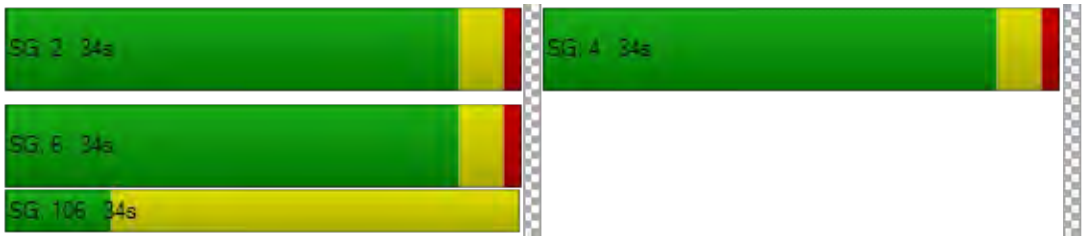
d_M, Delay for Movement [s/veh]	10.71	10.32	0.00	4.27	5.96	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	10.54		4.27		5.96	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	6.59					
Intersection LOS	A					
Intersection V/C	0.589					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.957	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.476	5.082
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.718

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	813	467	648	0	0	1006
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	1	0	7	0	0	7
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	814	467	655	0	0	1013
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	204	117	164	0	0	253
Total Analysis Volume [veh/h]	814	467	655	0	0	1013
Presence of On-Street Parking	No	Yes	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	40	40	40	40
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	15	15
g / C, Green / Cycle	0.43	0.43	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.24	0.33	0.18	0.28
s, saturation flow rate [veh/h]	3459	1431	3560	3560
c, Capacity [veh/h]	1478	612	1335	1335
d1, Uniform Delay [s]	8.68	9.86	9.69	11.06
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	2.02	0.28	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.76	0.49	0.76
d, Delay for Lane Group [s/veh]	9.00	11.87	9.97	11.96
Lane Group LOS	A	B	A	B
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.83	2.64	1.53	2.77
50th-Percentile Queue Length [ft/ln]	45.70	65.94	38.14	69.19
95th-Percentile Queue Length [veh/ln]	3.29	4.75	2.75	4.98
95th-Percentile Queue Length [ft/ln]	82.26	118.69	68.65	124.54

Movement, Approach, & Intersection Results

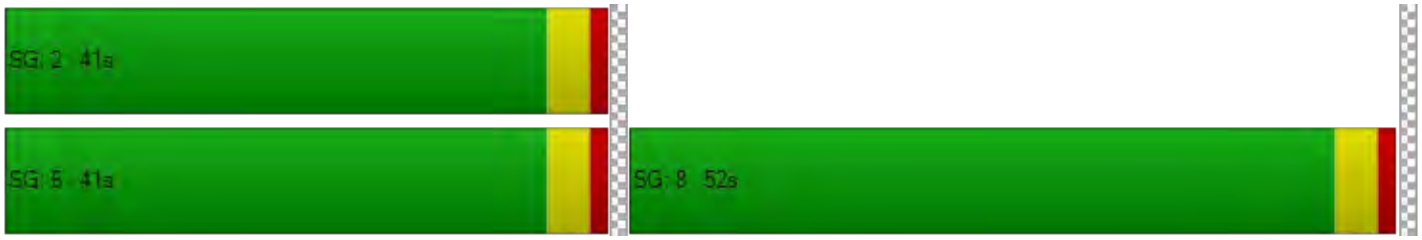
d_M, Delay for Movement [s/veh]	9.00	11.87	9.97	0.00	0.00	11.96
Movement LOS	A	B	A			B
d_A, Approach Delay [s/veh]	10.05		9.97		11.96	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	10.69					
Intersection LOS	B					
Intersection V/C	0.718					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.673	4.968
Bicycle LOS	D	E	E

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Report File: J:\...\Cumulative Plus Project AM.pdf

Scenario 4 Cumulative plus Project AM
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Dr.	64	9	66	145	44	4	4	534	126	326	466	83	1871

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	2	1	9	363	0	34	62	538	3	8	854	298	2172

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	240	186	417	1151	1994

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	814	467	655	1013	2949

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Scenario 4 Cumulative plus Project AM
1/6/2020

Turning Movement Volume: Detail

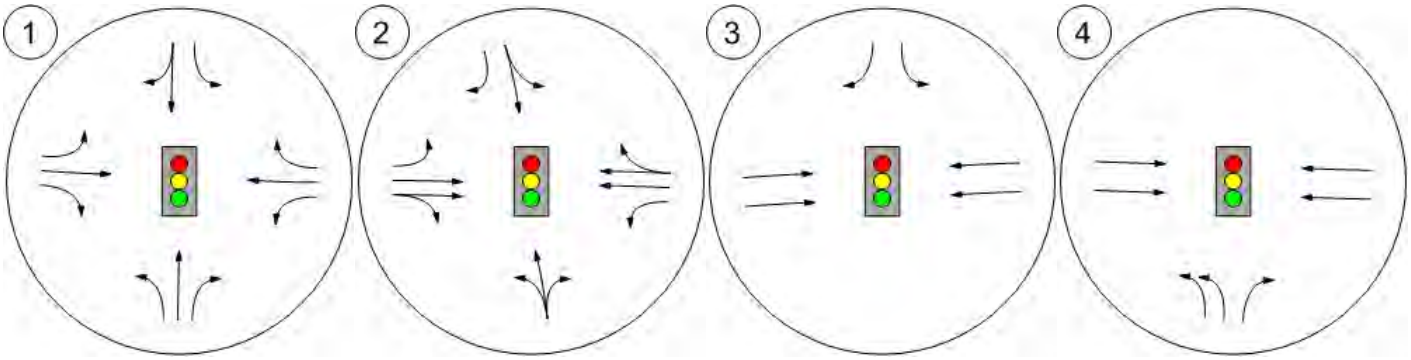
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Dr.	Final Base	59	9	66	145	39	4	0	518	126	326	449	83	1824
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	5	0	0	0	5	0	4	16	0	0	17	0	47
		Future Total	**64**	**9**	**66**	**145**	**44**	**4**	**4**	**534**	**126**	**326**	**466**	**83**	**1871**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	2	1	9	363	0	27	55	521	3	8	844	298	2131
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	7	7	17	0	0	10	0	41
		Future Total	**2**	**1**	**9**	**363**	**0**	**34**	**62**	**538**	**3**	**8**	**854**	**298**	**2172**

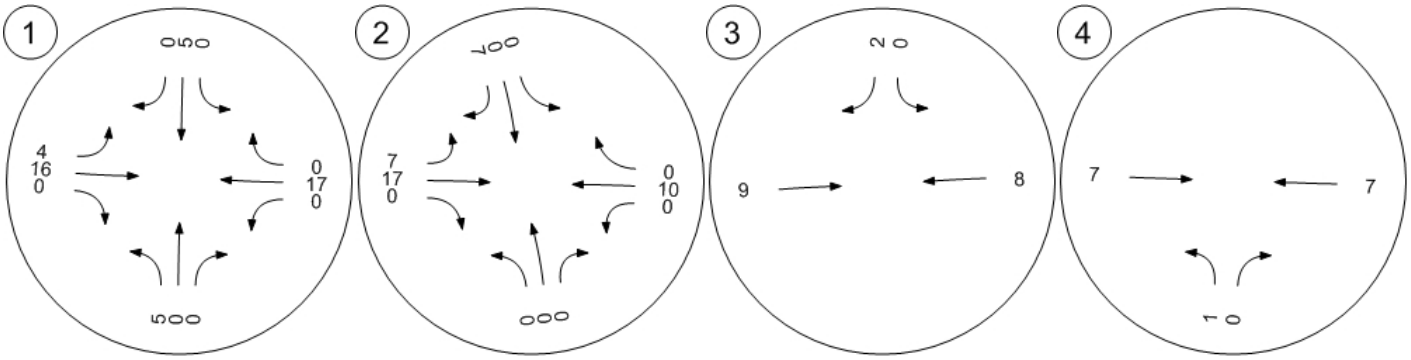
ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	240	184	408	1143	1975
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	2	9	8	19
		Future Total	**240**	**186**	**417**	**1151**	**1994**

ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	813	467	648	1006	2934
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	1	0	7	7	15
		Future Total	**814**	**467**	**655**	**1013**	**2949**

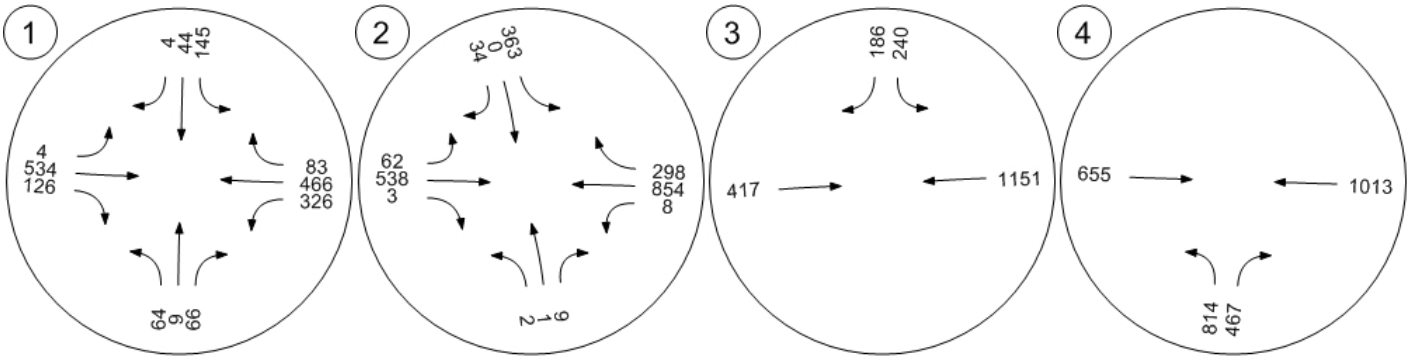
Lane Configuration and Traffic Control



Traffic Volume - Other Volume (Project Trips)



Traffic Volume - Future Total Volume



Vistro File: J:\...\Cumulative Conditions.vistro
Report File: J:\...\Cumulative Plus Project PM.pdf

Scenario 5 Cumulative plus Project PM
1/6/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Signalized	HCM 6th Edition	EB Left	0.757	13.8	B
2	Shiloh Road & Conde Lane	Signalized	HCM 6th Edition	WB Left	0.729	24.0	C
3	Shiloh Road & US 101 Southbound Off Ramp	Signalized	HCM 6th Edition	SB Left	0.618	6.9	A
4	Shiloh Road & US 101 Northbound Off Ramp	Signalized	HCM 6th Edition	NB Right	0.857	18.4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Version 7.00-06

Intersection Level Of Service Report

Intersection 1: Shiloh Road & Skylane Boulevard/Golf Course Drive

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.757

Intersection Setup

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	58.00	50.00	100.00	100.00	150.00	100.00	350.00	180.00	100.00	100.00
Speed [mph]	40.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Skylane Blvd.			Golf Course Dr.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	115	33	437	82	9	5	6	295	51	191	509	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	6	0	0	0	5	0	4	16	0	0	20	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	33	437	82	14	5	10	311	51	191	529	126
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	8	109	21	4	1	3	78	13	48	132	32
Total Analysis Volume [veh/h]	121	33	437	82	14	5	10	311	51	191	529	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	4	4	4	4	0	4	7	0	4	7	0
Maximum Green [s]	20	30	30	15	25	0	10	30	0	30	50	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	2.5	2.0	2.0	2.5	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	21	0	0	22	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	42	42	42	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	3.00	3.00	2.00	3.00	3.00
g_i, Effective Green Time [s]	4	5	18	2	4	0	9	9	9	17	17
g / C, Green / Cycle	0.09	0.12	0.42	0.06	0.09	0.01	0.21	0.21	0.21	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.07	0.02	0.28	0.05	0.01	0.01	0.17	0.03	0.11	0.28	0.08
s, saturation flow rate [veh/h]	1781	1870	1582	1781	1784	1781	1870	1589	1781	1870	1556
c, Capacity [veh/h]	158	220	662	105	156	19	403	342	370	771	642
d1, Uniform Delay [s]	18.90	16.82	9.87	19.70	17.86	20.89	15.67	13.50	14.93	10.22	7.96
k, delay calibration	0.04	0.08	0.04	0.04	0.08	0.04	0.08	0.08	0.04	0.08	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.87	0.23	0.42	4.66	0.26	8.23	2.38	0.15	0.42	0.81	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.15	0.66	0.78	0.12	0.53	0.77	0.15	0.52	0.69	0.20
d, Delay for Lane Group [s/veh]	21.77	17.06	10.29	24.35	18.11	29.12	18.05	13.65	15.34	11.03	8.07
Lane Group LOS	C	B	B	C	B	C	B	B	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.08	0.25	2.18	0.80	0.15	0.13	2.63	0.35	1.32	2.82	0.51
50th-Percentile Queue Length [ft/ln]	27.10	6.26	54.56	20.00	3.82	3.28	65.81	8.71	33.08	70.42	12.74
95th-Percentile Queue Length [veh/ln]	1.95	0.45	3.93	1.44	0.28	0.24	4.74	0.63	2.38	5.07	0.92
95th-Percentile Queue Length [ft/ln]	48.77	11.27	98.21	36.00	6.88	5.91	118.46	15.67	59.54	126.75	22.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.77	17.06	10.29	24.35	18.11	18.11	29.12	18.05	13.65	15.34	11.03	8.07
Movement LOS	C	B	B	C	B	B	C	B	B	B	B	A
d_A, Approach Delay [s/veh]	13.02			23.18			17.74			11.57		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	13.83											
Intersection LOS	B											
Intersection V/C	0.757											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	16860.28	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.406	2.057	2.381	2.735
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	1111
d_b, Bicycle Delay [s]	20.01	23.47	20.00	8.89
l_b,int, Bicycle LOS Score for Intersection	2.535	1.726	2.173	2.956
Bicycle LOS	B	A	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Version 7.00-06

Intersection Level Of Service Report

Intersection 2: Shiloh Road & Conde Lane

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.729

Intersection Setup

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	30.00	85.00	100.00	100.00	125.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Driveway			Conde Ln.			Shiloh Rd.			Shiloh Rd.		
Base Volume Input [veh/h]	4	2	16	387	4	65	77	702	0	9	722	372
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	6	6	10	0	0	14	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	2	16	387	4	71	83	712	0	9	736	372
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	4	97	1	18	21	178	0	2	184	93
Total Analysis Volume [veh/h]	4	2	16	387	4	71	83	712	0	9	736	372
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	7	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	11	0	8	8	0	8	8	0
Maximum Green [s]	0	20	0	0	25	0	25	30	0	20	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	35	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	17	17	6	29	29	1	24	24
g / C, Green / Cycle	0.05	0.25	0.25	0.09	0.44	0.44	0.02	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.05	0.05	0.19	0.19	0.01	0.31	0.32
s, saturation flow rate [veh/h]	1644	1782	1569	1781	1870	1870	1781	1870	1634
c, Capacity [veh/h]	83	452	398	168	821	821	33	680	594
d1, Uniform Delay [s]	30.75	24.00	19.61	28.97	13.07	13.07	32.58	19.84	20.02
k, delay calibration	0.11	0.14	0.11	0.11	0.11	0.11	0.11	0.23	0.24
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.68	6.63	0.21	2.26	0.36	0.36	4.32	6.90	9.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.86	0.18	0.50	0.43	0.43	0.27	0.86	0.88
d, Delay for Lane Group [s/veh]	32.43	30.63	19.82	31.22	13.43	13.43	36.90	26.74	29.11
Lane Group LOS	C	C	B	C	B	B	D	C	C
Critical Lane Group	Yes	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.37	6.36	0.84	1.32	3.41	3.41	0.18	8.98	8.39
50th-Percentile Queue Length [ft/ln]	9.23	159.04	21.09	33.12	85.36	85.36	4.48	224.40	209.82
95th-Percentile Queue Length [veh/ln]	0.66	10.50	1.52	2.38	6.15	6.15	0.32	13.89	13.14
95th-Percentile Queue Length [ft/ln]	16.62	262.45	37.97	59.62	153.64	153.64	8.07	347.23	328.60

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Movement, Approach, & Intersection Results

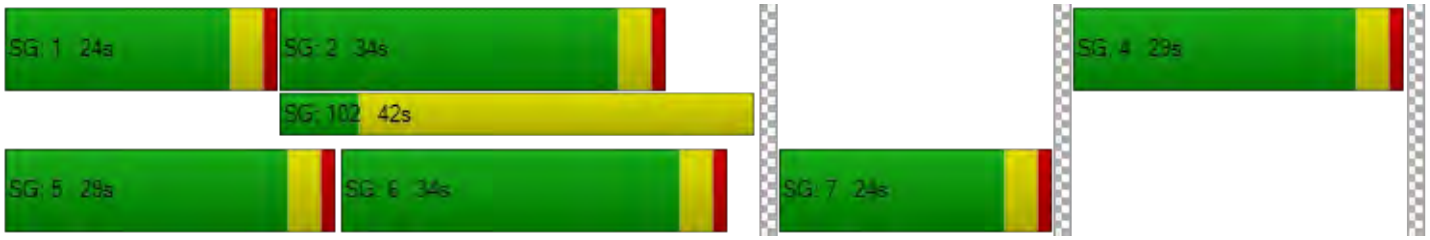
d_M, Delay for Movement [s/veh]	32.43	32.43	32.43	30.63	30.63	19.82	31.22	13.43	13.43	36.90	27.22	29.11
Movement LOS	C	C	C	C	C	B	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	32.43			28.97			15.29			27.93		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	23.98											
Intersection LOS	C											
Intersection V/C	0.729											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	-4.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	8759.43	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	49.09	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.731	0.000	2.626	0.000
Crosswalk LOS	A	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	556	667	667
d_b, Bicycle Delay [s]	27.22	23.48	20.00	20.02
l_b,int, Bicycle LOS Score for Intersection	1.596	2.322	2.215	2.481
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 3: Shiloh Road & US 101 Southbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	6.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

Intersection Setup

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	1	0	0	0	0
Pocket Length [ft]	100.00	300.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	US 101 SB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	322	94	0	637	1059	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	2	0	9	12	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	322	96	0	646	1071	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	24	0	162	268	0
Total Analysis Volume [veh/h]	322	96	0	646	1071	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	4	0	0	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	0	5	5	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	27	0	0	27	27	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	12	12
g / C, Green / Cycle	0.26	0.26	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.18	0.06	0.18	0.30
s, saturation flow rate [veh/h]	1781	1569	3560	3560
c, Capacity [veh/h]	472	415	1577	1577
d1, Uniform Delay [s]	9.03	7.87	5.19	6.07
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.75	0.28	0.17	0.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.23	0.41	0.68
d, Delay for Lane Group [s/veh]	10.78	8.15	5.36	6.59
Lane Group LOS	B	A	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.20	0.28	0.39	0.79
50th-Percentile Queue Length [ft/ln]	29.90	7.09	9.63	19.72
95th-Percentile Queue Length [veh/ln]	2.15	0.51	0.69	1.42
95th-Percentile Queue Length [ft/ln]	53.82	12.76	17.34	35.50

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Movement, Approach, & Intersection Results

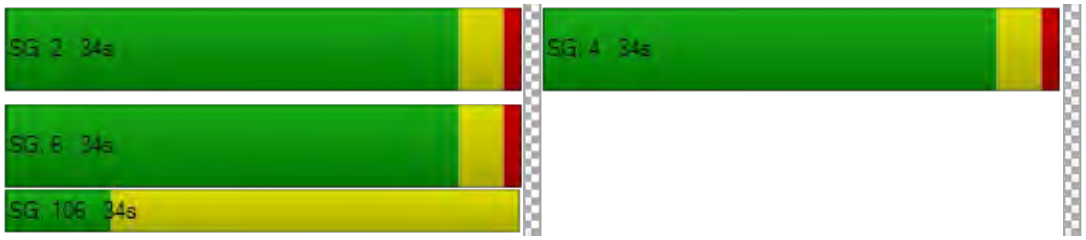
d_M, Delay for Movement [s/veh]	10.78	8.15	0.00	5.36	6.59	0.00
Movement LOS	B	A		A	A	
d_A, Approach Delay [s/veh]	10.18		5.36		6.59	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	6.92					
Intersection LOS	A					
Intersection V/C	0.618					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.952	0.000	0.000
Crosswalk LOS	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.665	5.016
Bicycle LOS	D	E	F

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Intersection Level Of Service Report

Intersection 4: Shiloh Road & US 101 Northbound Off Ramp

Control Type:	Signalized	Delay (sec / veh):	18.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.857

Intersection Setup

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	2	1	0	0	0
Pocket Length [ft]	100.00	260.00	75.00	100.00	100.00	100.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	US 101 NB Off Ramp		Shiloh Rd.		Shiloh Rd.	
Base Volume Input [veh/h]	694	737	761	0	0	871
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	7	0	7	0	0	5
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	701	737	768	0	0	876
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	175	184	192	0	0	219
Total Analysis Volume [veh/h]	701	737	768	0	0	876
Presence of On-Street Parking	No	Yes	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		2		3	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	8	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	52	0	41	0	0	41
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	54	54	54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	17	17
g / C, Green / Cycle	0.54	0.54	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.20	0.52	0.22	0.25
s, saturation flow rate [veh/h]	3459	1431	3560	3560
c, Capacity [veh/h]	1883	779	1095	1095
d1, Uniform Delay [s]	7.03	11.57	16.51	17.18
k, delay calibration	0.11	0.40	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	18.42	0.83	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.95	0.70	0.80
d, Delay for Lane Group [s/veh]	7.16	29.99	17.34	18.58
Lane Group LOS	A	C	B	B
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.66	9.62	3.57	4.29
50th-Percentile Queue Length [ft/ln]	41.51	240.40	89.16	107.36
95th-Percentile Queue Length [veh/ln]	2.99	14.70	6.42	7.69
95th-Percentile Queue Length [ft/ln]	74.72	367.54	160.48	192.33

Movement, Approach, & Intersection Results

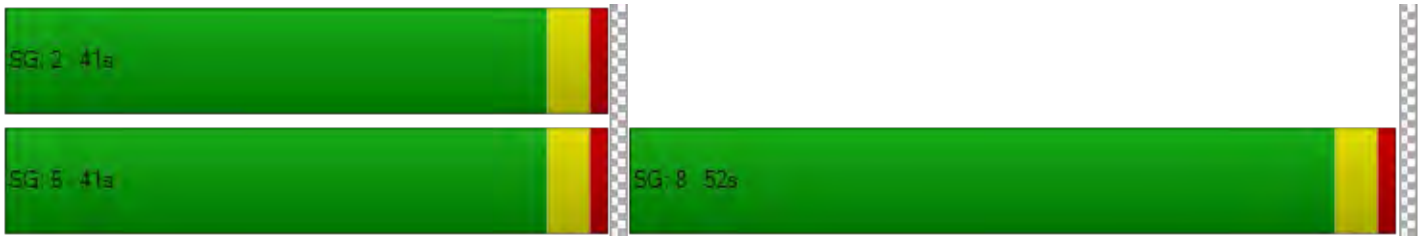
d_M, Delay for Movement [s/veh]	7.16	29.99	17.34	0.00	0.00	18.58
Movement LOS	A	C	B			B
d_A, Approach Delay [s/veh]	18.86		17.34		18.58	
Approach LOS	B		B		B	
d_I, Intersection Delay [s/veh]	18.40					
Intersection LOS	B					
Intersection V/C	0.857					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.766	4.855
Bicycle LOS	D	E	E

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Report File: J:\...\Cumulative Plus Project PM.pdf

Scenario 5 Cumulative plus Project PM
1/6/2020

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	121	33	437	82	14	5	10	311	51	191	529	126	1910

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	4	2	16	387	4	71	83	712	0	9	736	372	2396

ID	Intersection Name	Southbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	322	96	646	1071	2135

ID	Intersection Name	Northbound		Eastbound	Westbound	Total Volume
		Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	701	737	768	876	3082

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Report File: J:\...\Cumulative Plus Project PM.pdf

Scenario 5 Cumulative plus Project PM
1/6/2020

Turning Movement Volume: Detail

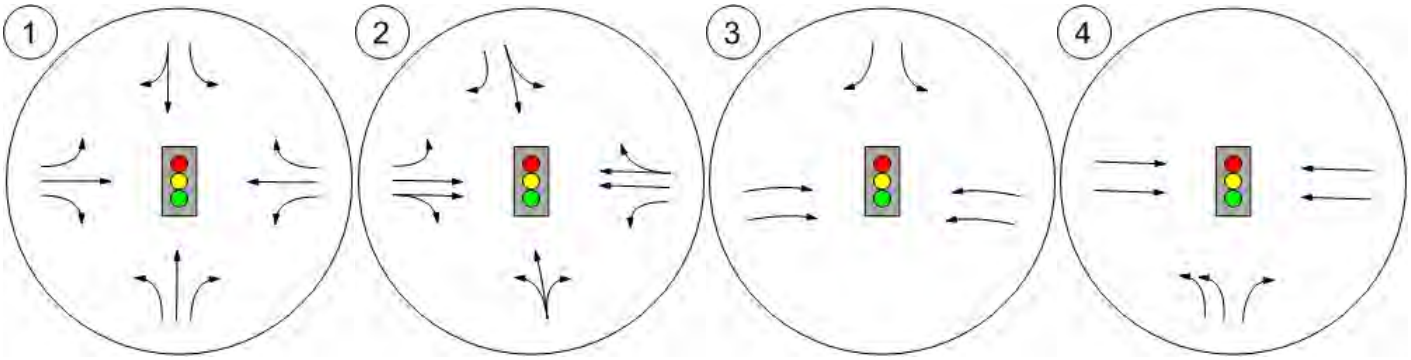
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Shiloh Road & Skylane Boulevard/Golf Course Drive	Final Base	115	33	437	82	9	5	6	295	51	191	509	126	1859
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	6	0	0	0	5	0	4	16	0	0	20	0	51
		Future Total	**121**	**33**	**437**	**82**	**14**	**5**	**10**	**311**	**51**	**191**	**529**	**126**	**1910**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Shiloh Road & Conde Lane	Final Base	4	2	16	387	4	65	77	702	0	9	722	372	2360
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	6	6	10	0	0	14	0	36
		Future Total	**4**	**2**	**16**	**387**	**4**	**71**	**83**	**712**	**0**	**9**	**736**	**372**	**2396**

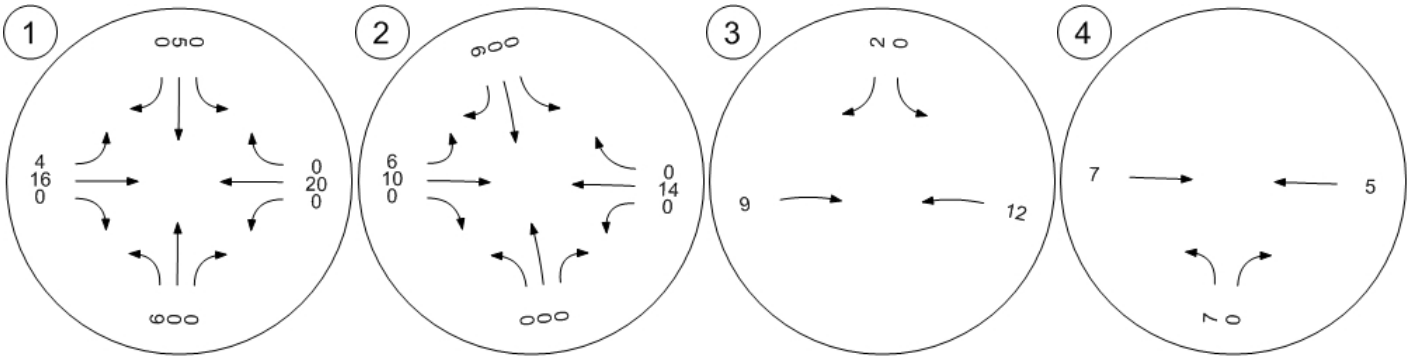
ID	Intersection Name	Volume Type	Southbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
3	Shiloh Road & US 101 Southbound Off Ramp	Final Base	322	94	637	1059	2112
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	2	9	12	23
		Future Total	**322**	**96**	**646**	**1071**	**2135**

ID	Intersection Name	Volume Type	Northbound		Eastbound	Westbound	Total Volume
			Left	Right	Thru	Thru	
4	Shiloh Road & US 101 Northbound Off Ramp	Final Base	694	737	761	871	3063
		Growth Factor	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	7	0	7	5	19
		Future Total	**701**	**737**	**768**	**876**	**3082**

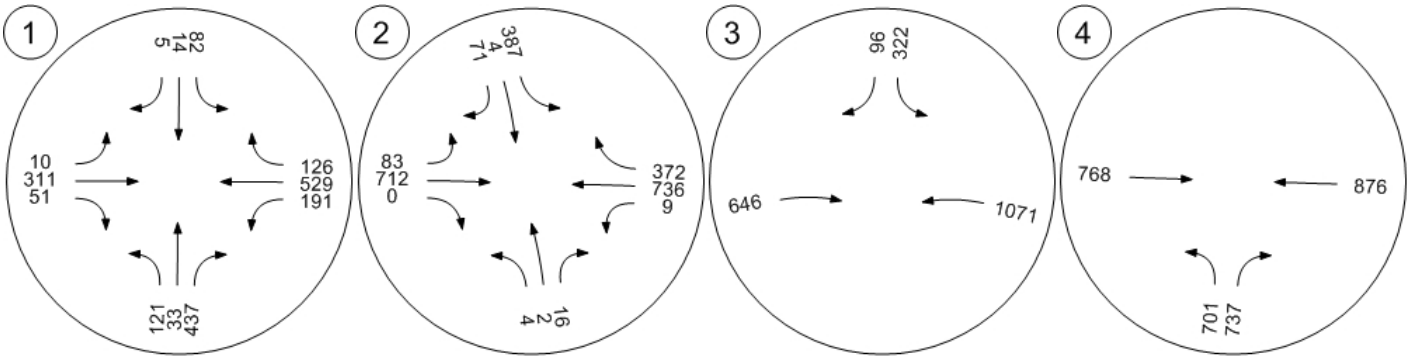
Lane Configuration and Traffic Control



Traffic Volume - Other Volume (Project Trips)



Traffic Volume - Future Total Volume



TJKM

Corporate Office
4305 Hacienda Drive, Suite 550, Pleasanton, CA 94588
Phone: (925) 463-0611
www.TJKM.com

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