Traffic Impact Analysis
For the Truck Stop Center
In County of San Bernardino

September 29, 2016

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1. Introduction

Hapy Highway, Inc. is providing engineering services for a property on the west side of Afton Road, southeast of the Interstate 15 Freeway in the unincorporated community of Baker within the County of San Bernardino. The project address is 45101 Afton Road, San Bernardino County, CA. The proposed truck stop will include an auto repair shop with two bays, an auto fuel canopy with 12 fueling stations, and a truck fueling canopy with 8 stations. The project is expected to open in 2018.

The appendices of this report contain background materials for this study. These materials include manual traffic counts, analysis worksheets and other details.

Project Location

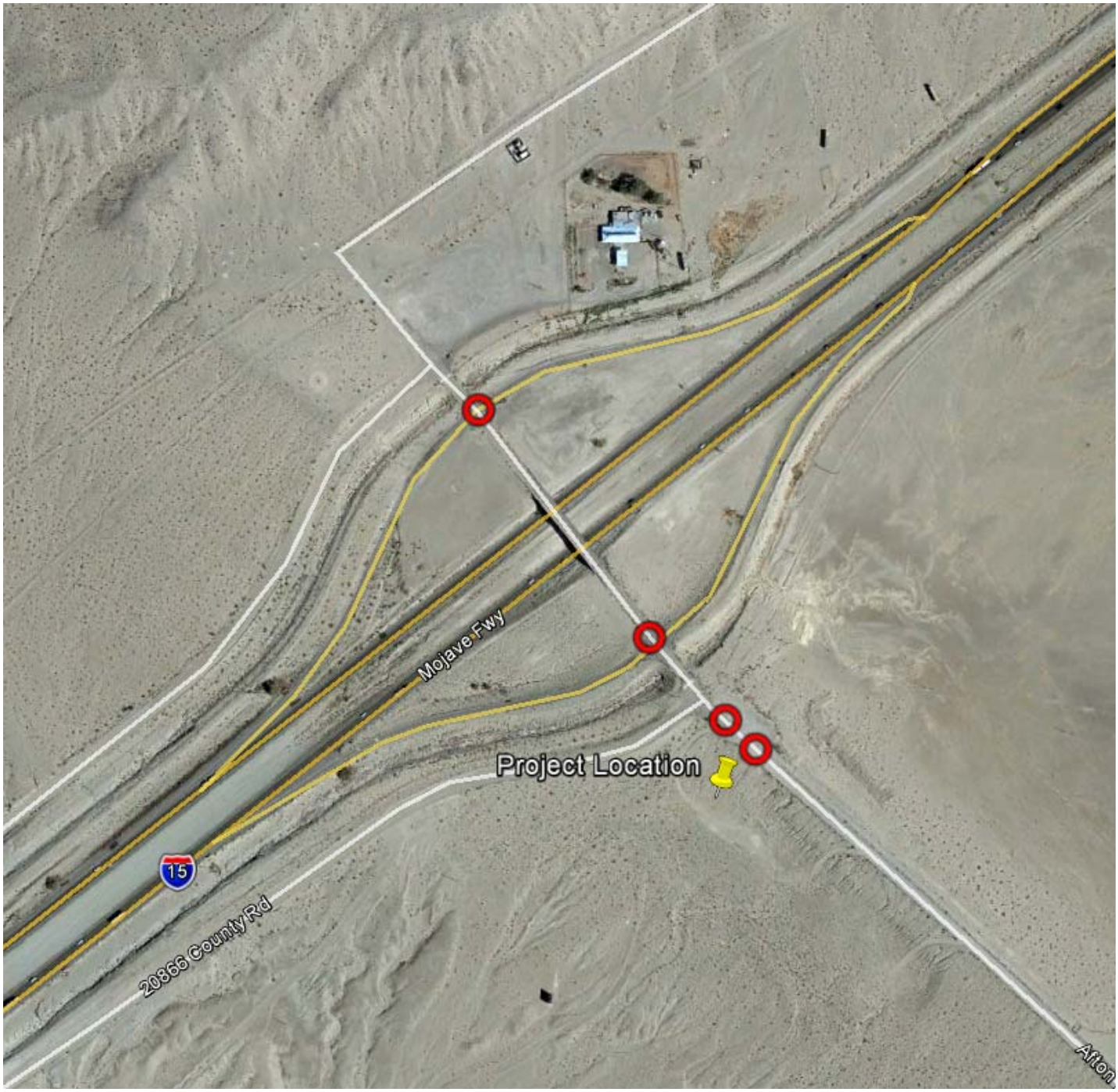
The project is located on the west side of Afton Road, southeast of the Interstate 15 Freeway in the County of San Bernardino. The following intersections within the project vicinity could be affected by the project:

- Interstate 15 Westbound Ramps
- Interstate 15 Eastbound Ramps
- Project Driveway #1
- Project Driveway #2

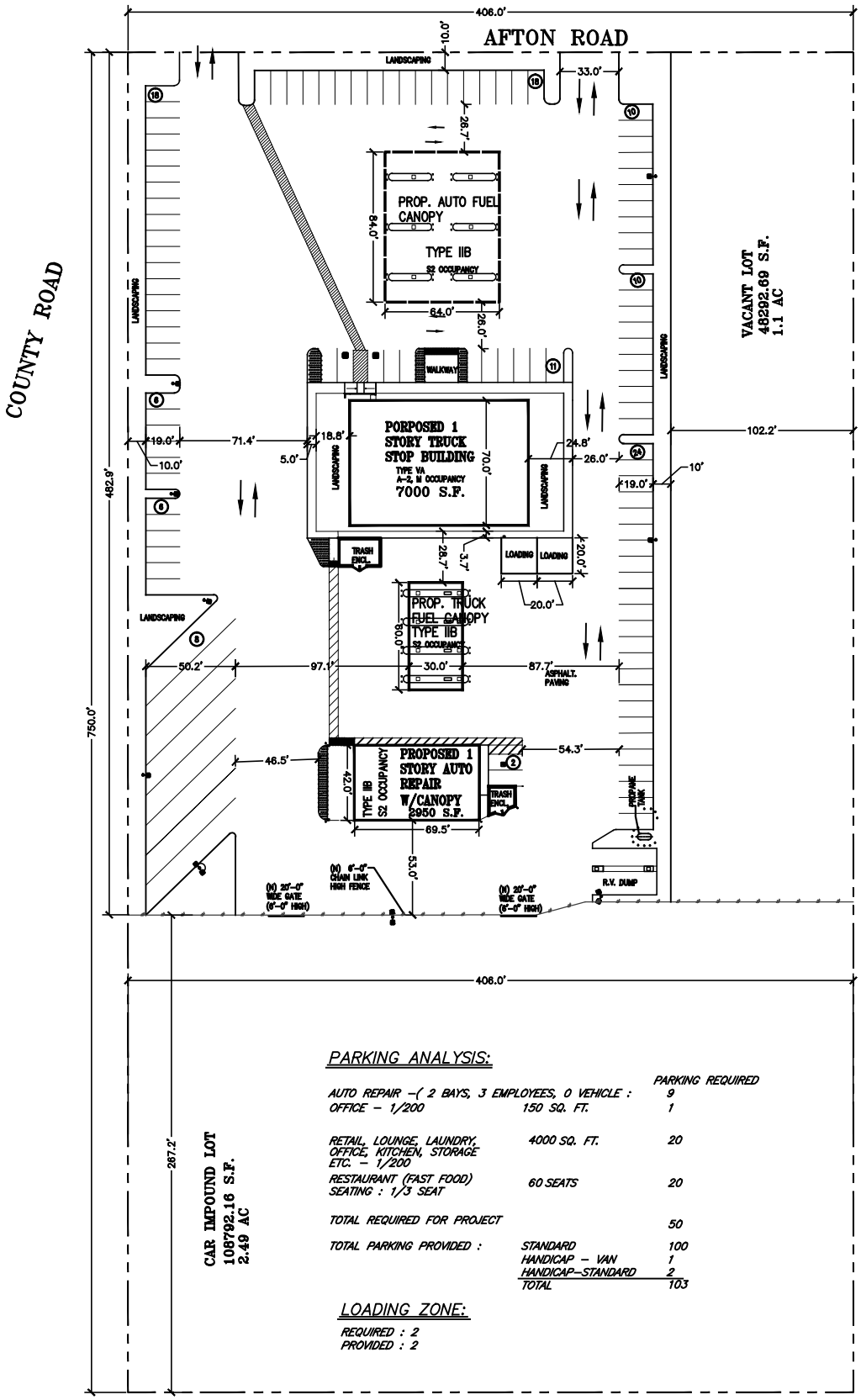
The study intersections are shown in Figure 1.1.

Project Description

The proposed project will add a one story truck stop building (7,000 square feet) for retail services to include an office, fast food restaurant and a retail/lounge area, a one story auto repair building with two bays (2,950 square feet), an auto fuel canopy with 12 fueling stations (5,376 square feet), and a truck fueling canopy with 8 fueling stations (1,800 square feet). The project will connect to the surrounding street system at two access points, both of which are along Afton Road. The project will supply 111 total parking spaces for those utilizing the project facilities. 108 of these parking spaces are regular parking spaces, while the remaining 8 spaces are for trucks. The project site plan is shown in Figure 1.2.



KOA CORPORATION PLANNING & ENGINEERING	Traffic Impact Analysis for the Truck Stop Center in San Bernardino County	Figure 1.1
	County of San Bernardino	Vicinity Map



PARKING ANALYSIS:

		PARKING REQUIRED
AUTO REPAIR –(2 BAYS, 3 EMPLOYEES, 0 VEHICLE :		9
OFFICE – 1/200	150 SQ. FT.	1
RETAIL, LOUNGE, LAUNDRY, OFFICE, KITCHEN, STORAGE ETC. – 1/200	4000 SQ. FT.	20
RESTAURANT (FAST FOOD) SEATING : 1/3 SEAT	60 SEATS	20
TOTAL REQUIRED FOR PROJECT		50
TOTAL PARKING PROVIDED :	STANDARD	100
	HANDICAP – VAN	1
	HANDICAP–STANDARD	2
	TOTAL	103

LOADING ZONE:

REQUIRED : 2
PROVIDED : 2

2. Project Study Methodology

This chapter documents the methodologies and assumptions used to conduct the traffic impact analysis for this proposed project. This section contains the following background information:

- Study timeframes
- Study area description
- County analysis methodologies

Study Timeframes

This report presents an analysis of the intersection operating conditions during the peak periods, which were selected in consultation with County staff for the following anticipated timeframes:

- Existing Year (2016)
- Opening Year (2018)
- Build Out Year (2040)

The County selected the following peak periods for analysis:

- Weekday Friday (peak hour between 12:00 PM and 3:00 PM)
- Weekend Sunday (peak hour between 2:00PM and 5:00PM)

These peak hours correspond to peak hour traffic coming to/from the Los Angeles region and Las Vegas, Nevada. For the timeframes chosen, the following scenarios will be studied during each peak hour period:

- Existing Year (2016) Conditions
- Project Opening Year (2018) with Ambient Traffic
- Project Opening Year (2018) with Ambient Traffic and Proposed Project
- Project Opening Year (2018) with Ambient Traffic, Cumulative Traffic, and Proposed Project
- Project Opening Year (2018) with Ambient Traffic, Cumulative Traffic, and Proposed Project with Mitigation (if necessary)
- Build Out Year (2040) with Ambient Traffic
- Build Out Year (2040) with Ambient Traffic and Proposed Project
- Build Out Year (2040) with Ambient Traffic, Cumulative Traffic, and Proposed Project
- Build Out Year (2040) with Ambient Traffic, Cumulative Traffic, and Proposed Project with Mitigation (if necessary)

Project Study Area

The study area intersections were determined through consultation with various County of San Bernardino Department staff and in compliance with the San Bernardino Associated Governments (SANBAG) Congestion Management Plan (CMP). The study area consists of the following intersections:

- Interstate 15 Westbound Ramps
- Interstate 15 Eastbound Ramps
- Proposed Project Driveway #1 (along Afton Road)
- Proposed Project Driveway #2 (along Afton Road)

Analysis Methodologies

This section presents a brief overview of traffic analysis methodologies and concepts used in this study. These methodologies are found in the *Highway Capacity Manual (HCM)*, a federally supported standard for analysis of transportation performance. Intersection operating conditions are typically described in terms of "level of service." Level of service is a report-card scale used to indicate the quality of traffic flow on roadway segments and at intersections. Level of service (LOS) ranges from Level of Service A (free flow, little congestion) to Level of Service F (forced flow, extreme congestion).

Level of Service for signalized intersections is based upon the average time (seconds) that vehicles approaching an intersection are delayed. There is a specific delay and level of service associated with each approach and an overall average delay for all movements. The overall level of service for the intersection is based upon the average control delay per vehicle. For this project, there are no signalized intersections to be analyzed.

Unsignalized intersection level of service is also based upon the control delay, but delay is only assessed for those traffic movements that are stopped or must yield to through traffic. Some movements, including cross traffic on the minor street or left turns onto the major street, can be subject to long delays, however through traffic and right turns from the major street will not experience any delays at stopped intersections. When delay for cross traffic is severe (Level of Service F) the intersection should be evaluated further for possible improvement with traffic signals. In some cases, this analysis determines that the delay is being experienced by a very low number of vehicles and traffic signals are not warranted. In other cases when the number of stopped vehicles is substantial and traffic signals may be justified as a mitigation measure, additional analysis is required to determine the need and justification for the installation of a traffic signal.

Table 1 shows the relationship between level of service and the performance measures for signalized and unsignalized intersections and lists the *HCM* delay criteria for signalized intersections.

Table 2.1
Level of Service Definitions

Level of Service	Signalized Intersection Control Delay (in sec/veh)	Unsignalized Intersection Control Delay (in sec/veh)
A	0 – 10	0 – 10
B	10.1 – 20	10.1 – 15
C	20.1 – 35	15.1 – 25
D	35.1 – 55	25.1 – 35
E	55.1 – 80	35.1 – 50
F	80.1 or more*	50.1 or more*

* When delay becomes excessively high, delay would be shown as >120.0

The County of San Bernardino has identified Level of Service D as the minimum allowable service level during peak hours. Mitigation measures should be considered when traffic conditions are forecasted to decline to poorer levels of service.

Intersection Level of Service Analysis

The analysis of peak hour intersection conditions was conducted using the PTV Vistro® software program developed by the PTV Group. PTV Vistro utilizes HCM 2010 for Intersection Capacity and LOS Calculation within the comprehensive traffic engineering and transportation planning analysis tool.

In addition, peak hour factors were applied to all of the volumes to analyze the peak hour. Traffic volumes may fluctuate from minute to minute within the peak periods, so a peak hour factor increases the hourly volume to simulate the higher 15-minute peak period for the entire peak period. The default HCM peak hour factor of 0.95 was applied to all movements for the Opening Year (2018) and Build Out Year (2040) analysis. The actual peak hour factors for each approach as shown in the traffic count data was used for the Existing Year (2016).

Existing Year (2016) Traffic Count Data

Existing weekday evening and weekend peak hour traffic counts were collected for this traffic study in August 2016. These peak-hour traffic volumes reflect typical Friday evening and Sunday afternoon operations during current 2016 conditions. All traffic count data used in this study is compiled in Appendix A.

Opening Year (2018) Traffic Volumes

The Opening Year (2018) was selected for analysis since it corresponds to the projected project completion date. Peak hour intersection volumes under near-term conditions were forecast based on existing peak hour intersection volumes and adjusted by a compounded growth rate of 2% per year (4.04%) to reflect anticipated growth in the County. One cumulative development project was added on top of this background base.

Build Out Year (2040) Traffic Volumes

There is no regional travel forecast model for this study area. Based upon discussion with the County, a compounded growth rate of 2% per year (57.7% total) between the Existing Year (2016) and Build Out Year (2040) was assumed. In addition, cumulative project traffic that may be developed in the next 5-10 years was also assumed to generate buildout traffic volumes to be conservative.

3. Existing Year (2016) Conditions

This section documents the existing traffic conditions within the study area. The discussion presented here is limited to specific roadways in the project's vicinity.

Existing Circulation Network

Streets in the site vicinity that could be affected by the proposed project include Afton Road, Arrowhead Trail, 20866 County Road, and Interstate 15.

Figure 2.1 shows the existing roadway classifications/circulation network and intersection configurations/control in the project vicinity.

Afton Road is a two-lane roadway running on a north/south alignment located adjacent to and east of the project site. The roadway provides one travel lane in each direction and is mostly divided by double yellow centerlines. It does, however, turn into a dirt road (unpaved) near the project site. From edge of pavement to edge of pavement, Afton Road is roughly 28 feet wide. Near the project site, there are no signals or stop signs that control traffic along Afton Road. Additionally, there are no posted speed limit signs along the roadway near the project site. Both Project Driveways, #1 and #2, are located along Afton Road.

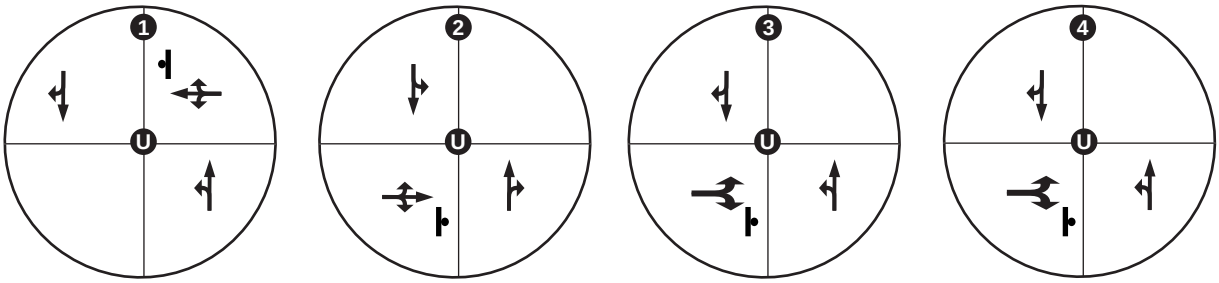
Arrowhead Trail is a two-lane roadway running on an east/west alignment located north of the project site. Arrowhead Trail, about 32 feet in width, is an unmarked roadway that provides one travel lane in each direction. There is no posted speed limit along the roadway. Arrowhead Trail is currently stop controlled at the intersection with Afton Road.

20866 County Road is a two-lane arterial roadway running on an east/west alignment located just north of the project site. The roadway provides one travel lane in each. The roadway begins at a T-intersection with Afton Road in the east, where it is stop controlled, and continues westward. The roadway is about 30 feet wide, and no speed limit signage is present near the project site along this roadway.

Interstate 15 is a four lane interstate highway running east and west. Two travel lanes are provided for each direction. The directional traffic is separated by 85 feet of median. Each lane is about 12 feet wide, therefore accounting for 48 feet of width for the four total travel lanes.

LEGEND

- Project Site
- # Study Intersection
- U Unsignalized Intersection
- Lane Geometry
- Stop Control



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Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 3.1

County of San Bernardino — Existing Year (2016) Lane Geometries and Intersection Controls

Peak Hour Intersection Level of Service

Figure 3.2 illustrates the existing peak hour traffic volumes during the Friday PM peak hour, as well as the Sunday PM peak hour volumes. Table 3.1 summarizes the results of the level of service analysis for the existing conditions.

The study area was observed during both peak hours. The indicated Levels of Service shown in Table 3.1 are representative of observed traffic conditions in the study area. The existing traffic condition counts were recently conducted in August of 2016.

Table 3.1 - Friday/Sunday Peak Hour Intersection Performance
Existing Year (2016) Conditions

#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	9.33	A	9.92	A
2	Interstate 15 Eastbound Ramps	9.19	A	10.44	B
3	Proposed Project Driveway #1	8.55	A	8.57	A
4	Proposed Project Driveway #2	8.55	A	8.57	A

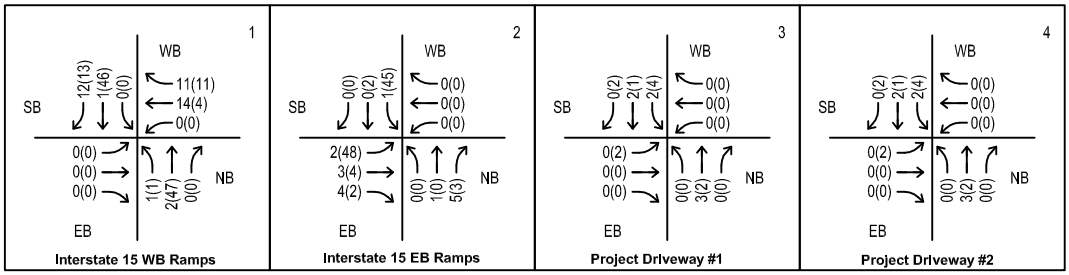
Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

As shown in Table 3.1, all of the intersections are forecast to operate at Level of Service D or better during the Friday and Sunday peak hours.

Appendix B contains the analysis worksheets for Existing Year (2016) Conditions.

LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



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Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 3.2

County of San Bernardino — Existing Year (2016) Traffic Volumes - Friday/Sunday Peak Hours

4. Cumulative Project Information

Future traffic increases can also be forecast by considering additional traffic that may be generated by other developments that have been approved in the area. There is one project near the site that will add cumulative traffic to the intersections analyzed in the study as shown in Table 4.1. The project sites are shown on Figure 4.1.

Table 4.1 - Cumulative Project Information

Land Use	Size
Apartment	5 Dwelling Units
Fast Food Restaurant with Drive Thru Window	3,600 TSF
Fast Food Drive In Stalls	10 Stalls
Gasoline/Service Station with Convenience Market - Trucks	6 Fueling Positions
Gasoline/Service Station with Convenience Market - Cars	24 Fueling Positions
Alternative Fuel Station	15 Charging Stations

The trips generated by cumulative projects are applied in the Opening Year (2018) and Build Out Year (2040) scenarios. The trip generation rates are shown in Table 4.2. The trip distribution and project-related traffic volumes for each cumulative project is shown in Appendix C.

Table 4.2 - Cumulative Project Trip Generation

Land Use	Units	Daily	Friday Peak Hour			Sunday Peak Hour		
			Total	In	Out	Total	In	Out
Apartments	DU	6.65	0.51	0.10	0.41	1.02	0.40	0.62
Fast-Food Restaurant with Drive Through Window	TSF	496.12	47.30	24.60	22.70	107.66	34.92	72.74
Fast Food Drive In Stalls	ST	60.00	6.00	3.00	3.00	9.00	3.00	6.00
Gasoline Service Station with Convenience Market	FP	162.78	13.57	6.79	6.78	20.36	6.79	13.57
Alternative Fuel Station	CS	20.00	2.00	1.00	1.00	3.00	1.00	2.00

The trips generated by the cumulative project was applied in the Opening Year (2018) and Build Out Year (2040) scenarios. The resultant traffic generation, based upon the trip generation rates shown in Table 4.2, is shown in Table 4.3. The cumulative project trip distribution is shown in Figure 4.2, and the project trips are shown in Figure 4.3.

Table 4.3 - Cumulative Project Trip Generation

Land Use	Daily	Friday Peak Hour			Sunday Peak Hour		
		Total	In	Out	Total	In	Out
Apartments	33	3	1	2	3	2	1
Fast-Food Restaurant with Drive Through Window	1,786	171	89	82	262	126	136
Fast Food Drive In Stalls	600	60	30	30	60	30	30
Gasoline Service Station with Convenience Market - Trucks	977	82	41	41	82	41	41
Gasoline Service Station with Convenience Market - Cars	3,907	326	163	163	326	163	163
Alternative Fuel Station	300	30	15	15	30	15	15
TOTAL TRIPS	**7603**	**672**	**339**	**333**	**763**	**377**	**386**

LEGEND

- Project Site
- # Study Intersection
- Cumulative Project Locations

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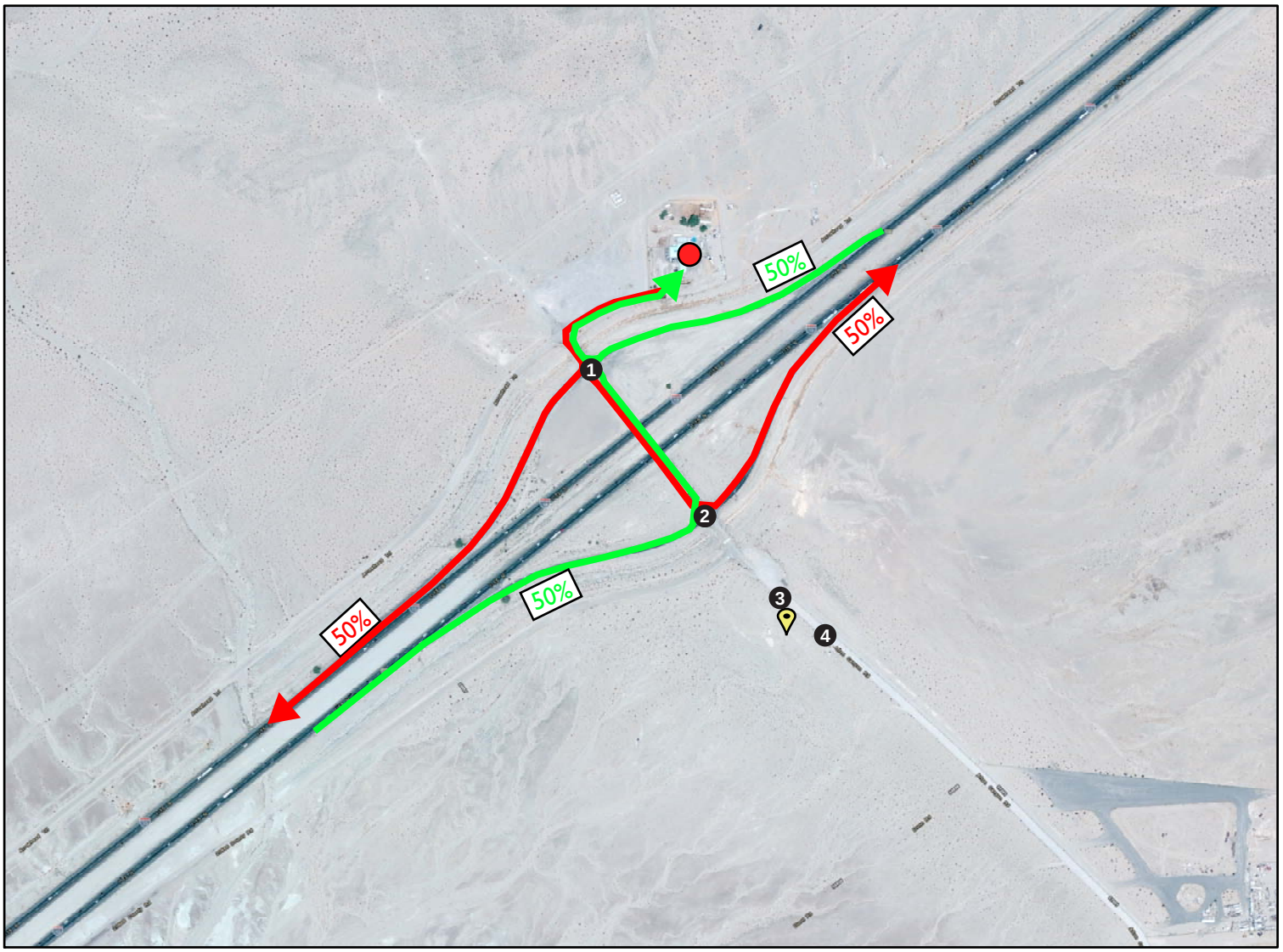
Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 4.1

County of San Bernardino — Cumulative Project Location



LEGEND

- Project Site
- # Study Intersection
- Cumulative Project Locations
- xx% Outbound Trip Distribution
- xx% Inbound Trip Distribution

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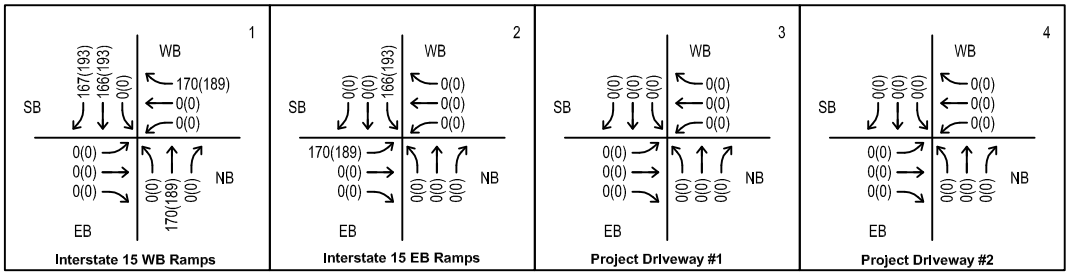
Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 4.2

County of San Bernardino — Cumulative Project Inbound/Outbound Trip Distribution

LEGEND

- Project Site
- # Study Intersection
- Cumulative Project Location



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Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 4.3

County of San Bernardino — Cumulative Project Trip Distribution

5. Opening Year (2018) Without Project Conditions

This section develops near term traffic conditions in the study area with ambient growth but without the proposed project forecast traffic. 2018 is selected as the opening year to coincide with the completion of the project.

Opening Year (2018) Growth

Based on discussions with San Bernardino County staff, it has been established that ambient traffic in the study area has historically increased at a rate of about 2% per year compounded. Future increases in the background traffic volumes due to local and regional growth are expected to continue at this rate in the vicinity of the project. The existing 2016 traffic volumes were adjusted upward by a compounded growth rate of 2.02% per year (4.04%) to reflect area-wide growth.

Peak-Hour Intersection Level-of-Service

To forecast the Opening Year (2018) Growth Conditions, the peak hour volumes in Figure 3.2 were increased by a compounded growth rate of 2.02% per year (4.04%). Figure 5.1 illustrates the Friday and Sunday peak hour volumes. Table 5.1 summarizes the results of the LOS analysis for this scenario. The LOS worksheets are provided in Appendix D.

Table 5.1 - Friday/Sunday Peak Hour Intersection Performance
Opening Year (2018) Conditions Without Cumulative Project, Without Project

#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay (s)	LOS	Delay (s)	LOS
1	Interstate 15 Westbound Ramps	9.23	A	9.74	A
2	Interstate 15 Eastbound Ramps	9.09	A	10.03	B
3	Proposed Project Driveway #1	8.54	A	8.54	A
4	Proposed Project Driveway #2	8.54	A	8.54	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

As shown in Table 5.1, all study intersections are forecasted to operate at Level of Service D or better.

Table 5.2 and Figure 5.2 show Opening Year (2018) Conditions with the cumulative project data included.

Table 5.2 - Friday/Sunday Peak Hour Intersection Performance
Opening Year (2018) Conditions with Cumulative Project, without Project

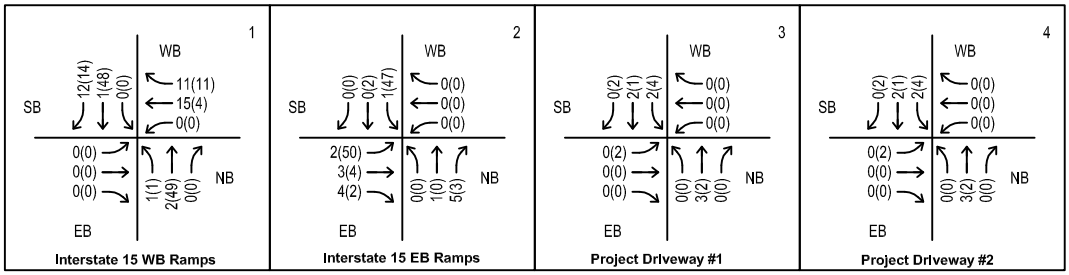
#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	14.65	B	17.05	C
2	Interstate 15 Eastbound Ramps	15.40	C	26.99	D
3	Proposed Project Driveway #1	8.54	A	8.54	A
4	Proposed Project Driveway #2	8.54	A	8.54	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

Table 5.2 shows that all intersections operate at an acceptable level of service.

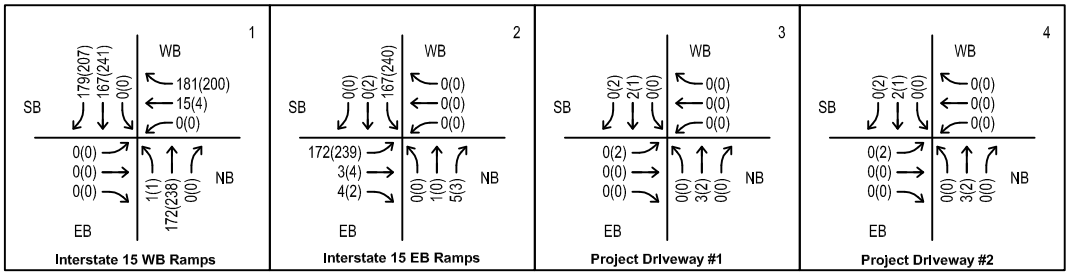
LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



6. Build Out Year (2040) Conditions Without Project

This section documents expected Build Out Year (2040) traffic conditions in the study. The Build Out Year (2040) is the year of completion of all land uses designated on the County's and nearby jurisdictions' general plans. Typically a forecast year of 2040 is used to designate the build-out year for planning purposes.

Build-out Growth

There is no regional travel forecast model for this study area so a 2% compounded growth rate (57.7%) plus cumulative project traffic was assumed to generate Build Out Year (2040) traffic volumes to be conservative. The forecasted volumes are shown in Figure 6.1.

Future Improvements

Although it is likely that many improvements to the area roadways would be constructed by private developments that abut the frontages to General Plan roadways, the San Bernardino County Congestion Management Program (CMP) guidelines generally do not allow a traffic impact study to assume that any non-committed or undisclosed improvements or roadway widening are constructed for the purpose of assessing preliminary impacts. Therefore, only existing or committed highway geometries are assumed for the Build Out Year (2040).

Peak Hour Intersection Level of Service

Figure 6.1 illustrates the Friday and Sunday peak hour volumes without additional volumes. Table 6.1 summarizes the results of the LOS analysis for the General Plan Build-out scenario for traffic volumes and existing geometrics. The LOS worksheets are provided in Appendix E.

Table 6.1 - Friday/Sunday Peak Hour Intersection Performance
Build Out Year (2040) Without Cumulative Project, Without Project Conditions

#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	9.35	A	10.19	B
2	Interstate 15 Eastbound Ramps	9.15	A	10.76	B
3	Proposed Project Driveway #1	8.55	A	8.56	A
4	Proposed Project Driveway #2	8.55	A	8.56	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

As shown in Table 6.1, all intersections and on/off ramps operate at acceptable levels of service or have

adequate average delays. No mitigation is necessary at this point and time.

Similarly, Figure 6.2 and Table 6.2 show the Build Out Year (2040) peak hour volumes with the inclusion of the cumulative project trips, but without the project trips. This table shows an unacceptable level of service at the Interstate 15 Eastbound Ramps during the Sunday peak hour.

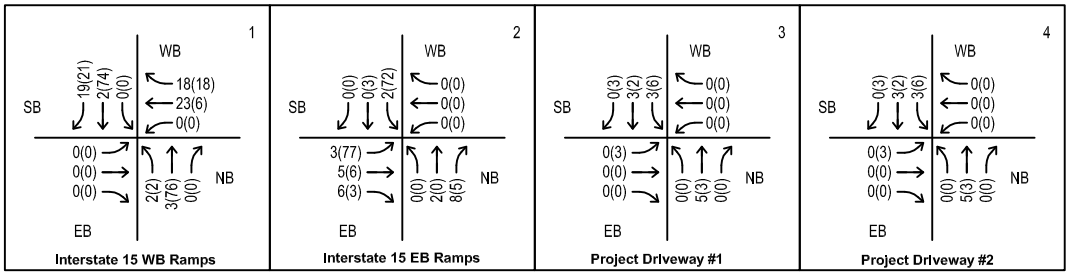
Table 6.2 - Friday/Sunday Peak Hour Intersection Performance
Build Out Year (2040) With Cumulative Project, Without Project Conditions

#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	15.07	C	18.32	C
2	Interstate 15 Eastbound Ramps	15.63	C	39.37	E
3	Proposed Project Driveway #1	8.55	A	8.56	A
4	Proposed Project Driveway #2	8.55	A	8.56	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

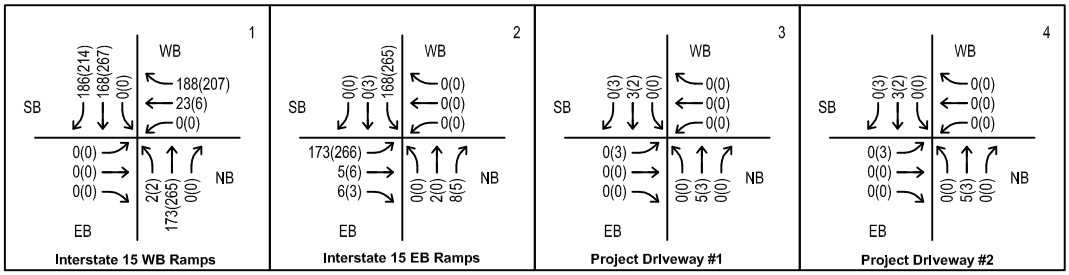
LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



7. Project Trips

Project-related traffic consists of trips on any portion of the street system that will begin or end on the project site as a result of the development of the proposed project. Project-related traffic is a function of the extent and type of development proposed for the site. This information is used to establish traffic generation for the site.

The current site has no existing infrastructure. Everything included within the project will be new and will be the only infrastructure at the site. The project will add a one story truck stop building (7,000 square feet) for retail services to include an office, fast food restaurant and a retail/lounge area, a one story auto repair building with two bays (2,950 square feet), an auto fuel canopy with 12 fueling stations (5,376 square feet), and a truck fueling canopy with 8 fueling stations (1,800 square feet).

Existing Land Use Traffic

There is no existing development at the site, and therefore the site does not contribute to the existing traffic conditions.

Project Trip Generation

Trip generation is a measure or forecast of the number of trips that will be made to or from the project. It is generally equal to the traffic volume expected at the project entrances.

Trip generation characteristics for projects are normally estimated based on rates published in *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE). This document is widely used in Southern California and indicates the probable traffic generation rates for various land uses based upon studies of existing developments in comparable settings throughout the nation. ITE does not have published rates for truck stop facilities. The primary function of a truck stop is to provide fueling for truckers. In order to come up with a trip generation for the proposed project, three similar sites were surveyed and data was collected. The three sites are the following:

1. Flying J Travel Plaza: 2611 Fisher Boulevard, Barstow, CA 92311
2. Pilot Travel Center: 2591 Commerce Parkway, Barstow, CA 92311
3. Pilot Travel Center: 8701 US Hwy 395, Oak Hills, CA

Truck AADT (Annual Average Daily Traffic) volumes on adjacent streets were also obtained from Caltrans. KOA Corporation evaluated the data collected and the truck AADT volumes and estimated the percentage of vehicle and truck traffic that was captured per each surveyed site. (http://traffic-counts.dot.ca.gov/2006truck.xls)

The resultant traffic generation for the site based upon the surveyed sites is shown in Table 7.1. This shows the trip generation rates for the site, for all vehicles classes.

Table 7.1 - Project Trip Generation Rates

Vehicle Type	Friday Peak Hour			Sunday Peak Hour		
	Total	In	Out	Total	In	Out
Autos	0.40	0.19	0.21	0.70	0.33	0.37
Trucks (2-axle)	0.03	0.01	0.02	0.04	0.02	0.02
Trucks (3-axle)	0.02	0.01	0.01	0.02	0.01	0.01
Trucks (4-axle +)	0.47	0.22	0.25	0.38	0.19	0.19
Trucks (Total)	0.53	0.25	0.28	0.45	0.23	0.22
Total Site	0.93	0.44	0.49	1.14	0.55	0.59

Effect of Heavy Vehicles

The traffic impacts of heavy trucks at intersections are normally addressed by converting heavy vehicles into "passenger car equivalents' (PCE's). It was assumed that the percentage of trucks in the mix is as follows: 19% 2-axle trucks, 5% 3-axle trucks, and 76% 4-5 axle trucks. Also, studies have indicated that each truck has a similar traffic impact that ranges between 1.5 to 3 passenger vehicles at intersections. The truck percentages listed above and a PCE factor of 3.0 for 4-5 axle trucks, 2.0 for 3 -axle trucks, and 1.5 for 2-axle trucks was applied to the to the rates listed in Table 6. The results are indicated in Table 7.3.

Table 7.2 -Trip Generation Rates – Adjustment to PCE's

PCE Factors
2-axle Trucks (19% X 1.5)
3-axle Trucks (5% X 2.0)
4-axle Trucks (76% X 3.0)

Table 7.3 summarizes the traffic generation expected from project, based on the generation rates shown in Table 7.1 with the PCE factors applied from Table 7.2. The trip information used to obtain the trip generation for the proposed facility can be found in Appendix F.

Table 7.3 - Project Trip Generation

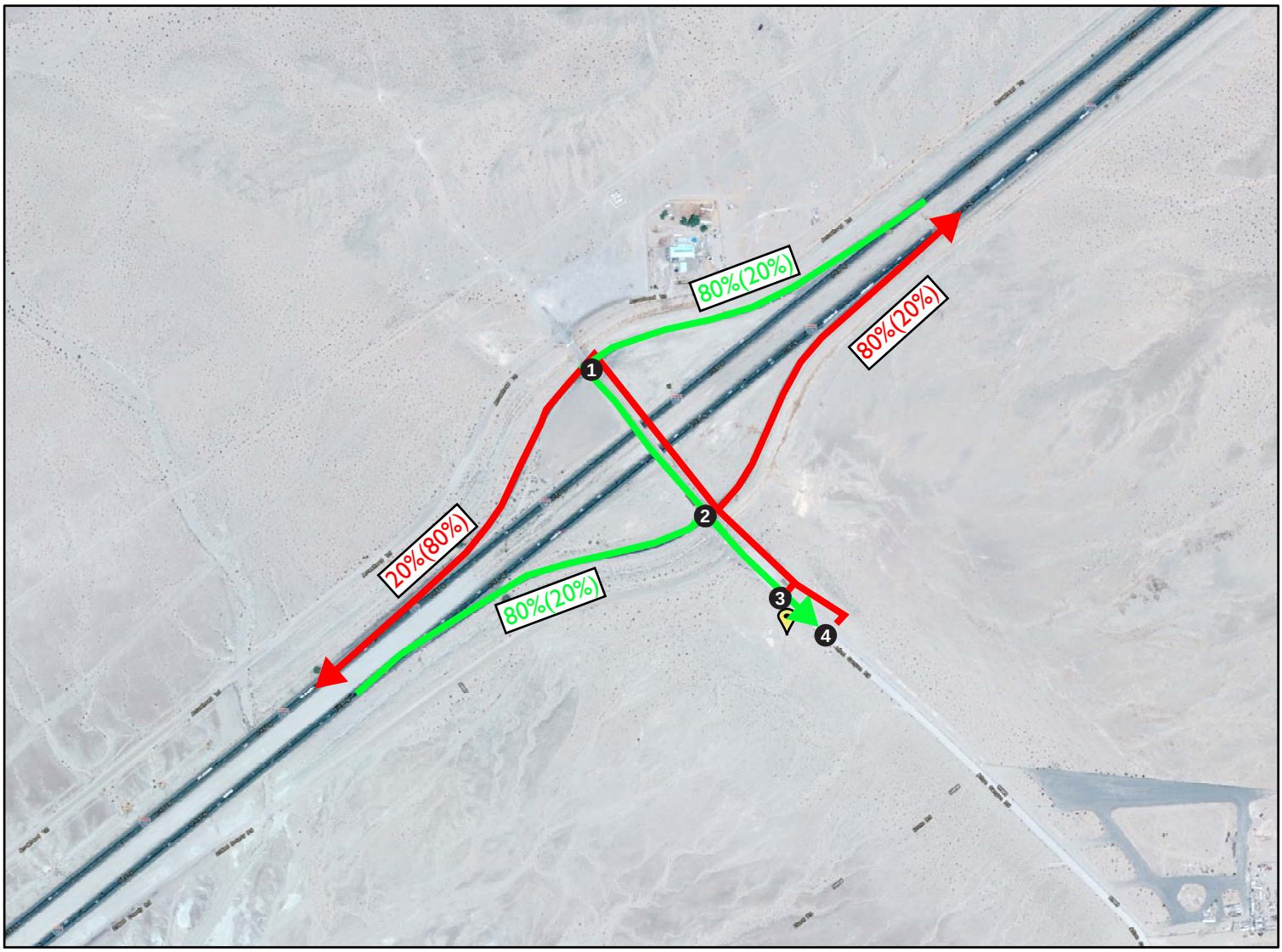
Vehicle Type	Friday Peak Hour			Sunday Peak Hour		
	Total	In	Out	Total	In	Out
Autos	49	24	25	86	40	46
Trucks (2-axle)	6	3	3	10	5	5
Trucks (3-axle)	6	4	2	4	2	2
Trucks (4-axle +)	177	84	93	141	72	69
Trucks (Total)	189	91	98	155	79	76
TOTAL SITE	**238**	**115**	**123**	**240**	**119**	**122**
DAILY			**2400**			

The project will generate a total of 2,400 daily trips, including 238 trips during the Friday peak hour and 240 trips during the Sunday peak hour.

Project Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by project traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the route where the project traffic will distribute.

The anticipated trip distributions for the proposed development are presented on Figures 7.1. Figure 7.1 indicate the proportion of project auto traffic that will use the street segments and turning movements indicated during Friday and Sunday. Figure 7.2 indicates the proportion of project truck traffic that will use the street segments and turning movements indicated during Friday and Sunday. The truck trip distribution reflects the heavy traffic peaks on I-15 freeway. It is based upon the relative existing traffic volumes on Afton Road and Interstate 15 interchange. Additionally, Figure 7.3 shows the trips associated with the development of the project.



LEGEND

- Project Site
- # Study Intersection
- Friday(Sunday) xx%(xx%) Outbound Trip Distribution
- Friday(Sunday) xx%(xx%) Inbound Trip Distribution

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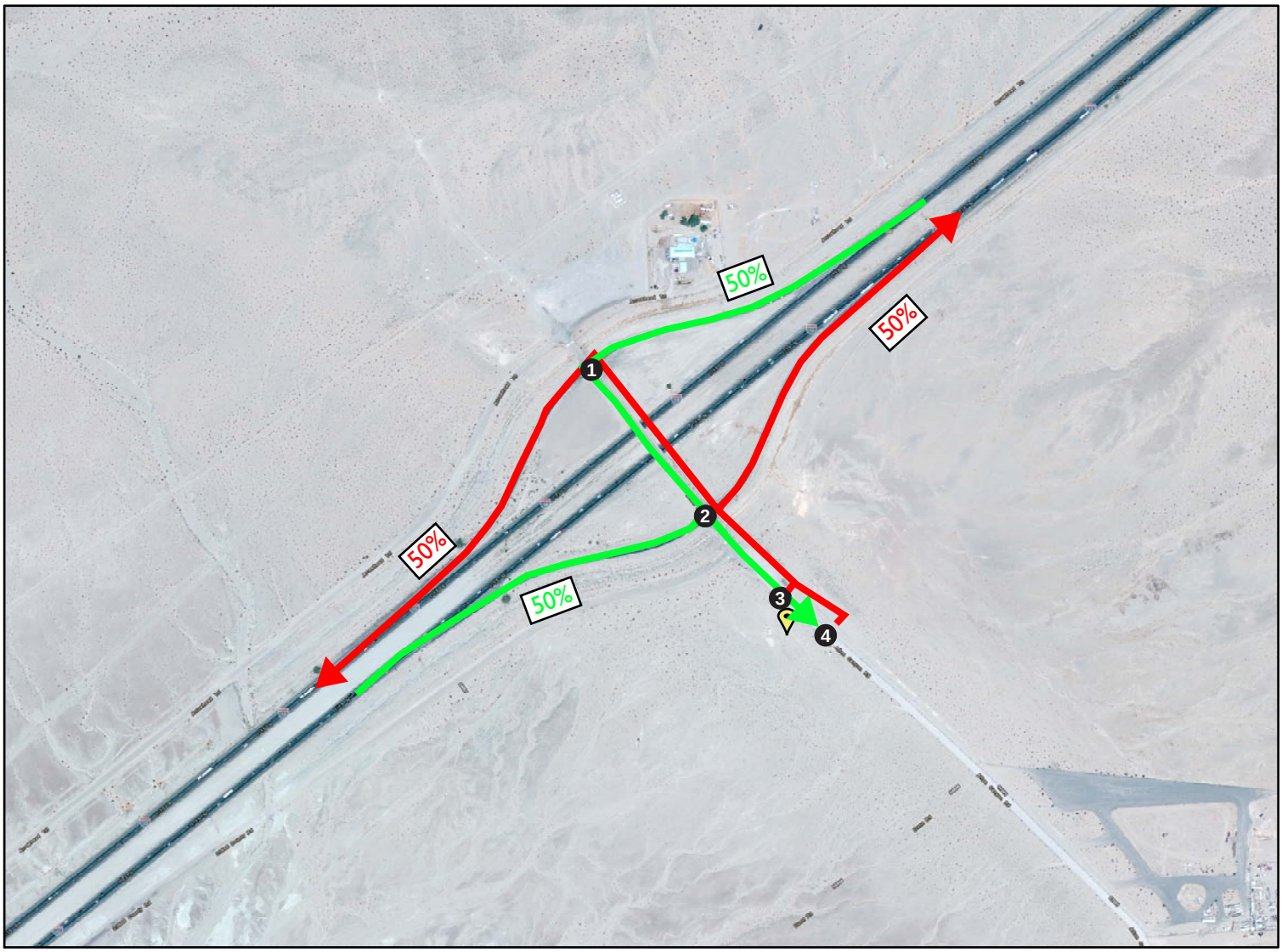
Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 7.1

County of San Bernardino — Auto Traffic Trip Distribution - Friday/Sunday Peak Hours



LEGEND

- Project Site
- # Study Intersection
- xx% Outbound Trip Distribution
- xx% Inbound Trip Distribution

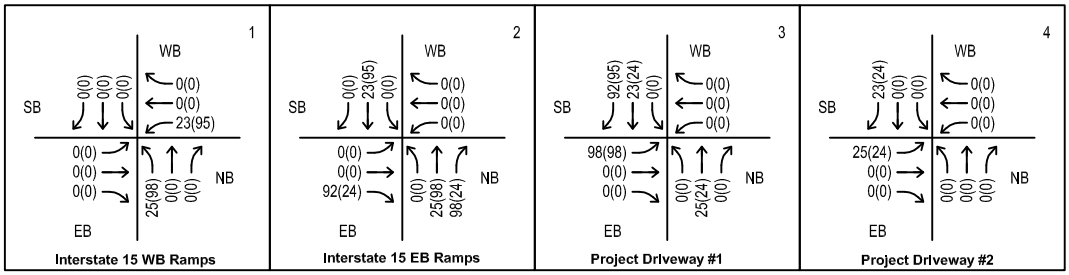
KOA CORPORATION
PLANNING & ENGINEERING

Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 7.2

County of San Bernardino — Truck Traffic Trip Distribution - Friday/Sunday Peak Hours

LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



KOA CORPORATION
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Traffic Impact Analysis for the Truck Stop Center in San Bernardino County — Figure 7.3

County of San Bernardino — Project Trips During Friday/Sunday Peak Hours

8. Opening Year (2018) Conditions with Project

This section documents the expected effect of project traffic upon near-term conditions in the study area, with the addition of the proposed development to the surrounding street system.

Opening Year (2018) Peak Hour Intersection Level of Service

The Opening Year (2018) with Project traffic volumes were derived by adding the project trips shown in Figures 8.1 and 8.2 to the Opening Year (2018) traffic volumes. Figure 8.1 does not include Cumulative Project traffic volumes, while Figure 8.2 does include such volumes. Tables 8.1 and 8.2 summarize the results of the Level of Service analysis for the respective Opening Year (2018) conditions.

Table 8.1 – Friday/Sunday Peak Hour Intersection Performance
Opening Year (2018) Without Cumulative Project, With Project Conditions

#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	9.70	A	12.84	B
2	Interstate 15 Eastbound Ramps	10.32	B	12.06	B
3	Proposed Project Driveway #1	9.55	A	9.56	A
4	Proposed Project Driveway #2	8.69	A	8.69	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

While this scenario is intact, all intersections and on/off ramps display acceptable delays and levels of service.

Table 8.2 – Friday/Sunday Peak Hour Intersection Performance
Opening Year (2018) With Cumulative Project, With Project Conditions

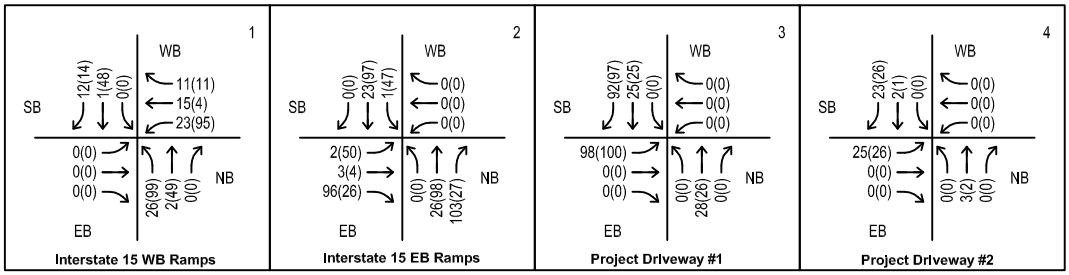
#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	16.09	C	33.52	D
2	Interstate 15 Eastbound Ramps	19.69	C	68.27	F
3	Proposed Project Driveway #1	9.55	A	9.56	A
4	Proposed Project Driveway #2	8.69	A	8.69	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

Once the cumulative project trips are added, the delay for the Interstate 15 Eastbound Ramps creates an unacceptable level of service. Mitigation will have to be conducted for this scenario (discussed in Chapter 11).

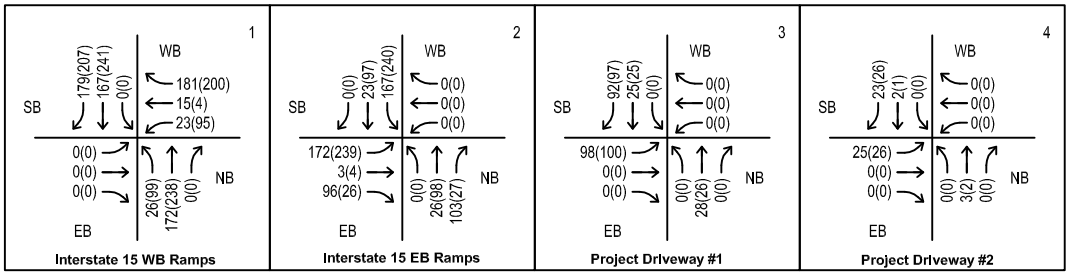
LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



9. Build Out Year (2040) with Project Conditions

This section documents the expected effect of project traffic upon build-out year conditions in the study area. The Build Out Year (2040) is the year of completion of all land uses designated on the County's and nearby jurisdictions' general plans. The year 2040 is used to designate the County's Build Out Year for planning purposes.

Build Out Year (2040) Peak Hour Intersection Level of Service

The Build Out Year (2040) traffic volumes were derived by adding the project trips shown in Figures 9.1 and 9.2 to the Build Out Year (2040) traffic volumes. Figure 9.1 does not include cumulative volumes, while Figure 9.2 does. Tables 9.1 and 9.2 display the corresponding results.

Table 9.1 – Friday/Sunday Peak Hour Intersection Performance
Build Out Year (2040) Without Cumulative Project, With Project Conditions

#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	9.85	A	13.81	B
2	Interstate 15 Eastbound Ramps	10.40	B	13.31	B
3	Proposed Project Driveway #1	9.57	A	9.58	A
4	Proposed Project Driveway #2	8.71	A	8.71	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

As shown in Table 9.1, all intersections still operate at acceptable average delays and levels of service. No issues need to be addressed through the mitigation process.

Table 9.2 – Friday/Sunday Peak Hour Intersection Performance
Build Out Year (2040) With Cumulative Project, With Project Conditions

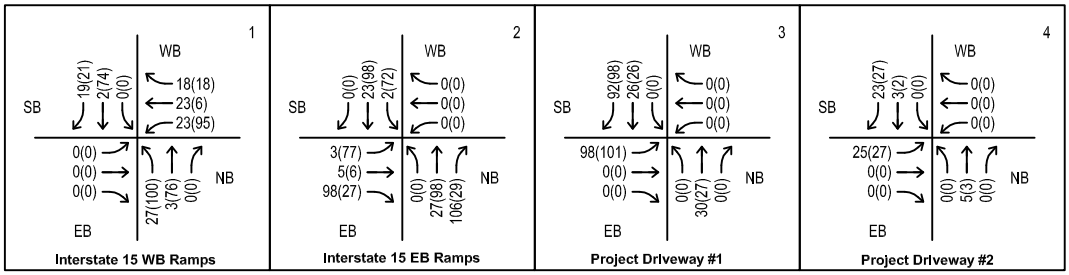
#	Intersection	Friday Peak Hour		Sunday Peak Hour	
		Delay[1] (s)	LOS	Delay[1] (s)	LOS
1	Interstate 15 Westbound Ramps	16.63	C	40.39	E
2	Interstate 15 Eastbound Ramps	20.12	C	129.22	F
3	Proposed Project Driveway #1	9.57	A	9.58	A
4	Proposed Project Driveway #2	8.71	A	8.71	A

Note 1: Delay for unsignalized intersection taken to be delay of poorest movement.

The addition of cumulative project trips to the Sunday Peak Hour creates high levels of service at the westbound and eastbound ramps of Interstate 15 near the project site. This will be addressed in Chapter 11.

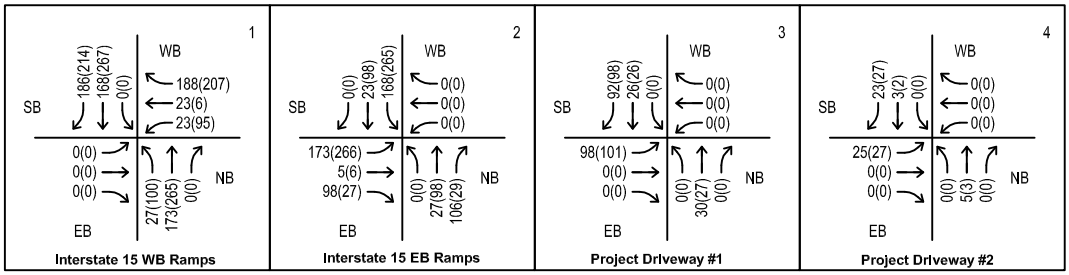
LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



LEGEND

- Project Site
- # Study Intersection
- XX(XX) Friday(Sunday) Peak Hour Volumes



10. Determination of Significant Impact

Traffic impacts are identified if the proposed project will result in a significant change in traffic conditions on a roadway or intersection. A significant impact is normally defined when project related traffic would cause level of service to deteriorate to below the minimum acceptable level by a measurable amount. A cumulative impact may also be significant if the location is forecast to fill below the minimum acceptable level due to cumulative traffic and project related traffic causes a further decline.

Level of Service (LOS) C is identified as the minimum allowable "Standard" service level during peak hours for intersections within unincorporated areas in County of San Bernardino and an average delay less than 45 seconds for the I-15 ramps. Mitigation measures should be considered when traffic conditions are forecasted to decline to poorer levels of service.

Unsignalized intersections are considered to be impacted if the level of service is poor, traffic signals are warranted, and delay is increased significantly. If signals are not warranted, mitigation measures other than signalization may be considered to improve stop control operation.

Project Impacts – Opening Year (2018) with Cumulative Project, with Project

Table 10.1 displays a comparison of Opening Year (2018) study scenarios. Traffic impacts created by the project can be calculated by comparing the "Without Project" scenarios to "With Project" scenarios, with the Cumulative Project trips.

As shown in the Table 10.1 below, the project **will contribute to a cumulative impact** during the Friday and/or Sunday peak hour at the following study intersection:

- Interstate 15 Eastbound Ramps at Afton Road (Sunday Peak Hour)

Table 10.1 - Level of Service Analysis /Determination of Impacts for Opening Year (2018) Conditions

#	Intersection	Opening Year without CP without P		Opening Year without CP with P		Increase?	Impact	Opening Year with CP without P		Opening Year with CP with P		Increase?	Impact
Friday Peak Hour (Delay/Level of Service)													
1	Interstate 15 Westbound Ramps	9.23	A	9.7	A	0.47	NO	14.65	B	16.09	C	1.44	NO
2	Interstate 15 Eastbound Ramps	9.09	A	10.32	B	1.23	NO	15.4	C	19.69	C	4.29	NO
3	Proposed Project Driveway #1	8.54	A	9.55	A	1.01	NO	8.54	A	9.55	A	1.01	NO
4	Proposed Project Driveway #2	8.54	A	8.69	A	0.15	NO	8.54	A	8.69	A	0.15	NO
Sunday Peak Hour (Delay/Level of Service)													
1	Interstate 15 Westbound Ramps	9.74	A	12.84	B	3.1	NO	17.05	C	33.52	D	16.47	NO
2	Interstate 15 Eastbound Ramps	10.03	B	12.06	B	2.03	NO	26.99	D	68.27	F	41.28	YES
3	Proposed Project Driveway #1	8.54	A	9.56	A	1.02	NO	8.54	A	9.56	A	1.02	NO
4	Proposed Project Driveway #2	8.54	A	8.69	A	0.15	NO	8.54	A	8.69	A	0.15	YES

Project Impacts – Build Out Year (2040) with Cumulative Project, with Project

Table 10.2 shows a comparison of the build-out study scenarios. Traffic impacts created by the project in the build-out year can be calculated by comparing the "Without Project" scenarios to the "With Project" scenarios, pending the inclusion of Cumulative Project trips.

As shown in the Table 10.2 below, the project **will contribute to a cumulative impact** during the Sunday peak hour at the following study intersections:

- Interstate 15 Westbound Ramps at Afton Road
- Interstate 15 Eastbound Ramps at Afton Road

Table 10.2 - Level of Service Analysis /Determination of Impacts for Build Out Year (2040) Conditions

#	Intersection	Build Out Year without CP without P		Build Out Year without CP with P		Increase?	Impact	Build Out Year with CP without P		Build Out Year with CP with P		Increase?	Impact
Friday Peak Hour (Delay/Level of Service)													
1	Interstate 15 Westbound Ramps	9.35	A	9.85	A	0.5	NO	15.07	C	16.63	C	1.56	NO
2	Interstate 15 Eastbound Ramps	9.15	A	10.4	B	1.25	NO	15.63	C	20.12	C	4.49	NO
3	Proposed Project Driveway #1	8.55	A	9.57	A	1.02	NO	8.55	A	9.57	A	1.02	NO
4	Proposed Project Driveway #2	8.55	A	8.71	A	0.16	NO	8.55	A	8.71	A	0.16	NO
Sunday Peak Hour (Delay/Level of Service)													
1	Interstate 15 Westbound Ramps	10.19	B	13.81	B	3.62	NO	18.32	C	40.39	E	22.07	YES
2	Interstate 15 Eastbound Ramps	10.76	B	13.31	B	2.55	NO	39.37	E	129.22	F	89.85	YES
3	Proposed Project Driveway #1	8.56	A	9.58	A	1.02	NO	8.56	A	9.58	A	1.02	NO
4	Proposed Project Driveway #2	8.56	A	8.71	A	0.15	NO	8.56	A	8.71	A	0.15	NO

11. Interstate 15 Ramp Intersection Queuing Analysis

In order to provide guidelines for future intersection improvements, KOA Corporation performed an analysis to calculate the design queue length (calculated to accommodate the 95th percentile queue lengths) for the following key intersections in the project vicinity:

- Interstate 15 Westbound Ramps at Afton Road
- Interstate 15 Eastbound Ramps at Afton Road

The queuing analysis was performed for the two intersections that feed into the Interstate 15 freeway, in each of the scenarios addressed below. The two intersections with the Interstate 15 Ramps are currently unsignalized.

The back of queue is the distance per lane that is queued depending on arrival patterns of vehicles and vehicles that do not clear the intersection during a given green phase. The queue values produced by this estimation procedure may be higher than those from other procedures, especially at high degrees of saturation or high percentiles. The results were reported in terms of distance of queue by lane group. A length of 25 feet per car length was used as a default and can be used as a reference to calculate the number of cars involved in the queue.

This model for predicting queue lengths is described in the HCM 2010. The results are found within the PTV Vistro reports included in the appendices following this report. The 95th-percentile queue is defined to be the queue length (in feet) that has only a 5-percent probability of being exceeded during the analysis time period. It is a useful parameter for determining the appropriate length of turn pockets, but it is not typical of what an average driver would experience.

Opening Year (2018) Queuing Analysis

Back of queue calculations were performed for the two intersections using the Opening Year (2018) forecast volumes. Tables 11.1 and 11.2 show the results of the queue analysis performed at the key intersections with the cumulative project, as well as with and without the project.

Table 11.1 – Opening Year (2018) Queue Analysis Without Project

Intersection	NB			SB			EB			WB		
Friday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	13.42	13.42	x	x	0.00	0.00	x	x	x	25.68	25.68	25.68
Interstate 15 Eastbound Ramps	x	0.00	0.00	9.15	9.15	x	37.24	37.24	37.24	x	x	x
Sunday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	22.37	22.37	x	x	0.00	0.00	x	x	x	1.14	1.14	1.14
Interstate 15 Eastbound Ramps	x	0.00	0.00	13.98	13.98	x	100.27	100.27	100.27	x	x	x

Note: x = queue does not exist for that movement

Table 11.2 – Opening Year (2018) Queue Analysis With Project

Intersection	NB			SB			EB			WB		
Friday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	15.73	15.73	x	x	0.00	0.00	x	x	x	33.38	33.38	33.38
Interstate 15 Eastbound Ramps	x	0.00	0.00	11.97	11.97	x	67.72	67.72	67.72	x	x	x
Sunday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	35.68	35.68	x	x	0.00	0.00	x	x	x	117.42	117.42	117.42
Interstate 15 Eastbound Ramps	x	0.00	0.00	24.05	24.05	x	215.49	215.49	215.49	x	x	x

Note: x = queue does not exist for that movement

Build Out Year (2040) Queuing Analysis

Back of queue calculations were performed for the unsignalized study intersections using the Build Out Year (2040) forecast volumes. Tables 11.3 and 11.4 show the results of the queue analysis performed at the key intersections with the cumulative project, as well as with and without the project.

Table 11.3 - Build Out Year (2040) Queue Analysis Without Project

Intersection	NB			SB			EB			WB		
Friday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	13.72	13.72	x	x	0.00	0.00	x	x	x	29.40	29.40	29.40
Interstate 15 Eastbound Ramps	x	0.00	0.00	9.25	9.25	x	38.89	38.89	38.89	x	x	x
Sunday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	26.80	26.80	x	x	0.00	0.00	x	x	x	32.34	32.34	32.34
Interstate 15 Eastbound Ramps	x	0.00	0.00	15.79	15.79	x	153.78	153.78	153.78	x	x	x

Note: x = queue does not exist for that movement

Table 11.4 – Build Out Year (2040) Queue Analysis With Project

Intersection	NB			SB			EB			WB		
Friday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	16.06	16.06	x	x	0.00	0.00	x	x	x	38.06	38.06	38.06
Interstate 15 Eastbound Ramps	x	0.00	0.00	12.10	12.10	x	70.80	70.80	70.80	x	x	x
Sunday Peak Hour (Design Queue Length - feet)												
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Interstate 15 Westbound Ramps	41.85	41.85	x	x	0.00	0.00	x	x	x	144.80	144.80	144.80
Interstate 15 Eastbound Ramps	x	0.00	0.00	26.60	26.60	x	326.63	326.63	326.63	x	x	x

Note: x = queue does not exist for that movement

In the build-out conditions, queue lengths for both westbound and eastbound ramps of Interstate 15 can be accommodated, since the ramps at these locations are both relatively long.

Design queue length calculations are provided in Appendix G of this report.

12. Mitigation and Project Recommendations

Mitigation measures are required if approval and construction of the project will result in or significantly increase unacceptable traffic conditions. They are also appropriate if cumulative traffic conditions of approved projects will result in an unsatisfactory level-of-service and the proposed development contributes to these conditions significantly.

For both the Opening Year (2018) and the Build Out Year (2040), the intersection between the Interstate 15 eastbound ramps and Afton Road has a delay greater than 45 seconds during the Sunday Peak Hour, which is the threshold set by the County of San Bernardino. Two options were provided regarding mitigation:

- Installation of a traffic signal
- Implementation of a roundabout

These mitigation options meet the satisfaction of Caltrans standards, however will be determined through a review under the I.C.E. Policy. Tables 12.1 and 12.2 below show the levels of service for these impacted intersections when either of the above mitigations are implemented.

Table 12.1 - Level-of-Service Analysis of Mitigation for Opening Year (2018) Conditions

Intersection	Without Project		With Project		Signalized		Roundabout		Impact?
Friday Peak Hour (Delay/Level of Service)									
Interstate 15 Eastbound Ramps	15.40	C	19.69	C	19.27	B	6.40	A	NO
Sunday Peak Hour (Delay/Level of Service)									
Interstate 15 Eastbound Ramps	26.99	D	68.27	F	19.48	B	7.65	A	NO

As shown in Table 12.1, the intersections of Interstate 15 Westbound and Eastbound Ramps at Afton Road will operate at an acceptable level of service if either of the proposed improvements are provided.

Table 12.2 - Level-of-Service Analysis of Mitigation for Build Out Year (2040) Conditions

Intersection	Without Project		With Project		Signalized		Roundabout		Impact?
Friday Peak Hour (Delay/Level of Service)									
Interstate 15 Eastbound Ramps	15.63	C	20.12	C	19.41	B	6.47	A	NO
Sunday Peak Hour (Delay/Level of Service)									
Interstate 15 Eastbound Ramps	39.37	E	129.22	F	20.72	C	8.33	A	NO

As shown in Table 12.2, all the intersections will operate at acceptable levels of service if either of the proposed improvements are provided.
Appendix H contains the analysis reports for the mitigations.

13. Interstate 15 Ramps Signal Warrant Analysis

The purpose of this analysis is to explore and determine the possibility of installing a traffic signal at both Interstate 15 on/off ramps at Afton Road (westbound and eastbound). Consideration of traffic signal controls will be based on the guidelines and recommendations found in the latest version of the Manual on Uniform Traffic Control Devices.

In order to determine if the proposed traffic signals are justified, a traffic signal warrant number 3, Peak Hour Warrant was applied. Table 13.1 shows the results of the analysis. The intersections were analyzed as a two-way stop with existing geometric configurations for Opening Year (2018) and Build Out Year (2040). Refer to Figure 3.1, which shows the lane configurations.

Table 13.1 – Interstate 15 Ramps Signal Warrant Results

Intersection	Friday Peak Hour		Sunday Peak Hour	
	Peak Hour Signal Warrant Met		Peak Hour Signal Warrant Met	
	Yes	No	Yes	No
Interstate 15 Westbound Ramps				
Opening Year (2018)		X		X
Build Out Year (2040)		X	X	
Interstate 15 Eastbound Ramps				
Opening Year (2018)		X		X
Build Out Year (2040)		X	X	

Note: Delay based on seconds per vehicle average. LOS = Level of Service

As shown in Table 13.1, the both intersections at Afton Road meet signal warrants for the Sunday Peak Hour during the Build Out Year (2040). All other scenarios do not meet the warrant requirements. Appendix I contains the Opening Year (2018) and Build Out Year (2040) signal warrant printouts.

14. Cost Estimates and Cost Sharing

Improvements are required to accommodate forecast future traffic at several study intersections where the project must construct improvements that may benefit other projects and at other locations where the project does not solely cause the impact but contributes to the impact caused by cumulative traffic growth.

The fair share is calculated by comparing the relative amount of traffic increase at the location for the proposed project with the traffic increase indicated in the analysis. This number is compared to the cost of mitigation to provide a fair share. These calculations are shown below:

Build Out Year (2040) Intersection Improvement Costs

Improvements are required to accommodate forecast Build Out Year (2040) traffic at two of the study intersections for the Build Out Year (2040), where the project contributes significantly to the impact caused by cumulative traffic growth. Below is a discussion of the mitigation measure needed at the intersections:

Interstate 15 Westbound/Eastbound Ramps at Afton Road

- Signalization: $400,000 per intersection
  OR
- Roundabout: $150,000 per intersection

Tables 14.1 and 14.2 show the fair share for both mitigation options. This represents the project's fair share towards funding of improvements to meet long-term future traffic demands.

Table 14.1 – Build Out Year (2040) Fair Share Cost – Signalized Intersections

Intersection	Total Cost - Signalized	Existing Year (2016)	Build Out Year (2040) with Project	Difference	Project	%	Total Fair Share Cost
Interstate 15 Westbound Ramps	$400,000.00	122	1154	1032	193	18.70%	$74,806.20
Interstate 15 Eastbound Ramps	$400,000.00	104	789	685	241	35.18%	$140,729.93
TOTAL	**$800,000.00**						**$215,536.13**

Sunday Peak Hour (worst case scenario)

The proposed projects fair share improvements for the Build Out Year (2040) for the installation of signals at both ramps is **$215,536.13**.

Table 14.2 – Build Out Year (2040) Fair Share Cost – Roundabouts

Intersection	Total Cost - Roundabout	Existing Year (2016)	Build Out Year (2040) with Project	Difference	Project	%	Total Fair Share Cost
Interstate 15 Westbound Ramps	$150,000.00	122	1154	1032	193	18.70%	$28,052.33
Interstate 15 Eastbound Ramps	$150,000.00	104	789	685	241	35.18%	$52,773.72
TOTAL	**$300,000.00**						**$80,826.05**

Sunday Peak Hour (worst case scenario)

The proposed projects fair share improvements for the Build Out Year (2040) for the installation of roundabouts are estimated to cost **$80,826.05**.

14. Project Access and Internal Circulation

The project takes access to the roadway system at two locations, both of which are along Afton Road, just south of Interstate 15. Both driveways along Afton Road provide adequate width for one inbound and one outbound lane (left and right turn lane).

Traffic counts were taken at the nearby intersection of Afton Road and 20866 County Road to account for traffic going to and from the project site. These existing counts were used to determine if there is need for signalization. Since volumes are low, the accepted traffic signal warrants are not met for either site entrance along Afton Road.

The project site plan was briefly reviewed for internal circulation. All parking areas comply with accepted design standards for stall and aisle width. Also, all parking stalls are accessible. We have no major concerns over the existing site plan.

The proposed project will be submitted to the County of San Bernardino, who will review the plan for compliance with applicable County standards. We anticipate that any minor internal circulation or parking issues will be addressed in conjunction with this review.

15. Conclusions

Hapy Highway, Inc. is providing engineering services for a property on the southwest side of Afton Road, southeast of Interstate 15 in the unincorporated area in the County of San Bernardino. The proposed project will add a one story truck stop building (7,000 square feet) for retail services to include an office, fast food restaurant and a retail/lounge area, a one story auto repair building with two bays (2,950 square feet), an auto fuel canopy with 12 fueling stations (5,376 square feet), and a truck fueling canopy with 8 fueling stations (1,800 square feet).

Mitigation measures are required if approval and construction of the project will result in or significantly increase unacceptable traffic conditions. These conditions occur at two intersections in the project study area due to traffic from cumulative project and further development growth. A description of the necessary improvements can be found in the Mitigation and Project Recommendation Section of the report.

KOA Corporation recommends that the County San Bernardino find that the traffic impact of the project has no adverse effect on the surrounding street system as long as all of the recommended mitigation measures or suitable alternative measures are incorporated in the future.

APPENDIX A
Traffic Count Data (2016)

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Sun, Aug 28, 16

LOCATION: Baker
NORTH & SOUTH: Afton
EAST & WEST: I-15 WB Ramp

PROJECT #: SC1609
LOCATION #: 1
CONTROL: STOP W

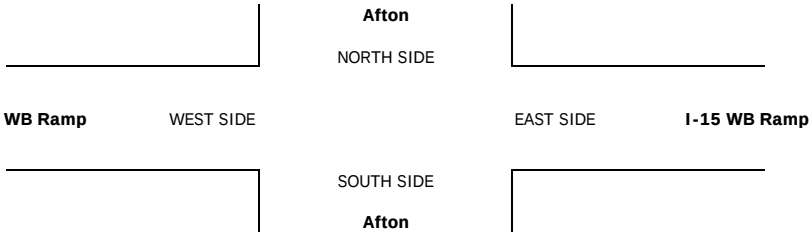
NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Afton			SOUTHBOUND Afton			EASTBOUND I-15 WB Ramp			WESTBOUND I-15 WB Ramp				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL X	ET X	ER X	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	12:00 PM	0	0	0	0	0	3	0	0	0	1	1	2	7	0	0	0	0	0
	12:15 PM	1	2	0	0	0	3	0	0	0	0	4	4	14	0	0	0	0	0
	12:30 PM	0	0	0	0	0	3	0	0	0	0	3	2	8	0	0	0	0	0
	12:45 PM	0	0	0	0	1	2	0	0	0	0	2	2	7	0	0	0	0	0
	1:00 PM	0	0	0	0	0	4	0	0	0	0	5	3	12	0	0	0	0	0
	1:15 PM	0	0	0	0	0	3	0	0	0	0	3	3	9	0	0	0	0	0
	1:30 PM	0	1	0	0	0	1	0	0	0	0	2	0	4	0	0	0	0	0
	1:45 PM	0	0	0	0	1	2	0	0	0	0	4	2	9	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	3	0	0	2	21	0	0	0	1	24	18	70	0	0	0	0	0
	APPROACH %	25%	75%	0%	0%	9%	91%	0%	0%	0%	2%	56%	42%						
	APP/DEPART	4	/	21	23	/	3	0	/	0	43	/	46	0					
	BEGIN PEAK HR		12:15 PM																
	VOLUMES	1	2	0	0	1	12	0	0	0	0	14	11	41					
	APPROACH %	33%	67%	0%	0%	8%	92%	0%	0%	0%	0%	56%	44%						
	PEAK HR FACTOR		0.250			0.813			0.000			0.781		0.732					
	APP/DEPART	3	/	13	13	/	1	0	/	0	25	/	27	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:					
Sun, Aug 28, 16	LOCATION:	Baker	PROJECT #:	SC1609	
	NORTH & SOUTH:	Afton	LOCATION #:	2	
	EAST & WEST:	I-15 EB Ramp	CONTROL:	STOP E	

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Afton			SOUTHBOUND Afton			EASTBOUND I-15 EB Ramp			WESTBOUND I-15 EB Ramp				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL 0	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	12:00 PM	0	0	0	0	1	0	0	1	1	0	0	0	3	0	0	0	0	0
	12:15 PM	0	1	0	0	0	0	2	1	1	0	0	0	5	0	0	0	0	0
	12:30 PM	0	0	1	0	0	0	0	1	1	0	0	0	3	0	0	0	0	0
	12:45 PM	0	0	1	1	0	0	0	1	1	0	0	0	4	0	0	0	0	0
	1:00 PM	0	0	3	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	1	0	0	0	1	1	1	0	0	0	4	0	0	0	0	0
	1:45 PM	0	0	0	1	0	0	0	1	1	0	0	0	3	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	6	2	1	0	3	6	7	0	0	0	26	0	0	0	0	0
	APPROACH %	0%	14%	86%	67%	33%	0%	19%	38%	44%	0%	0%	0%						
	APP/DEPART	7	/	4	3	/	8	16	/	14	0	/	0	0					
	BEGIN PEAK HR		12:15 PM																
	VOLUMES	0	1	5	1	0	0	2	3	4	0	0	0	16					
	APPROACH %	0%	17%	83%	100%	0%	0%	22%	33%	44%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.250			0.563			0.000		0.800					
	APP/DEPART	6	/	3	1	/	4	9	/	9	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Sun, Aug 28, 16

LOCATION: Baker
NORTH & SOUTH: Afton
EAST & WEST: 20866 County

PROJECT #: SC1609
LOCATION #: 3
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N
◄ W E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Afton			SOUTHBOUND Afton			EASTBOUND 20866 County			WESTBOUND 20866 County				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	12:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	2	0	1	0	0	1
	12:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	1	0	0	1
	12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	1:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	1	0	0	1
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1
	1:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	3	0	5	3	0	0	0	0	0	0	0	11	0	5	0	0	5
	APPROACH %	0%	100%	0%	63%	38%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	3	/	8	8	/	3	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	3	0	2	2	0	0	0	0	0	0	0	7					
	APPROACH %	0%	100%	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.750			0.500			0.000			0.000		0.875					
	APP/DEPART	3	/	5	4	/	2	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Fri, Aug 26, 16

LOCATION: Baker
NORTH & SOUTH: Afton
EAST & WEST: I-15 WB Ramp

PROJECT #: SC1609
LOCATION #: 1
CONTROL: STOP W

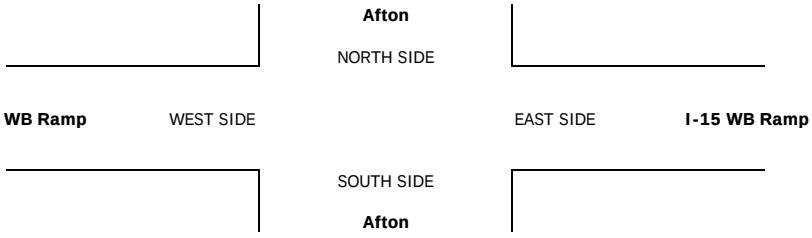
NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Afton			SOUTHBOUND Afton			EASTBOUND I-15 WB Ramp			WESTBOUND I-15 WB Ramp				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL X	ET X	ER X	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	2:00 PM	1	18	0	0	12	5	0	0	0	0	1	3	40	0	0	0	0	0
	2:15 PM	0	15	0	0	16	1	0	0	0	0	3	2	37	0	0	0	0	0
	2:30 PM	0	12	0	0	11	2	0	0	0	0	0	3	28	0	0	0	0	0
	2:45 PM	0	2	0	0	7	5	0	0	0	0	0	3	17	0	0	0	0	0
	3:00 PM	0	1	0	0	0	1	0	0	0	0	2	0	4	0	0	0	0	0
	3:15 PM	1	0	0	0	1	6	0	0	0	0	1	7	16	0	0	0	0	0
	3:30 PM	0	0	0	0	0	2	0	0	0	0	0	3	5	0	0	0	0	0
	3:45 PM	0	0	0	0	0	3	0	0	0	0	0	1	4	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	2	48	0	0	47	25	0	0	0	0	7	22	151	0	0	0	0	0
	APPROACH %	4%	96%	0%	0%	65%	35%	0%	0%	0%	0%	24%	76%						
	APP/DEPART	50	/	70	72	/	47	0	/	0	29	/	34	0					
	BEGIN PEAK HR		2:00 PM																
	VOLUMES	1	47	0	0	46	13	0	0	0	0	4	11	122					
	APPROACH %	2%	98%	0%	0%	78%	22%	0%	0%	0%	0%	27%	73%						
	PEAK HR FACTOR		0.632			0.868			0.000			0.750		0.763					
	APP/DEPART	48	/	58	59	/	46	0	/	0	15	/	18	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Fri, Aug 26, 16

LOCATION: Baker
NORTH & SOUTH: Afton
EAST & WEST: I-15 EB Ramp

PROJECT #: SC1609
LOCATION #: 2
CONTROL: STOP E

NOTES:

AM
PM
MD
OTHER
OTHER

N
◄ W
E ►
S

Add U-Turns to Left Turns

		NORTHBOUND Afton			SOUTHBOUND Afton			EASTBOUND I-15 EB Ramp			WESTBOUND I-15 EB Ramp				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL 0	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	2:00 PM	0	0	0	12	0	0	20	1	0	0	0	0	33	0	0	0	0	0
	2:15 PM	0	0	0	15	1	0	15	0	0	0	0	0	31	0	0	0	0	0
	2:30 PM	0	0	1	12	0	0	11	2	0	0	0	0	26	0	0	0	0	0
	2:45 PM	0	0	2	6	1	0	2	1	2	0	0	0	14	0	0	0	0	0
	3:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	3:15 PM	0	1	2	0	1	0	0	0	2	0	0	0	6	0	0	0	0	0
	3:30 PM	0	0	1	0	0	0	0	1	1	0	0	0	3	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	7	45	3	0	48	6	5	0	0	0	116	0	0	0	0	0
	APPROACH %	0%	22%	78%	94%	6%	0%	81%	10%	8%	0%	0%	0%						
	APP/DEPART	9	/	50	48	/	8	59	/	58	0	/	0	0					
	BEGIN PEAK HR		2:00 PM																
	VOLUMES	0	0	3	45	2	0	48	4	2	0	0	0	104					
	APPROACH %	0%	0%	100%	96%	4%	0%	89%	7%	4%	0%	0%	0%						
	PEAK HR FACTOR		0.375			0.734			0.643			0.000		0.788					
	APP/DEPART	3	/	48	47	/	4	54	/	52	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Fri, Aug 26, 16

LOCATION: Baker
NORTH & SOUTH: Afton
EAST & WEST: 20866 County

PROJECT #: SC1609
LOCATION #: 3
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N
◄ W E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Afton			SOUTHBOUND Afton			EASTBOUND 20866 County			WESTBOUND 20866 County				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	1	0	2	1	0	0	0	0	0	0	0	4	0	2	0	0	2
	3:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
	3:15 PM	0	1	0	1	0	2	1	0	0	0	0	0	5	0	1	0	0	1
	3:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	5	1	2	2	0	0	0	0	0	12	0	5	0	0	5
	APPROACH %	0%	100%	0%	63%	13%	25%	100%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	9	8	/	1	2	/	0	0	/	2	0					
	BEGIN PEAK HR		2:45 PM																
	VOLUMES	0	2	0	4	1	2	2	0	0	0	0	0	11					
	APPROACH %	0%	100%	0%	57%	14%	29%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.583			0.500			0.000		0.550					
	APP/DEPART	2	/	8	7	/	1	2	/	0	0	/	2	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

APPENDIX B
Intersection Level of Service Worksheets
Existing Conditions (August 2016)

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	2	0	0	1	12	0	0	0	0	14	11
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 Rate	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 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
Total Hourly Volume [veh/h]	1	2	0	0	1	12	0	0	0	0	14	11
Peak Hour Factor	0.2500	0.2500	1.0000	1.0000	0.8130	0.8130	1.0000	1.0000	1.0000	0.7810	0.7810	0.7810
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	2	0	0	0	4	0	0	0	0	4	4
Total Analysis Volume [veh/h]	4	8	0	0	1	15	0	0	0	0	18	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.79	9.33	8.49
Movement LOS	A	A			A	A				A	A	A
95th-Percentile Queue Length [veh]	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11
95th-Percentile Queue Length [ft]	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	2.64	2.64
d_A, Approach Delay [s/veh]	2.42			0.00			0.00			8.96		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.26											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
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 Rate	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 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
Total Hourly Volume [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
Peak Hour Factor	1.0000	0.5000	0.5000	0.2500	0.2500	1.0000	0.5630	0.5630	0.5630	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]	0	1	3	1	0	0	1	1	2	0	0	0
Total Analysis Volume [veh/h]	0	2	10	4	0	0	4	5	7	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.25	0.00	0.00	8.66	9.19	8.38	0.00	0.00	0.00
Movement LOS		A	A	A	A		A	A	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.01	0.01	0.00	0.05	0.05	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.19	0.19	0.00	1.23	1.23	1.23	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.25			8.70			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.26											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.7500	0.7500	0.5000	0.5000	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]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	4	4	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.7500	0.7500	0.5000	0.5000	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]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	4	4	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	47	0	0	46	13	0	0	0	0	4	11
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 Rate	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 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
Total Hourly Volume [veh/h]	1	47	0	0	46	13	0	0	0	0	4	11
Peak Hour Factor	0.6320	0.6320	1.0000	1.0000	0.8680	0.8680	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
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]	0	19	0	0	13	4	0	0	0	0	1	4
Total Analysis Volume [veh/h]	2	74	0	0	53	15	0	0	0	0	5	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.42	9.92	8.73
Movement LOS	A	A			A	A				A	A	A
95th-Percentile Queue Length [veh]	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07
95th-Percentile Queue Length [ft]	3.91	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	1.68	1.68
d_A, Approach Delay [s/veh]	0.19			0.00			0.00			9.03		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.19											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	3	45	2	0	48	4	2	0	0	0
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 Rate	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 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
Total Hourly Volume [veh/h]	0	0	3	45	2	0	48	4	2	0	0	0
Peak Hour Factor	1.0000	0.3750	0.3750	0.7340	0.7340	1.0000	0.6430	0.6430	0.6430	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]	0	0	2	15	1	0	19	2	1	0	0	0
Total Analysis Volume [veh/h]	0	0	8	61	3	0	75	6	3	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.04	0.00	0.00	0.09	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.32	0.00	0.00	9.89	10.44	8.83	0.00	0.00	0.00
Movement LOS		A	A	A	A		A	B	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.12	0.12	0.00	0.34	0.34	0.34	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	3.10	3.10	0.00	8.54	8.54	8.54	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			6.98			9.90			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	8.19											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.5000	0.5000	0.5830	0.5830	0.5000	0.5000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	4	2	3	4	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.57	8.35
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.30	0.30
d_A, Approach Delay [s/veh]	0.00		0.00		8.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.64					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.5000	0.5000	0.5830	0.5830	0.5000	0.5000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	4	2	3	4	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.57	8.35
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.30	0.30
d_A, Approach Delay [s/veh]	0.00		0.00		8.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.64					
Intersection LOS	A					

APPENDIX C
Cumulative Project Information

Table 2

Project Trip Generation[1]

Land Use	Quantity[2]	Units[3]	Friday Evening[4]			Sunday Afternoon[4]			Daily[5]
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Apartments		DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Fast-Food Restaurant with Drive-Through Window		TSF	24.60	22.70	47.30	34.92	37.82	72.74	496.12
Fast-Food Drive In Stalls[6]		ST	3.00	3.00	6.00	3.00	3.00	6.00	60.00
Gasoline/Service Station with Convenience Market		FP	6.79	6.78	13.57	6.79	6.78	13.57	162.78
Alternative Fuel Station[7]		CS	1.00	1.00	2.00	1.00	1.00	2.00	20.00
Trips Generated									
Apartments	5	DU	1	2	3	2	1	3	33
Internal Capture - Residential (25%)[8]			0	-1	-1	-1	0	-1	-8
Fast-Food Restaurant with Drive-Through Window	3.600	TSF	89	82	171	126	136	262	1786
Fast-Food Drive In Stalls	10	ST	30	30	60	30	30	60	600
Internal Capture - Restaurant (25%)[9]			-30	-28	-58	-39	-42	-81	-597
Pass-By - Restaurant (95%)			-85	-80	-165	-111	-118	-229	-1,700
Gasoline/Service Station with Convenience Market - Trucks	6	FP	41	41	82	41	41	82	977
Gasoline/Service Station with Convenience Market - Cars	24	FP	163	163	326	163	163	326	3,907
Internal Capture - Service Station (25%)[10]			-51	-51	-102	-51	-51	-102	-1,221
Pass-By - Service Station (95%)			-145	-145	-290	-145	-145	-290	-3,480
Alternative Fuel Station	15	CS	15	15	30	15	15	30	300
Internal Capture - Alternative Fuel Station (50%)[11]			-8	-8	-16	-8	-8	-16	-150
Pass-By - Alternative Fuel Station (90%)			-6	-6	-12	-6	-6	-12	-135
Total Trips Generated		→	339	333	672	377	386	763	7,603
Total Trips Generated Using Study Area Intersections			250	245	495	278	285	563	5,627
Total Trips Generated Added to Freeway Mainline			14	14	28	16	16	32	312

It should be noted that this facility is completely isolated and adjacent to the I-15 Freeway. The site is so remote that the staff will live on-site. Patrons of the facility will likely stop at the facility to fuel their vehicle and obtain food. It is projected that the site adds virtually no traffic to the adjacent I-15 Freeway but all its traffic utilizes the study area intersections.

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012, Land Use Categories 210, 934, and 945.

[2] The proposed service station is projected to consist of 24 passenger car fueling positions and 6 diesel truck fueling positions. To remain conservative, the 6 diesel truck fueling positions have been assumed to have the same trip generation as a passenger car fueling position.

[3] DU= Dwelling Unit; TSF = Thousand Square Feet; ST= Stalls; FP = Fueling Positions; CS = Charging Stations

[4] Peak hour trip generation rates for Friday evening and Sunday Mid-day peak periods are not available. Weekday evening peak hour of generator trip generation has been used because it is the highest trip generating period for this land use.

[5] Weekday daily trip generation rates have been used.

Project Desc
10 # × 3 = 30

[6] It is assumed that each drive in stall will turn over three times per peak hour. -It is assumed that the daily total is ten times the peak hour total.

[7] It is assumed that each charging station will turn over one time per peak hour. It is assumed that the daily total is ten times the peak hour total.

[8] It is assumed that 25 percent of the trips of the residential use will be internal to the site.

[9] It is assumed that approximately 50 percent of the patrons of the restaurants will also utilize the fueling stations. To remain conservative an internal reduction of 25 percent is utilized.

[10] It is assumed that approximately 50 percent of the patrons of the fueling station will also utilize the restaurants. To remain conservative an internal reduction of 25 percent is utilized.

[11] It is assumed that the alternative fuel station will be used passively by patrons of the restaurants. I conservative estimate of 50 percent of the alternative fuel use will be exclusively alternative fuel.

APPENDIX D
Intersection Level-of- Service Worksheets
Opening Year (2018) Conditions

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	2	0	0	1	12	0	0	0	0	15	11
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 Rate	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 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
Total Hourly Volume [veh/h]	1	2	0	0	1	12	0	0	0	0	15	11
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	0	1	0	0	0	3	0	0	0	0	4	3
Total Analysis Volume [veh/h]	1	2	0	0	1	13	0	0	0	0	16	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.69	9.23	8.44
Movement LOS	A	A			A	A				A	A	A
95th-Percentile Queue Length [veh]	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.09
95th-Percentile Queue Length [ft]	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	2.27	2.27
d_A, Approach Delay [s/veh]	2.42			0.00			0.00			8.89		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.69											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
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 Rate	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 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
Total Hourly Volume [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	0	0	0	1	1	1	0	0	0
Total Analysis Volume [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.23	0.00	0.00	8.58	9.09	8.35	0.00	0.00	0.00
Movement LOS		A	A	A	A		A	A	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.05	0.05	0.00	0.68	0.68	0.68	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.23			8.65			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.32											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	3	2	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	3	2	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	2	0	0	1	12	0	0	0	0	15	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	170	0	0	166	167	0	0	0	0	0	170
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
Total Hourly Volume [veh/h]	1	172	0	0	167	179	0	0	0	0	15	181
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	0	45	0	0	44	47	0	0	0	0	4	48
Total Analysis Volume [veh/h]	1	181	0	0	176	188	0	0	0	0	16	191
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.22
d_M, Delay for Movement [s/veh]	8.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.52	14.65	10.73
Movement LOS	A	A			A	A				B	B	B
95th-Percentile Queue Length [veh]	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	1.03	1.03
95th-Percentile Queue Length [ft]	13.42	13.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.68	25.68	25.68
d_A, Approach Delay [s/veh]	0.04			0.00			0.00			11.03		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.04											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	166	0	0	170	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
Total Hourly Volume [veh/h]	0	1	5	167	0	0	172	3	4	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	44	0	0	45	1	1	0	0	0
Total Analysis Volume [veh/h]	0	1	5	176	0	0	181	3	4	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.11	0.00	0.00	0.33	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.50	0.00	0.00	14.84	15.40	11.61	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.37	0.37	0.00	1.49	1.49	1.49	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	9.15	9.15	0.00	37.24	37.24	37.24	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.50			14.78			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	11.08											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	3	2	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	3	2	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	2	0	0	1	12	0	0	0	0	15	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	0	0	0	0	0	0	0	0	23	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
Total Hourly Volume [veh/h]	26	2	0	0	1	12	0	0	0	23	15	11
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	7	1	0	0	0	3	0	0	0	6	4	3
Total Analysis Volume [veh/h]	27	2	0	0	1	13	0	0	0	24	16	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.01
d_M, Delay for Movement [s/veh]	7.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.16	9.70	8.57
Movement LOS	A	A			A	A				A	A	A
95th-Percentile Queue Length [veh]	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18
95th-Percentile Queue Length [ft]	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.53	4.53	4.53
d_A, Approach Delay [s/veh]	6.78			0.00			0.00			9.19		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.10											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	98	0	23	0	0	0	92	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
Total Hourly Volume [veh/h]	0	26	103	1	23	0	2	3	96	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	7	27	0	6	0	1	1	25	0	0	0
Total Analysis Volume [veh/h]	0	27	108	1	24	0	2	3	101	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.49	0.00	0.00	9.53	10.32	8.82	0.00	0.00	0.00
Movement LOS		A	A	A	A		A	B	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.05	0.05	0.00	0.34	0.34	0.34	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	1.32	1.32	0.00	8.53	8.53	8.53	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.30			8.87			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.56											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	23	92	98	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
Total Hourly Volume [veh/h]	0	28	25	92	98	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	24	26	0
Total Analysis Volume [veh/h]	0	29	26	97	103	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	9.55	9.17
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.39	0.39
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.72	9.72
d_A, Approach Delay [s/veh]	0.00		0.00		9.55	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	23	25	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
Total Hourly Volume [veh/h]	0	3	2	23	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	6	7	0
Total Analysis Volume [veh/h]	0	3	2	24	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.69	8.47
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.00	2.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.11					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	2	0	0	1	12	0	0	0	0	15	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	170	0	0	166	167	0	0	0	23	0	170
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
Total Hourly Volume [veh/h]	26	172	0	0	167	179	0	0	0	23	15	181
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	7	45	0	0	44	47	0	0	0	6	4	48
Total Analysis Volume [veh/h]	27	181	0	0	176	188	0	0	0	24	16	191
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.22
d_M, Delay for Movement [s/veh]	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.88	16.09	11.38
Movement LOS	A	A			A	A				B	C	B
95th-Percentile Queue Length [veh]	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	1.34	1.34
95th-Percentile Queue Length [ft]	15.73	15.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.38	33.38	33.38
d_A, Approach Delay [s/veh]	1.05			0.00			0.00			12.07		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.74											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	98	166	23	0	170	0	92	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
Total Hourly Volume [veh/h]	0	26	103	167	23	0	172	3	96	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	7	27	44	6	0	45	1	25	0	0	0
Total Analysis Volume [veh/h]	0	27	108	176	24	0	181	3	101	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.12	0.00	0.00	0.39	0.01	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.83	0.00	0.00	18.61	19.69	14.30	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.48	0.48	0.00	2.71	2.71	2.71	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	11.97	11.97	0.00	67.72	67.72	67.72	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			6.89			17.10			0.00		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	10.08											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	23	92	98	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
Total Hourly Volume [veh/h]	0	28	25	92	98	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	24	26	0
Total Analysis Volume [veh/h]	0	29	26	97	103	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	9.55	9.17
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.39	0.39
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.72	9.72
d_A, Approach Delay [s/veh]	0.00		0.00		9.55	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	23	25	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
Total Hourly Volume [veh/h]	0	3	2	23	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	6	7	0
Total Analysis Volume [veh/h]	0	3	2	24	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.69	8.47
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.00	2.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.11					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	49	0	0	48	14	0	0	0	0	4	11
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 Rate	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 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
Total Hourly Volume [veh/h]	1	49	0	0	48	14	0	0	0	0	4	11
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	0	13	0	0	13	4	0	0	0	0	1	3
Total Analysis Volume [veh/h]	1	52	0	0	51	15	0	0	0	0	4	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.23	9.74	8.61
Movement LOS	A	A			A	A				A	A	A
95th-Percentile Queue Length [veh]	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05
95th-Percentile Queue Length [ft]	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	1.30	1.30
d_A, Approach Delay [s/veh]	0.14			0.00			0.00			8.89		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.11											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
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 Rate	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 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
Total Hourly Volume [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	12	1	0	13	1	1	0	0	0
Total Analysis Volume [veh/h]	0	0	3	49	2	0	53	4	2	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.00	0.06	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.29	0.00	0.00	9.50	10.03	8.64	0.00	0.00	0.00
Movement LOS		A	A	A	A		A	B	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.10	0.10	0.00	0.22	0.22	0.22	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	2.44	2.44	0.00	5.53	5.53	5.53	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.01			9.51			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	8.13											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	2	1	2	2	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		8.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	2	1	2	2	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		8.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	49	0	0	48	14	0	0	0	0	4	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	193	193	0	0	0	0	0	189
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
Total Hourly Volume [veh/h]	1	238	0	0	241	207	0	0	0	0	4	200
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	0	63	0	0	63	54	0	0	0	0	1	53
Total Analysis Volume [veh/h]	1	251	0	0	254	218	0	0	0	0	4	211
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.27
d_M, Delay for Movement [s/veh]	8.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.75	17.05	11.37
Movement LOS	A	A			A	A				C	C	B
95th-Percentile Queue Length [veh]	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14
95th-Percentile Queue Length [ft]	22.37	22.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.59	28.59	28.59
d_A, Approach Delay [s/veh]	0.03			0.00			0.00			11.48		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.64											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	27.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	193	0	0	189	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
Total Hourly Volume [veh/h]	0	0	3	240	2	0	239	4	2	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	63	1	0	63	1	1	0	0	0
Total Analysis Volume [veh/h]	0	0	3	253	2	0	252	4	2	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.16	0.00	0.00	0.60	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.63	0.00	0.00	26.46	26.99	21.15	0.00	0.00	0.00
Movement LOS		A	A	A	A		D	D	C			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.56	0.56	0.00	4.01	4.01	4.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	13.98	13.98	0.00	100.27	100.27	100.27	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.58			26.42			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	16.95											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	2	1	2	2	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		8.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	2	1	2	2	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		8.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	49	0	0	48	14	0	0	0	0	4	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	98	0	0	0	0	0	0	0	0	95	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
Total Hourly Volume [veh/h]	99	49	0	0	48	14	0	0	0	95	4	11
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	26	13	0	0	13	4	0	0	0	25	1	3
Total Analysis Volume [veh/h]	104	52	0	0	51	15	0	0	0	100	4	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.01	0.01
d_M, Delay for Movement [s/veh]	7.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.30	12.84	9.85
Movement LOS	A	A			A	A				B	B	A
95th-Percentile Queue Length [veh]	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68
95th-Percentile Queue Length [ft]	8.46	8.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.92	16.92	16.92
d_A, Approach Delay [s/veh]	5.01			0.00			0.00			12.07		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.45											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	98	24	0	95	0	0	0	24	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
Total Hourly Volume [veh/h]	0	98	27	47	97	0	50	4	26	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	26	7	12	26	0	13	1	7	0	0	0
Total Analysis Volume [veh/h]	0	103	28	49	102	0	53	4	27	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.00	0.09	0.01	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.56	0.00	0.00	11.54	12.06	9.49	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.35	0.35	0.00	0.41	0.41	0.41	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	8.67	8.67	0.00	10.28	10.28	10.28	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			2.45			10.90			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	3.51											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.117

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	24	95	98	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
Total Hourly Volume [veh/h]	0	26	25	97	100	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	26	26	0
Total Analysis Volume [veh/h]	0	27	26	102	105	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	9.56	9.19
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.40	0.40
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.94	9.94
d_A, Approach Delay [s/veh]	0.00		0.00		9.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	24	24	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
Total Hourly Volume [veh/h]	0	2	1	26	26	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	7	7	0
Total Analysis Volume [veh/h]	0	2	1	27	27	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.69	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.08	2.08
d_A, Approach Delay [s/veh]	0.00		0.00		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.12					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	33.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	49	0	0	48	14	0	0	0	0	4	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	98	189	0	0	193	193	0	0	0	95	0	189
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
Total Hourly Volume [veh/h]	99	238	0	0	241	207	0	0	0	95	4	200
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	26	63	0	0	63	54	0	0	0	25	1	53
Total Analysis Volume [veh/h]	104	251	0	0	254	218	0	0	0	100	4	211
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.02	0.27
d_M, Delay for Movement [s/veh]	8.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.77	33.52	22.90
Movement LOS	A	A			A	A				D	D	C
95th-Percentile Queue Length [veh]	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	4.70	4.70
95th-Percentile Queue Length [ft]	35.68	35.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117.42	117.42	117.42
d_A, Approach Delay [s/veh]	2.53			0.00			0.00			25.85		
Approach LOS	A			A			A			D		
d_I, Intersection Delay [s/veh]	7.92											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	68.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	98	24	193	95	0	189	0	24	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
Total Hourly Volume [veh/h]	0	98	27	240	97	0	239	4	26	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	26	7	63	26	0	63	1	7	0	0	0
Total Analysis Volume [veh/h]	0	103	28	253	102	0	252	4	27	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.17	0.00	0.00	0.86	0.01	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.00	0.00	0.00	67.80	68.27	59.24	0.00	0.00	0.00
Movement LOS		A	A	A	A		F	F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.96	0.96	0.00	8.62	8.62	8.62	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	24.05	24.05	0.00	215.49	215.49	215.49	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			5.70			66.99			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	27.28											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.117

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	24	95	98	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
Total Hourly Volume [veh/h]	0	26	25	97	100	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	26	26	0
Total Analysis Volume [veh/h]	0	27	26	102	105	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	9.56	9.19
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.40	0.40
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.94	9.94
d_A, Approach Delay [s/veh]	0.00		0.00		9.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	24	24	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
Total Hourly Volume [veh/h]	0	2	1	26	26	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	7	7	0
Total Analysis Volume [veh/h]	0	2	1	27	27	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.69	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.08	2.08
d_A, Approach Delay [s/veh]	0.00		0.00		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.12					
Intersection LOS	A					

APPENDIX E

Intersection Level- of- Service Worksheets
Build Out Year (2040) Conditions

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	3	0	0	2	19	0	0	0	0	23	18
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 Rate	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 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
Total Hourly Volume [veh/h]	2	3	0	0	2	19	0	0	0	0	23	18
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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	0	0	1	5	0	0	0	0	6	5
Total Analysis Volume [veh/h]	2	3	0	0	2	20	0	0	0	0	24	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02
d_M, Delay for Movement [s/veh]	7.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.80	9.35	8.51
Movement LOS	A	A			A	A				A	A	A
95th-Percentile Queue Length [veh]	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.14
95th-Percentile Queue Length [ft]	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.56	3.56	3.56
d_A, Approach Delay [s/veh]	2.90			0.00			0.00			8.98		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.72											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
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 Rate	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 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
Total Hourly Volume [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	1	2	1	0	0	1	1	2	0	0	0
Total Analysis Volume [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.24	0.00	0.00	8.63	9.15	8.37	0.00	0.00	0.00
Movement LOS		A	A	A	A		A	A	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.09	0.09	0.00	1.08	1.08	1.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.24			8.70			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.24											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	5	3	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	5	3	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	5	3	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	5	3	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	15.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	3	0	0	2	19	0	0	0	0	23	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	170	0	0	166	167	0	0	0	0	0	170
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
Total Hourly Volume [veh/h]	2	173	0	0	168	186	0	0	0	0	23	188
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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	46	0	0	44	49	0	0	0	0	6	49
Total Analysis Volume [veh/h]	2	182	0	0	177	196	0	0	0	0	24	198
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23
d_M, Delay for Movement [s/veh]	8.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.89	15.07	11.02
Movement LOS	A	A			A	A				B	C	B
95th-Percentile Queue Length [veh]	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18
95th-Percentile Queue Length [ft]	13.72	13.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.40	29.40	29.40
d_A, Approach Delay [s/veh]	0.09			0.00			0.00			11.45		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.28											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	166	0	0	170	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
Total Hourly Volume [veh/h]	0	2	8	168	0	0	173	5	6	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	1	2	44	0	0	46	1	2	0	0	0
Total Analysis Volume [veh/h]	0	2	8	177	0	0	182	5	6	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.11	0.00	0.00	0.33	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.51	0.00	0.00	15.05	15.63	11.77	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.37	0.37	0.00	1.56	1.56	1.56	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	9.25	9.25	0.00	38.89	38.89	38.89	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.51			14.97			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	11.10											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	5	3	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	5	3	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	5	3	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	5	3	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	3	0	0	2	19	0	0	0	0	23	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	0	0	0	0	0	0	0	0	23	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
Total Hourly Volume [veh/h]	27	3	0	0	2	19	0	0	0	23	23	18
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	7	1	0	0	1	5	0	0	0	6	6	5
Total Analysis Volume [veh/h]	28	3	0	0	2	20	0	0	0	24	24	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.02
d_M, Delay for Movement [s/veh]	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.28	9.85	8.65
Movement LOS	A	A			A	A				A	A	A
95th-Percentile Queue Length [veh]	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.24	0.24
95th-Percentile Queue Length [ft]	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	6.00	6.00
d_A, Approach Delay [s/veh]	6.59			0.00			0.00			9.31		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	6.90											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	98	0	23	0	0	0	92	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
Total Hourly Volume [veh/h]	0	27	106	2	23	0	3	5	98	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	7	28	1	6	0	1	1	26	0	0	0
Total Analysis Volume [veh/h]	0	28	112	2	24	0	3	5	103	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.50	0.00	0.00	9.59	10.40	8.85	0.00	0.00	0.00
Movement LOS		A	A	A	A		A	B	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.06	0.06	0.00	0.36	0.36	0.36	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	1.38	1.38	0.00	9.07	9.07	9.07	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.58			8.94			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.64											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.116

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	23	92	98	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
Total Hourly Volume [veh/h]	0	30	26	92	98	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	7	24	26	0
Total Analysis Volume [veh/h]	0	32	27	97	103	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	9.57	9.18
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.39	0.39
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.78	9.78
d_A, Approach Delay [s/veh]	0.00		0.00		9.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	23	25	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
Total Hourly Volume [veh/h]	0	5	3	23	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	6	7	0
Total Analysis Volume [veh/h]	0	5	3	24	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.71	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.01	2.01
d_A, Approach Delay [s/veh]	0.00		0.00		8.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.90					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	3	0	0	2	19	0	0	0	0	23	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	170	0	0	166	167	0	0	0	23	0	170
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
Total Hourly Volume [veh/h]	27	173	0	0	168	186	0	0	0	23	23	188
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	7	46	0	0	44	49	0	0	0	6	6	49
Total Analysis Volume [veh/h]	28	182	0	0	177	196	0	0	0	24	24	198
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.23
d_M, Delay for Movement [s/veh]	8.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.37	16.63	11.77
Movement LOS	A	A			A	A				C	C	B
95th-Percentile Queue Length [veh]	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	1.52	1.52
95th-Percentile Queue Length [ft]	16.06	16.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.06	38.06	38.06
d_A, Approach Delay [s/veh]	1.08			0.00			0.00			12.59		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	4.01											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	98	166	23	0	170	0	92	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
Total Hourly Volume [veh/h]	0	27	106	168	23	0	173	5	98	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	7	28	44	6	0	46	1	26	0	0	0
Total Analysis Volume [veh/h]	0	28	112	177	24	0	182	5	103	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.12	0.00	0.00	0.39	0.01	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.84	0.00	0.00	19.02	20.12	14.63	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.48	0.48	0.00	2.83	2.83	2.83	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	12.10	12.10	0.00	70.80	70.80	70.80	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			6.91			17.48			0.00		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	10.23											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.116

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	23	92	98	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
Total Hourly Volume [veh/h]	0	30	26	92	98	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	7	24	26	0
Total Analysis Volume [veh/h]	0	32	27	97	103	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	9.57	9.18
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.39	0.39
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.78	9.78
d_A, Approach Delay [s/veh]	0.00		0.00		9.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	23	25	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
Total Hourly Volume [veh/h]	0	5	3	23	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	6	7	0
Total Analysis Volume [veh/h]	0	5	3	24	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.71	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.01	2.01
d_A, Approach Delay [s/veh]	0.00		0.00		8.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.90					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	76	0	0	74	21	0	0	0	0	6	18
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 Rate	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 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
Total Hourly Volume [veh/h]	2	76	0	0	74	21	0	0	0	0	6	18
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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	20	0	0	19	6	0	0	0	0	2	5
Total Analysis Volume [veh/h]	2	80	0	0	78	22	0	0	0	0	6	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.68	10.19	8.79
Movement LOS	A	A			A	A				A	B	A
95th-Percentile Queue Length [veh]	0.17	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.09
95th-Percentile Queue Length [ft]	4.36	4.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.15	2.15	2.15
d_A, Approach Delay [s/veh]	0.18			0.00			0.00			9.12		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.17											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
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 Rate	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 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
Total Hourly Volume [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	19	1	0	20	2	1	0	0	0
Total Analysis Volume [veh/h]	0	0	5	76	3	0	81	6	3	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.00	0.10	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.34	0.00	0.00	10.22	10.76	8.93	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	A			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.15	0.15	0.00	0.39	0.39	0.39	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	3.85	3.85	0.00	9.73	9.73	9.73	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.06			10.21			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	8.49											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	3	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	1	1	0
Total Analysis Volume [veh/h]	0	3	2	3	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.56	8.34
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.33					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	3	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	1	1	0
Total Analysis Volume [veh/h]	0	3	2	3	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.56	8.34
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.33					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	76	0	0	74	21	0	0	0	0	6	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	193	193	0	0	0	0	0	189
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
Total Hourly Volume [veh/h]	2	265	0	0	267	214	0	0	0	0	6	207
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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	70	0	0	70	56	0	0	0	0	2	54
Total Analysis Volume [veh/h]	2	279	0	0	281	225	0	0	0	0	6	218
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.29
d_M, Delay for Movement [s/veh]	8.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.97	18.32	11.88
Movement LOS	A	A			A	A				C	C	B
95th-Percentile Queue Length [veh]	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	1.29	1.29
95th-Percentile Queue Length [ft]	26.80	26.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.34	32.34	32.34
d_A, Approach Delay [s/veh]	0.06			0.00			0.00			12.06		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.69											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	39.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	193	0	0	189	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
Total Hourly Volume [veh/h]	0	0	5	265	3	0	266	6	3	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	70	1	0	70	2	1	0	0	0
Total Analysis Volume [veh/h]	0	0	5	279	3	0	280	6	3	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.17	0.00	0.00	0.74	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.69	0.00	0.00	38.84	39.37	32.66	0.00	0.00	0.00
Movement LOS		A	A	A	A		E	E	D			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.63	0.63	0.00	6.15	6.15	6.15	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	15.79	15.79	0.00	153.78	153.78	153.78	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.61			38.78			0.00		
Approach LOS	A			A			E			A		
d_I, Intersection Delay [s/veh]	23.18											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	3	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	1	1	0
Total Analysis Volume [veh/h]	0	3	2	3	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.56	8.34
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.33					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	3	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	1	1	0
Total Analysis Volume [veh/h]	0	3	2	3	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.56	8.34
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.33					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	76	0	0	74	21	0	0	0	0	6	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	98	0	0	0	0	0	0	0	0	95	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
Total Hourly Volume [veh/h]	100	76	0	0	74	21	0	0	0	95	6	18
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	26	20	0	0	19	6	0	0	0	25	2	5
Total Analysis Volume [veh/h]	105	80	0	0	78	22	0	0	0	100	6	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.01	0.02
d_M, Delay for Movement [s/veh]	7.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.27	13.81	10.35
Movement LOS	A	A			A	A				B	B	B
95th-Percentile Queue Length [veh]	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81
95th-Percentile Queue Length [ft]	10.58	10.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.19	20.19	20.19
d_A, Approach Delay [s/veh]	4.31			0.00			0.00			12.85		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	5.86											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	98	24	0	95	0	0	0	24	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
Total Hourly Volume [veh/h]	0	98	29	72	98	0	77	6	27	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	26	8	19	26	0	20	2	7	0	0	0
Total Analysis Volume [veh/h]	0	103	31	76	103	0	81	6	28	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.00	0.14	0.01	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.62	0.00	0.00	12.77	13.31	10.11	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.42	0.42	0.00	0.68	0.68	0.68	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	10.53	10.53	0.00	16.96	16.96	16.96	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			3.23			12.15			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	4.62											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.119

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	24	95	98	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
Total Hourly Volume [veh/h]	0	27	26	98	101	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	26	27	0
Total Analysis Volume [veh/h]	0	28	27	103	106	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	9.58	9.21
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.40	0.40
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	10.08	10.08
d_A, Approach Delay [s/veh]	0.00		0.00		9.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.85					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	24	24	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
Total Hourly Volume [veh/h]	0	3	2	27	27	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	7	7	0
Total Analysis Volume [veh/h]	0	3	2	28	28	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.71	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.09	0.09
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.16	2.16
d_A, Approach Delay [s/veh]	0.00		0.00		8.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	40.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	76	0	0	74	21	0	0	0	0	6	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	98	189	0	0	193	193	0	0	0	95	0	189
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
Total Hourly Volume [veh/h]	100	265	0	0	267	214	0	0	0	95	6	207
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	26	70	0	0	70	56	0	0	0	25	2	54
Total Analysis Volume [veh/h]	105	279	0	0	281	225	0	0	0	100	6	218
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.03	0.29
d_M, Delay for Movement [s/veh]	8.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.56	40.39	28.44
Movement LOS	A	A			A	A				E	E	D
95th-Percentile Queue Length [veh]	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.79	5.79	5.79
95th-Percentile Queue Length [ft]	41.85	41.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	144.80	144.80	144.80
d_A, Approach Delay [s/veh]	2.40			0.00			0.00			31.78		
Approach LOS	A			A			A			D		
d_I, Intersection Delay [s/veh]	9.24											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	129.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	98	24	193	95	0	189	0	24	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
Total Hourly Volume [veh/h]	0	98	29	265	98	0	266	6	27	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	26	8	70	26	0	70	2	7	0	0	0
Total Analysis Volume [veh/h]	0	103	31	279	103	0	280	6	28	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.19	0.00	0.00	1.06	0.02	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.07	0.00	0.00	128.75	129.22	118.87	0.00	0.00	0.00
Movement LOS		A	A	A	A		F	F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	1.06	1.06	0.00	13.07	13.07	13.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	26.60	26.60	0.00	326.63	326.63	326.63	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			5.90			127.87			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	51.09											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.119

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	24	95	98	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
Total Hourly Volume [veh/h]	0	27	26	98	101	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	26	27	0
Total Analysis Volume [veh/h]	0	28	27	103	106	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	9.58	9.21
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.40	0.40
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	10.08	10.08
d_A, Approach Delay [s/veh]	0.00		0.00		9.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.85					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	24	24	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
Total Hourly Volume [veh/h]	0	3	2	27	27	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	7	7	0
Total Analysis Volume [veh/h]	0	3	2	28	28	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.71	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.09	0.09
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.16	2.16
d_A, Approach Delay [s/veh]	0.00		0.00		8.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS	A					

APPENDIX F
Trip Generation Data

Flying J Travel Plaza

2611 Fisher Blvd, Barstow, CA
Thursday, May 01, 2008

Driveway 1

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
7:00	0	0	0	0	0	0	21	23
7:15	1	1	0	0	1	0	10	12
7:30	0	0	0	1	0	1	11	20
7:45	0	0	0	1	0	0	8	14
8:00	0	0	0	0	0	1	10	16
8:15	1	1	0	0	0	0	13	17
8:30	0	0	0	0	0	0	18	16
8:45	0	0	0	0	0	0	17	16
Total	**2**	**2**	**0**	**2**	**1**	**2**	**108**	**134**

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
16:00	0	0	0	0	1	0	20	17
16:15	0	0	0	0	1	0	16	18
16:30	0	0	0	0	0	1	14	14
16:45	0	0	0	0	0	0	10	18
17:00	1	0	0	0	0	1	22	14
17:15	0	0	0	0	0	0	28	21
17:30	0	0	0	0	0	0	16	18
17:45	0	0	0	0	1	0	20	12
Total	**1**	**0**	**0**	**0**	**3**	**2**	**146**	**132**

Driveway 2

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
7:00	10	10	0	1	1	0	0	0
7:15	6	7	5	1	0	1	0	1
7:30	7	6	0	3	0	0	0	0
7:45	6	4	0	3	2	0	0	0
8:00	7	4	2	4	0	0	0	1
8:15	7	8	0	1	0	0	0	0
8:30	7	10	0	0	0	0	0	0
8:45	3	5	1	0	0	0	0	0
Total	**53**	**54**	**8**	**13**	**3**	**1**	**0**	**2**

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
16:00	16	14	1	1	0	0	0	0
16:15	12	15	3	1	1	0	0	1
16:30	12	10	2	2	1	0	0	0
16:45	11	14	2	4	1	0	0	0
17:00	20	14	1	0	0	0	0	0
17:15	17	16	1	4	0	0	0	0
17:30	14	14	4	1	0	1	0	0
17:45	16	22	2	2	0	0	0	0
Total	**118**	**119**	**16**	**15**	**3**	**1**	**0**	**1**

Driveway 3

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
7:00	4	3	0	0	0	0	0	0
7:15	3	3	0	0	0	0	1	0
7:30	2	5	0	0	0	0	0	0
7:45	4	2	0	0	0	0	0	0
8:00	1	4	0	0	0	0	2	1
8:15	1	5	0	0	0	0	0	0
8:30	4	2	0	0	0	0	1	0
8:45	2	5	0	0	0	0	0	0
Total	**21**	**29**	**0**	**0**	**0**	**0**	**4**	**1**

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
16:00	5	2	0	0	0	1	0	0
16:15	2	2	0	0	0	0	0	0
16:30	5	4	0	0	0	0	0	0
16:45	1	4	1	1	0	0	0	0
17:00	3	5	0	0	0	0	0	0
17:15	4	5	0	0	0	0	0	0
17:30	1	4	1	3	0	0	0	0
17:45	7	7	1	0	0	0	0	0
Total	**28**	**33**	**3**	**4**	**0**	**1**	**0**	**0**

Flying J Driveway Totals

AM Driveway	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
1	2	2	0	2	1	2	108	134
2	53	54	8	13	3	1	0	2
3	21	5	0	0	0	0	0	0
Sub-Total	**76**	**61**	**8**	**15**	**4**	**3**	**108**	**136**
Flying *Total*	**137**		**23**		**7**		**244**	

PM Driveway	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
1	1	0	0	0	3	2	146	132
2	118	119	16	15	3	1	0	1
3	28	33	3	4	0	1	0	0
Sub-Total	**147**	**152**	**19**	**19**	**6**	**4**	**146**	**133**
Total	**299**		**38**		**10**		**279**	

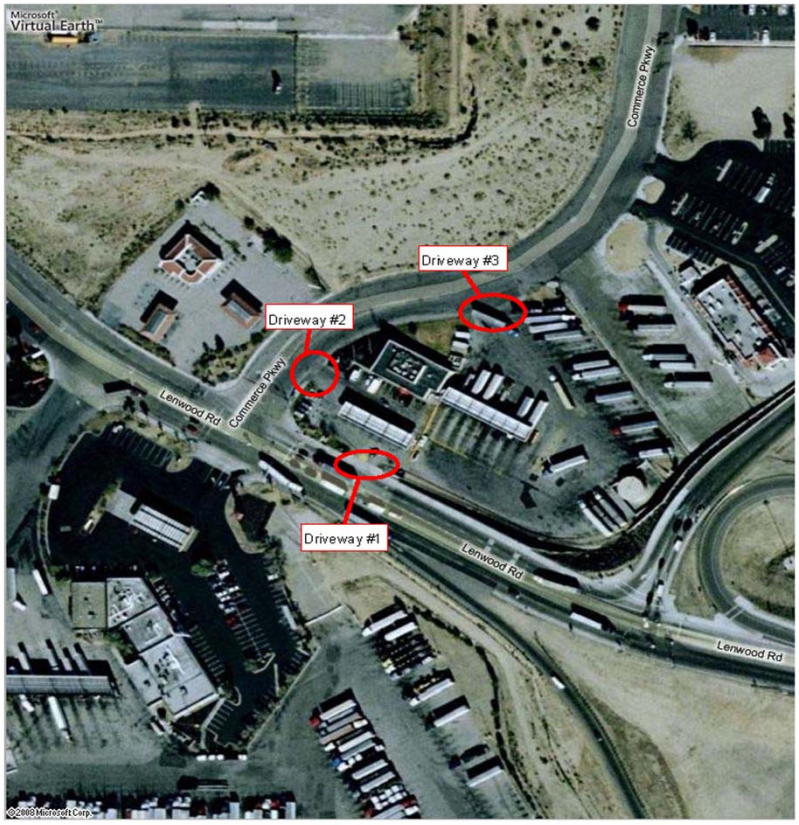
acres 15
square feet 653.4 per 1000 sqft

1 acre = 43560 square feet

Flying J	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out
Autos	***0.21***	***0.12***	***0.09***	***0.46***	***0.22***	***0.23***
Trucks (2 axle)	***0.04***	***0.01***	***0.02***	***0.06***	***0.03***	***0.03***
Trucks (3 axle)	***0.01***	***0.01***	***0.00***	***0.02***	***0.01***	***0.01***
Trucks (4 axle)	***0.37***	***0.17***	***0.21***	***0.43***	***0.22***	***0.20***
Total Trucks	***0.42***	***0.18***	***0.24***	***0.50***	***0.26***	***0.24***
Total	***0.63***	***0.30***	***0.33***	***0.96***	***0.49***	***0.47***

Pilot Travel Center

2591 Commerce Parkway Barstow, CA
Thursday, May 01, 2008



Driveway 1

Time	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
7:00	3	1	0	0	0	0	0	0
7:15	3	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0
7:45	1	0	0	0	0	0	0	0
8:00	1	0	0	0	0	0	0	0
8:15	4	0	0	0	1	0	1	0
8:30	5	0	0	0	0	0	0	0
8:45	5	0	0	0	0	0	0	0
Total	**22**	**1**	**0**	**0**	**1**	**0**	**1**	**0**

Time	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
16:00	13	1	1	0	0	0	0	0
16:15	6	1	0	0	0	0	0	0
16:30	9	1	0	1	0	0	0	0
16:45	4	1	0	0	0	0	0	0
17:00	6	0	0	0	0	0	0	0
17:15	10	1	0	0	0	0	0	0
17:30	4	1	1	0	0	0	0	0
17:45	7	2	1	1	0	0	0	0
Total	**59**	**8**	**3**	**2**	**0**	**0**	**0**	**0**

Driveway 2

Time	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
7:00	4	7	1	2	0	0	0	0
7:15	2	7	0	0	0	0	0	0
7:30	1	2	0	0	1	0	0	0
7:45	5	7	0	0	0	0	0	0
8:00	3	7	0	0	0	0	0	0
8:15	0	7	0	0	0	1	0	0
8:30	3	6	0	0	0	0	0	0
8:45	1	4	0	0	0	0	0	0
Total	**19**	**47**	**1**	**2**	**1**	**1**	**0**	**0**

Time	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
16:00	3	18	0	0	0	0	0	0
16:15	3	8	1	1	0	0	0	0
16:30	3	13	0	0	0	0	0	0
16:45	4	9	0	0	0	0	0	0
17:00	1	7	0	0	0	0	0	0
17:15	2	17	0	0	0	0	0	0
17:30	1	14	0	0	0	0	0	0
17:45	1	4	0	0	0	0	0	0
Total	**18**	**90**	**1**	**1**	**0**	**0**	**0**	**0**

Driveway 3

Time	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
7:00	0	0	0	1	0	0	7	6
7:15	0	0	0	0	0	0	8	8
7:30	0	0	0	0	0	0	7	5
7:45	0	0	0	0	0	0	5	10
8:00	0	0	0	0	0	0	9	6
8:15	0	0	0	0	0	0	8	9
8:30	0	0	0	0	1	0	9	7
8:45	0	0	1	0	0	1	5	8
Total	**0**	**0**	**1**	**1**	**1**	**1**	**58**	**59**

Time	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
16:00	0	0	0	0	0	0	5	6
16:15	0	0	0	0	0	2	3	10
16:30	0	0	0	0	0	0	3	6
16:45	0	0	0	0	1	0	8	5
17:00	0	0	0	0	0	0	3	6
17:15	0	0	0	0	0	0	3	1
17:30	0	0	0	0	0	0	7	2
17:45	0	0	0	0	0	0	3	4
Total	**0**	**0**	**0**	**0**	**1**	**2**	**35**	**40**

Pilot Driveway Totals

AM Driveway	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
1	22	1	0	0	1	0	1	0
2	19	47	1	2	1	1	0	0
3	0	0	1	1	1	1	58	59
Total	**41**	**48**	**2**	**3**	**3**	**2**	**59**	**59**
Sum	89		5		5		118	

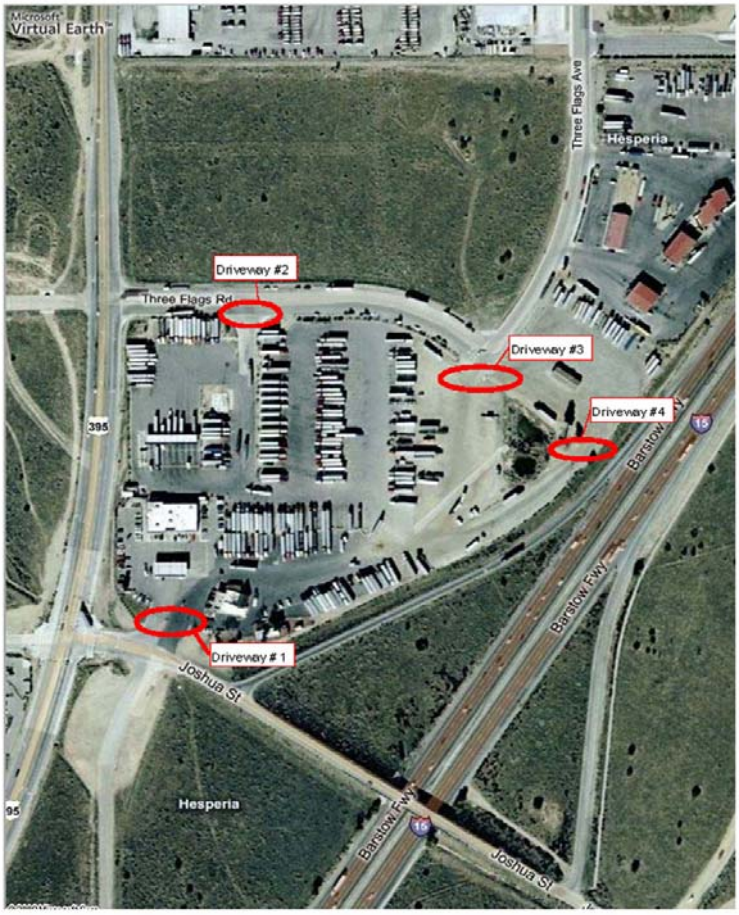
PM Driveway	Passenger Vehicles		Large 2 Axle Vehicles		3 Axle Vehicles		4+ Axle Trucks	
	In	Out	In	Out	In	Out	In	Out
1	59	8	3	2	0	0	0	0
2	18	90	1	1	0	0	0	0
3	0	0	0	0	1	2	35	40
Total	**77**	**98**	**4**	**3**	**1**	**2**	**35**	**40**
Sum	175		7		3		75	

1 acre = 43560 square feet

acres 3.8
square feet 165.528 per 1000

	Pilot					
	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out
Autos	***0.54***	***0.25***	***0.29***	***1.06***	***0.47***	***0.59***
Trucks (2 axle)	***0.03***	***0.01***	***0.02***	***0.04***	***0.02***	***0.02***
Trucks (3 axle)	***0.03***	***0.02***	***0.01***	***0.02***	***0.01***	***0.01***
Trucks (4 axle)	***0.71***	***0.36***	***0.36***	***0.45***	***0.21***	***0.24***
Total Trucks	***0.77***	***0.39***	***0.39***	***0.51***	***0.24***	***0.27***
Total	***1.31***	***0.63***	***0.68***	***1.57***	***0.71***	***0.86***

Pilot Travel Center
8701 US Hwy 395, Oak Hills, CA
Thursday, May 01, 2008



Driveway 1

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
7:00	28	32	1	2	2	3	6	9
7:15	30	26	3	1	1	1	6	5
7:30	34	30	0	3	1	3	4	7
7:45	15	23	0	0	1	0	5	5
8:00	20	25	2	1	2	0	3	2
8:15	28	29	1	1	0	2	3	4
8:30	17	25	2	3	1	0	7	5
8:45	14	17	1	2	1	1	8	5
Total	**186**	**207**	**10**	**13**	**9**	**10**	**42**	**42**

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
16:00	32	36	1	0	0	1	5	3
16:15	26	28	1	3	0	0	6	2
16:30	20	34	2	3	1	0	6	2
16:45	38	29	1	2	0	1	9	1
17:00	35	34	1	1	0	0	11	6
17:15	29	32	4	2	0	0	6	2
17:30	35	35	1	1	0	0	4	4
17:45	35	25	1	2	4	1	4	1
Total	**250**	**253**	**12**	**14**	**5**	**3**	**51**	**21**

Driveway 2

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
7:00	1	1	0	0	2	1	13	14
7:15	0	1	1	0	0	1	9	24
7:30	3	1	0	0	0	1	10	19
7:45	2	1	0	0	1	0	18	12
8:00	6	7	0	0	0	0	8	23
8:15	0	5	0	0	0	4	10	15
8:30	0	0	0	0	0	0	16	11
8:45	2	4	1	0	3	0	7	17
Total	**14**	**20**	**2**	**0**	**6**	**7**	**91**	**135**

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
16:00	2	2	1	1	0	2	16	7
16:15	3	3	1	0	1	0	9	11
16:30	4	3	0	1	1	2	19	13
16:45	5	2	0	0	0	1	13	11
17:00	5	1	0	1	1	0	10	14
17:15	0	1	0	0	1	1	11	19
17:30	2	4	1	1	0	0	8	7
17:45	2	0	0	0	0	0	3	5
Total	**23**	**16**	**3**	**4**	**4**	**6**	**89**	**87**

Driveway 3

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
7:00	1	1	0	0	1	0	2	2
7:15	0	0	0	0	0	0	0	5
7:30	2	4	0	0	1	1	1	4
7:45	2	1	0	0	0	0	1	4
8:00	3	0	0	0	0	0	1	0
8:15	2	1	0	0	0	0	1	0
8:30	2	0	0	0	0	0	0	0
8:45	1	0	0	1	0	0	1	3
Total	**13**	**7**	**0**	**1**	**2**	**1**	**7**	**18**

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
16:00	3	0	0	0	0	0	0	3
16:15	2	2	0	0	0	0	3	1
16:30	1	2	0	1	0	1	1	0
16:45	1	0	0	0	0	0	1	0
17:00	1	0	0	0	0	0	0	0
17:15	1	5	0	0	1	0	1	1
17:30	0	0	0	0	0	0	0	1
17:45	0	2	0	0	0	0	0	2
Total	**9**	**11**	**0**	**1**	**1**	**1**	**6**	**8**

Driveway 4

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
7:00	1	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	1	1
8:15	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	1
8:45	0	0	0	0	0	0	0	0
Total	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**2**

Time	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
16:00	1	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
17:00	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	1	0
17:30	1	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0
Total	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**2**

Oak Hills Trip Generation

AM Driveway	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
1	186	207	10	13	9	10	42	42
2	14	20	2	0	6	7	91	135
3	13	7	0	1	2	1	7	18
4	1	0	0	0	0	0	3	2
Total	**214**	**234**	**12**	**14**	**17**	**18**	**143**	**197**
sum	448		26		35		340	

PM Driveway	Passenger Vehicles In	Passenger Vehicles Out	Large 2 Axle Vehicles In	Large 2 Axle Vehicles Out	3 Axle Vehicles In	3 Axle Vehicles Out	4+ Axle Trucks In	4+ Axle Trucks Out
1	250	253	12	14	5	3	51	21
2	23	16	3	4	4	6	89	87
3	9	11	0	1	1	1	6	8
4	3	0	0	0	0	0	1	2
Total	**285**	**280**	**15**	**19**	**10**	**10**	**147**	**118**
sum	565		34		20		265	

1 acre = 43560 square feet

acres 22.83
square feet 994.4748 per 1000

Oak Hills	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out
Autos	***0.450***	***0.215***	***0.235***	***0.568***	***0.287***	***0.282***
Trucks (2 axle)	***0.026***	***0.012***	***0.014***	***0.034***	***0.015***	***0.019***
Trucks (3 axle)	***0.035***	***0.017***	***0.018***	***0.020***	***0.010***	***0.010***
Trucks (4 axle)	***0.342***	***0.144***	***0.198***	***0.266***	***0.148***	***0.119***
Total Trucks	***0.403***	***0.173***	***0.230***	***0.321***	***0.173***	***0.148***
Total	***0.854***	***0.388***	***0.466***	***0.889***	***0.460***	***0.429***

Flying J						
	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out
Autos	0.21	0.12	0.09	0.46	0.22	0.23
Trucks (2 axle)	0.04	0.01	0.02	0.06	0.03	0.03
Trucks (3 axle)	0.01	0.01	0.00	0.02	0.01	0.01
Trucks (4 axle)	0.37	0.17	0.21	0.43	0.22	0.20
Total Trucks	0.42	0.18	0.24	0.50	0.26	0.24
Total	0.63	0.30	0.33	0.96	0.49	0.47

Pilot						
	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out
Autos	0.54	0.25	0.29	1.06	0.47	0.59
Trucks (2 axle)	0.03	0.01	0.02	0.04	0.02	0.02
Trucks (3 axle)	0.03	0.02	0.01	0.02	0.01	0.01
Trucks (4 axle)	0.71	0.36	0.36	0.45	0.21	0.24
Total Trucks	0.77	0.39	0.39	0.51	0.24	0.27
Total	1.31	0.63	0.68	1.57	0.71	0.86

Oak Hills						
	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out
Autos	0.45	0.22	0.24	0.57	0.29	0.28
Trucks (2 axle)	0.03	0.01	0.01	0.03	0.02	0.02
Trucks (3 axle)	0.04	0.02	0.02	0.02	0.01	0.01
Trucks (4 axle)	0.34	0.14	0.20	0.27	0.15	0.12
Total Trucks	0.40	0.17	0.23	0.32	0.17	0.15
Total	0.85	0.39	0.47	0.89	0.46	0.43

3 Site Trip Generation (Average)						
	AM Peak Hour			PM Peak Hour		
Averages	**Total**	**IN**	**OUT**	**Total**	**IN**	**OUT**
Autos	**0.40**	**0.19**	**0.21**	**0.69**	**0.33**	**0.37**
Trucks (2 axle)	0.03	0.01	0.02	0.04	0.02	0.02
Trucks (3 axle)	0.03	0.01	0.01	0.02	0.01	0.01
Trucks (4 axle)	0.48	0.22	0.25	0.38	0.19	0.19
Total Trucks	**0.53**	**0.25**	**0.28**	**0.44**	**0.23**	**0.22**
Total	**0.93**	**0.44**	**0.49**	**1.14**	**0.55**	**0.59**

Truck Stop	
123,424	**sf**

Truck Stop Trip Generation						
Project sq.ft	123.424	per 1000 sf				
Averages	Friday Peak Hour			Sunday Peak Hour		
	Total	**IN**	**OUT**	**Total**	**IN**	**OUT**
Autos	**49**	**24**	**25**	**86**	**40**	**46**
Trucks (2 axle)	**4**	**1**	**2**	**6**	**3**	**3**
Trucks (3 axle)	**3**	**2**	**1**	**2**	**1**	**1**
Trucks (4 axle)	**59**	**28**	**31**	**47**	**24**	**23**
Total Trucks	**66**	**31**	**35**	**55**	**28**	**27**
Total	**115**	**55**	**61**	**141**	**68**	**73**
*****Daily will be10 times the PM						

Rounding adjustment						
Project sq.ft	123.424	per 1000				
Averages	Friday Peak Hour			Sunday Peak Hour		
	Total	IN	OUT	Total	IN	OUT
Autos	49	24	25	86	40	46
Trucks (2 axle)	4	2	2	6	3	3
Trucks (3 axle)	3	2	1	2	1	1
Trucks (4 axle)	59.0	28.0	31.0	47	24	23
Total Trucks	66	32	34	55	28	27
Total	115	56	59	141	68	73
*****Daily will be10 times the PM						

New Trip Rates for our Project, Modified for PCEs						
	Friday Peak Hour			Sunday Peak Hour		
Type	Total	In	Out	Total	In	Out
Autos	*49*	*24*	*25*	*86*	*40*	*46*
Trucks (2 ax - 1.5 PCE)	*6*	*3*	*3*	*9*	*5*	*5*
Trucks (3 ax - 2.0 PCE)	*6*	*4*	*2*	*4*	*2*	*2*
Trucks (4 ax - 3.0 PCE)	*177*	*84*	*93*	*141*	*72*	*69*
Total Trucks	*189*	*91*	*98*	*154*	*79*	*76*
Total	238	115	123	240	119	122
Daily	2400					

APPENDIX G
Queuing Analysis

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	2	0	0	1	12	0	0	0	0	15	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	170	0	0	166	167	0	0	0	0	0	170
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
Total Hourly Volume [veh/h]	1	172	0	0	167	179	0	0	0	0	15	181
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	0	45	0	0	44	47	0	0	0	0	4	48
Total Analysis Volume [veh/h]	1	181	0	0	176	188	0	0	0	0	16	191
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.22
d_M, Delay for Movement [s/veh]	8.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.52	14.65	10.73
Movement LOS	A	A			A	A				B	B	B
95th-Percentile Queue Length [veh]	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	1.03	1.03
95th-Percentile Queue Length [ft]	13.42	13.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.68	25.68	25.68
d_A, Approach Delay [s/veh]	0.04			0.00			0.00			11.03		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.04											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	166	0	0	170	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
Total Hourly Volume [veh/h]	0	1	5	167	0	0	172	3	4	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	44	0	0	45	1	1	0	0	0
Total Analysis Volume [veh/h]	0	1	5	176	0	0	181	3	4	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.11	0.00	0.00	0.33	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.50	0.00	0.00	14.84	15.40	11.61	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.37	0.37	0.00	1.49	1.49	1.49	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	9.15	9.15	0.00	37.24	37.24	37.24	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.50			14.78			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	11.08											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	3	2	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	3	2	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	2	0	0	1	12	0	0	0	0	15	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	170	0	0	166	167	0	0	0	23	0	170
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
Total Hourly Volume [veh/h]	26	172	0	0	167	179	0	0	0	23	15	181
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	7	45	0	0	44	47	0	0	0	6	4	48
Total Analysis Volume [veh/h]	27	181	0	0	176	188	0	0	0	24	16	191
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.22
d_M, Delay for Movement [s/veh]	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.88	16.09	11.38
Movement LOS	A	A			A	A				B	C	B
95th-Percentile Queue Length [veh]	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	1.34	1.34
95th-Percentile Queue Length [ft]	15.73	15.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.38	33.38	33.38
d_A, Approach Delay [s/veh]	1.05			0.00			0.00			12.07		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.74											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	98	166	23	0	170	0	92	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
Total Hourly Volume [veh/h]	0	26	103	167	23	0	172	3	96	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	7	27	44	6	0	45	1	25	0	0	0
Total Analysis Volume [veh/h]	0	27	108	176	24	0	181	3	101	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.12	0.00	0.00	0.39	0.01	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.83	0.00	0.00	18.61	19.69	14.30	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.48	0.48	0.00	2.71	2.71	2.71	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	11.97	11.97	0.00	67.72	67.72	67.72	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			6.89			17.10			0.00		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	10.08											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	23	92	98	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
Total Hourly Volume [veh/h]	0	28	25	92	98	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	24	26	0
Total Analysis Volume [veh/h]	0	29	26	97	103	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	9.55	9.17
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.39	0.39
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.72	9.72
d_A, Approach Delay [s/veh]	0.00		0.00		9.55	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	23	25	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
Total Hourly Volume [veh/h]	0	3	2	23	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	6	7	0
Total Analysis Volume [veh/h]	0	3	2	24	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.69	8.47
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.00	2.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.11					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	49	0	0	48	14	0	0	0	0	4	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	193	193	0	0	0	0	0	189
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
Total Hourly Volume [veh/h]	1	238	0	0	241	207	0	0	0	0	4	200
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	0	63	0	0	63	54	0	0	0	0	1	53
Total Analysis Volume [veh/h]	1	251	0	0	254	218	0	0	0	0	4	211
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.27
d_M, Delay for Movement [s/veh]	8.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.75	17.05	11.37
Movement LOS	A	A			A	A				C	C	B
95th-Percentile Queue Length [veh]	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14
95th-Percentile Queue Length [ft]	22.37	22.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.59	28.59	28.59
d_A, Approach Delay [s/veh]	0.03			0.00			0.00			11.48		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.64											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	27.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	193	0	0	189	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
Total Hourly Volume [veh/h]	0	0	3	240	2	0	239	4	2	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	63	1	0	63	1	1	0	0	0
Total Analysis Volume [veh/h]	0	0	3	253	2	0	252	4	2	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.16	0.00	0.00	0.60	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.63	0.00	0.00	26.46	26.99	21.15	0.00	0.00	0.00
Movement LOS		A	A	A	A		D	D	C			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.56	0.56	0.00	4.01	4.01	4.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	13.98	13.98	0.00	100.27	100.27	100.27	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.58			26.42			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	16.95											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	2	1	2	2	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		8.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	2	1	2	2	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	1	1	0
Total Analysis Volume [veh/h]	0	2	1	2	2	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.54	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		8.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	33.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	49	0	0	48	14	0	0	0	0	4	11
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	98	189	0	0	193	193	0	0	0	95	0	189
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
Total Hourly Volume [veh/h]	99	238	0	0	241	207	0	0	0	95	4	200
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	26	63	0	0	63	54	0	0	0	25	1	53
Total Analysis Volume [veh/h]	104	251	0	0	254	218	0	0	0	100	4	211
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.02	0.27
d_M, Delay for Movement [s/veh]	8.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.77	33.52	22.90
Movement LOS	A	A			A	A				D	D	C
95th-Percentile Queue Length [veh]	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	4.70	4.70
95th-Percentile Queue Length [ft]	35.68	35.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117.42	117.42	117.42
d_A, Approach Delay [s/veh]	2.53			0.00			0.00			25.85		
Approach LOS	A			A			A			D		
d_I, Intersection Delay [s/veh]	7.92											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	68.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	98	24	193	95	0	189	0	24	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
Total Hourly Volume [veh/h]	0	98	27	240	97	0	239	4	26	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	26	7	63	26	0	63	1	7	0	0	0
Total Analysis Volume [veh/h]	0	103	28	253	102	0	252	4	27	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.17	0.00	0.00	0.86	0.01	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.00	0.00	0.00	67.80	68.27	59.24	0.00	0.00	0.00
Movement LOS		A	A	A	A		F	F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.96	0.96	0.00	8.62	8.62	8.62	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	24.05	24.05	0.00	215.49	215.49	215.49	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			5.70			66.99			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	27.28											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.117

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	24	95	98	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
Total Hourly Volume [veh/h]	0	26	25	97	100	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	26	26	0
Total Analysis Volume [veh/h]	0	27	26	102	105	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	9.56	9.19
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.40	0.40
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.94	9.94
d_A, Approach Delay [s/veh]	0.00		0.00		9.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	2	1	2	2	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	24	24	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
Total Hourly Volume [veh/h]	0	2	1	26	26	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	7	7	0
Total Analysis Volume [veh/h]	0	2	1	27	27	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.69	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.08	2.08
d_A, Approach Delay [s/veh]	0.00		0.00		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.12					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	15.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	3	0	0	2	19	0	0	0	0	23	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	170	0	0	166	167	0	0	0	0	0	170
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
Total Hourly Volume [veh/h]	2	173	0	0	168	186	0	0	0	0	23	188
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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	46	0	0	44	49	0	0	0	0	6	49
Total Analysis Volume [veh/h]	2	182	0	0	177	196	0	0	0	0	24	198
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23
d_M, Delay for Movement [s/veh]	8.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.89	15.07	11.02
Movement LOS	A	A			A	A				B	C	B
95th-Percentile Queue Length [veh]	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18
95th-Percentile Queue Length [ft]	13.72	13.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.40	29.40	29.40
d_A, Approach Delay [s/veh]	0.09			0.00			0.00			11.45		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.28											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	166	0	0	170	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
Total Hourly Volume [veh/h]	0	2	8	168	0	0	173	5	6	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	1	2	44	0	0	46	1	2	0	0	0
Total Analysis Volume [veh/h]	0	2	8	177	0	0	182	5	6	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.11	0.00	0.00	0.33	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.51	0.00	0.00	15.05	15.63	11.77	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.37	0.37	0.00	1.56	1.56	1.56	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	9.25	9.25	0.00	38.89	38.89	38.89	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.51			14.97			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	11.10											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	5	3	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	5	3	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	5	3	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	0	0	0
Total Analysis Volume [veh/h]	0	5	3	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	0.00	8.55	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	3	0	0	2	19	0	0	0	0	23	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	170	0	0	166	167	0	0	0	23	0	170
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
Total Hourly Volume [veh/h]	27	173	0	0	168	186	0	0	0	23	23	188
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	7	46	0	0	44	49	0	0	0	6	6	49
Total Analysis Volume [veh/h]	28	182	0	0	177	196	0	0	0	24	24	198
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.23
d_M, Delay for Movement [s/veh]	8.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.37	16.63	11.77
Movement LOS	A	A			A	A				C	C	B
95th-Percentile Queue Length [veh]	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	1.52	1.52
95th-Percentile Queue Length [ft]	16.06	16.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.06	38.06	38.06
d_A, Approach Delay [s/veh]	1.08			0.00			0.00			12.59		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	4.01											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	98	166	23	0	170	0	92	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
Total Hourly Volume [veh/h]	0	27	106	168	23	0	173	5	98	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	7	28	44	6	0	46	1	26	0	0	0
Total Analysis Volume [veh/h]	0	28	112	177	24	0	182	5	103	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.12	0.00	0.00	0.39	0.01	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.84	0.00	0.00	19.02	20.12	14.63	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.48	0.48	0.00	2.83	2.83	2.83	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	12.10	12.10	0.00	70.80	70.80	70.80	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			6.91			17.48			0.00		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	10.23											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.116

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	23	92	98	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
Total Hourly Volume [veh/h]	0	30	26	92	98	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	7	24	26	0
Total Analysis Volume [veh/h]	0	32	27	97	103	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	9.57	9.18
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.39	0.39
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.78	9.78
d_A, Approach Delay [s/veh]	0.00		0.00		9.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	3	0	0	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	23	25	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
Total Hourly Volume [veh/h]	0	5	3	23	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	6	7	0
Total Analysis Volume [veh/h]	0	5	3	24	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.71	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.01	2.01
d_A, Approach Delay [s/veh]	0.00		0.00		8.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.90					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	76	0	0	74	21	0	0	0	0	6	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	193	193	0	0	0	0	0	189
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
Total Hourly Volume [veh/h]	2	265	0	0	267	214	0	0	0	0	6	207
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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	70	0	0	70	56	0	0	0	0	2	54
Total Analysis Volume [veh/h]	2	279	0	0	281	225	0	0	0	0	6	218
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.29
d_M, Delay for Movement [s/veh]	8.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.97	18.32	11.88
Movement LOS	A	A			A	A				C	C	B
95th-Percentile Queue Length [veh]	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	1.29	1.29
95th-Percentile Queue Length [ft]	26.80	26.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.34	32.34	32.34
d_A, Approach Delay [s/veh]	0.06			0.00			0.00			12.06		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.69											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	39.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	193	0	0	189	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
Total Hourly Volume [veh/h]	0	0	5	265	3	0	266	6	3	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	0	1	70	1	0	70	2	1	0	0	0
Total Analysis Volume [veh/h]	0	0	5	279	3	0	280	6	3	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.17	0.00	0.00	0.74	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.69	0.00	0.00	38.84	39.37	32.66	0.00	0.00	0.00
Movement LOS		A	A	A	A		E	E	D			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.63	0.63	0.00	6.15	6.15	6.15	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	15.79	15.79	0.00	153.78	153.78	153.78	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.61			38.78			0.00		
Approach LOS	A			A			E			A		
d_I, Intersection Delay [s/veh]	23.18											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	3	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	1	1	0
Total Analysis Volume [veh/h]	0	3	2	3	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.56	8.34
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.33					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	0	3	2	3	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	1	1	0
Total Analysis Volume [veh/h]	0	3	2	3	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.23	0.00	0.00	0.00	8.56	8.34
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.33					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Afton Road / I-15 WB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	40.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name												
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	2	76	0	0	74	21	0	0	0	0	6	18
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	98	189	0	0	193	193	0	0	0	95	0	189
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
Total Hourly Volume [veh/h]	100	265	0	0	267	214	0	0	0	95	6	207
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
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]	26	70	0	0	70	56	0	0	0	25	2	54
Total Analysis Volume [veh/h]	105	279	0	0	281	225	0	0	0	100	6	218
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.03	0.29
d_M, Delay for Movement [s/veh]	8.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.56	40.39	28.44
Movement LOS	A	A			A	A				E	E	D
95th-Percentile Queue Length [veh]	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.79	5.79	5.79
95th-Percentile Queue Length [ft]	41.85	41.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	144.80	144.80	144.80
d_A, Approach Delay [s/veh]	2.40			0.00			0.00			31.78		
Approach LOS	A			A			A			D		
d_I, Intersection Delay [s/veh]	9.24											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: Afton Road / I-15 EB Ramp

Control Type:	Two-way stop	Delay (sec / veh):	129.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name											
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	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
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 Rate	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 Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	98	24	193	95	0	189	0	24	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
Total Hourly Volume [veh/h]	0	98	29	265	98	0	266	6	27	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	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]	0	26	8	70	26	0	70	2	7	0	0	0
Total Analysis Volume [veh/h]	0	103	31	279	103	0	280	6	28	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.19	0.00	0.00	1.06	0.02	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.07	0.00	0.00	128.75	129.22	118.87	0.00	0.00	0.00
Movement LOS		A	A	A	A		F	F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	1.06	1.06	0.00	13.07	13.07	13.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	26.60	26.60	0.00	326.63	326.63	326.63	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			5.90			127.87			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	51.09											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: Afton Road / Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.119

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	24	95	98	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
Total Hourly Volume [veh/h]	0	27	26	98	101	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	7	26	27	0
Total Analysis Volume [veh/h]	0	28	27	103	106	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	9.58	9.21
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.40	0.40
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	10.08	10.08
d_A, Approach Delay [s/veh]	0.00		0.00		9.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.85					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Afton Road / Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	3	3	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	24	24	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
Total Hourly Volume [veh/h]	0	3	2	27	27	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	7	7	0
Total Analysis Volume [veh/h]	0	3	2	28	28	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.71	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.09	0.09
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	2.16	2.16
d_A, Approach Delay [s/veh]	0.00		0.00		8.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS	A					

APPENDIX H
Mitigation Measures for Opening Year (2018) and Build Out Year (2040) Project Conditions

Unmitigated

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Two-way stop											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
Total Analysis Volume [veh/h]	0	27	108	176	24	0	181	3	101	0	0	0

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane							No					
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No					
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	0	1	1	2	1	0	4	3	2	0	0	0
v_c, Conflicting Flow Rate [veh/h]	0	0	0	135	0	0	457	511	24	0	0	0
v_c, Stage 1 [veh/h]	0	0	0	135	0	0	376	376	24	0	0	0
v_c, Stage 2 [veh/h]	0	0	0	0	0	0	81	135	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	0	0	1449	0	0	514	466	1052	0	0	0
c_p,x, Stage 1 [veh/h]	0	0	0	1690	0	0	645	616	1097	0	0	0
c_p,x, Stage 2 [veh/h]	0	0	0	1623	0	0	927	785	1085	0	0	0
c_m,x, Movement Capacity [veh/h]	0	100000	100000	1449	100000	0	465	409	1052	0	0	0
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	100000	100000	1449	100000	0	465	409	1052	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.12	0.00	0.00	0.39	0.01	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.83	0.00	0.00	18.61	19.69	14.30	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
Critical Movement		No	No	No	No		No	Yes	No			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.48	0.48	0.00	2.71	2.71	2.71	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	11.97	11.97	0.00	67.72	67.72	67.72	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			6.89			17.10			0.00		
Approach LOS	A			A			C			A		
V/C_I, Worst Movement V/C Ratio	0.01											
d_I, Worst Movement Control Delay [s/veh]	19.69											
d_I, Intersection Delay [s/veh]	10.08											
Intersection LOS	C											

Option 1: Signalized

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
Total Analysis Volume [veh/h]	0	27	108	176	24	0	181	3	101	0	0	0

Intersection Settings

Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fixed time											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	4	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	54	0	0	54	0	0	36	0	0	0	0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.56	0.56	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.09	0.19	0.19	
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	
Arrival type	3	3	3	3
s, saturation flow rate [veh/h]	1469	1038	1532	
c, Capacity [veh/h]	816	652	545	
X, volume / capacity	0.17	0.31	0.52	
d, Delay for Lane Group [s/veh]	10.22	15.04	26.53	
Lane Group LOS	B	B	C	
Critical Lane Group	No	Yes	Yes	
50th-Percentile Queue Length [veh]	1.32	2.58	5.17	

50th-Percentile Queue Length [ft]	33.05	64.60	129.27	
95th-Percentile Queue Length [veh]	2.38	4.65	8.90	
95th-Percentile Queue Length [ft]	59.49	116.27	222.51	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	10.22	10.22	15.04	15.04	0.00	26.53	26.53	26.53	0.00	0.00	0.00
Movement LOS		B	B	B	B		C	C	C			
Critical Movement		No	No	No	No		Yes	No	No			
d_A, Approach Delay [s/veh]	10.22			15.04			26.53			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.27											
Intersection LOS	B											
Intersection V/C	0.379											

Option 2: Roundabout

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Roundabout											
Analysis Method	HCM											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	1	5	1	0	0	2	3	4	0	0	0
Total Analysis Volume [veh/h]	0	27	108	176	24	0	181	3	101	0	0	0

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	367			0			204			212		
Exiting Flow Rate [veh/h]	183			0			24			212		
Demand Flow Rate [veh/h]	0	26	103	167	23	0	172	3	96	0	0	0
Adjusted Demand Flow Rate [veh/h]	0	27	108	176	24	0	181	3	101	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	
User-Defined Critical Headway [s]	4.00	4.00	4.00	
Overwrite Calculated Follow-Up Time	No	No	No	
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	
A (intercept)	1130.00	1130.00	1130.00	
B (coefficient)	0.00100	0.00100	0.00100	
HV Adjustment Factor	0.98	0.98	0.98	
Entry Flow Rate [veh/h]	138	205	291	
Capacity of Entry and Bypass Lanes [veh/h]	783	1130	922	
Pedestrian Impedance	1.00	1.00	1.00	
Capacity per Entry Lane [veh/h]	768	1108	904	
X, volume / capacity	0.18	0.18	0.32	

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	6.57	4.87	7.39	
Lane LOS	A	A	A	
95th-Percentile Queue Length [veh]	0.64	0.66	1.36	
95th-Percentile Queue Length [ft]	15.88	16.43	33.97	
Approach Delay [s/veh]	6.57	4.87	7.39	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.40			
Intersection LOS	A			

Unmitigated

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Two-way stop											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
Total Analysis Volume [veh/h]	0	103	28	253	102	0	252	4	27	0	0	0

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane							No					
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No					
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	0	1	1	2	1	0	4	3	2	0	0	0
v_c, Conflicting Flow Rate [veh/h]	0	0	0	131	0	0	725	739	102	0	0	0
v_c, Stage 1 [veh/h]	0	0	0	131	0	0	608	608	102	0	0	0
v_c, Stage 2 [veh/h]	0	0	0	0	0	0	117	131	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	0	0	1454	0	0	340	345	953	0	0	0
c_p,x, Stage 1 [veh/h]	0	0	0	1688	0	0	483	486	1136	0	0	0
c_p,x, Stage 2 [veh/h]	0	0	0	1623	0	0	888	788	1085	0	0	0
c_m,x, Movement Capacity [veh/h]	0	100000	100000	1454	100000	0	292	281	953	0	0	0
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	100000	100000	1454	100000	0	292	281	953	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.17	0.00	0.00	0.86	0.01	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.00	0.00	0.00	67.80	68.27	59.24	0.00	0.00	0.00
Movement LOS		A	A	A	A		F	F	F			
Critical Movement		No	No	No	No		No	Yes	No			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.96	0.96	0.00	8.62	8.62	8.62	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	24.05	24.05	0.00	215.49	215.49	215.49	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			5.70			66.99			0.00		
Approach LOS	A			A			F			A		
V/C_I, Worst Movement V/C Ratio	0.01											
d_I, Worst Movement Control Delay [s/veh]	68.27											
d_I, Intersection Delay [s/veh]	27.28											
Intersection LOS	F											

Option 1: Signalized

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
Total Analysis Volume [veh/h]	0	103	28	253	102	0	252	4	27	0	0	0

Intersection Settings

Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fixed time											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	4	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	54	0	0	54	0	0	36	0	0	0	0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes			Yes			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.56	0.56	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.08	0.31	0.18	
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	
Arrival type	3	3	3	3
s, saturation flow rate [veh/h]	1616	1135	1580	
c, Capacity [veh/h]	898	699	562	
X, volume / capacity	0.15	0.51	0.50	
d, Delay for Lane Group [s/veh]	10.02	17.78	25.98	
Lane Group LOS	B	B	C	
Critical Lane Group	No	Yes	Yes	
50th-Percentile Queue Length [veh]	1.26	5.21	5.06	

50th-Percentile Queue Length [ft]	31.46	130.20	126.52	
95th-Percentile Queue Length [veh]	2.26	8.95	8.75	
95th-Percentile Queue Length [ft]	56.62	223.76	218.76	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	10.02	10.02	17.78	17.78	0.00	25.98	25.98	25.98	0.00	0.00	0.00
Movement LOS		B	B	B	B		C	C	C			
Critical Movement		No	No	No	No		Yes	No	No			
d_A, Approach Delay [s/veh]	10.02			17.78			25.98			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.48											
Intersection LOS	B											
Intersection V/C	0.492											

Option 2: Roundabout

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Roundabout											
Analysis Method	HCM											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	3	47	2	0	50	4	2	0	0	0
Total Analysis Volume [veh/h]	0	103	28	253	102	0	252	4	27	0	0	0

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	519			0			362			362		
Exiting Flow Rate [veh/h]	262			0			104			362		
Demand Flow Rate [veh/h]	0	98	27	240	97	0	239	4	26	0	0	0
Adjusted Demand Flow Rate [veh/h]	0	103	28	253	102	0	252	4	27	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	
User-Defined Critical Headway [s]	4.00	4.00	4.00	
Overwrite Calculated Follow-Up Time	No	No	No	
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	
A (intercept)	1130.00	1130.00	1130.00	
B (coefficient)	0.00100	0.00100	0.00100	
HV Adjustment Factor	0.98	0.98	0.98	
Entry Flow Rate [veh/h]	134	363	289	
Capacity of Entry and Bypass Lanes [veh/h]	673	1130	787	
Pedestrian Impedance	1.00	1.00	1.00	
Capacity per Entry Lane [veh/h]	660	1108	772	
X, volume / capacity	0.20	0.32	0.37	

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	7.80	6.38	9.18	
Lane LOS	A	A	A	
95th-Percentile Queue Length [veh]	0.74	1.39	1.69	
95th-Percentile Queue Length [ft]	18.40	34.85	42.30	
Approach Delay [s/veh]	7.80	6.38	9.18	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.65			
Intersection LOS	A			

Unmitigated

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Two-way stop											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
Total Analysis Volume [veh/h]	0	28	112	177	24	0	182	5	103	0	0	0

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane							No					
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No					
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	0	1	1	2	1	0	4	3	2	0	0	0
v_c, Conflicting Flow Rate [veh/h]	0	0	0	140	0	0	462	518	24	0	0	0
v_c, Stage 1 [veh/h]	0	0	0	140	0	0	378	378	24	0	0	0
v_c, Stage 2 [veh/h]	0	0	0	0	0	0	84	140	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	0	0	1443	0	0	510	462	1052	0	0	0
c_p,x, Stage 1 [veh/h]	0	0	0	1693	0	0	644	615	1097	0	0	0
c_p,x, Stage 2 [veh/h]	0	0	0	1623	0	0	924	781	1085	0	0	0
c_m,x, Movement Capacity [veh/h]	0	100000	100000	1443	100000	0	461	404	1052	0	0	0
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	100000	100000	1443	100000	0	461	404	1052	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.12	0.00	0.00	0.39	0.01	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.84	0.00	0.00	19.02	20.12	14.63	0.00	0.00	0.00
Movement LOS		A	A	A	A		C	C	B			
Critical Movement		No	No	No	No		No	Yes	No			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.48	0.48	0.00	2.83	2.83	2.83	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	12.10	12.10	0.00	70.80	70.80	70.80	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			6.91			17.48			0.00		
Approach LOS	A			A			C			A		
V/C_I, Worst Movement V/C Ratio	0.01											
d_I, Worst Movement Control Delay [s/veh]	20.12											
d_I, Intersection Delay [s/veh]	10.23											
Intersection LOS	C											

Option 1: Signalized

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
Total Analysis Volume [veh/h]	0	28	112	177	24	0	182	5	103	0	0	0

Intersection Settings

Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fixed time											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	4	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	54	0	0	54	0	0	36	0	0	0	0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.56	0.56	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.10	0.20	0.19	
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	
Arrival type	3	3	3	3
s, saturation flow rate [veh/h]	1469	1030	1532	
c, Capacity [veh/h]	816	647	545	
X, volume / capacity	0.17	0.31	0.53	
d, Delay for Lane Group [s/veh]	10.28	15.20	26.75	
Lane Group LOS	B	B	C	
Critical Lane Group	No	Yes	Yes	
50th-Percentile Queue Length [veh]	1.38	2.62	5.29	

50th-Percentile Queue Length [ft]	34.41	65.38	132.26	
95th-Percentile Queue Length [veh]	2.48	4.71	9.06	
95th-Percentile Queue Length [ft]	61.94	117.69	226.56	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	10.28	10.28	15.20	15.20	0.00	26.75	26.75	26.75	0.00	0.00	0.00
Movement LOS		B	B	B	B		C	C	C			
Critical Movement		No	No	No	No		Yes	No	No			
d_A, Approach Delay [s/veh]	10.28			15.20			26.75			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.41											
Intersection LOS	B											
Intersection V/C	0.384											

Option 2: Roundabout

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Roundabout											
Analysis Method	HCM											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	2	8	2	0	0	3	5	6	0	0	0
Total Analysis Volume [veh/h]	0	28	112	177	24	0	182	5	103	0	0	0

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	371			0			205			214		
Exiting Flow Rate [veh/h]	186			0			24			214		
Demand Flow Rate [veh/h]	0	27	106	168	23	0	173	5	98	0	0	0
Adjusted Demand Flow Rate [veh/h]	0	28	112	177	24	0	182	5	103	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	
User-Defined Critical Headway [s]	4.00	4.00	4.00	
Overwrite Calculated Follow-Up Time	No	No	No	
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	
A (intercept)	1130.00	1130.00	1130.00	
B (coefficient)	0.00100	0.00100	0.00100	
HV Adjustment Factor	0.98	0.98	0.98	
Entry Flow Rate [veh/h]	143	206	296	
Capacity of Entry and Bypass Lanes [veh/h]	780	1130	921	
Pedestrian Impedance	1.00	1.00	1.00	
Capacity per Entry Lane [veh/h]	765	1108	903	
X, volume / capacity	0.18	0.18	0.32	

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	6.68	4.88	7.47	
Lane LOS	A	A	A	
95th-Percentile Queue Length [veh]	0.67	0.66	1.40	
95th-Percentile Queue Length [ft]	16.68	16.53	34.88	
Approach Delay [s/veh]	6.68	4.88	7.47	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.47			
Intersection LOS	A			

Unmitigated

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Two-way stop											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
Total Analysis Volume [veh/h]	0	103	31	279	103	0	280	6	28	0	0	0

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane							No					
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No					
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	0	1	1	2	1	0	4	3	2	0	0	0
v_c, Conflicting Flow Rate [veh/h]	0	0	0	134	0	0	780	795	103	0	0	0
v_c, Stage 1 [veh/h]	0	0	0	134	0	0	661	661	103	0	0	0
v_c, Stage 2 [veh/h]	0	0	0	0	0	0	119	134	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	0	0	1451	0	0	313	320	952	0	0	0
c_p,x, Stage 1 [veh/h]	0	0	0	1690	0	0	452	460	1137	0	0	0
c_p,x, Stage 2 [veh/h]	0	0	0	1623	0	0	886	785	1085	0	0	0
c_m,x, Movement Capacity [veh/h]	0	100000	100000	1451	100000	0	264	255	952	0	0	0
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	100000	100000	1451	100000	0	264	255	952	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.19	0.00	0.00	1.06	0.02	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.07	0.00	0.00	128.75	129.22	118.87	0.00	0.00	0.00
Movement LOS		A	A	A	A		F	F	F			
Critical Movement		No	No	No	No		No	Yes	No			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	1.06	1.06	0.00	13.07	13.07	13.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	26.60	26.60	0.00	326.63	326.63	326.63	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			5.90			127.87			0.00		
Approach LOS	A			A			F			A		
V/C_I, Worst Movement V/C Ratio	0.02											
d_I, Worst Movement Control Delay [s/veh]	129.22											
d_I, Intersection Delay [s/veh]	51.09											
Intersection LOS	F											

Option 1: Signalized

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 2010											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
Total Analysis Volume [veh/h]	0	103	31	279	103	0	280	6	28	0	0	0

Intersection Settings

Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fixed time											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	4	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	54	0	0	54	0	0	36	0	0	0	0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes			Yes			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.56	0.56	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.08	0.34	0.20	
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	
Arrival type	3	3	3	3
s, saturation flow rate [veh/h]	1611	1119	1581	
c, Capacity [veh/h]	895	691	562	
X, volume / capacity	0.15	0.55	0.56	
d, Delay for Lane Group [s/veh]	10.05	19.06	27.29	
Lane Group LOS	B	B	C	
Critical Lane Group	No	Yes	Yes	
50th-Percentile Queue Length [veh]	1.29	5.88	5.80	

50th-Percentile Queue Length [ft]	32.26	146.93	145.07	
95th-Percentile Queue Length [veh]	2.32	9.85	9.75	
95th-Percentile Queue Length [ft]	58.07	246.33	243.83	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	10.05	10.05	19.06	19.06	0.00	27.29	27.29	27.29	0.00	0.00	0.00
Movement LOS		B	B	B	B		C	C	C			
Critical Movement		No	No	No	No		Yes	No	No			
d_A, Approach Delay [s/veh]	10.05			19.06			27.29			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	20.72											
Intersection LOS	C											
Intersection V/C	0.540											

Option 2: Roundabout

Number	2											
Intersection	Afton Road / I-15 EB Ramp											
Control Type	Roundabout											
Analysis Method	HCM											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	5	72	3	0	77	6	3	0	0	0
Total Analysis Volume [veh/h]	0	103	31	279	103	0	280	6	28	0	0	0

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	576			0			390			391		
Exiting Flow Rate [veh/h]	291			0			105			391		
Demand Flow Rate [veh/h]	0	98	29	265	98	0	266	6	27	0	0	0
Adjusted Demand Flow Rate [veh/h]	0	103	31	279	103	0	280	6	28	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	
User-Defined Critical Headway [s]	4.00	4.00	4.00	
Overwrite Calculated Follow-Up Time	No	No	No	
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	
A (intercept)	1130.00	1130.00	1130.00	
B (coefficient)	0.00100	0.00100	0.00100	
HV Adjustment Factor	0.98	0.98	0.98	
Entry Flow Rate [veh/h]	137	390	321	
Capacity of Entry and Bypass Lanes [veh/h]	636	1130	766	
Pedestrian Impedance	1.00	1.00	1.00	
Capacity per Entry Lane [veh/h]	623	1108	751	
X, volume / capacity	0.22	0.34	0.42	

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	8.44	6.67	10.30	
Lane LOS	A	A	B	
95th-Percentile Queue Length [veh]	0.81	1.55	2.08	
95th-Percentile Queue Length [ft]	20.30	38.81	51.99	
Approach Delay [s/veh]	8.44	6.67	10.30	0.00
Approach LOS	A	A	B	A
Intersection Delay [s/veh]	8.33			
Intersection LOS	A			

APPENDIX I
Traffic Signal Warrant Worksheets

Opening Year (2018) Friday
I-15 WB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B **SATISFIED YES ☐ NO ☒**

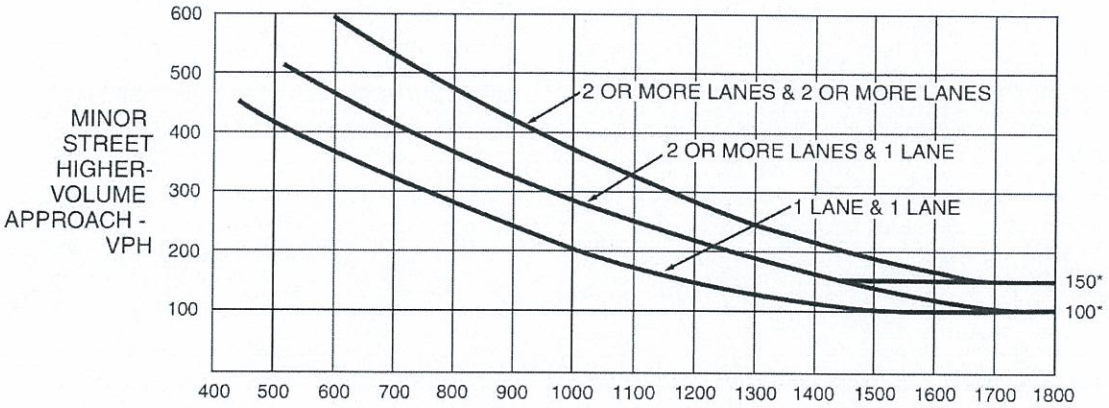
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street	528			
Higher Approach - Minor Street	193			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Opening Year (2018) Friday
I-15 WB Ramps

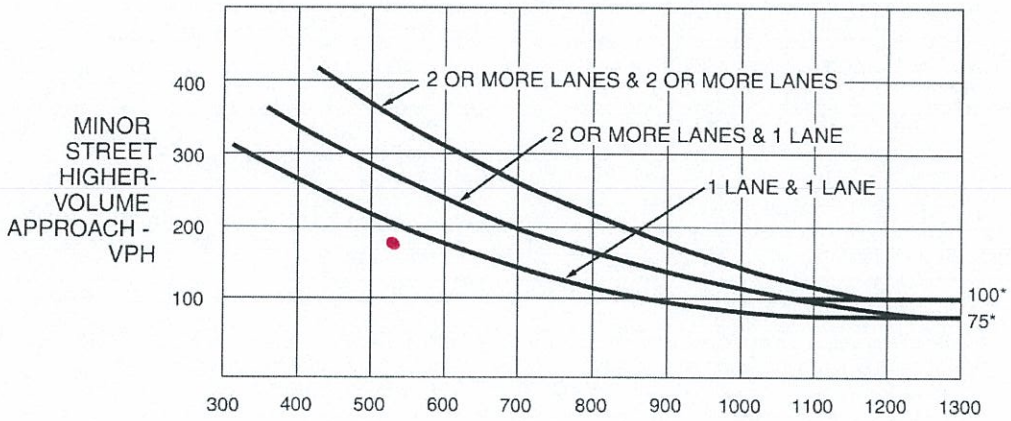
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Opening Year (2018) Friday
I-15 EB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☒

PART B **SATISFIED YES ☐ NO ☒**

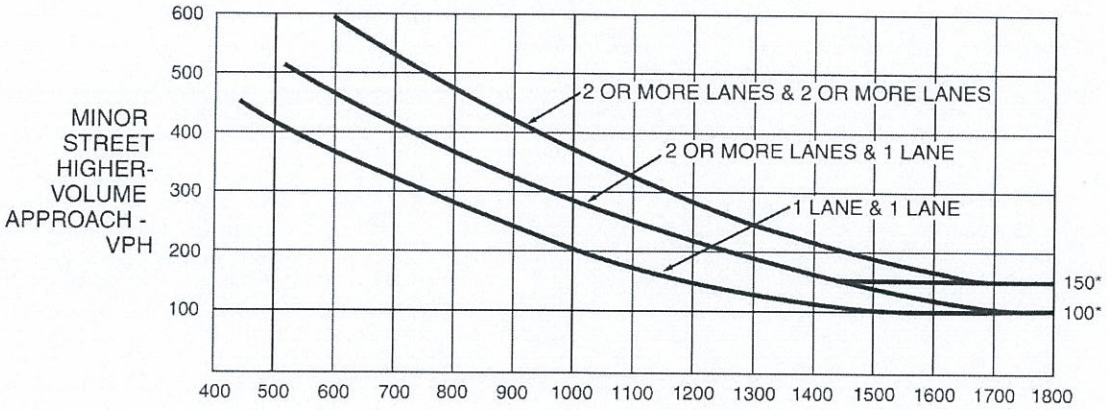
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street	312			
Higher Approach - Minor Street	271			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Opening Year (2018) Friday
I-15 EB Ramps

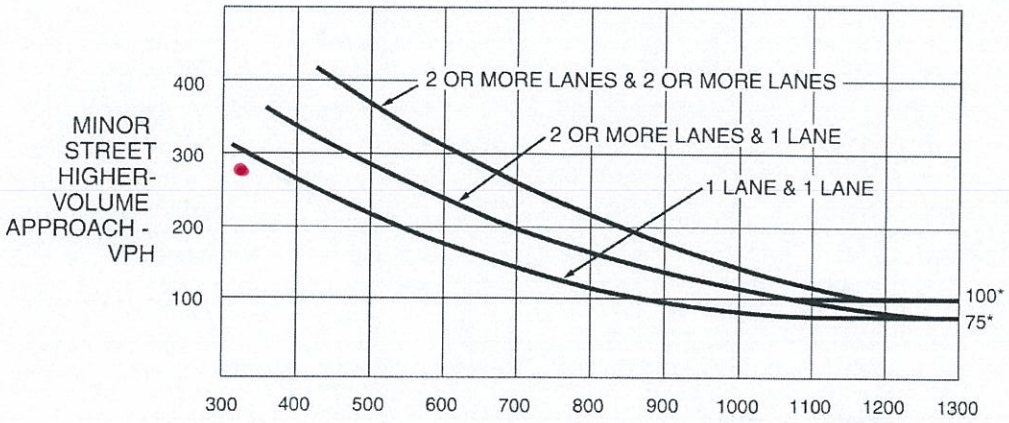
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Opening Year (2018) Sunday
I-15 WB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☒

PART B **SATISFIED YES ☐ NO ☒**

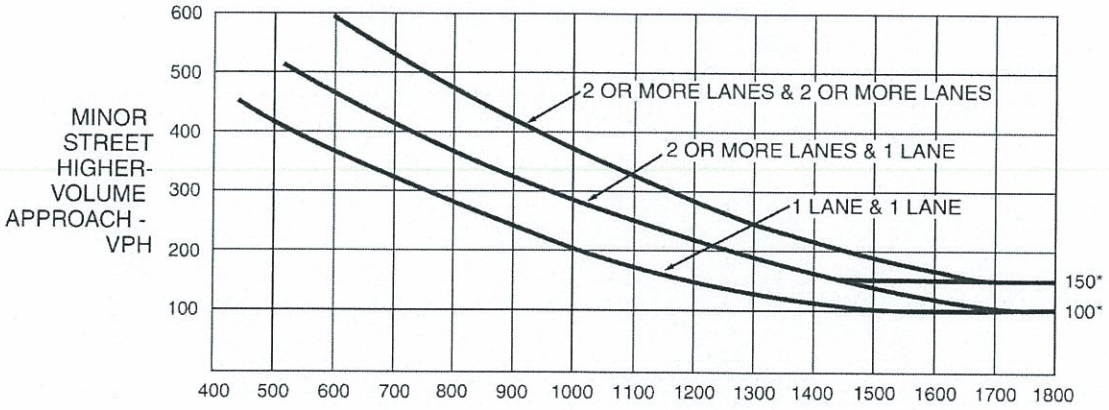
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street	313			
Higher Approach - Minor Street	299			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Opening Year (2018) Sunday
I-15 WB Ramps

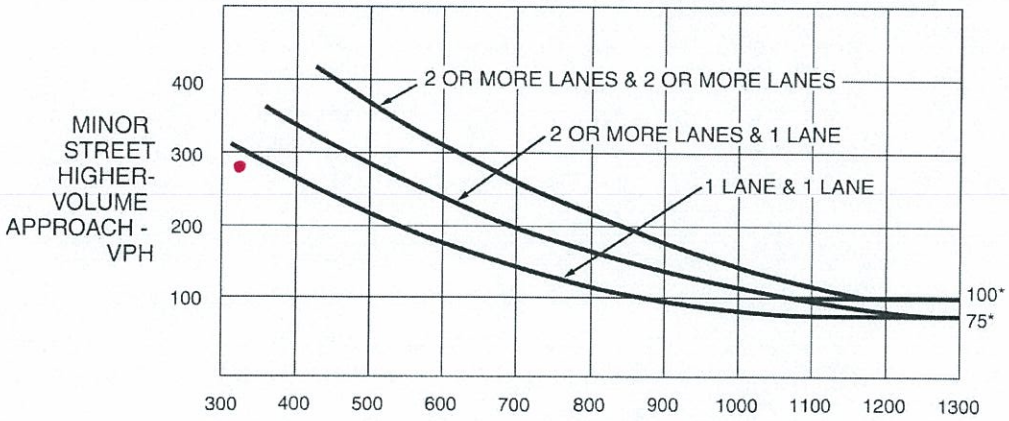
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Opening Year (2018) Sunday
I-15 EB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B **SATISFIED YES ☐ NO ☒**

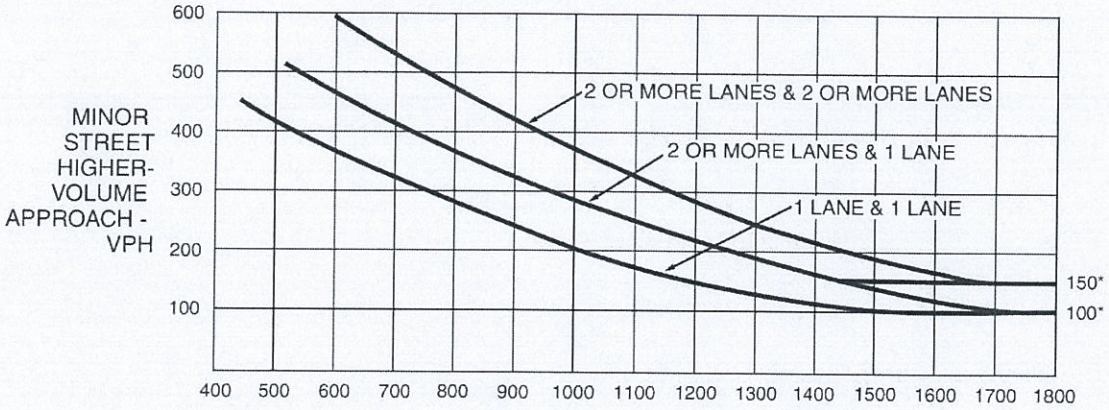
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street	410			
Higher Approach - Minor Street	269			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Opening Year (2018) Sunday
I-15 EB Ramps

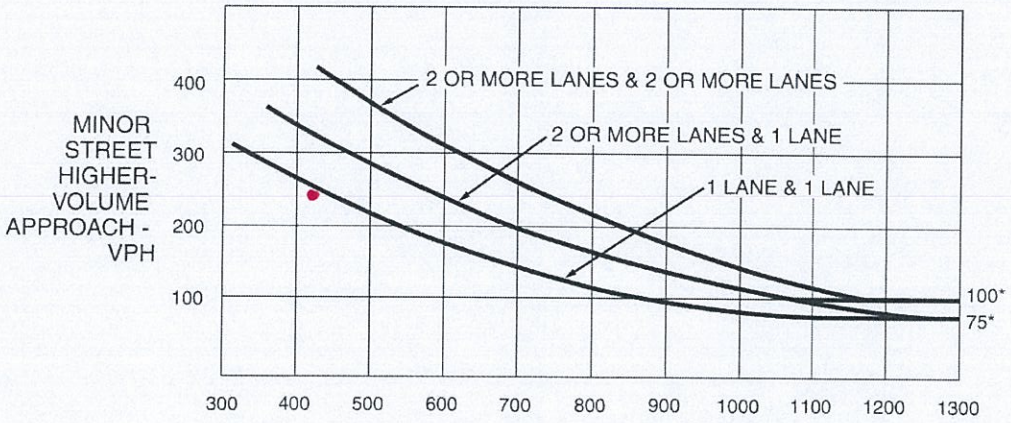
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Build Out Year (2040) Friday
I-15 WB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B **SATISFIED YES ☐ NO ☒**

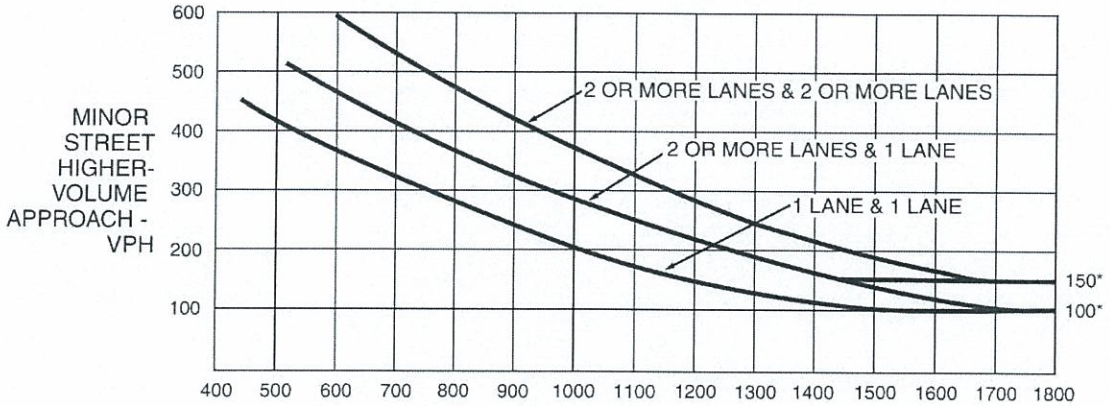
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street	533			
Higher Approach - Minor Street	193			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Build Out Year (2040) Friday
I-15 WB Ramps

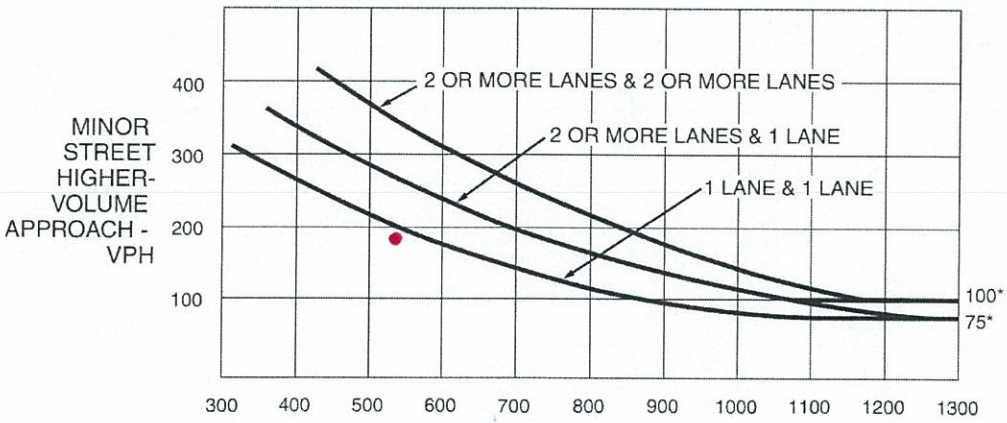
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Build Out Year (2040) Friday
I-15 EB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied) **SATISFIED YES ☐ NO ☒**

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☒

PART B **SATISFIED YES ☐ NO ☒**

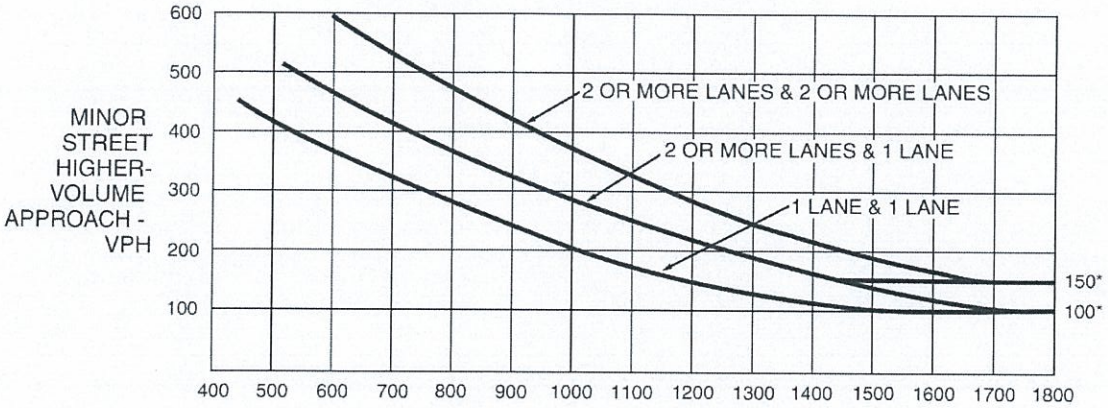
APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street	324		
Higher Approach - Minor Street	276		

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Build Out Year (2040) Friday
I-15 EB Ramps

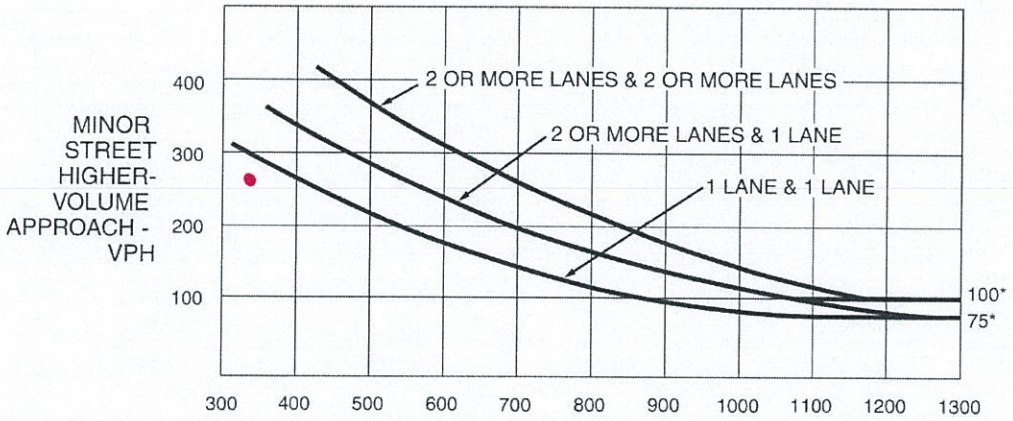
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Build Out Year (2040) Sunday
I-15 WB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☑ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☑ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑ No ☐

PART B **SATISFIED YES ☑ NO ☐**

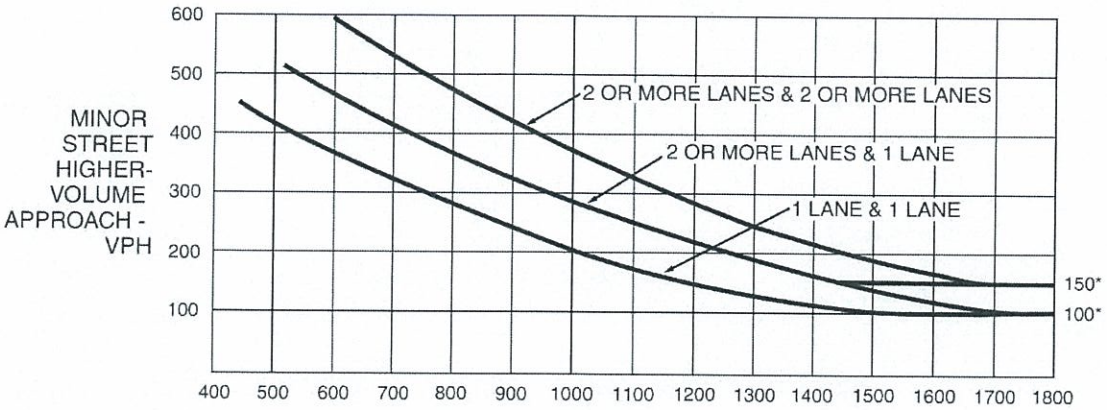
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street	846			
Higher Approach - Minor Street	308			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☑ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Build Out Year (2040) Sunday
I-15 WB Ramps

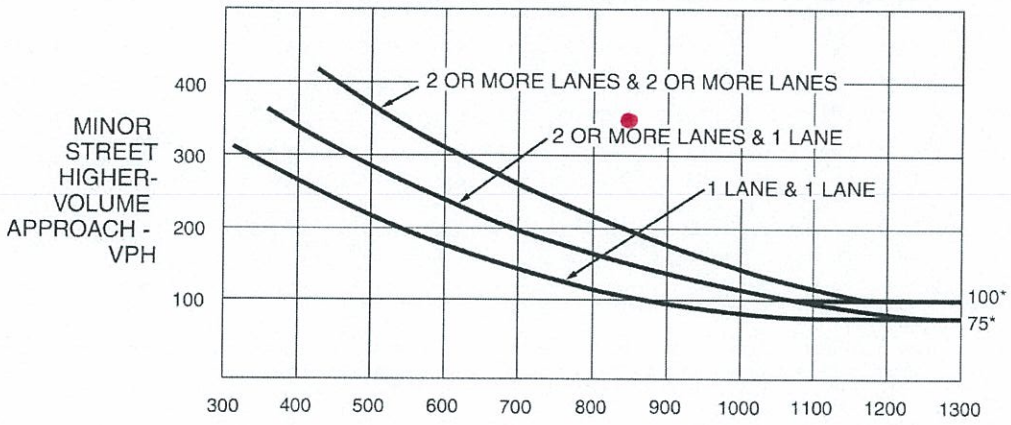
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Build Out Year (2040) Sunday
I-15 EB Ramps

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☑ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☑ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑ No ☐

PART B **SATISFIED YES ☑ NO ☐**

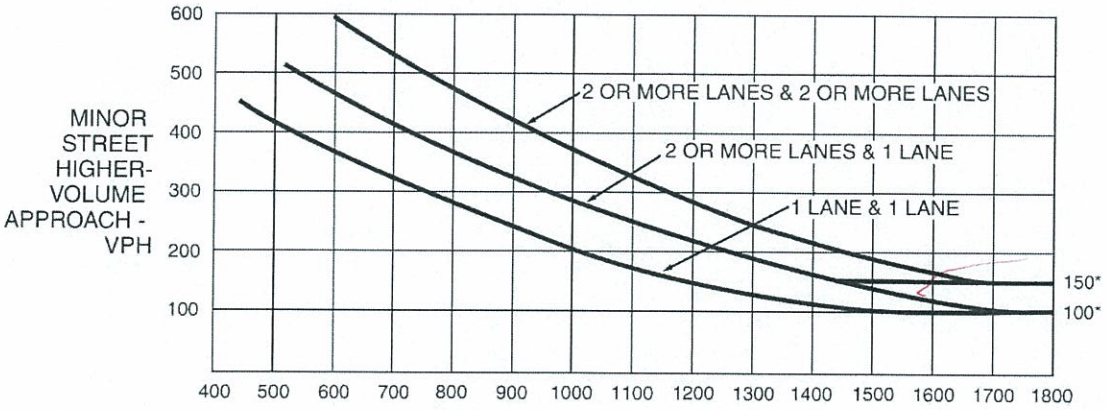
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street	490			
Higher Approach - Minor Street	299			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☑ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Build Out Year (2040) Sunday
I-15 EB Ramps

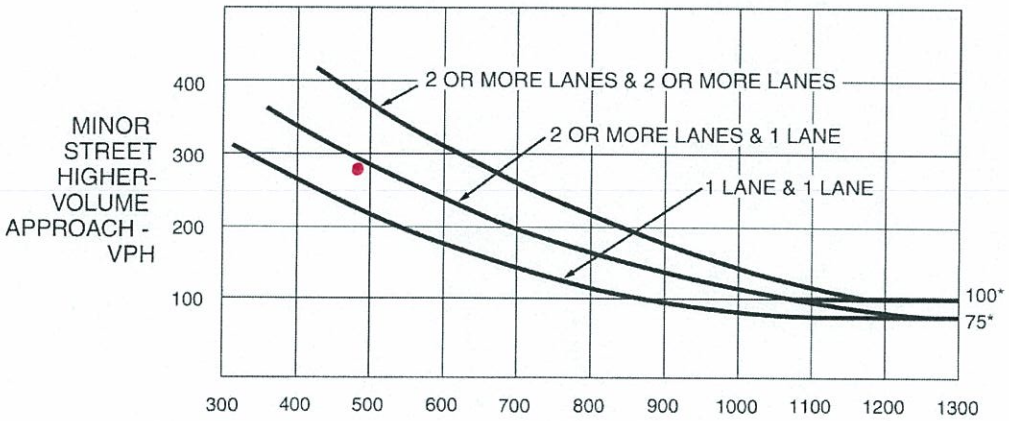
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.