TRAFFIC STUDY

Proposed Camino Castaneda Commercial and Residential Development

Northeast of the Intersection of Farmersville Boulevard and Walnut Avenue

Farmersville, California

Prepared For:

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P.O. Box 1109
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Date:

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August 23, 2022

Subject: Traffic Study
Proposed Camino Castaneda Commercial and Residential Development
Northeast of the Intersection of Farmersville Boulevard and Walnut Avenue
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Dear Ms. Ruiz:

1.0 INTRODUCTION

This report presents the results of traffic analyses for the proposed Camino Castaneda Commercial and Residential Development in Farmersville, California. This study focuses on the anticipated effect of vehicle traffic resulting from the Project and is intended to satisfy the requirements of the City of Farmersville.

2.0 PROJECT DESCRIPTION

The proposed Camino Castaneda project covers approximately 7.38 acres generally located northeast of the intersection of Farmersville Boulevard and Walnut Avenue in Farmersville, California (APN 111-290-002 and 111-290-014). The Project site surrounds the existing Rite Aid store, but the Rite Aid store is not a part of the Project. The Project includes a 23,000-square-foot grocery store or medical clinic, a gas station with 12 fueling positions, a 3,000-square-foot convenience store with a drive through, a 2,400-square-foot fast-food restaurant with a drive through, 2,700 square feet of shops buildings, and 48 multi-family residential units.

Access to the site is proposed via two driveways connecting to Farmersville Boulevard and two driveways connecting to Walnut Avenue. It is also anticipated that there will be reciprocal access to the Rite Aid store near the existing driveway on Farmersville Boulevard.

The Project site location is presented in the attached Figure 1, Vicinity Map, and the Project site plan is presented in the attached Figure 2, Site Plan, following the text of this report.

3.0 STUDY AREA AND TIME PERIOD

This report includes traffic counts and analysis of the following intersections:

1. Farmersville Boulevard and Walnut Street
2. Freedom Drive and Walnut Street
3. Road 168 and Walnut Street
4. Farmersville Boulevard and Front Street
5. Farmersville Boulevard and Ash Street

The study time periods include the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The peak hours are analyzed for the following conditions:

- Existing Conditions;
- Existing-Plus-Project Conditions;
- Near-Term With-Project Conditions (includes pending and approved projects not yet occupied); and
- Cumulative (Year 2043) With-Project Conditions.

4.0 OPERATIONAL ANALYSES CRITERIA

4.1 Level of Service

The Transportation Research Board *Highway Capacity Manual, 6th Edition,* (HCM) defines level of service (LOS) as, "A quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst." Automobile mode LOS characteristics for both unsignalized and signalized intersections are presented in Tables 1 and 2.

Table 1
Level of Service Characteristics for Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Reference: *Highway Capacity Manual, 6th Edition,* Transportation Research Board, 2016

Table 2
Level of Service Characteristics for Signalized Intersections

Level of Service	Description	Average Vehicle Delay (seconds)
A	Volume-to-capacity ratio is no greater than 1.0. Progression is exceptionally favorable or the cycle length is very short.	<10
B	Volume-to-capacity ratio is no greater than 1.0. Progression is highly favorable or the cycle length is very short.	>10-20
C	Volume-to-capacity ratio is no greater than 1.0. Progression is favorable or cycle length is moderate.	>20-35
D	Volume-to-capacity ratio is high but no greater than 1.0. Progression is ineffective or cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35-55
E	Volume-to-capacity ratio is high but no greater than 1.0. Progression is unfavorable and cycle length is long. Individual cycle failures are frequent.	>55-80
F	Volume-to-capacity ratio is greater than 1.0. Progression is very poor and cycle length is long. Most cycles fail to clear the queue.	>80

Reference: *Highway Capacity Manual, 6th Edition*, Transportation Research Board, 2016

The Farmersville General Plan Circulation Element states: "*A level of service C will be the desirable minimum service level in Farmersville at which arterial and collector segments will operate. A level of service of C will be the desirable minimum service level in Farmersville at which intersections will operate.*"

For purposes of this study, a traffic issue will be recognized at City intersections if the Project will decrease the LOS below C at an intersection. A traffic issue will also be recognized if the Project will exacerbate conditions at an intersection already operating below the target LOS C by increasing the average delay at the intersection by 5.0 seconds or more.

4.2 Intersection Queuing Criteria

A queuing issue is identified if the calculated 95th-percentile queue length exceeds the existing storage capacity by more than 25 feet (the average storage length for one vehicle).

5.0 TRIP GENERATION

5.1 Project Vehicle Trip Generation

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, are typically used to estimate the number of trips anticipated to be generated by proposed projects. For purposes of the trip generation estimates it was assumed that the 3,000-square-foot convenience market with a drive through would consist of a 1,000-square-foot fast-food restaurant and a 2,000-square-foot convenience store. The shops buildings were assumed to be high-turnover sit-down restaurants.

Information presented in the ITE *Trip Generation Handbook, 3rd Edition* dated September 2017 (TGH) suggests that captured-trip reductions are applicable to the Project. Captured trips occur as a result of interaction between the various individual land uses assumed for the trip generation calculations. A common example of a captured trip occurs in a multi-use

development containing both offices and shops. Trips made by office workers to shops within the site are defined as internal to (i.e., "captured within") the multi-use site. A more complete description of captured trips is presented in the TGH. An example of a captured trip for the proposed Project is a person who lives in the apartments and fuels a vehicle without exiting the site between. The NCHRP 684 Trip Capture Estimation Tool was utilized to calculate the peak-hour internal (captured) trips expected to be generated by the Project and the resulting external trips. The tool does not calculate captured daily trips, so the daily captured trips were estimated to be approximately 20 percent of the total based on peak-hour correlations. Table 3 presents the trip generation estimates for the Project. The trip capture calculation is attached.

Table 3
Project Weekday Trip Generation

Land Use	Units	Weekday		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Supermarket (850)	23,000 sq. ft	93.84	2,158	2.86	59:41	39	27	66	8.95	50:50	103	103	206
High-Turnover (Sit-Down) Restaurant (932)	2,700 sq. ft.	107.2	290	9.57	55:45	14	12	26	9.05	61:39	14	10	24
Fast Food Restaurant with Drive Through (934)	3,400 sq. ft.	467.48	1,590	44.61	51:49	77	75	152	33.03	52:48	58	54	112
Convenience Store/Gas Station – VFP (9-15) (945)	2,000 sq. ft.	700.43	1,402	56.52	50:50	56	57	113	54.52	50:50	54	55	109
Multifamily Housing (Low-Rise) (220)	48	6.74	324	0.40	24:76	4	15	19	0.51	63:37	15	9	24
SUBTOTAL:			5,764			190	186	376			244	231	475
Internal Trips			1,152			19	21	40			70	68	138
TOTAL:			**4,612**			**171**	**165**	**336**			**174**	**163**	**337**

Reference: *Trip Generation Manual, 11th Edition,* Institute of Transportation Engineers 2021
vfp: vehicle fueling positions
Rates are reported in trips per 1,000 square feet of building area for Land Uses 820, 850, 934, and 945. Rates are in trips per dwelling unit for Land Use 220.

5.2 Project Pass-By Trips

The ITE *Trip Generation Handbook, 3rd Edition* dated September 2017 (TGH) presents information suggesting that pass-by reductions are applicable to the Project. The TGH states: "There are instances, however, when the total number of trips generated by a site is different from the amount of new traffic added to the street system by the generator. For example, retail-oriented developments such as shopping centers…are often located adjacent to busy streets in order to attract the motorists already on the street. These sites attract a portion of their trips from traffic passing the site… These retail trips may not add new traffic to the adjacent street system." The TGH also states: "Pass-by trips are made as intermediate

stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. Pass-by trips are not diverted from another roadway."

Available data in the TGH indicate that an average of 62 percent of the weekday a.m. peak hour trips and 56 percent of the weekday p.m. peak hour trips generated by Gasoline / Service Station with Convenience Market (Land Use 945) are pass-by trips. The TGH also indicates that that an average of 49 percent of the weekday a.m. peak hour trips and 50 percent of the weekday p.m. peak hour trips generated by Fast-Food Restaurant with Drive Through (Land Use 934) are pass-by trips. Finally, the TGH indicates that 36 percent of the weekday p.m. peak hour trips generated by Supermarket (Land Use 850) are pass-by trips.

For purposes of this study, a pass-by percentage of 40 percent is proposed to be applied to the non-residential external trips expected to be generated by the Project. Table 4 presents a breakdown of Project pass-by trips and primary trips.

Table 4
Pass-By Trips and Primary Project Trips

Time Period	Project Trips Entering Site	Project Trips Exiting Site	Total Project Trips
Weekday A.M. Peak Hour Pass-By Trips	-66	-61	-127
Weekday A.M. Peak Hour Primary Trips	105	104	209
Weekday P.M. Peak Hour Pass-By Trips	-67	-64	-131
Weekday P.M. Peak Hour Primary Trips	107	99	206

5.3 Project Vehicle Trip Distribution and Assignment

The distribution of Project trips to the adjacent streets was estimated based on engineering judgment considering major routes and complementary land uses. The estimated distribution Project trips is presented in Figure 3, Project Traffic Distribution Percentages. The peak-hour Project traffic volumes are presented in Figure 4, Peak-Hour Project Traffic Volumes.

5.4 CEQA Transportation Impact Analysis (Vehicle Miles Traveled)

The State of California Governor's Office of Planning and Research document entitled *Technical Advisory on Evaluating Transportation Impacts in CEQA* dated December 2018 (Technical Advisory) provides guidance for determining a project's transportation impacts. Transportation impacts are identified based on vehicle miles traveled (VMT).

Building upon the guidance in the Technical Advisory, the County of Tulare developed local VMT Guidelines that are described in detail in a report entitled *County of Tulare SB 743 Guideline*s dated June 8, 2020 (County Guidelines). Section 13, Transportation & Circulation, of the County of Tulare Goals and Policies Report dated February 2010 and amended in 2020 presents the County's adopted VMT Guidelines. The County Guidelines are typically utilized in the City of Farmersville.

For small projects, the County Guidelines state: "*Some projects are small enough that they can be presumed to have a less than significant transportation impact without doing a detailed VMT analysis. For Tulare County, projects that generate less than 500 trips per day can be presumed to have a less than significant impact…*"

Regarding local-serving retail uses, the Technical Advisory states: "*By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, may tend to have a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less-than-significant.*"

Also regarding local-serving retail uses, the County Guidelines state: "*Consistent with OPR's Technical Advisory, local-serving retail uses are presumed to have a less than significant impact on VMT since they tend to attract vehicle trips from adjacent areas that would have otherwise been made to more distant retail locations. This presumption also applies in Tulare County.*" The County Guidelines also state: "*Other developments that are not technically retail may fall under this category such as medical offices, insurance agents, and other offices that are intended to serve the general public.*"

With respect to mixed-use projects, the Technical Advisory states: "*Lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential and retail). Alternatively, a lead agency may consider only the project's dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.*"

The dominant local-serving retail use of the Camino Castaneda project will add retail opportunities into the urban fabric, improve retail destination proximity, shorten trips, and reduce VMT. Furthermore, the residential portion of the Project will generate fewer than 500 trips per day, which is the stated significance threshold for small projects. Therefore, it is suggested that the lead agency may presume that the Camino Castaneda project will cause a less-than-significant transportation impact.

6.0 EXISTING TRAFFIC VOLUMES

Existing peak-hour traffic volumes at the study intersections were determined by performing manual turning-movement counts between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. on a weekday. The counts included pedestrians, bicycles, heavy vehicles, and right turns on red where applicable. The traffic count data sheets are presented in the attached Appendix B and include the date the counts were performed. The existing peak-hour turning movement volumes are presented in Figure 5, Existing Peak-Hour Traffic Volumes.

7.0 LANE CONFIGURATIONS AND INTERSECTION CONTROL

The existing lane configurations and intersection control at the study intersections are presented in Figure 6, Existing Lane Configurations and Intersection Control.

8.0 EXISTING-PLUS-PROJECT TRAFFIC VOLUMES

The existing-plus-Project peak-hour turning movement volumes are presented in Figure 7, Existing-Plus-Project Peak-Hour Traffic Volumes.

9.0 PENDING AND APPROVED PROJECTS

The analyses for the near-term and long-term conditions consider trips expected to be generated by pending and approved projects in the study area.

- Petunia Estates: 18-lot single-family residential subdivision southwest of the intersection of Farmersville Boulevard and Petunia Avenue
- 165-lot single-family residential subdivision southwest of the intersection of the Virginia Avenue alignment and the San Joaquin Valley Railroad.
- Hacienda Estates: 165-lot single-family residential subdivision northwest of the intersection of Virginia Avenue and Visalia Road.
- Eagle Meadows: 453-lot single-family residential subdivision with two parks southeast of the intersection of Virginia Avenue and Visalia Road.

10.0 NEAR-TERM TRAFFIC VOLUMES

The near-term with-Project peak-hour turning movement volumes are presented in Figure 8, Near-Term With-Project Peak-Hour Traffic Volumes. The near-term volumes include trips expected to be generated by the pending and approved projects.

11.0 CUMULATIVE YEAR 2043 TRAFFIC VOLUMES

The travel model maintained by TCAG is typically used to forecast future traffic volumes and was utilized to estimate the year 2043 traffic volumes. The travel model output provided by TCAG is included in Appendix A. The cumulative year 2043 traffic volumes with the Project at the study intersections are presented in Figure 9, Year 2043 Cumulative With-Project Peak-Hour Traffic Volumes.

12.0 INTERSECTION ANALYSES

The levels of service at the study intersections were determined using the computer program Synchro 11, which is based on the *Highway Capacity Manual* procedures for calculating levels of service. The California State Transportation Agency and California Department of Transportation *California Manual on Uniform Traffic Control Devices, 2014 Edition (Revision 6 dated March 30, 2021)* (CMUTCD) presents various criteria (warrants) for determining the need for traffic signals. Warrant 3, Peak Hour, was analyzed for each of the unsignalized study intersections. Tables 5 through 8 present the results of the intersection analyses. Delays and LOS worse than the City's desirable minimum are indicated in bold font and are underlined. The intersection analysis sheets are included in the attached Appendix C.

Table 5
Intersection LOS Summary – Existing Conditions

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour		
		Delay (sec)	LOS	Warrant	Delay (sec)	LOS	Warrant
Farmersville / Walnut	Signals	25.0	C		16.3	B	
Freedom / Walnut	One-way stop	**294.1**	**F**	Not met	12.8	B	Not met

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour		
		Delay (sec)	LOS	Warrant	Delay (sec)	LOS	Warrant
Road 168 / Walnut	Two-way stop	13.0	B	Not met	12.0	B	Not met
Farmersville / Front	All-way stop	**56.9**	**F**	Not met	15.2	B	Not met
Farmersville / Ash	All-way stop	16.4	C	Not met	12.5	B	Not met

Table 6
Intersection LOS Summary – Existing-Plus-Project Conditions

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour		
		Delay (sec)	LOS	Warrant	Delay (sec)	LOS	Warrant
Farmersville / Walnut	Signals	27.5	C		16.8	B	
Freedom / Walnut	One-way stop	**>300**	**F**	Not met	13.0	B	Not met
Road 168 / Walnut	Two-way stop	13.1	B	Not met	12.1	B	Not met
Farmersville / Front	All-way stop	**70.4**	**F**	Not met	16.7	C	Not met
Farmersville / Ash	All-way stop	17.1	C	Not met	12.8	B	Not met

Table 7
Intersection LOS Summary – Near-Term-With-Project Conditions

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour		
		Delay (sec)	LOS	Warrant	Delay (sec)	LOS	Warrant
Farmersville / Walnut	Signals	**35.7**	**D**		19.6	B	
Freedom / Walnut	One-way stop	**>300**	**F**	Not met	13.4	B	Not met
Road 168 / Walnut	Two-way stop	13.5	B	Not met	12.5	B	Not met
Farmersville / Front	All-way stop	**118.6**	**F**	Met	**32.1**	**D**	Not met
Farmersville / Ash	All-way stop	**27.4**	**D**	Not met	20.3	C	Not met

Table 8
Intersection LOS Summary – Cumulative 2043 With-Project Conditions

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour		
		Delay (sec)	LOS	Warrant	Delay (sec)	LOS	Warrant
Farmersville / Walnut	Signals	**43.5**	**D**		20.8	C	
Freedom / Walnut	One-way stop	**>300**	**F**	Met	14.9	B	Not met
Road 168 / Walnut	Two-way stop	15.0	C	Not met	13.3	B	Not met
Farmersville / Front	All-way stop	**165.9**	**F**	Met	**39.4**	**E**	Not met
Farmersville / Ash	All-way stop	**38.9**	**E**	Not met	23.2	C	Not met

The results of the intersection operational analyses include an estimate of the 95th-percentile queue lengths at the study intersections. The existing storage capacity and the calculated 95th-percentile queue lengths are presented in Tables 9 through 12. Calculated 95th-percentile queues that exceed the storage capacity by more than 25 feet (the average storage space for one vehicle) are indicated in bold font and are underlined.

Table 9
Intersection Queuing Summary – Existing Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Farmersville / Walnut	Storage	100+	*	55	175	*	175	155	*	160+	105	*	S
	A.M.	67	174	35	194	127	29	106	232	31	65	74	
	P.M.	48	96	45	80	101	32	104	155	12	68	130	
Freedom / Walnut	Storage	DNE	*	110	100	*	DNE	*	DNE	S	DNE	DNE	DNE
	A.M.		DNS	DNS	3	DNS		533					
	P.M.		DNS	DNS	0	DNS		8					
Road 168 / Walnut	Storage	S	*	S	S	*	S	S	300	S	S	*	S
	A.M.		5			0			0			8	
	P.M.		0			0			0			3	
Farmersville / Front	Storage	S	*	S	S	*	50	S	990	S	S	*	S
	A.M.		140			5	**95**		140			465	
	P.M.		20			5	20		60			103	
Farmersville / Ash	Storage	S	*	S	S	965	S	S	*	S	S	995	S
	A.M.		43			50			60			105	
	P.M.		18			23			48			58	

Notes: S - Shared lane DNE - Does not exist DNS - Does not stop

* Nearest major intersection is greater than 1,000 feet away.

\+ Connects to a two-way left-turn lane or trapped through lane that provides additional storage.

Table 10
Intersection Queuing Summary – Existing-Plus-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Farmersville / Walnut	Storage	100+	*	55	175	*	175	155	*	160+	105	*	S
	A.M.	77	179	35	**204**	131	29	106	275	32	65	94	
	P.M.	60	103	47	91	108	34	109	188	17	71	147	
Freedom / Walnut	Storage	DNE	*	110	100	*	DNE	*	DNE	S	DNE	DNE	DNE
	A.M.		DNS	DNS	3	DNS		543					
	P.M.		DNS	DNS	0	DNS		8					
Road 168 / Walnut	Storage	S	*	S	S	*	S	S	300	S	S	*	S
	A.M.		5			0			0			8	
	P.M.		0			0			0			3	
Farmersville / Front	Storage	S	*	S	S	*	50	S	990	S	S	*	S
	A.M.		155			5	**108**		158			543	
	P.M.		25			5	20		70			120	
Farmersville / Ash	Storage	S	*	S	S	965	S	S	*	S	S	995	S
	A.M.		45			55			63			115	
	P.M.		18			25			50			63	

Notes: S - Shared lane DNE - Does not exist DNS - Does not stop

* Nearest major intersection is greater than 1,000 feet away.

\+ Connects to a two-way left-turn lane or trapped through lane that provides additional storage.

Table 11
Intersection Queuing Summary – Near-Term-With-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Farmersville / Walnut	Storage	100+	*	55	175	*	175	155	*	160+	105	*	S
	A.M.	76	179	24	**252**	140	31	156	400	53	66	113	
	P.M.	64	109	53	115	112	12	148	244	6	77	205	
Freedom / Walnut	Storage	DNE	*	110	100	*	DNE	*	DNE	S	DNE	DNE	DNE
	A.M.		DNS	DNS	3	DNS		573					
	P.M.		DNS	DNS	0	DNS		8					
Road 168 / Walnut	Storage	S	*	S	S	*	S	S	300	S	S	*	S
	A.M.		5			0			0			8	
	P.M.		0			0			0			3	
Farmersville / Front	Storage	S	*	S	S	*	50	S	990	S	S	*	S
	A.M.		235			8	**118**		353			740	
	P.M.		38			8	28		125			260	
Farmersville / Ash	Storage	S	*	S	S	965	S	S	*	S	S	995	S
	A.M.		78			68			160			198	
	P.M.		30			28			128			145	

Notes: S - Shared lane DNE - Does not exist DNS - Does not stop

* Nearest major intersection is greater than 1,000 feet away.

\+ Connects to a two-way left-turn lane or trapped through lane that provides additional storage.

Table 12
Intersection Queuing Summary – Cumulative 2043 With-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Farmersville / Walnut	Storage	100+	*	55	175	*	175	155	*	160+	105	*	S
	A.M.	88	242	33	**298**	169	32	158	420	62	93	124	
	P.M.	84	131	57	121	143	28	155	253	26	97	225	
Freedom / Walnut	Storage	DNE	*	110	100	*	DNE	*	DNE	S	DNE	DNE	DNE
	A.M.		DNS	DNS	5	DNS		963					
	P.M.		DNS	DNS	0	DNS		13					
Road 168 / Walnut	Storage	S	*	S	S	*	S	S	300	S	S	*	S
	A.M.		5			0			0			10	
	P.M.		3			0			0			5	
Farmersville / Front	Storage	S	*	S	S	*	50	S	990	S	S	*	S
	A.M.		345			8	**190**		400			928	
	P.M.		40			8	35		143			323	
Farmersville / Ash	Storage	S	*	S	S	965	S	S	*	S	S	995	S
	A.M.		103			110			195			290	
	P.M.		33			40			138			178	

Notes: S - Shared lane DNE - Does not exist DNS - Does not stop

* Nearest major intersection is greater than 1,000 feet away.

\+ Connects to a two-way left-turn lane or trapped through lane that provides additional storage.

13.0 DISCUSSION

13.1 Existing Conditions

The results of the intersection analyses indicate that the study intersections are currently operating at acceptable LOS and with acceptable calculated 95th-percentile queues, with the following exceptions:

- The intersection of Freedom Drive and Walnut Street operates at LOS F during the a.m. peak hour, primarily attributable to school traffic based on a low peak hour factor that indicates very concentrated flows for approximately 15 to 30 minutes.
- The intersection of Farmersville Boulevard and Front Street operates at LOS F during the a.m. peak hour, highly attributable to school traffic based on a low peak hour factor that indicates very concentrated flows for approximately 15 to 30 minutes. The calculated 95th-percentile queue in the right-turn lane on the westbound approach exceeds the length of the right-turn lane by the length of approximately two vehicles during the a.m. peak hour.

The other study intersections are currently operating at acceptable levels of service. Peak-hour traffic signal warrants are not met at any of the study intersections.

13.2 Existing-Plus-Project Conditions

The existing-plus-Project conditions analyses represent conditions that would occur after development of the Project in the absence of other pending projects. With development of the Project, the study intersections are expected to continue to operate at levels of service nearly identical to the existing conditions. Peak-hour traffic signal warrants are not expected to be met at any of the study intersections.

Although the Project appears to exacerbate delays at the two intersections that are currently operating worse than the target LOS C (described above), the delays at those intersections appear to be highly attributable to school traffic. Since traffic signal warrants are not expected to be satisfied and the intersections operate at acceptable LOS during the p.m. peak hour, it is suggested that the Project does not cause traffic issues related to delays that do not already occur in the existing condition, it is not recommended that the Project be required to construct improvements.

The Project is expected to cause the 95th-percentile queue to exceed the storage capacity in the left-turn lane on the westbound approach to the intersection of Farmersville Boulevard and Walnut Street during the a.m. peak hour. It is recommended that road work for frontage improvements include restriping to provide a longer left-turn lane. A length of 300 feet is recommended.

The following study intersections are expected to continue to operate at acceptable levels of service:

- Farmersville Boulevard and Walnut Street
- Road 168 and Walnut Street
- Farmersville Boulevard and Ash Street

13.3 Near-Term With-Project Conditions

The near-term with-Project conditions analyses represent conditions that are expected to occur after construction of the Project and the pending projects. This scenario estimates the near-term cumulative effects of known projects. The analyses indicate that the following study intersections are expected to operate worse than the City's target LOS C:

- The intersection of Farmersville Boulevard and Walnut Street is expected to operate at LOS D during the a.m. peak hour. The 95th-percentile queue is expected to exceed the storage capacity in the left-turn lane on the westbound approach during the a.m. peak hour. The intersection will operate at LOS B during the p.m. peak hour, which suggests that a major intersection upgrade is not warranted in the near-term condition.
- The intersection of Freedom Drive and Walnut Street will continue to operate at LOS F during the a.m. peak hour, primarily attributable to school traffic based on a low peak hour factor that indicates very concentrated flows for approximately 15 to 30 minutes. The intersection will operate at LOS B during the p.m. peak hour and peak-hour traffic signal warrants are not expected to be satisfied during either peak hour, which suggests that a major intersection upgrade is not warranted in the near-term condition.
- The intersection of Farmersville Boulevard and Front Street is expected to operate at LOS F during the a.m. peak hour and LOS D during the p.m. peak hour. The calculated 95th-percentile queue in the right-turn lane on the westbound approach exceeds the length of the right-turn lane by the length of approximately three vehicles during the a.m. peak hour. Peak-hour traffic signal warrants are expected to be satisfied during the a.m. peak hour. The analyses indicate that the pending projects will have a much greater impact on the intersection than the Camino Castaneda project. Signalization or a roundabout should be considered to improve traffic conditions. The proximity of the railroad must be considered in the selection of the preferred alternative. It is suggested that improvements be designed for at least 20 years of operation. A discussion of potential improvements is presented in Section 13.5 of this report.
- The intersection of Farmersville Boulevard and Ash Street is expected to operate at LOS D during the a.m. peak hour and LOS C during the p.m. peak hour. Peak-hour traffic signal warrants are not expected to be satisfied during either peak hour, which suggests that a major intersection upgrade is not warranted in the near-term condition.

The intersection of Road 168 and Walnut Street is expected to continue to operate at acceptable levels of service.

13.4 Cumulative 2043 With-Project Conditions

The year 2043 With-Project conditions analyses are based on the assumption that regional growth has occurred and that the Project has been developed. The analyses indicate that the following study intersections are expected to operate worse than the City's target LOS C:

- The intersection of Farmersville Boulevard and Walnut Street is expected to operate at LOS D during the a.m. peak hour. The 95th-percentile queue is expected to exceed

the storage capacity in the left-turn lane on the westbound approach during the a.m. peak hour. The intersection will operate at LOS C during the p.m. peak hour, which suggests that a major intersection upgrade is not warranted in the year 2043 condition.

- The intersection of Freedom Drive and Walnut Street will continue to operate at LOS F during the a.m. peak hour, and the a.m. peak-hour traffic signal warrant is expected to be satisfied. The a.m. peak hour delays are primarily attributable to school traffic based on a low peak hour factor that indicates very concentrated flows for approximately 15 to 30 minutes. The intersection will operate at LOS B during the p.m. peak hour, and the p.m. peak-hour traffic signal warrant is not expected to be satisfied, which suggests that a major intersection upgrade may not be warranted in the year 2043 condition. However, potential improvements are discussed in Section 13.5 of this report.
- The intersection of Farmersville Boulevard and Front Street is expected to operate at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour. The calculated 95th-percentile queue in the right-turn lane on the westbound approach exceeds the length of the right-turn lane by the length of approximately five vehicles during the a.m. peak hour. Peak-hour traffic signal warrants are expected to be satisfied during the a.m. peak hour. The analyses indicate that the pending projects will have a much greater impact on the intersection than the Camino Castaneda project. Signalization or a roundabout should be considered to improve traffic conditions. The proximity of the railroad must be considered in the selection of the preferred alternative. A discussion of potential improvements is presented in Section 13.5 of this report.
- The intersection of Farmersville Boulevard and Ash Street is expected to operate at LOS E during the a.m. peak hour and LOS C during the p.m. peak hour. Peak-hour traffic signal warrants are not expected to be satisfied during either peak hour, which suggests that a major intersection upgrade is not warranted in the 2043 condition.

The intersection of Road 168 and Walnut Street is expected to continue to operate at acceptable levels of service.

13.5 Potential Intersection Improvements

At the intersection of Farmersville Boulevard and Walnut Street, the Project should restripe the westbound approach to provide a left-turn lane that is 300 feet long.

The intersection of Farmersville Boulevard and Front Street is expected to require signalization or installation of a roundabout, primarily as a result of traffic generated by the pending projects in the near-term condition. This is not expected to be a requirement of the Camino Castaneda project to construct, but the Project may be required to pay an equitable share of the cost of the improvements. In order to operate at acceptable LOS with signalization through the year 2043, the intersection would require the following lane configurations:

Eastbound: one shared left-turn/through/right-turn lane with permissive left turns

Westbound: one shared left-turn/through lane with permissive left turns and one right-turn lane

Northbound: one left-turn lane with a protected left-turn signal and two through lanes with a shared right turn

Southbound: one left-turn lane with a protected left-turn signal and two through lanes with a shared right turn.

As an alternative to signalization, the intersection of Farmersville Boulevard and Front Street could be converted to a roundabout with two lanes in the northbound and southbound directions and one lane in the eastbound and westbound directions.

The intersection of Freedom Drive and Walnut Street is expected to require signalization by the year 2043 to operate at acceptable levels of service. This is not expected to be a requirement of the Camino Castaneda project to construct, but the Project may be required to pay an equitable share of the cost of the improvements. In order to operate at acceptable LOS in the year 2043, the intersection would require signalization with the existing lane configurations and protected left-turn phasing on the westbound approach.

Tables 13 and 14 present the results of intersection analyses for the improved conditions. The analysis sheets for the improved conditions are presented in Appendix D.

Table 13
Improved Intersection LOS Summary – Cumulative 2043 With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Freedom / Walnut	Signals	19.8	B	7.7	A
Farmersville / Front	Signals	34.5	C	18.2	B
	Roundabout	12.7	B	6.9	A

Table 14
Improved Intersection Queuing Summary – Cumulative 2043 With-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Freedom / Walnut	Storage	DNE	*	110	100	*	DNE	*	DNE	S	DNE	DNE	DNE
	A.M.		251	21	32	216		163					
	P.M.		104	12	12	77		33					
Farmersville / Front (signal)	Storage	S	*	S	S	*	50	TBD	990	S	TBD	*	S
	A.M.		408			57	84	19	373		179	399	
	P.M.		116			45	33	21	202		127	227	
Farmersville / Front (roundabout)	Storage	S	*	S	S	965	S	S	*	S	S	995	S
	A.M.		100			150			75			75	
	P.M.		25			25			25			50	

Notes: S - Shared lane DNE - Does not exist DNS - Does not stop
TBD: to be designed
* Nearest major intersection is greater than 1,000 feet away.
\+ Connects to a two-way left-turn lane or trapped through lane that provides additional storage.

14.0 EQUITABLE SHARE CALCULATIONS

Where required future improvements are not included in established development fees and are not the sole responsibility of a particular project, but rather a cumulative result of regional growth, the responsibility for the improvement may be determined based on equitable share calculations as presented in the Caltrans *Guide for the Preparation of Traffic Impact Studies* dated December 2002. The following equation was used to determine the project's equitable share of the cost of improvements:

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

where:

P = The equitable share of the project's traffic responsibility;
T = The project trips generated during the peak hour of the adjacent State Highway facility;
T_B = The forecasted (future with project) traffic volume on the affected State highway facility;
T_E = The existing traffic on the State Highway facility.

Table 15 presents equitable share responsibility calculations. The values in Table 15 may be applicable if the Project does not pay into a fee program.

Table 15
Equitable Share Responsibility Calculations – A.M. Peak Hour

Location	Project Trips	Existing Traffic	Future Traffic	Equitable Share
Freedom / Walnut	10	1,074	1,332	3.9%
Farmersville / Front	70	1,599	2,126	13.3%

15.0 CONCLUSIONS

15.1 General

Generally-accepted traffic engineering principles and methods were employed to estimate the number of trips expected to be generated by the Project, to analyze the existing traffic conditions, and to analyze the traffic conditions projected to occur in the future.

The dominant local-serving retail use of the Camino Castaneda project will add retail opportunities into the urban fabric, improve retail destination proximity, shorten trips, and reduce VMT. Furthermore, the residential portion of the Project will generate fewer than 500 trips per day, which is the stated significance threshold for small projects. Therefore, it is suggested that the lead agency may presume that the Camino Castaneda project will cause a less-than-significant transportation impact.

15.2 Existing Conditions

The intersection analyses indicate that the study intersections are currently operating at acceptable LOS and with acceptable calculated 95th-percentile queues, with the following exceptions:

- The intersection of Freedom Drive and Walnut Street operates at LOS F during the a.m. peak hour;
- The intersection of Farmersville Boulevard and Front Street operates at LOS F during the a.m. peak hour.

The other study intersections are currently operating at acceptable levels of service. Peak-hour traffic signal warrants are not met at any of the study intersections.

15.3 Existing-Plus-Project Conditions

With development of the Project, the study intersections are expected to continue to operate at levels of service nearly identical to the existing conditions. Peak-hour traffic signal warrants are not expected to be met at any of the study intersections. The analyses indicate that the Project does not cause traffic issues related to delays that do not already occur in the existing condition, and it is not recommended that the Project be required to construct intersection improvements at either the intersection of Freedom Drive and Walnut Street or the intersection of Farmersville Boulevard and Front Street.

The Project is expected to cause the 95th-percentile queue to exceed the storage capacity in the left-turn lane on the westbound approach to the intersection of Farmersville Boulevard and Walnut Street during the a.m. peak hour. It is recommended that road work for frontage improvements include restriping to provide a longer left-turn lane. A length of 300 feet is recommended.

15.4 Near-Term With-Project Conditions

The analyses indicate that the following study intersections are expected to operate worse than the City's target LOS C:

- The intersection of Farmersville Boulevard and Walnut Street is expected to operate at LOS D during the a.m. peak hour. The intersection will operate at LOS B during

the p.m. peak hour, which suggests that a major intersection upgrade is not warranted in the near-term condition.

- The intersection of Freedom Drive and Walnut Street will continue to operate at LOS F during the a.m. peak hour. The intersection will operate at LOS B during the p.m. peak hour and peak-hour traffic signal warrants are not expected to be satisfied during either peak hour, which suggests that a major intersection upgrade is not warranted in the near-term condition.

- The intersection of Farmersville Boulevard and Front Street is expected to operate at LOS F during the a.m. peak hour and LOS D during the p.m. peak hour. Peak-hour traffic signal warrants are expected to be satisfied during the a.m. peak hour. The analyses indicate that the pending projects will have a much greater impact on the intersection than the Camino Castaneda project. Signalization or a roundabout should be considered to improve traffic conditions. The proximity of the railroad must be considered in the selection of the preferred alternative.

- The intersection of Farmersville Boulevard and Ash Street is expected to operate at LOS D during the a.m. peak hour and LOS C during the p.m. peak hour. Peak-hour traffic signal warrants are not expected to be satisfied during either peak hour, which suggests that a major intersection upgrade is not warranted in the near-term condition.

The intersection of Road 168 and Walnut Street is expected to continue to operate at acceptable levels of service.

15.5 Cumulative 2043 With-Project Conditions

The year 2043 With-Project conditions analyses are based on the assumption that regional growth has occurred and that the Project has been developed. The analyses indicate that the following study intersections are expected to operate worse than the City's target LOS C:

- The intersection of Farmersville Boulevard and Walnut Street is expected to operate at LOS D during the a.m. peak hour. The intersection will operate at LOS C during the p.m. peak hour, which suggests that a major intersection upgrade is not warranted in the year 2043 condition.

- The intersection of Freedom Drive and Walnut Street will continue to operate at LOS F during the a.m. peak hour, and the a.m. peak-hour traffic signal warrant is expected to be satisfied. The intersection will operate at LOS B during the p.m. peak hour, and the p.m. peak-hour traffic signal warrant is not expected to be satisfied, which suggests that a major intersection upgrade may not be warranted in the year 2043 condition.

- The intersection of Farmersville Boulevard and Front Street is expected to operate at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour. Peak-hour traffic signal warrants are expected to be satisfied during the a.m. peak hour. The analyses indicate that the pending projects will have a much greater impact on the intersection than the Camino Castaneda project. Signalization or a roundabout should be considered to improve traffic conditions. The proximity of the railroad must be considered in the selection of the preferred alternative.

- The intersection of Farmersville Boulevard and Ash Street is expected to operate at LOS E during the a.m. peak hour and LOS C during the p.m. peak hour. Peak-hour traffic signal warrants are not expected to be satisfied during either peak hour, which suggests that a major intersection upgrade is not warranted in the 2043 condition.

The intersection of Road 168 and Walnut Street is expected to continue to operate at acceptable levels of service.

15.6 Potential Intersection Improvements

At the intersection of Farmersville Boulevard and Walnut Street, the Project should restripe the westbound approach to provide a left-turn lane that is 300 feet long.

The intersection of Farmersville Boulevard and Front Street is expected to require signalization or installation of a roundabout, primarily as a result of traffic generated by the pending projects in the near-term condition. It is not recommended that this be a requirement of the Camino Castaneda project to construct, but the Project may be required to pay an equitable share of the cost of the improvements. In order to operate at acceptable LOS with signalization through the year 2043, the intersection would require the following lane configurations:

Eastbound: one shared left-turn/through/right-turn lane with permissive left turns

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Northbound: one left-turn lane with a protected left-turn signal and two through lanes with a shared right turn

Southbound: one left-turn lane with a protected left-turn signal and two through lanes with a shared right turn.

As an alternative to signalization, the intersection of Farmersville Boulevard and Front Street could be converted to a roundabout with two lanes in the northbound and southbound directions and one lane in the eastbound and westbound directions.

The intersection of Freedom Drive and Walnut Street is expected to require signalization by the year 2043 to operate at acceptable levels of service. It is not recommended that this be a requirement of the Camino Castaneda project to construct, but the Project may be required to pay an equitable share of the cost of the improvements. In order to operate at acceptable LOS in the year 2043, the intersection would require signalization with the existing lane configurations and protected left-turn phasing on the westbound approach.

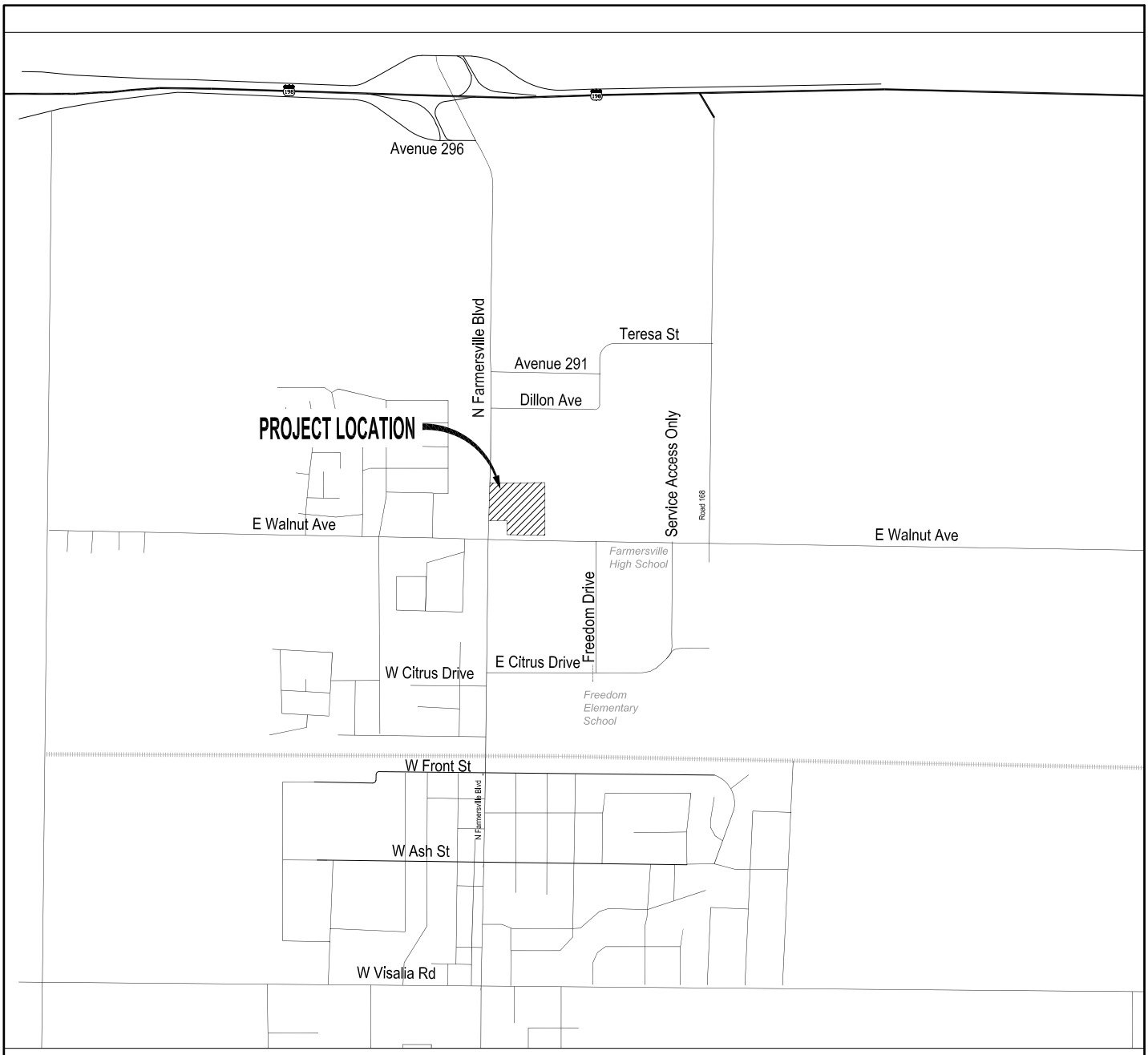
Thank you for the opportunity to perform these traffic analyses. Please feel free to contact our office if you have any questions.

PETERS ENGINEERING GROUP

John Rowland, PE, TE

Attachments: Figures
Appendix A - TCAG Travel Model Output
Appendix B - Traffic Count Data Sheets
Appendix C - Intersection Analysis Sheets
Appendix D - Intersection Analysis Sheets With Improvements

FIGURES



LEGEND

PROJECT SITE

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

VICINITY MAP

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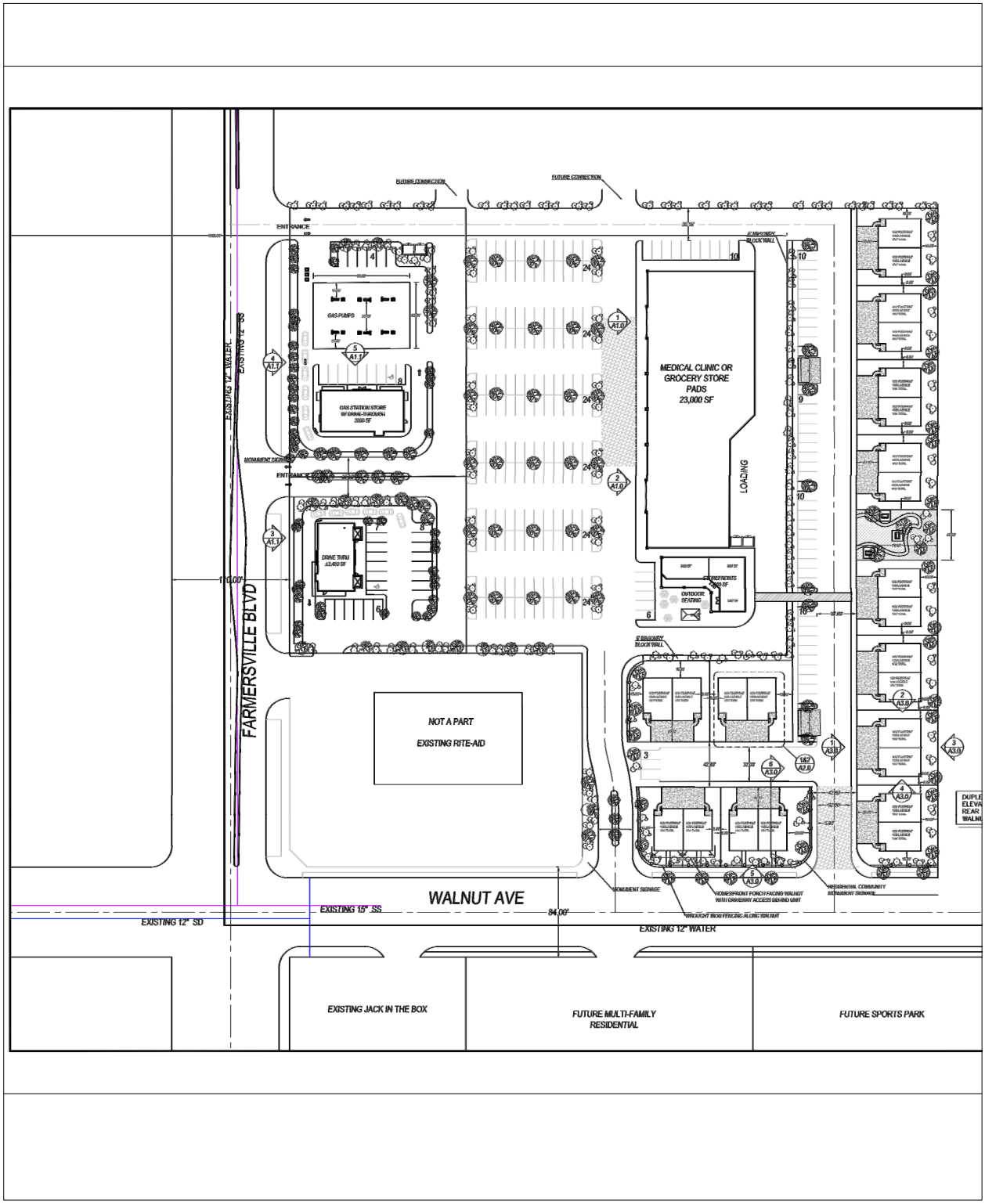

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

SITE PLAN

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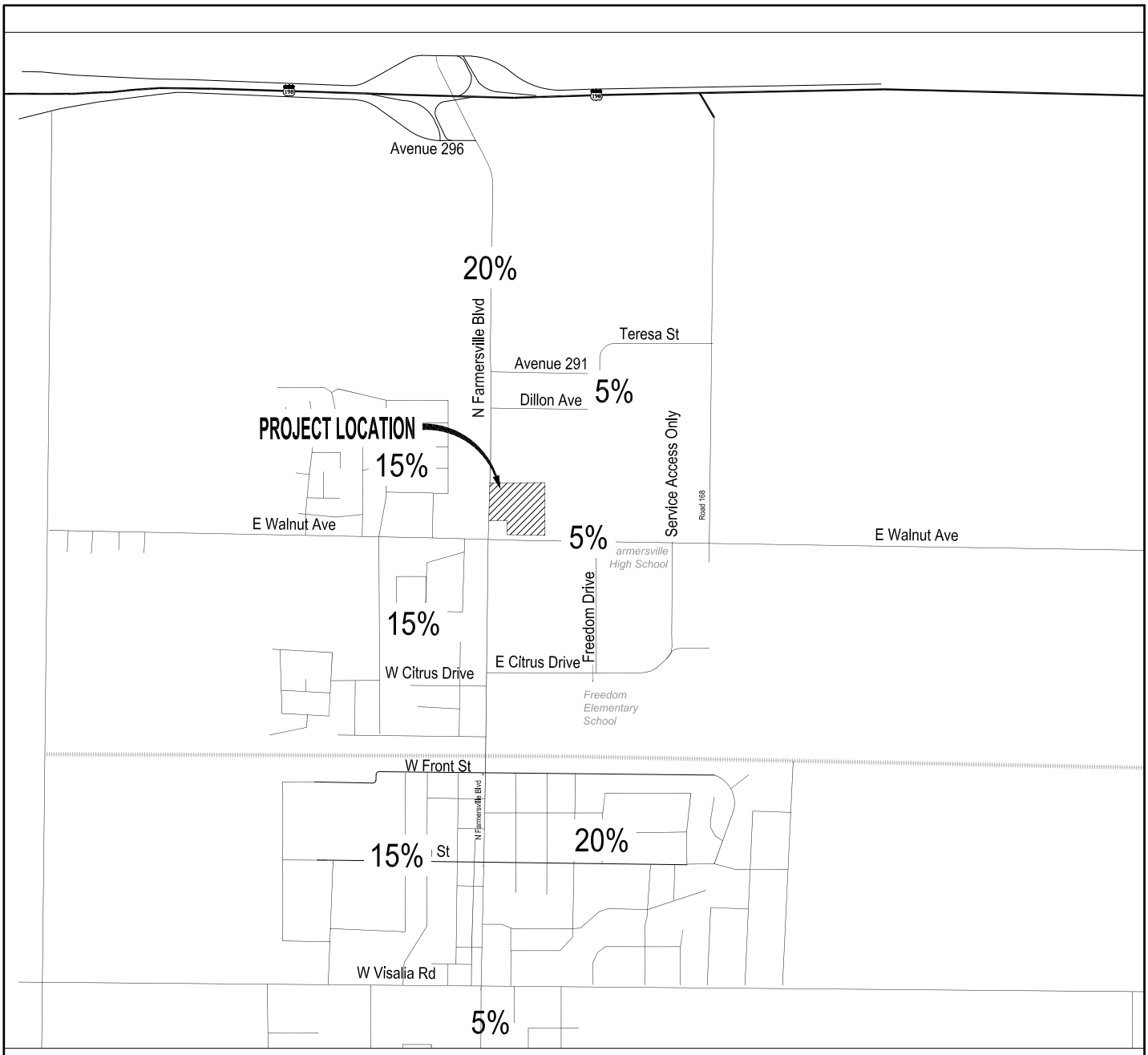

LEGEND

PROJECT SITE

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

PROJECT TRAFFIC DISTRIBUTION PERCENTAGES

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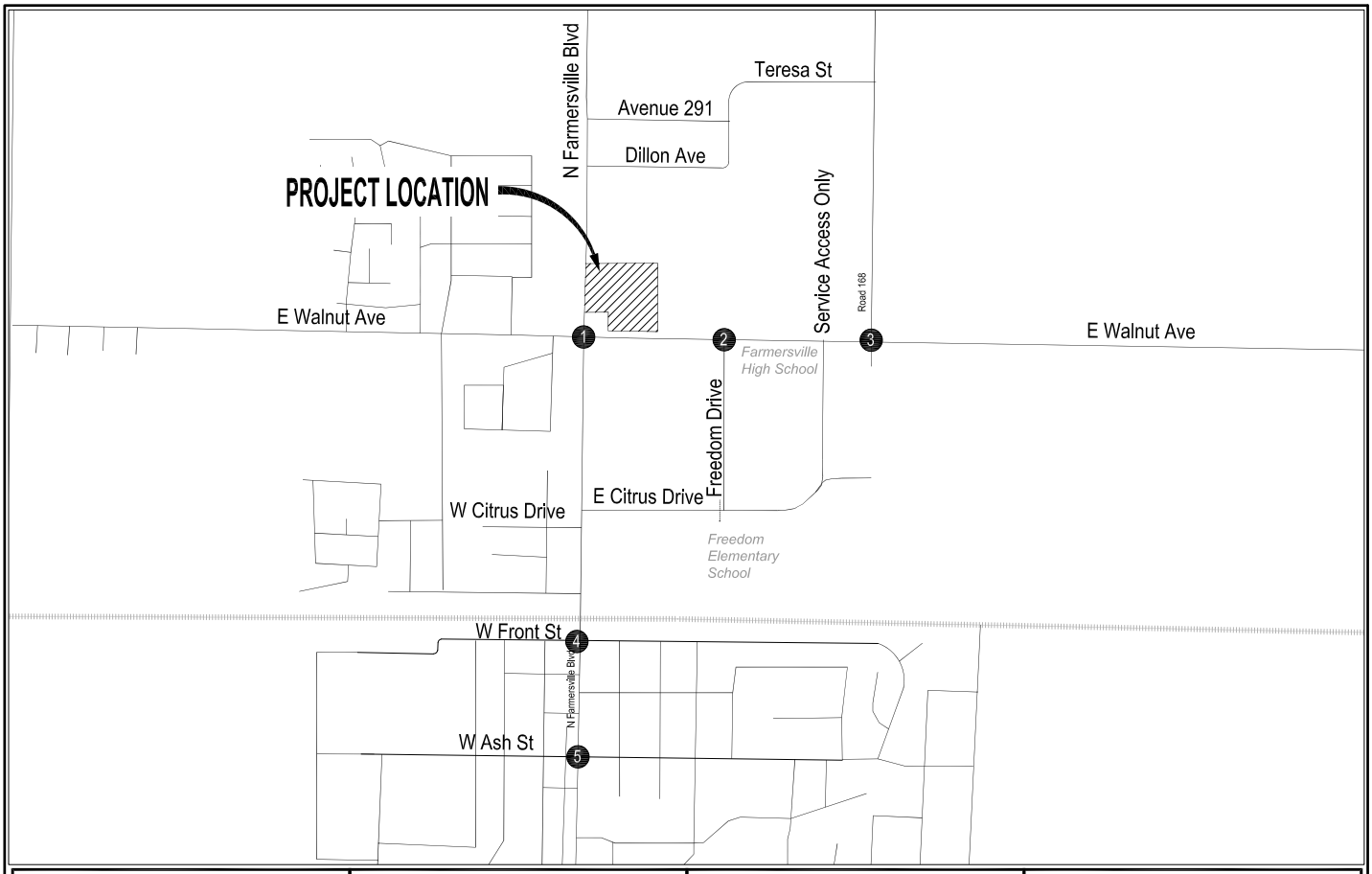

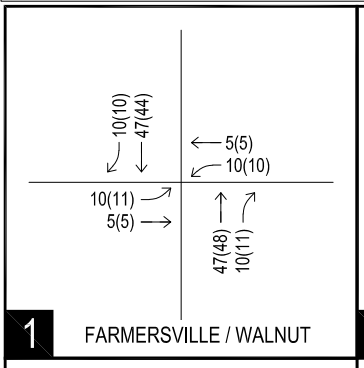

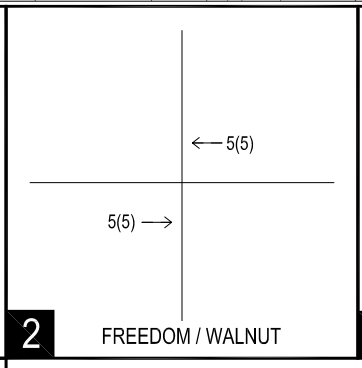

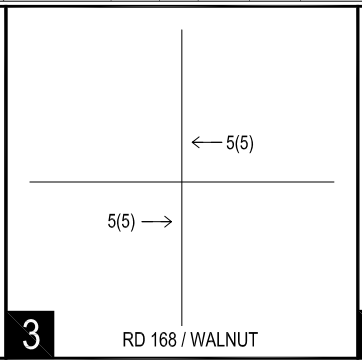

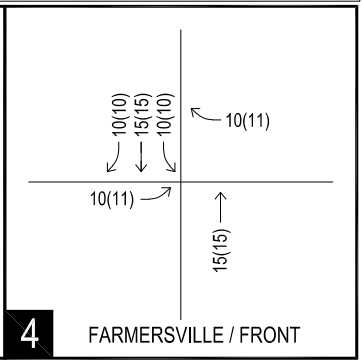

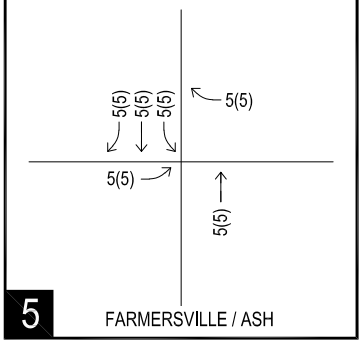

LEGEND

XX	STUDY AREA INTERSECTIONS
	PROJECT SITE
XX (YY)	AM (PM) VOLUMES

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

PEAK-HOUR PROJECT TRAFFIC VOLUMES

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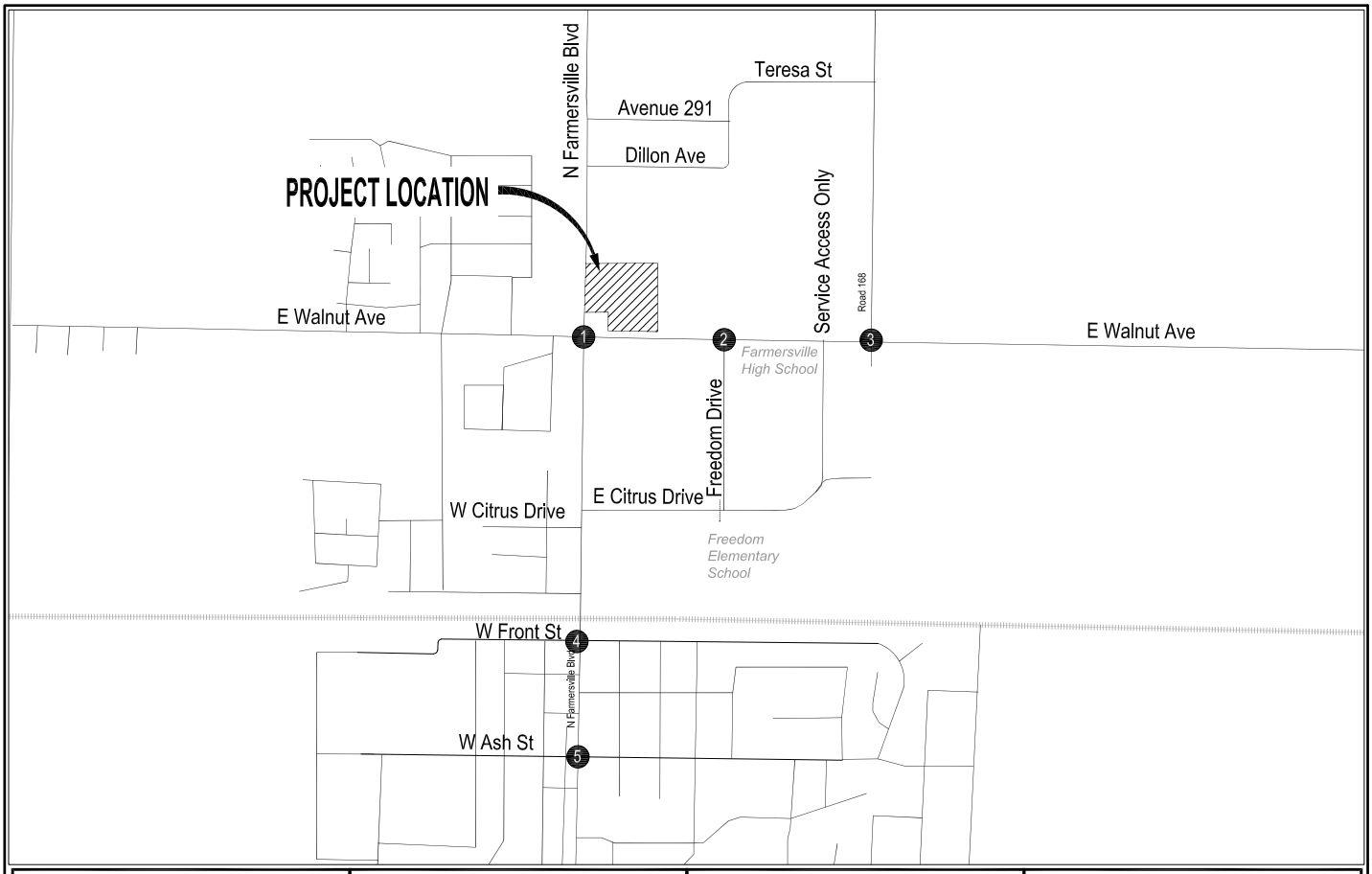

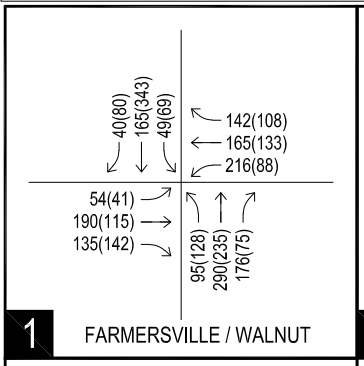

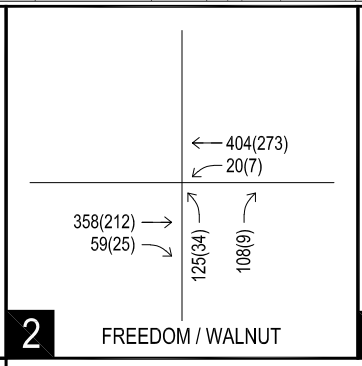

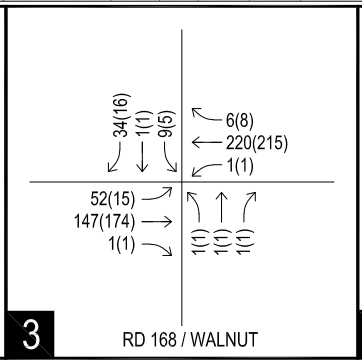

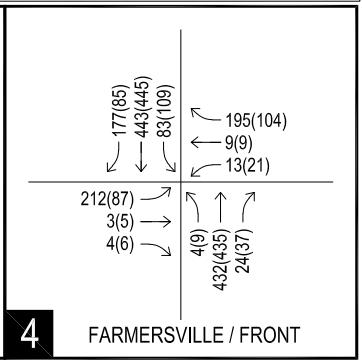

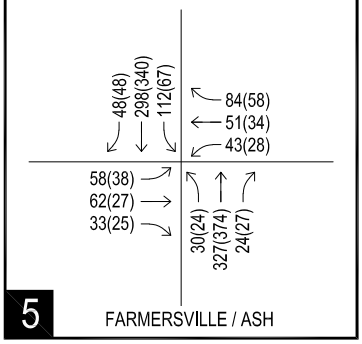

LEGEND

(XX)	STUDY AREA INTERSECTIONS
	PROJECT SITE
XX (YY)	AM (PM) VOLUMES

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

EXISTING PEAK-HOUR TRAFFIC VOLUMES

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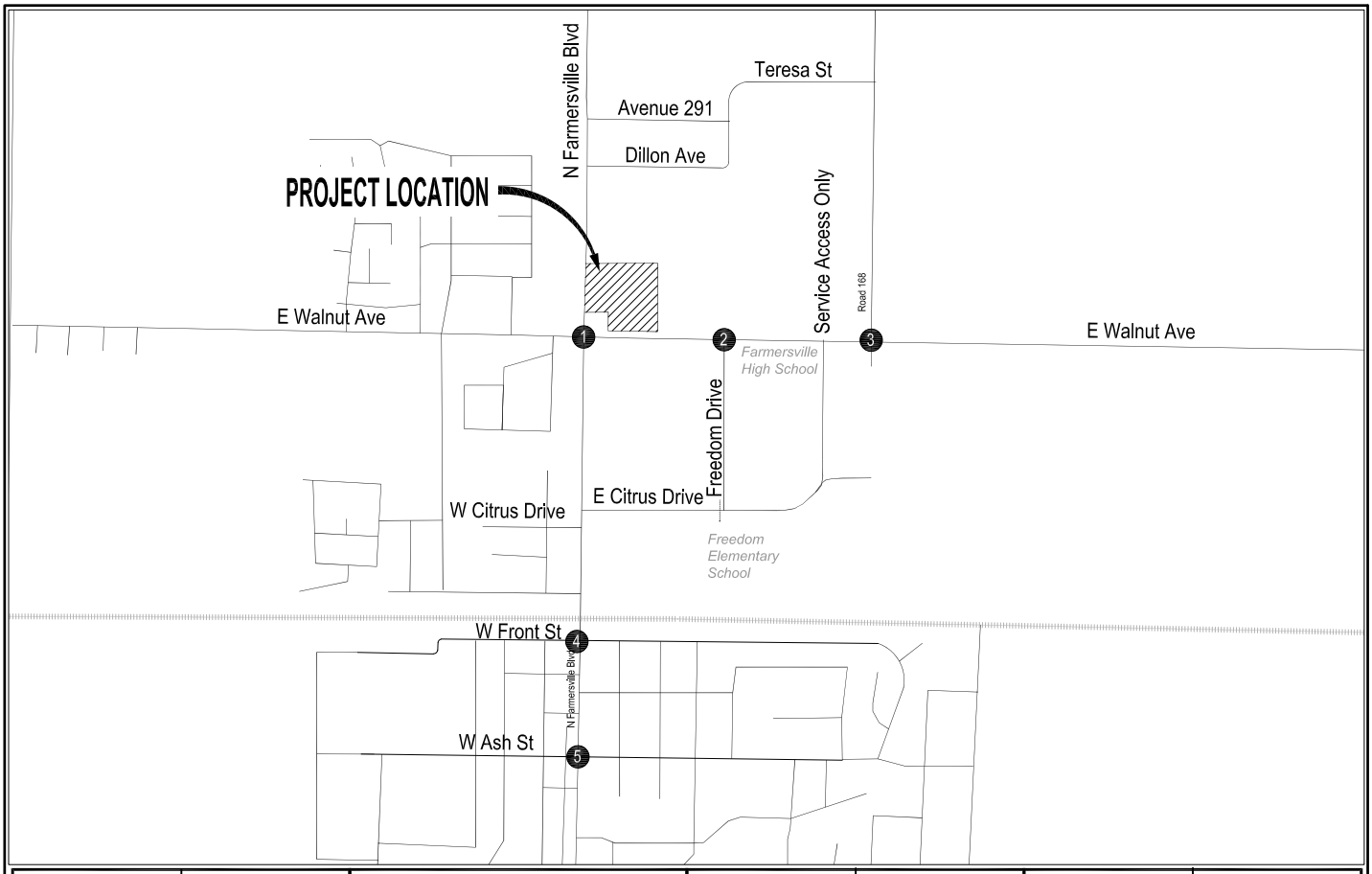

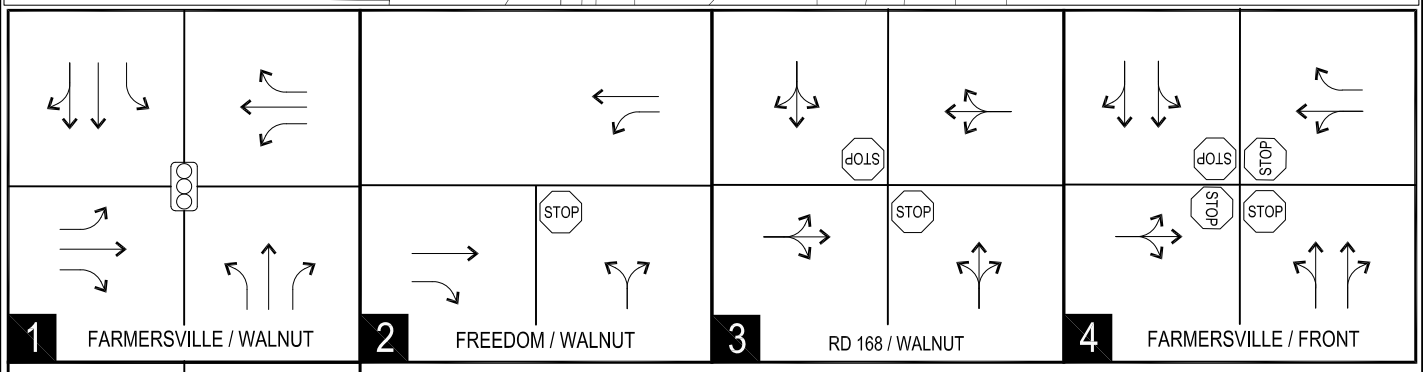

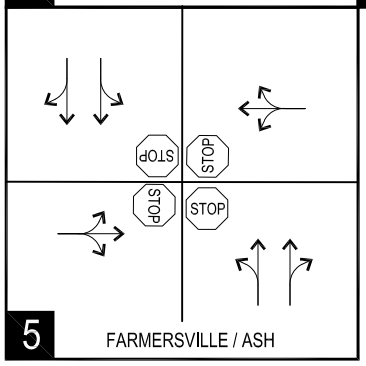

LEGEND

- XX STUDY AREA INTERSECTIONS
- PROJECT SITE
- SIGNALIZED INTERSECTION
- STOP STOP SIGN
- DIRECTION OF TRAVEL

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

EXISTING LANE CONFIGURATIONS AND INTERSECTION CONTROL

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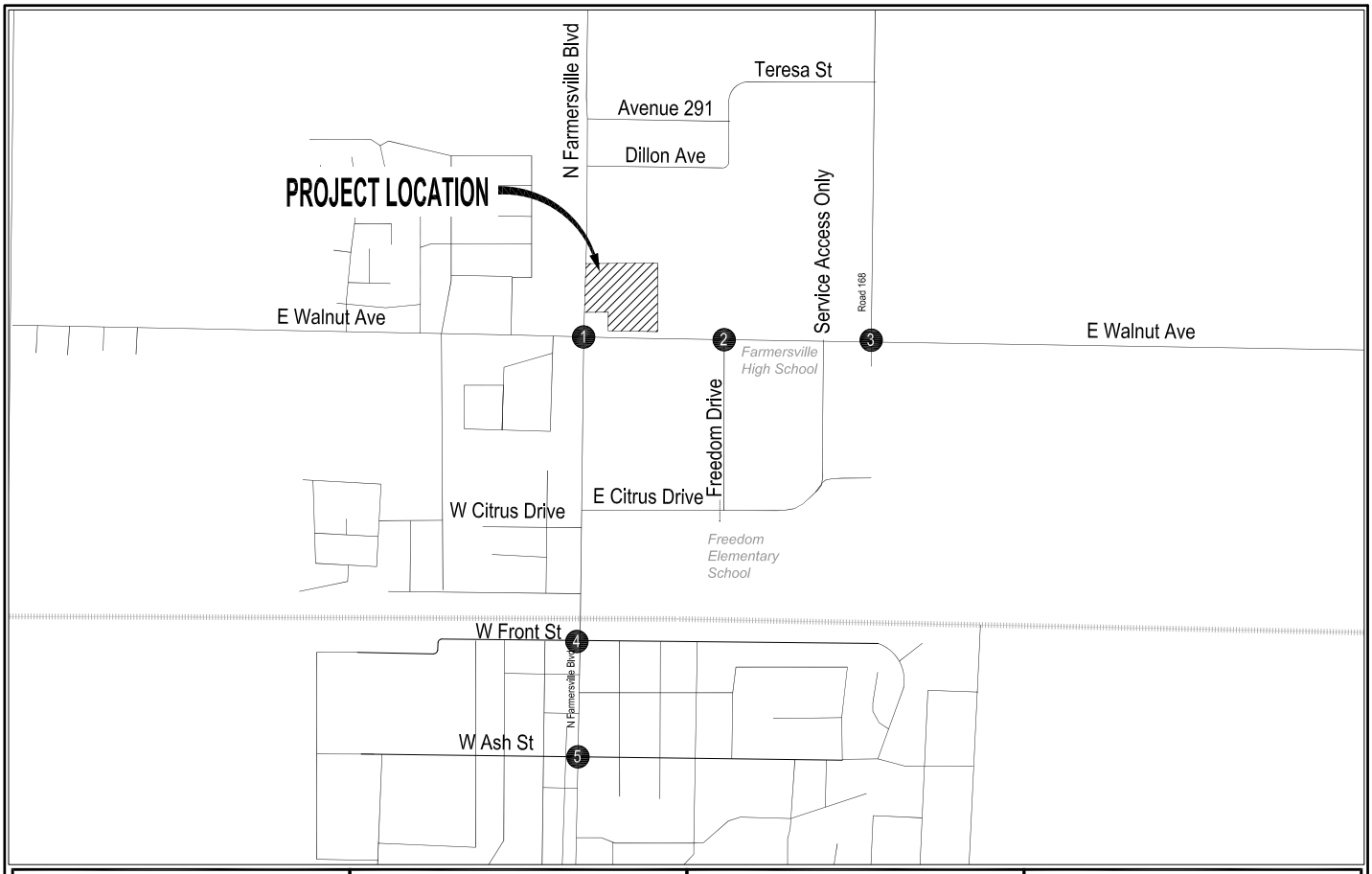

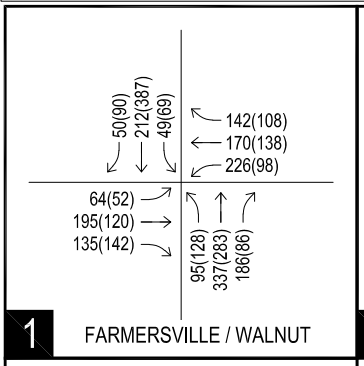

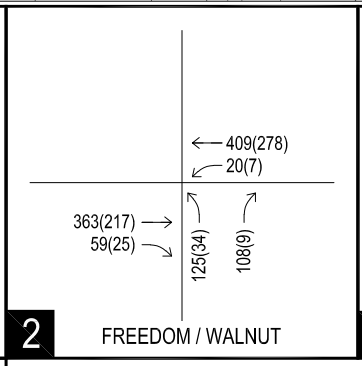

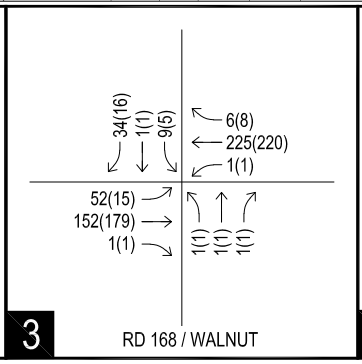

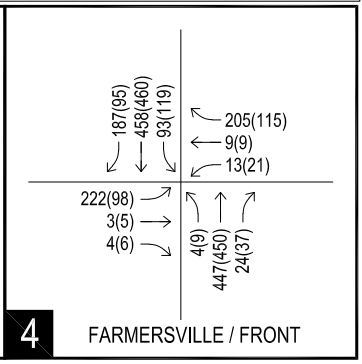

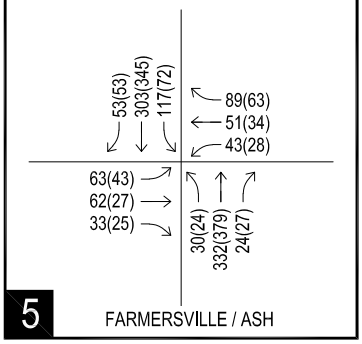

LEGEND

XX	STUDY AREA INTERSECTIONS
	PROJECT SITE
XX (YY)	AM (PM) VOLUMES

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

EXISTING-PLUS-PROJECT PEAK-HOUR TRAFFIC VOLUMES

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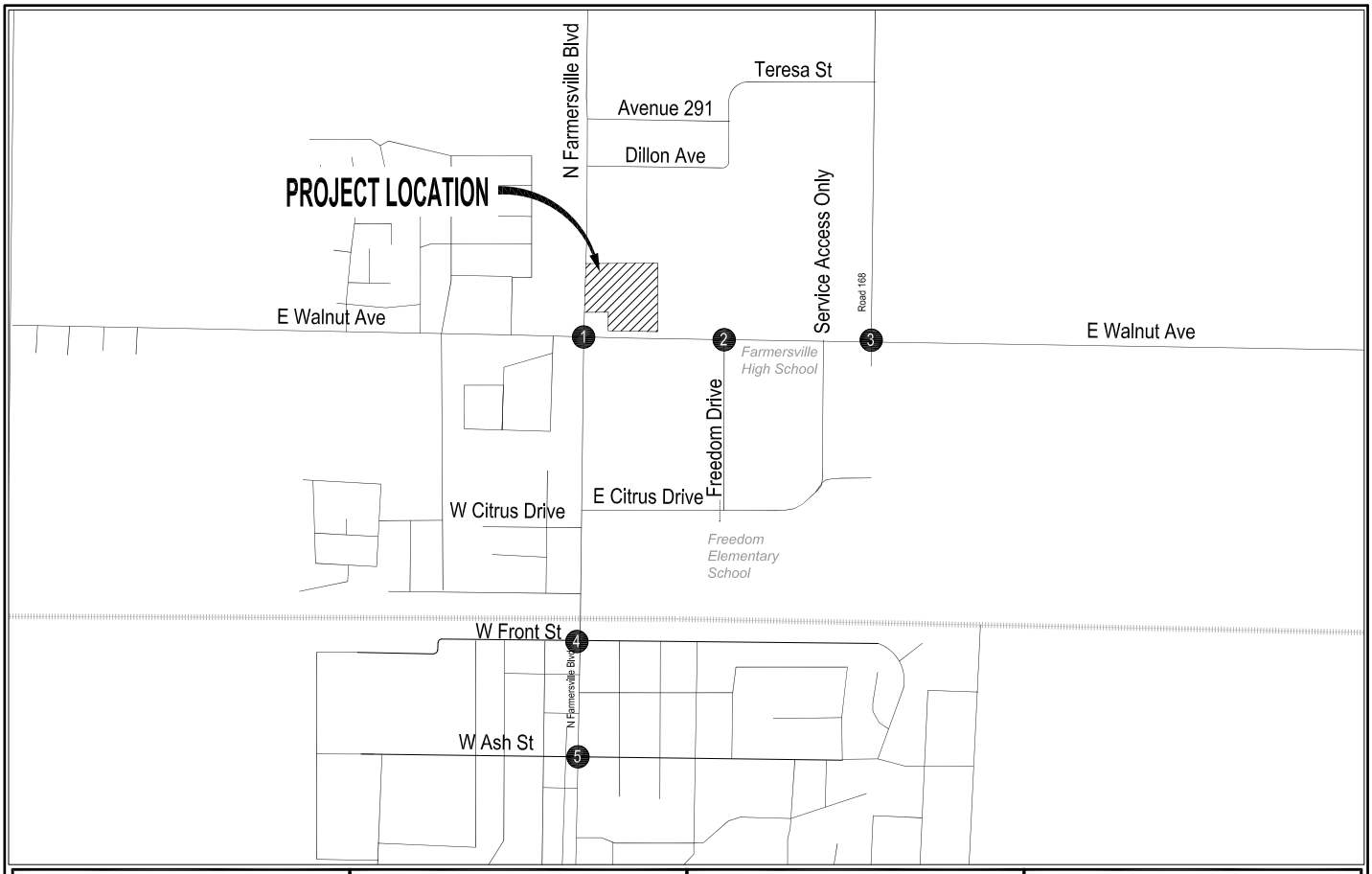
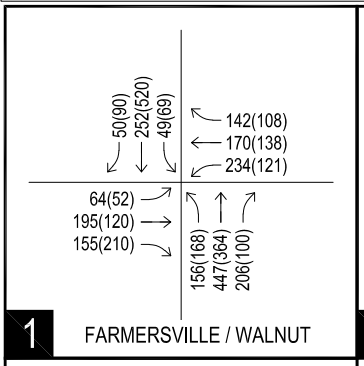
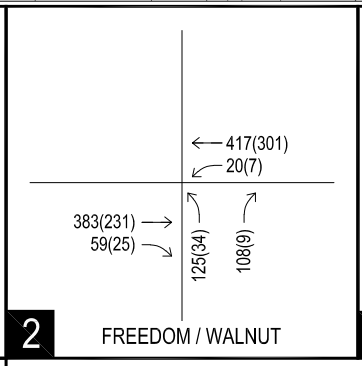
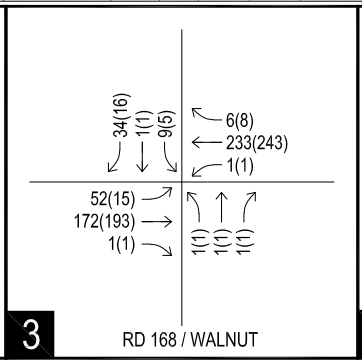
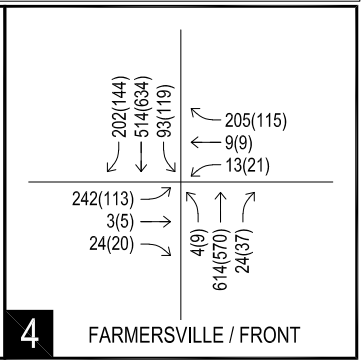
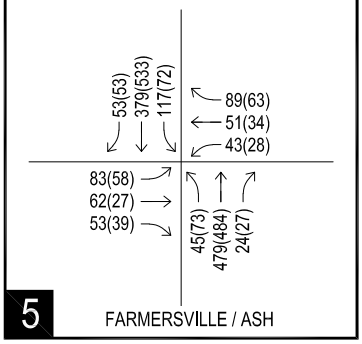












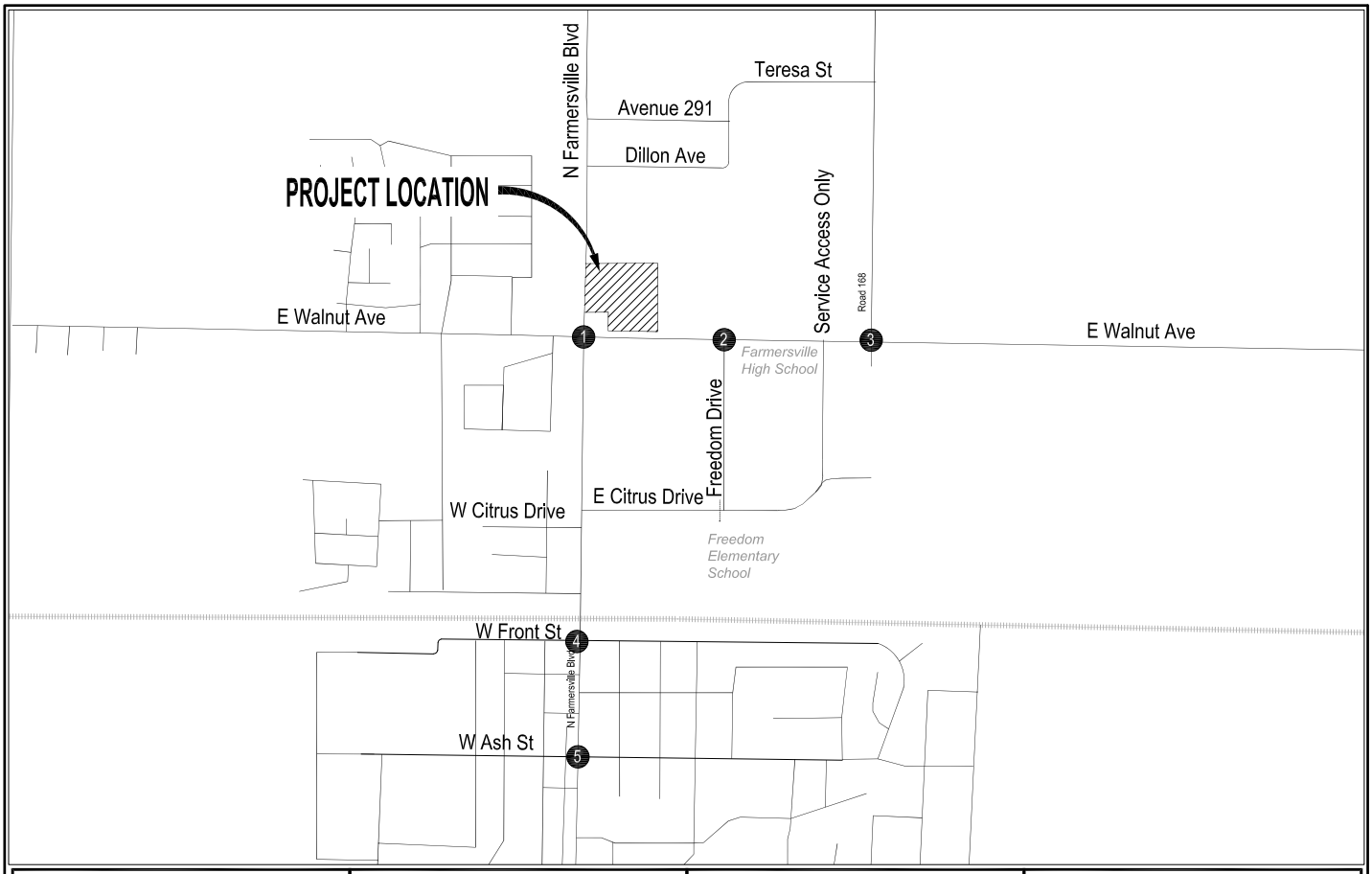
LEGEND

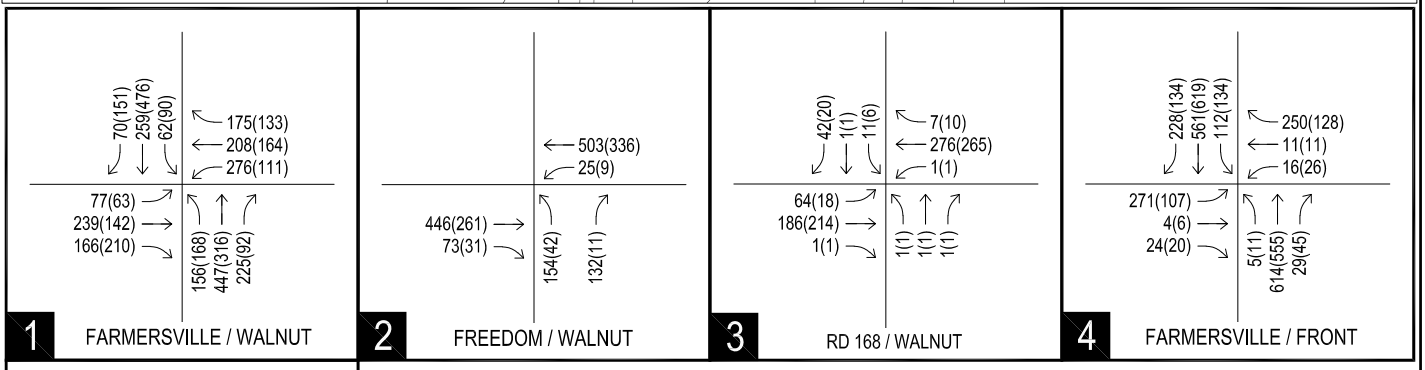
XX	STUDY AREA INTERSECTIONS
	PROJECT SITE
XX (YY)	AM (PM) VOLUMES

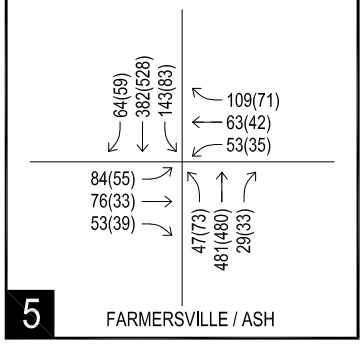
Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

NEAR-TERM WITH-PROJECT PEAK-HOUR TRAFFIC VOLUMES

Not to Scale







LEGEND

(XX)	STUDY AREA INTERSECTIONS
	PROJECT SITE
XX (YY)	AM (PM) VOLUMES

Proposed Camino Castaneda Commercial and Residential Development
Farmersville, California

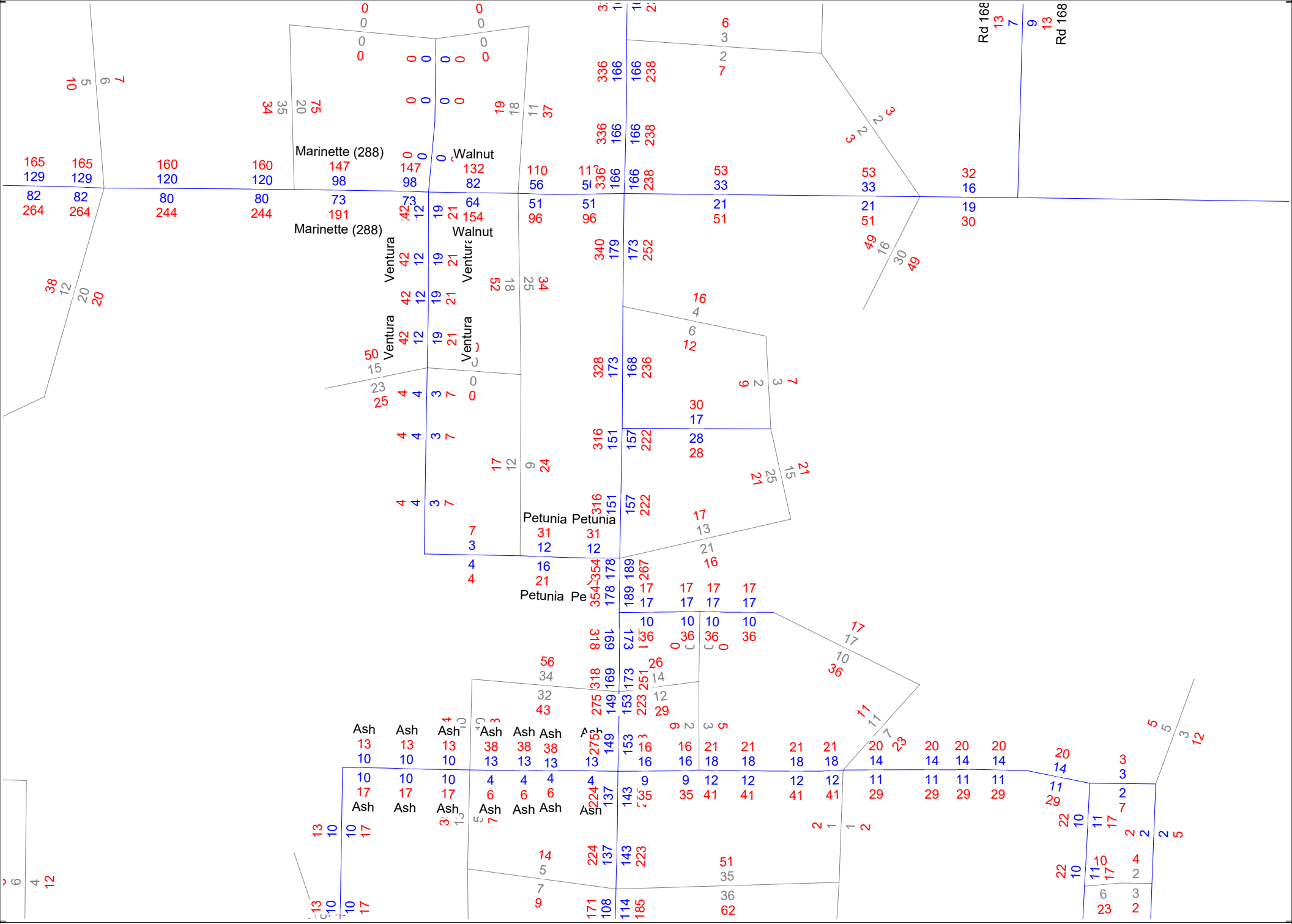
YEAR 2043 CUMULATIVE WITH-PROJECT PEAK-HOUR TRAFFIC VOLUMES

Not to Scale

APPENDIX A

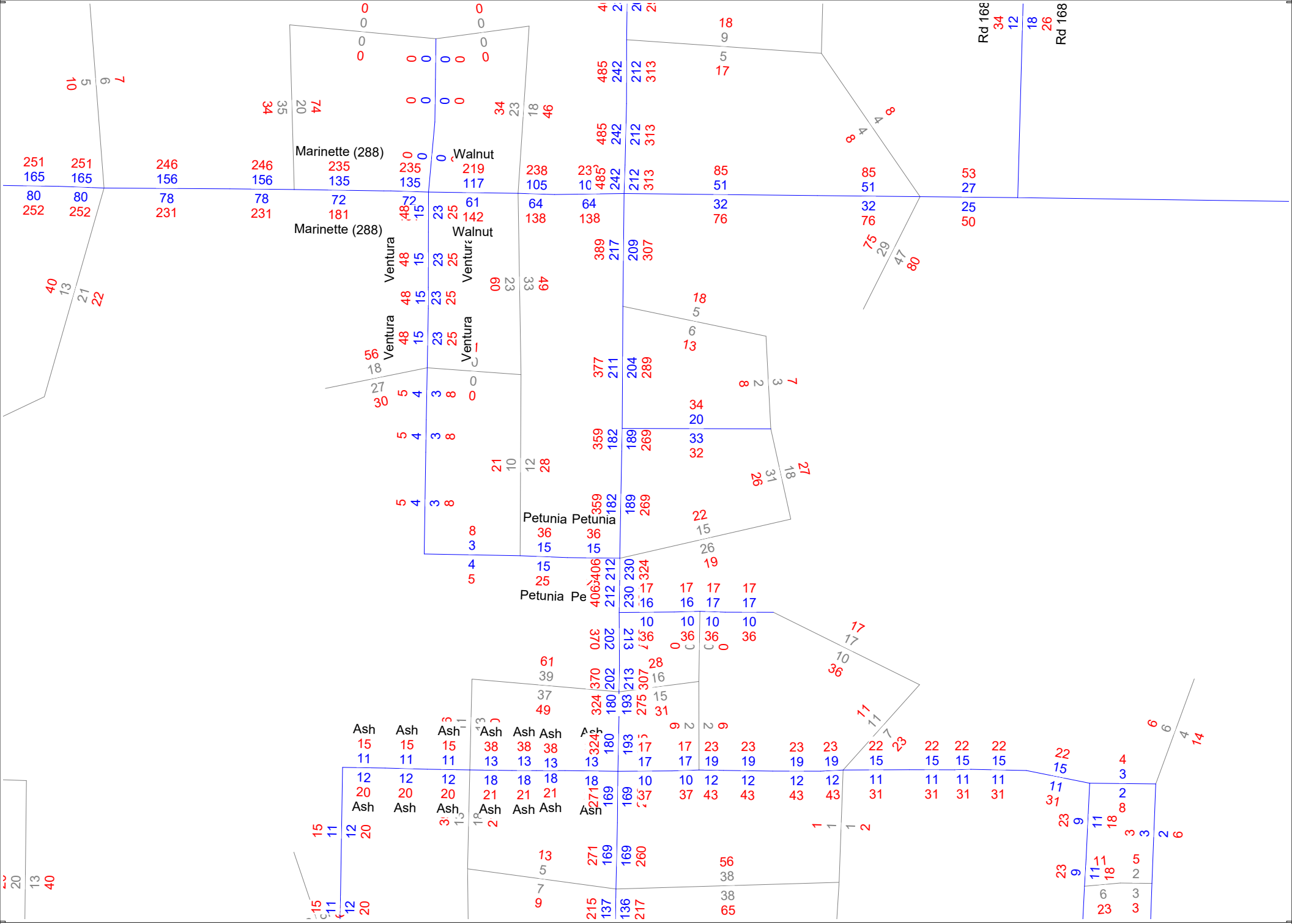
TULARE COUNTY TRAVEL MODEL OUTPUT

Base Year Model Output



2019 Tulare County Travel Model
AM and PM Peak-Hour Traffic Volumes

Horizon Year Model Output



2042 Tulare County Travel Model
AM and PM Peak-Hour Traffic Volumes

APPENDIX B

TRAFFIC COUNT DATA SHEETS

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION Farmersville Rd @ Walnut Ave
COUNTY Tulare
COLLECTION DATE Tuesday, May 3, 2022

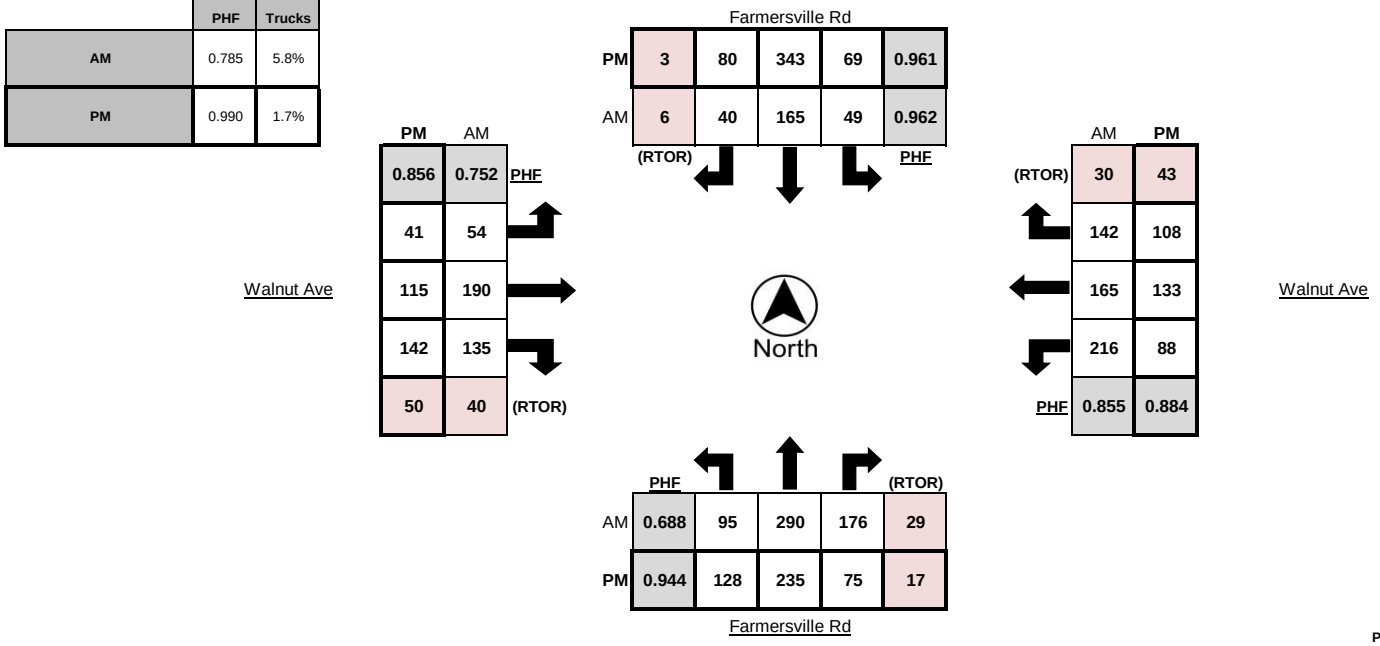
LATITUDE 36.3123
LONGITUDE -119.2070
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**
7:00 AM - 7:15 AM	7	55	8	4	5	10	33	6	1	9	9	21	17	5	3	12	22	10	4	5
7:15 AM - 7:30 AM	18	52	12	2	7	14	41	8	1	12	9	45	34	10	5	24	26	32	6	3
7:30 AM - 7:45 AM	21	81	35	7	7	17	42	7	3	8	16	63	47	16	6	60	33	51	10	4
7:45 AM - 8:00 AM	25	82	97	8	7	12	43	10	1	12	22	64	39	9	5	63	55	35	8	1
8:00 AM - 8:15 AM	31	75	32	12	8	6	39	15	1	11	7	18	15	5	3	69	51	24	6	1
8:15 AM - 8:30 AM	24	54	10	3	8	7	38	4	1	8	6	12	18	6	4	18	22	18	7	1
8:30 AM - 8:45 AM	19	44	9	5	6	7	45	14	0	12	7	25	20	8	1	12	15	9	5	0
8:45 AM - 9:00 AM	21	48	9	6	9	5	45	7	2	8	5	18	13	6	0	12	21	13	7	2
TOTAL	**166**	**491**	**212**	**47**	**57**	**78**	**326**	**71**	**10**	**80**	**81**	**266**	**203**	**65**	**27**	**270**	**245**	**192**	**53**	**17**

	Northbound					Southbound					Eastbound					Westbound				
Time	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**
4:00 PM - 4:15 PM	28	61	19	6	3	10	88	27	3	2	10	26	39	16	0	22	29	24	10	3
4:15 PM - 4:30 PM	34	62	12	1	3	23	90	12	0	1	13	27	30	11	1	24	37	29	11	3
4:30 PM - 4:45 PM	31	47	28	6	2	20	83	25	0	0	9	25	32	13	0	21	40	32	12	3
4:45 PM - 5:00 PM	35	65	16	4	0	16	82	16	0	1	9	37	41	10	1	21	27	23	10	3
5:00 PM - 5:15 PM	39	65	19	7	3	9	54	23	2	0	5	27	35	17	0	25	35	19	4	4
5:15 PM - 5:30 PM	38	47	13	2	1	19	71	18	4	1	13	21	40	14	0	21	28	25	8	2
5:30 PM - 5:45 PM	32	65	21	4	0	14	66	9	1	0	7	27	21	10	1	27	33	23	7	2
5:45 PM - 6:00 PM	22	47	16	3	0	17	67	17	2	1	14	27	42	17	0	26	25	12	5	1
TOTAL	**259**	**459**	**144**	**33**	**12**	**128**	**601**	**147**	**12**	**6**	**80**	**217**	**280**	**108**	**3**	**187**	**254**	**187**	**67**	**21**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**	**Left**	**Thru**	**Right**	**(RTOR)**	**Trucks**
7:15 AM - 8:15 AM	95	290	176	29	29	49	165	40	6	43	54	190	135	40	19	216	165	142	30	9
4:00 PM - 5:00 PM	128	235	75	17	8	69	343	80	3	4	41	115	142	50	2	88	133	108	43	12

	PHF	Trucks
AM	0.785	5.8%
PM	0.990	1.7%



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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

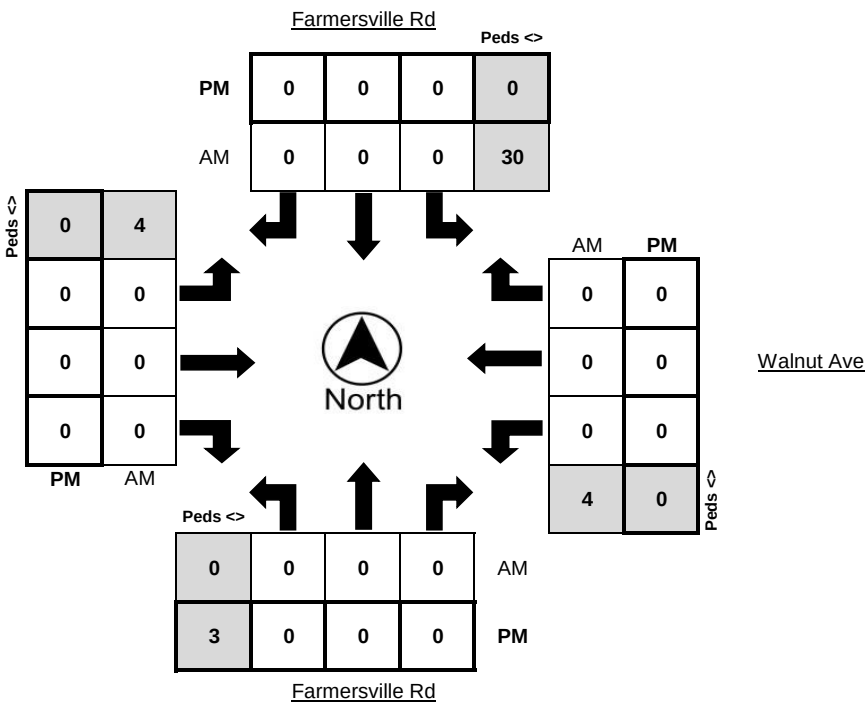
LOCATION Farmersville Rd @ Walnut Ave
LATITUDE 36.3123
COUNTY Tulare
LONGITUDE -119.2070
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	5	0	0	0	0	0	0	0	3	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM - 8:00 AM	0	0	0	14	0	0	0	0	0	0	0	1	0	0	0	1
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**31**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**4**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	0	0	30	0	0	0	0	0	0	0	4	0	0	0	4
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	38
PM Peak Total	**0**	**3**



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Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

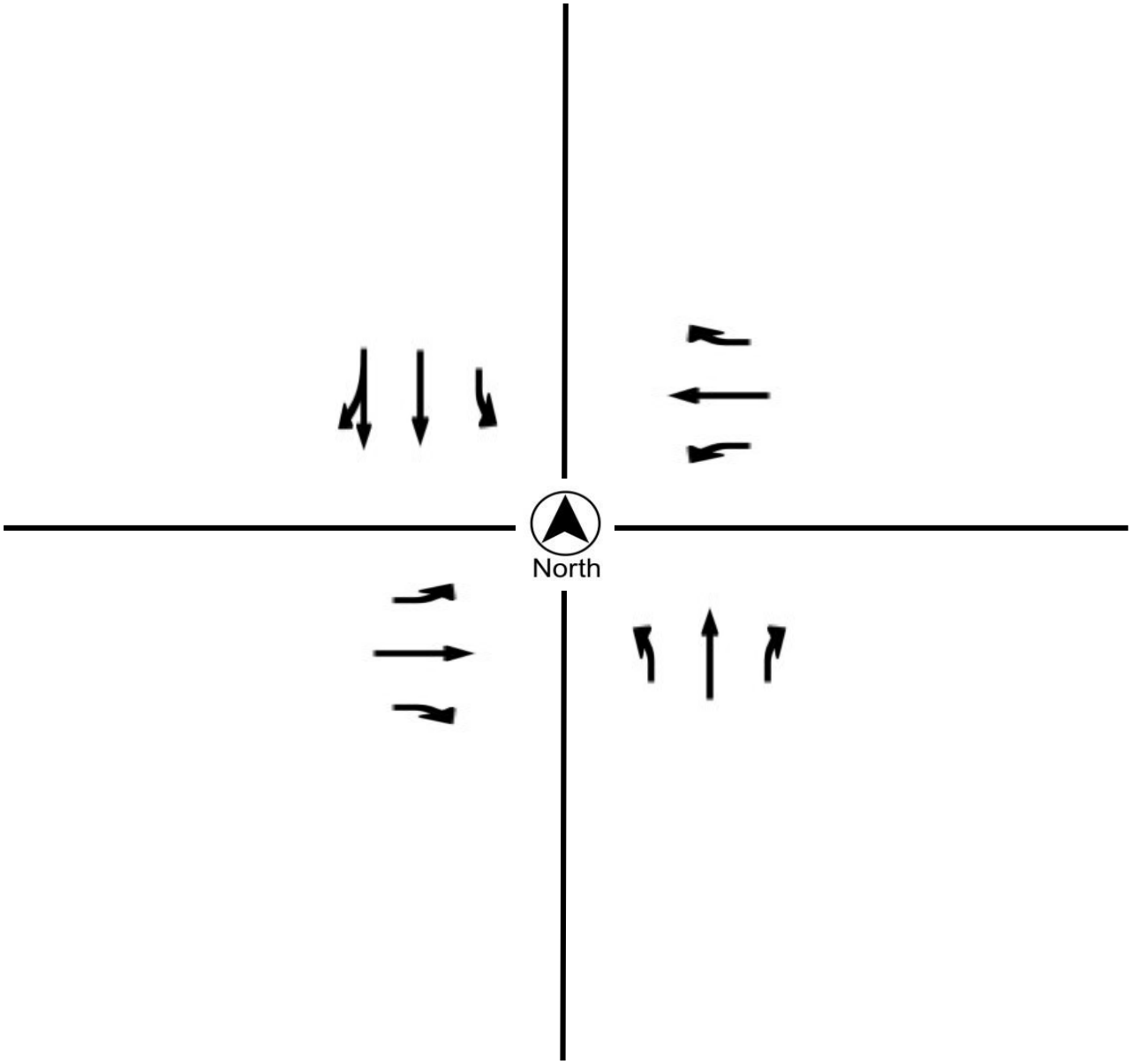
Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION	Farmersville Rd @ Walnut Ave	**N/S STREET**	Farmersville Rd
COUNTY	Tulare	**E/W STREET**	Walnut Ave
COLLECTION DATE	Tuesday, May 3, 2022	**WEATHER**	Clear
CYCLE TIME	89 Seconds	**CONTROL TYPE**	Signal

COMMENTS All approaches have protected left turns.



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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

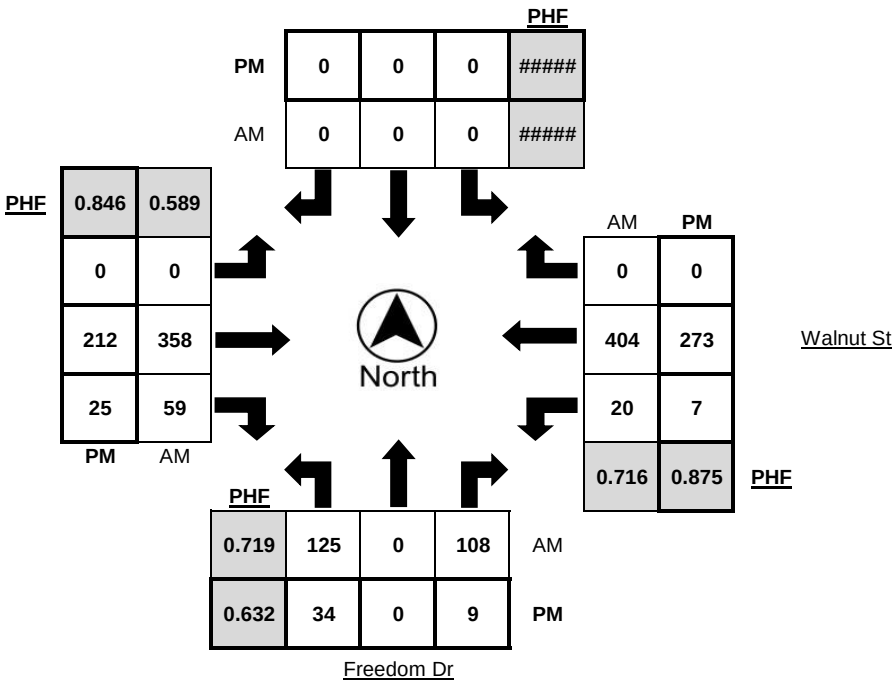
LOCATION Freedom Dr @ Walnut St
LATITUDE 36.3122
COUNTY Tulare
LONGITUDE -119.2027
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	7	0	3	0	0	0	0	0	0	31	8	2	6	44	0	4
7:15 AM - 7:30 AM	26	0	5	0	0	0	0	0	0	47	9	3	4	58	0	3
7:30 AM - 7:45 AM	40	0	19	0	0	0	0	0	0	98	31	2	2	109	0	5
7:45 AM - 8:00 AM	23	0	58	0	0	0	0	0	0	163	14	1	10	138	0	1
8:00 AM - 8:15 AM	36	0	26	0	0	0	0	0	0	50	5	0	4	99	0	1
8:15 AM - 8:30 AM	6	0	0	0	0	0	0	0	0	26	1	0	0	48	0	1
8:30 AM - 8:45 AM	2	0	0	0	0	0	0	0	0	36	2	1	0	31	0	0
8:45 AM - 9:00 AM	2	0	2	0	0	0	0	0	0	27	1	1	1	45	0	2
TOTAL	**142**	**0**	**113**	**0**	**0**	**0**	**0**	**0**	**0**	**478**	**71**	**10**	**27**	**572**	**0**	**17**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	3	0	2	0	0	0	0	0	0	49	3	0	0	74	0	3
4:15 PM - 4:30 PM	8	0	3	0	0	0	0	0	0	53	5	0	2	67	0	3
4:30 PM - 4:45 PM	9	0	1	0	0	0	0	0	0	68	2	0	3	77	0	3
4:45 PM - 5:00 PM	14	0	3	0	0	0	0	0	0	42	15	0	2	55	0	4
5:00 PM - 5:15 PM	11	0	1	0	0	0	0	0	0	41	5	1	0	54	0	4
5:15 PM - 5:30 PM	7	0	4	0	0	0	0	0	0	40	5	0	1	65	0	2
5:30 PM - 5:45 PM	7	0	0	0	0	0	0	0	0	45	9	0	1	62	0	2
5:45 PM - 6:00 PM	14	0	1	0	0	0	0	0	0	34	14	0	2	44	0	1
TOTAL	**73**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**372**	**58**	**1**	**11**	**498**	**0**	**22**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	125	0	108	0	0	0	0	0	0	358	59	6	20	404	0	10
4:00 PM - 5:00 PM	34	0	9	0	0	0	0	0	0	212	25	0	7	273	0	13

	PHF	Trucks
AM	0.661	1.5%
PM	0.875	2.3%



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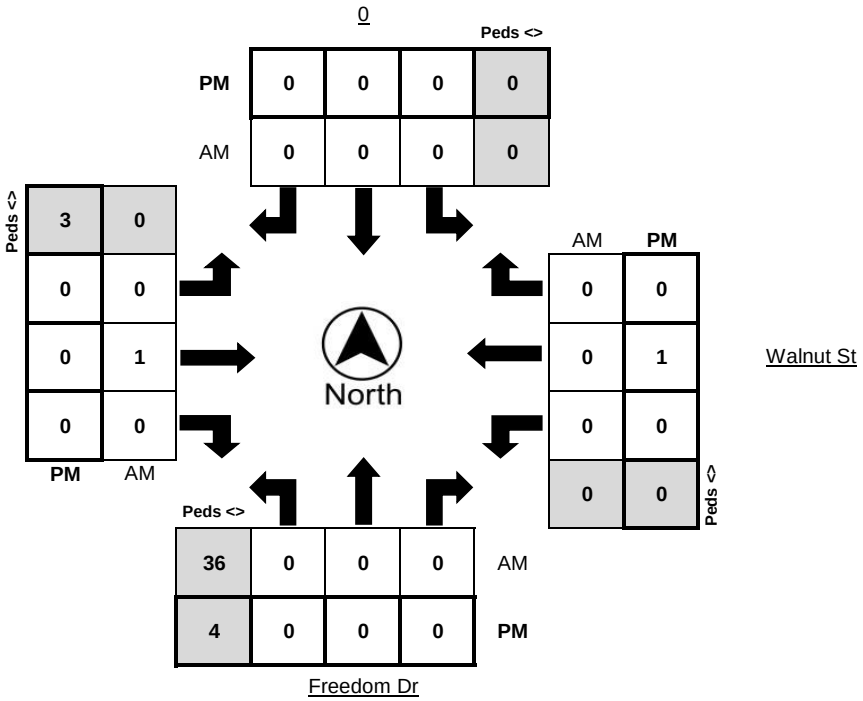
LOCATION Freedom Dr @ Walnut St
LATITUDE 36.3122
COUNTY Tulare
LONGITUDE -119.2027
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7	0	1	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**38**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**9**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	36	0	1	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	3

	Bikes	Peds
AM Peak Total	1	36
PM Peak Total	**1**	**7**



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

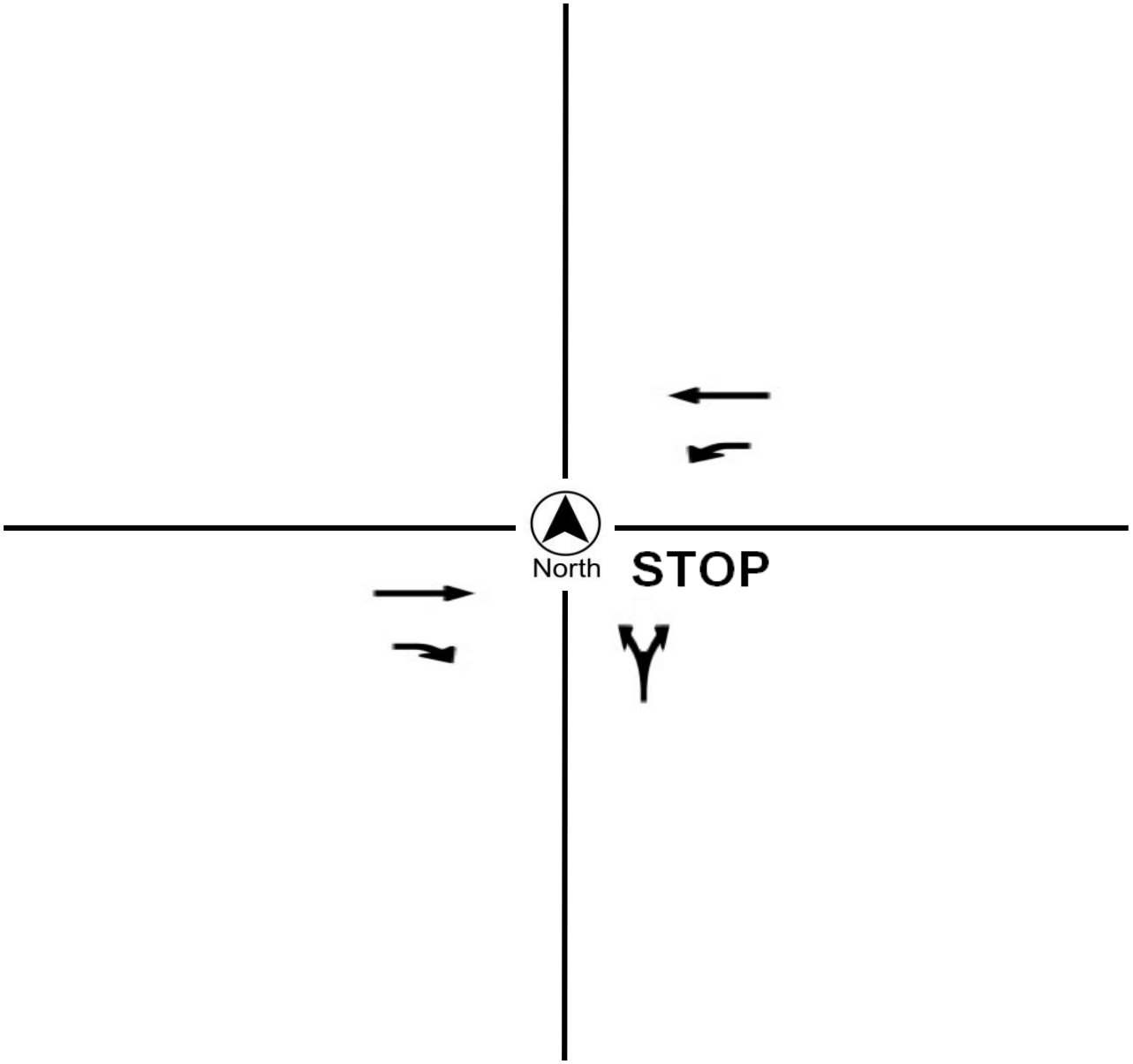
Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

LOCATION	Freedom Dr @ Walnut St	**N/S STREET**	Freedom Dr
COUNTY	Tulare	**E/W STREET**	Walnut St
COLLECTION DATE	Tuesday, May 3, 2022	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	One-Way Stop

COMMENTS



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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

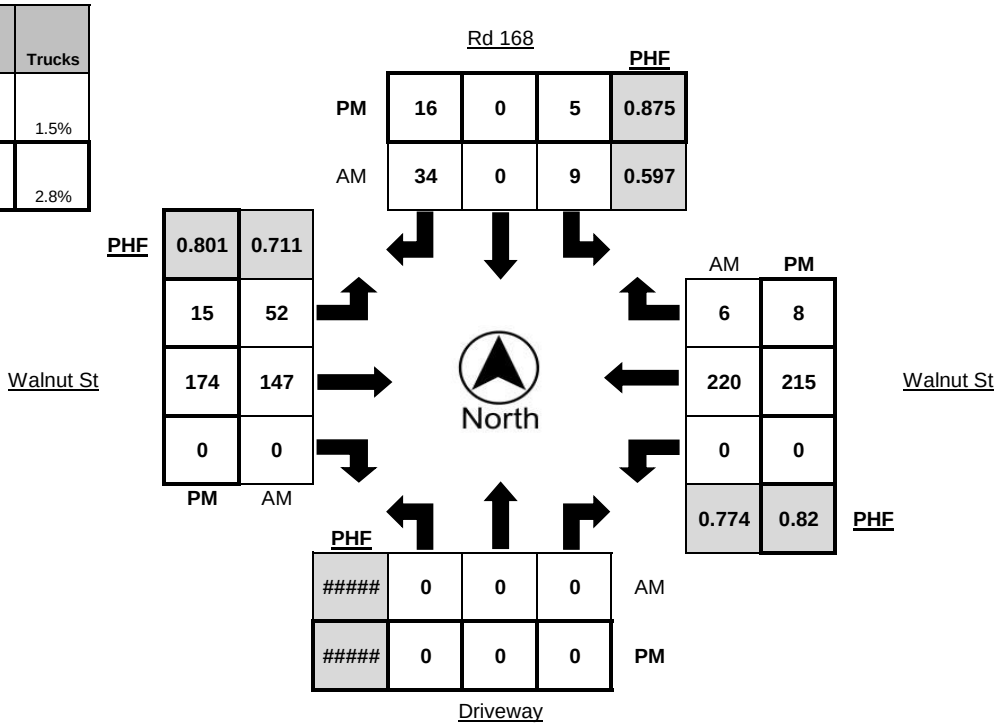
LOCATION Rd 168 @ Walnut St
LATITUDE 36.3122
COUNTY Tulare
LONGITUDE -119.1982
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	0	0	0	0	3	0	6	2	4	18	0	0	0	39	0	0
7:15 AM - 7:30 AM	0	0	0	0	2	0	3	0	4	28	0	1	0	50	2	1
7:30 AM - 7:45 AM	0	0	0	0	2	0	7	0	8	44	0	1	0	71	2	2
7:45 AM - 8:00 AM	0	0	0	0	4	0	14	0	20	50	0	0	0	60	1	1
8:00 AM - 8:15 AM	0	0	0	0	1	0	10	0	20	25	0	0	0	39	1	1
8:15 AM - 8:30 AM	1	0	0	0	0	0	1	0	2	18	0	0	0	38	2	2
8:30 AM - 8:45 AM	0	0	0	0	0	0	4	0	3	26	1	1	0	26	0	0
8:45 AM - 9:00 AM	1	0	0	0	1	0	1	0	1	21	0	0	0	37	1	2
TOTAL	**2**	**0**	**0**	**0**	**13**	**0**	**46**	**2**	**62**	**230**	**1**	**3**	**0**	**360**	**9**	**9**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	0	0	0	1	0	5	0	6	34	0	0	0	55	1	3
4:15 PM - 4:30 PM	0	0	0	0	1	0	4	0	1	47	0	0	0	53	1	3
4:30 PM - 4:45 PM	0	0	0	0	3	0	3	0	4	55	0	0	0	65	3	3
4:45 PM - 5:00 PM	0	0	0	0	0	0	4	0	4	38	0	0	0	42	3	3
5:00 PM - 5:15 PM	0	0	0	0	2	0	3	0	2	37	0	1	0	42	1	4
5:15 PM - 5:30 PM	0	0	0	0	1	0	5	0	1	39	0	0	0	56	3	2
5:30 PM - 5:45 PM	0	0	0	0	1	0	1	0	1	34	0	0	0	54	1	2
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	5	26	0	0	0	36	0	1
TOTAL	**0**	**0**	**0**	**0**	**9**	**0**	**25**	**0**	**24**	**310**	**0**	**1**	**0**	**403**	**13**	**21**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	0	0	0	0	9	0	34	0	52	147	0	2	0	220	6	5
4:00 PM - 5:00 PM	0	0	0	0	5	0	16	0	15	174	0	0	0	215	8	12

	PHF	Trucks
AM	0.785	1.5%
PM	0.814	2.8%



Metro Traffic Data Inc.
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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

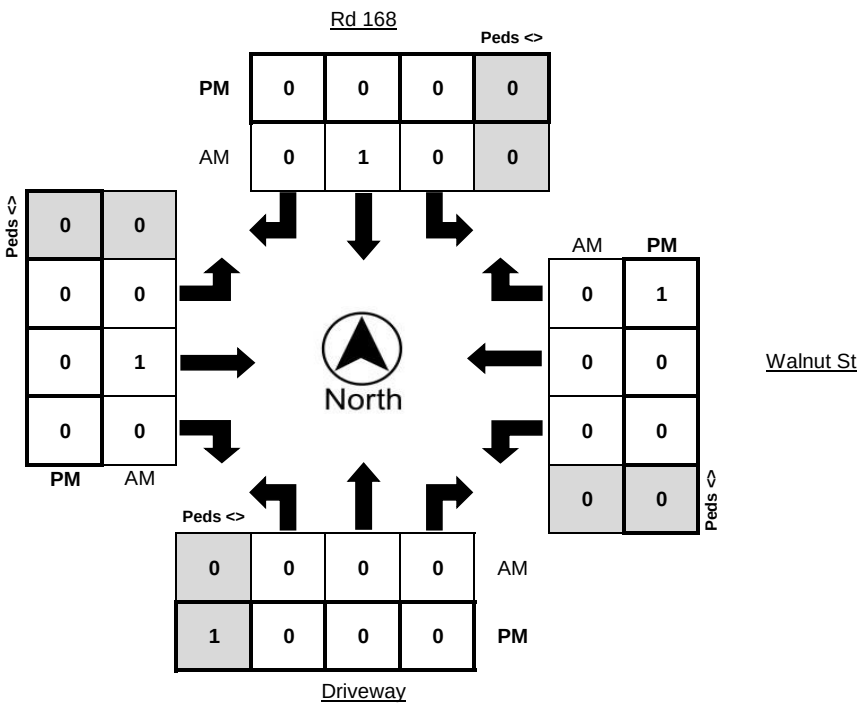
LOCATION Rd 168 @ Walnut St
LATITUDE 36.3122
COUNTY Tulare
LONGITUDE -119.1982
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0

	Bikes	Peds
AM Peak Total	2	0
PM Peak Total	**1**	**1**



Metro Traffic Data Inc.
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Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

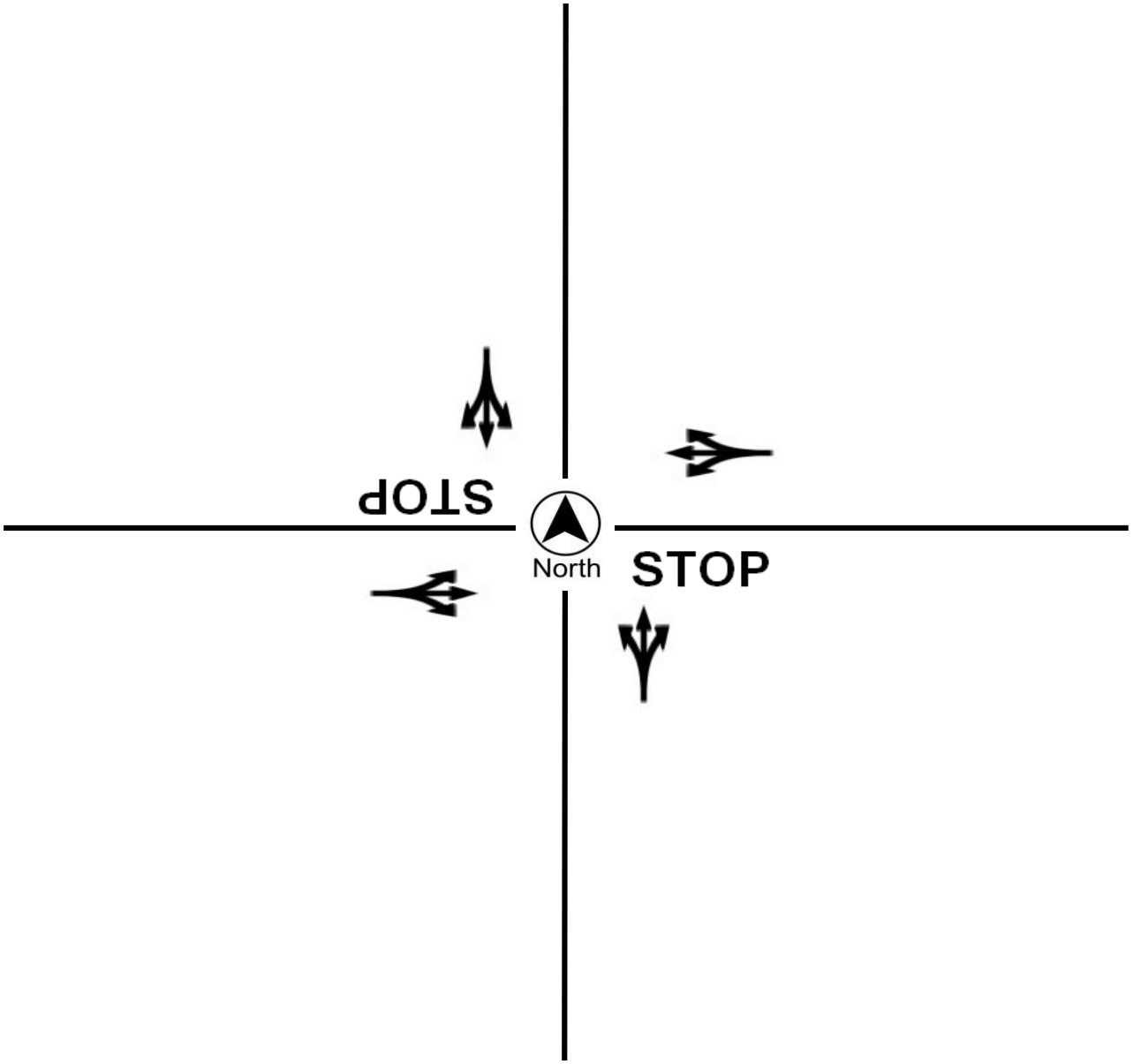
Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

LOCATION	Rd 168 @ Walnut St	**N/S STREET**	Rd 168
COUNTY	Tulare	**E/W STREET**	Walnut St
COLLECTION DATE	Tuesday, May 3, 2022	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	Two-Way Stop

COMMENTS



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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

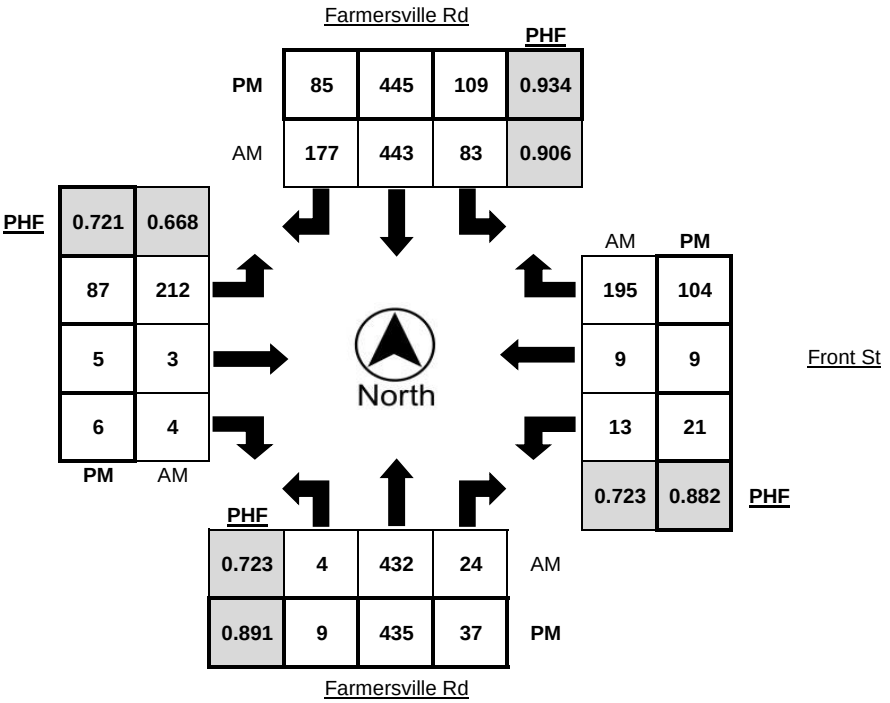
LOCATION Farmersville Rd @ Front St
LATITUDE 36.3047
COUNTY Tulare
LONGITUDE -119.2071
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	1	40	1	2	5	50	9	10	12	0	0	2	0	1	22	1
7:15 AM - 7:30 AM	1	73	1	2	18	95	36	10	35	0	1	7	4	2	35	0
7:30 AM - 7:45 AM	1	126	3	2	11	125	51	8	54	1	2	5	2	5	54	0
7:45 AM - 8:00 AM	0	148	11	3	26	118	50	6	81	1	0	5	3	2	70	1
8:00 AM - 8:15 AM	2	85	9	1	28	105	40	8	42	1	1	5	4	0	36	0
8:15 AM - 8:30 AM	0	78	6	2	14	63	15	8	15	0	1	6	3	1	13	1
8:30 AM - 8:45 AM	1	47	3	1	24	59	16	8	13	0	0	4	4	0	12	0
8:45 AM - 9:00 AM	0	58	6	5	14	60	9	6	23	2	1	0	1	2	18	0
TOTAL	**6**	**655**	**40**	**18**	**140**	**675**	**226**	**64**	**275**	**5**	**6**	**34**	**21**	**13**	**260**	**3**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	2	97	14	2	28	124	20	1	18	3	2	0	7	2	18	0
4:15 PM - 4:30 PM	0	116	9	1	28	123	20	3	12	0	1	0	5	3	26	2
4:30 PM - 4:45 PM	4	91	9	2	24	102	24	0	24	2	2	0	3	1	28	1
4:45 PM - 5:00 PM	2	103	12	0	35	108	27	2	32	1	1	0	3	2	25	0
5:00 PM - 5:15 PM	3	125	7	3	22	112	14	0	19	2	2	1	10	3	25	0
5:15 PM - 5:30 PM	0	99	7	1	18	97	14	1	16	4	0	0	4	0	17	0
5:30 PM - 5:45 PM	0	93	7	0	23	86	23	3	28	0	2	0	4	1	26	0
5:45 PM - 6:00 PM	5	90	7	0	25	98	29	1	27	3	1	1	6	3	21	0
TOTAL	**16**	**814**	**72**	**9**	**203**	**850**	**171**	**11**	**176**	**15**	**11**	**2**	**42**	**15**	**186**	**3**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	4	432	24	8	83	443	177	32	212	3	4	22	13	9	195	1
4:15 PM - 5:15 PM	9	435	37	6	109	445	85	5	87	5	6	1	21	9	104	3

	PHF	Trucks
AM	0.784	3.9%
PM	0.963	1.1%



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www.metrotrafficdata.com

Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

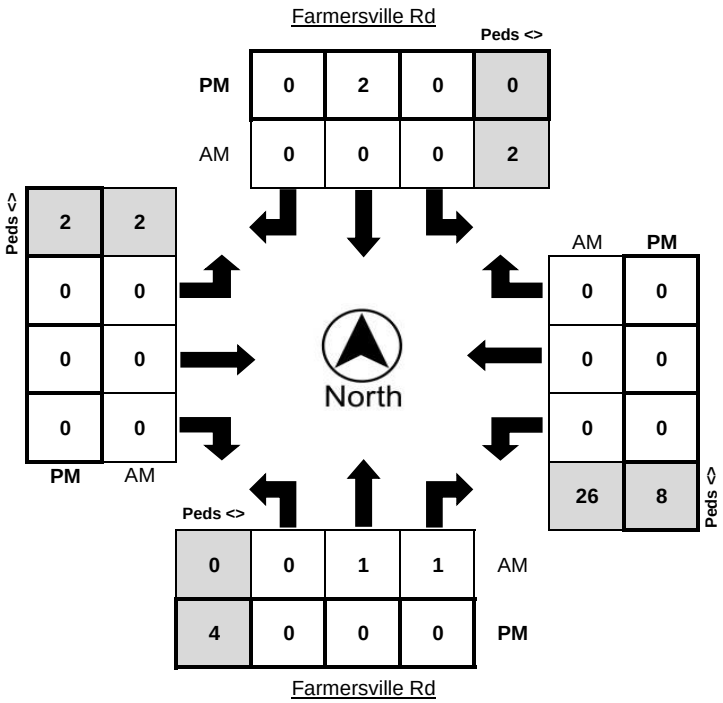
LOCATION Farmersville Rd @ Front St
LATITUDE 36.3047
COUNTY Tulare
LONGITUDE -119.2071
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7:15 AM - 7:30 AM	0	1	1	0	0	0	0	0	0	0	0	4	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	2	0	0	0	0	0	0	0	13	0	0	0	1
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
TOTAL	**0**	**2**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**27**	**0**	**0**	**0**	**2**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	1	0	3	0	0	0	16	0	0	0	3
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1
4:45 PM - 5:00 PM	0	0	0	0	0	2	0	1	0	0	0	2	0	0	0	1
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0
5:15 PM - 5:30 PM	0	1	0	0	0	1	0	0	0	0	0	2	0	0	0	2
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM - 6:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
TOTAL	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**7**	**0**	**0**	**0**	**27**	**0**	**0**	**0**	**9**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	1	1	2	0	0	0	0	0	0	0	26	0	0	0	2
4:15 PM - 5:15 PM	0	0	0	0	0	2	0	4	0	0	0	8	0	0	0	2

	Bikes	Peds
AM Peak Total	2	30
PM Peak Total	**2**	**14**



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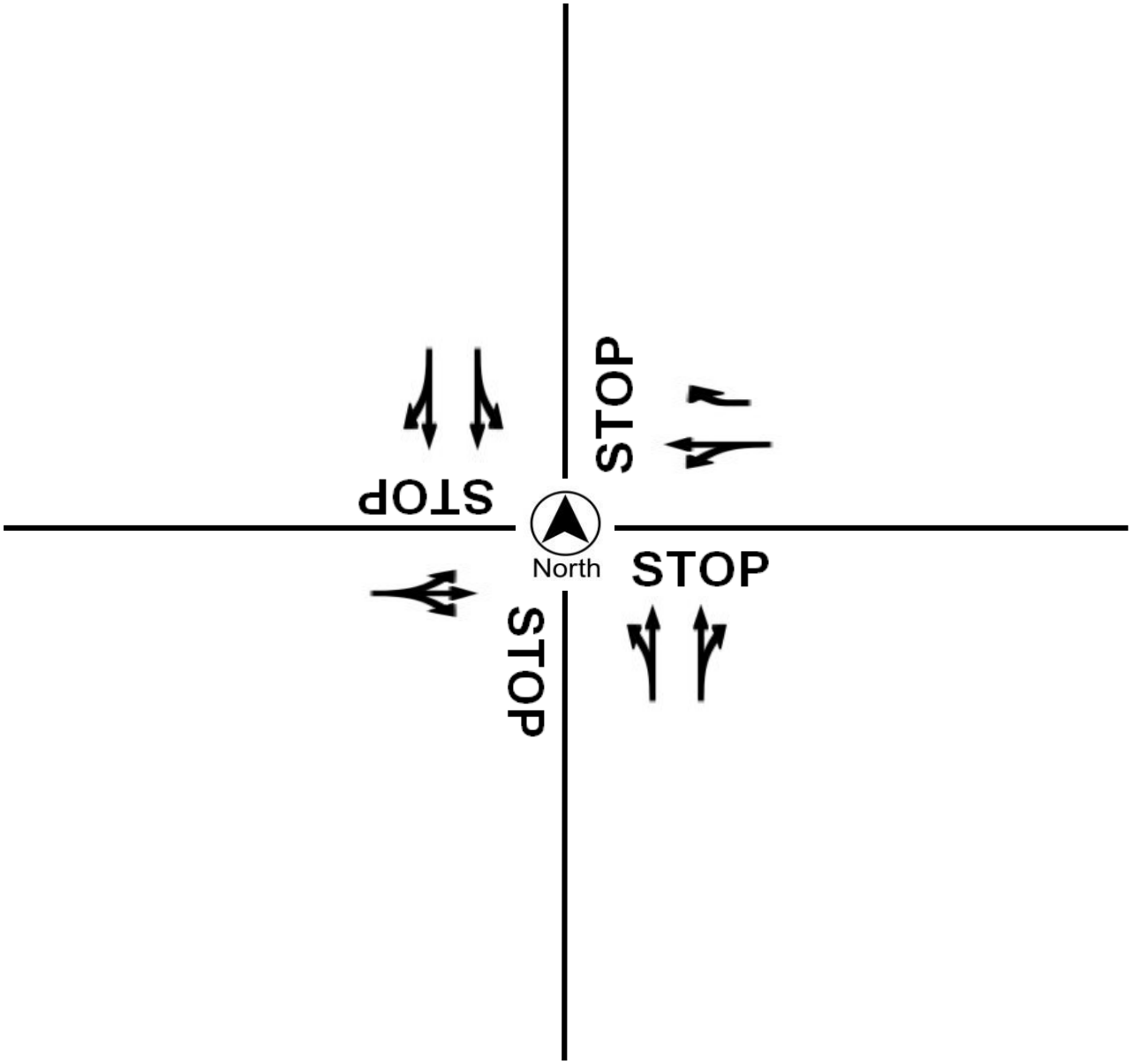
Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

LOCATION	Farmersville Rd @ Front St	**N/S STREET**	Farmersville Rd
COUNTY	Tulare	**E/W STREET**	Front St
COLLECTION DATE	Tuesday, May 3, 2022	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	All-Way Stop

COMMENTS



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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

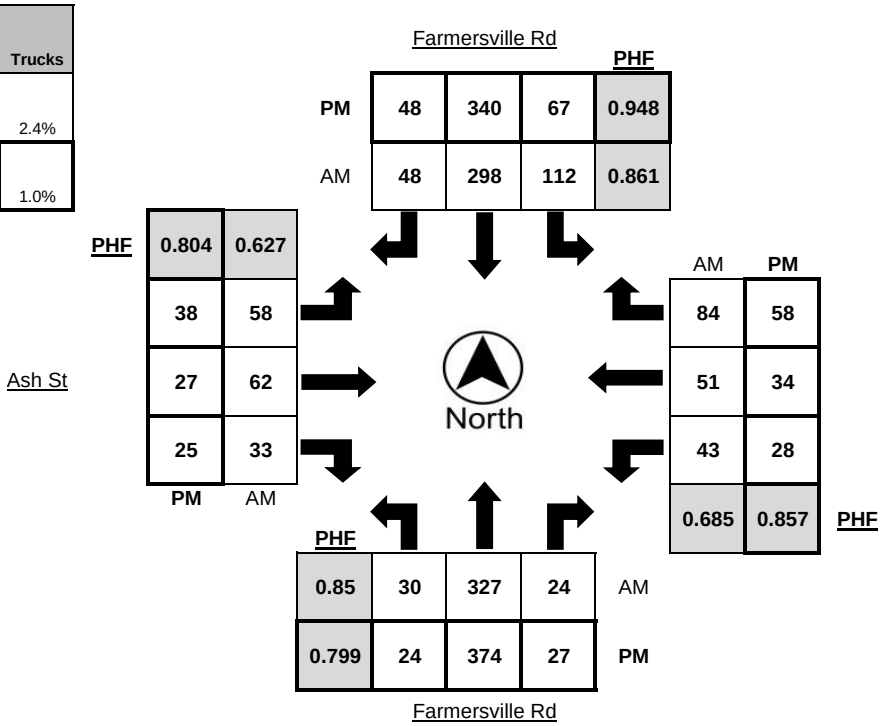
LOCATION Farmersville Rd @ Ash St
LATITUDE 36.3018
COUNTY Tulare
LONGITUDE -119.2071
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	2	32	4	2	7	40	2	4	3	2	2	0	6	5	7	0
7:15 AM - 7:30 AM	3	64	7	1	28	63	8	4	7	8	3	2	7	5	14	1
7:30 AM - 7:45 AM	10	89	7	3	34	86	13	2	16	23	16	2	9	19	26	2
7:45 AM - 8:00 AM	9	98	5	1	33	72	13	4	27	24	10	1	17	21	27	1
8:00 AM - 8:15 AM	8	76	5	0	17	77	14	3	8	7	4	1	10	6	17	0
8:15 AM - 8:30 AM	6	66	7	2	6	53	8	3	5	4	5	0	4	4	8	2
8:30 AM - 8:45 AM	2	34	3	0	2	47	6	2	5	2	3	0	4	1	16	0
8:45 AM - 9:00 AM	5	44	4	5	7	49	7	3	1	2	2	0	7	2	12	0
TOTAL	**45**	**503**	**42**	**14**	**134**	**487**	**71**	**25**	**72**	**72**	**45**	**6**	**64**	**63**	**127**	**6**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	7	99	7	2	22	96	8	0	7	10	1	1	9	7	6	1
4:15 PM - 4:30 PM	6	90	5	1	21	75	17	3	12	5	2	0	3	5	18	0
4:30 PM - 4:45 PM	7	77	6	2	11	88	14	0	9	7	9	0	10	7	8	0
4:45 PM - 5:00 PM	6	90	5	0	11	87	11	2	12	6	10	0	6	11	17	0
5:00 PM - 5:15 PM	5	117	11	3	24	90	6	0	5	9	4	0	9	11	15	0
5:15 PM - 5:30 PM	2	72	9	1	17	69	9	1	12	7	5	0	9	1	18	0
5:30 PM - 5:45 PM	12	73	5	0	17	67	9	2	10	4	12	0	7	5	14	0
5:45 PM - 6:00 PM	7	79	11	0	16	74	8	0	9	3	4	0	3	3	17	0
TOTAL	**52**	**697**	**59**	**9**	**139**	**646**	**82**	**8**	**76**	**51**	**47**	**1**	**56**	**50**	**113**	**1**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	30	327	24	5	112	298	48	13	58	62	33	6	43	51	84	4
4:15 PM - 5:15 PM	24	374	27	6	67	340	48	5	38	27	25	0	28	34	58	0

	PHF	Trucks
AM	0.822	2.4%
PM	0.891	1.0%



Metro Traffic Data Inc.
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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

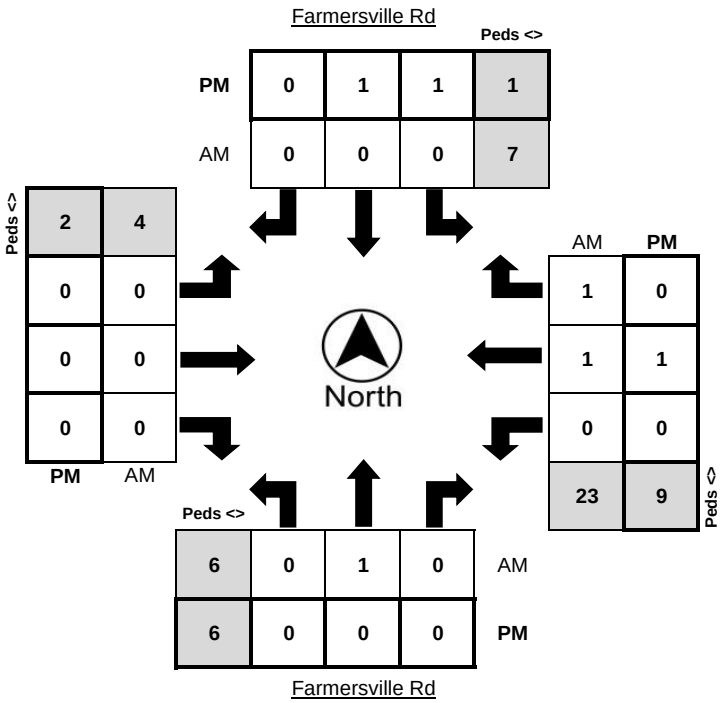
LOCATION Farmersville Rd @ Ash St
LATITUDE 36.3018
COUNTY Tulare
LONGITUDE -119.2071
COLLECTION DATE Tuesday, May 3, 2022
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	1
7:15 AM - 7:30 AM	0	1	0	1	0	0	0	4	0	0	0	9	0	1	1	3
7:30 AM - 7:45 AM	0	0	0	5	0	0	0	2	0	0	0	9	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
8:30 AM - 8:45 AM	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	3
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL	**0**	**3**	**0**	**7**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**28**	**0**	**1**	**1**	**8**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	1	0	0	0	0	0	0	12	0	0	0	3
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	1	1	1	0	4	0	0	0	1	0	1	0	1
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	2	0	0	0	0	0	0	0	1	0	2	1	0
5:30 PM - 5:45 PM	1	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**1**	**1**	**0**	**4**	**2**	**1**	**0**	**6**	**0**	**1**	**0**	**23**	**0**	**3**	**1**	**5**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	1	0	7	0	0	0	6	0	0	0	23	0	1	1	4
4:15 PM - 5:15 PM	0	0	0	1	1	1	0	6	0	0	0	9	0	1	0	2

	Bikes	Peds
AM Peak Total	3	40
PM Peak Total	**3**	**18**



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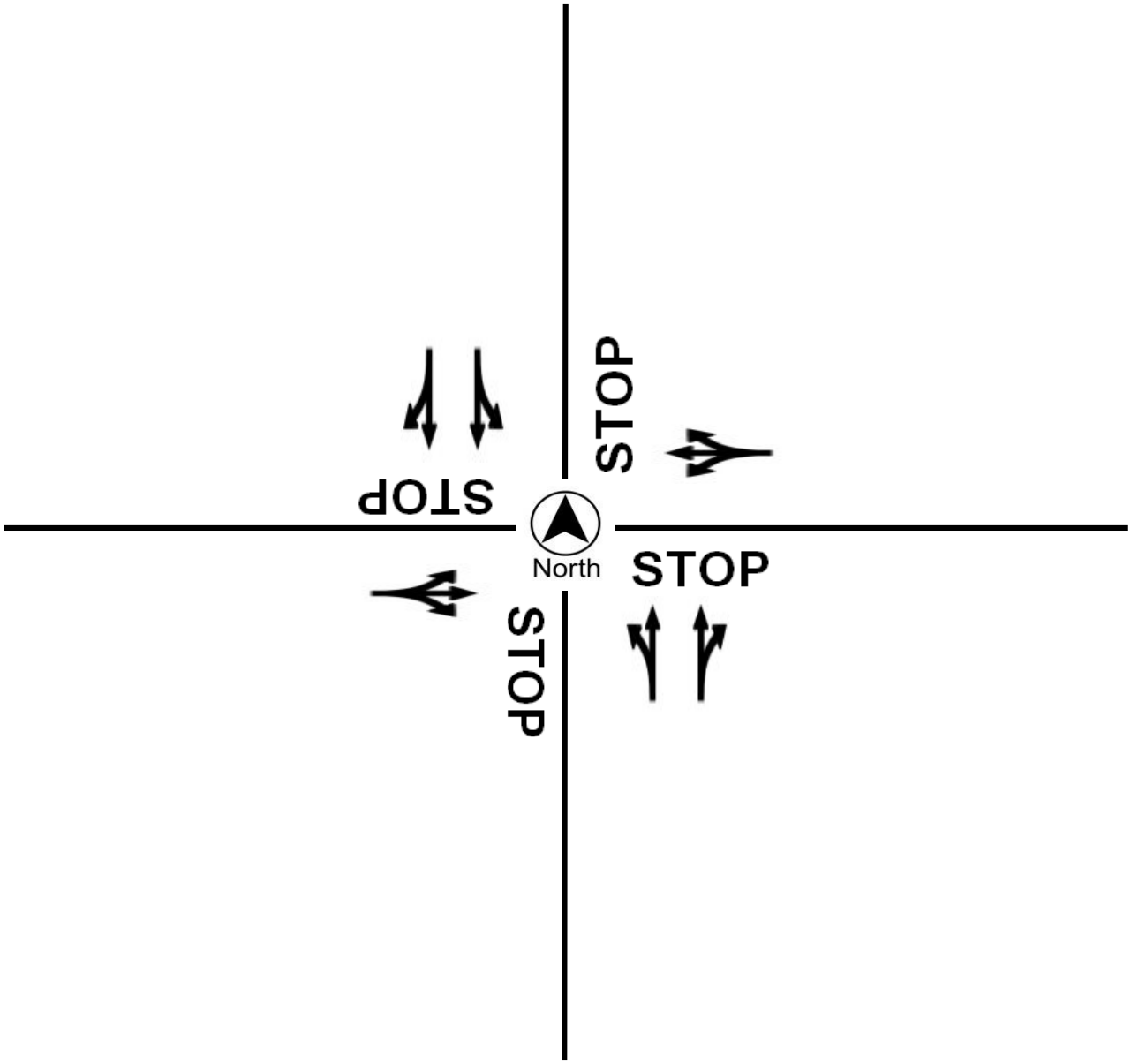
Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Avenue
Clovis, CA 93612

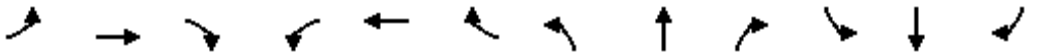
LOCATION	Farmersville Rd @ Ash St	**N/S STREET**	Farmersville Rd
COUNTY	Tulare	**E/W STREET**	Ash St
COLLECTION DATE	Tuesday, May 3, 2022	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	All-Way Stop

COMMENTS



APPENDIX C

INTERSECTION ANALYSIS SHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	190	135	216	165	142	95	290	176	49	165	40
Future Volume (veh/h)	54	190	135	216	165	142	95	290	176	49	165	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.93	1.00		0.91	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	68	241	120	273	209	142	120	367	186	62	209	29
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	94	401	318	326	646	507	153	480	370	89	684	93
Arrive On Green	0.05	0.22	0.22	0.19	0.36	0.36	0.09	0.27	0.27	0.05	0.23	0.23
Sat Flow, veh/h	1725	1811	1438	1725	1811	1422	1725	1811	1394	1725	2997	406
Grp Volume(v), veh/h	68	241	120	273	209	142	120	367	186	62	118	120
Grp Sat Flow(s),veh/h/ln	1725	1811	1438	1725	1811	1422	1725	1811	1394	1725	1721	1683
Q Serve(g_s), s	2.5	7.8	4.6	10.0	5.5	4.7	4.5	12.2	7.4	2.3	3.7	3.9
Cycle Q Clear(g_c), s	2.5	7.8	4.6	10.0	5.5	4.7	4.5	12.2	7.4	2.3	3.7	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	94	401	318	326	646	507	153	480	370	89	393	384
V/C Ratio(X)	0.73	0.60	0.38	0.84	0.32	0.28	0.78	0.76	0.50	0.70	0.30	0.31
Avail Cap(c_a), veh/h	245	501	398	528	798	627	264	751	578	158	608	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	22.9	21.6	25.5	15.3	15.0	29.2	22.1	20.4	30.5	20.9	21.0
Incr Delay (d2), s/veh	10.2	1.4	0.7	6.3	0.3	0.3	8.5	2.6	1.1	9.3	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	5.7	2.7	7.7	3.6	2.4	3.8	8.9	4.1	2.1	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	24.3	22.4	31.9	15.6	15.3	37.7	24.7	21.4	39.8	21.3	21.4
LnGrp LOS	D	C	C	C	B	B	D	C	C	D	C	C
Approach Vol, veh/h		429			624			673			300	
Approach Delay, s/veh		26.3			22.6			26.1			25.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	22.2	16.4	19.4	9.8	19.8	7.5	28.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	6.0	27.1	20.0	18.1	10.0	23.1	9.3	28.8
Max Q Clear Time (g_c+I1), s	4.3	14.2	12.0	9.8	6.5	5.9	4.5	7.5
Green Ext Time (p_c), s	0.0	2.5	0.5	1.1	0.1	1.2	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	68	241	171	273	209	180	120	367	223	62	260
v/c Ratio	0.37	0.68	0.41	0.72	0.33	0.30	0.56	0.74	0.42	0.43	0.32
Control Delay	41.9	41.2	8.8	41.6	23.4	5.3	47.0	35.7	6.2	48.7	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	41.2	8.8	41.6	23.4	5.3	47.0	35.7	6.2	48.7	23.4
Queue Length 50th (ft)	33	114	0	128	80	0	58	168	0	31	50
Queue Length 95th (ft)	67	174	35	194	127	29	106	232	31	65	74
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	229	470	498	493	748	669	246	704	666	148	1104
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.51	0.34	0.55	0.28	0.27	0.49	0.52	0.33	0.42	0.24

Intersection Summary

Intersection	
Int Delay, s/veh	64

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	358	59	20	404	125	108
Future Vol, veh/h	358	59	20	404	125	108
Conflicting Peds, #/hr	0	36	36	0	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	542	89	30	612	189	164

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	667	0	1286	614
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	708	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	923	-	~ 181	492
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	488	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	891	-	~ 163	459
Mov Cap-2 Maneuver	-	-	-	-	~ 163	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	455	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	294.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	232	-	-	891	-
HCM Lane V/C Ratio	1.522	-	-	0.034	-
HCM Control Delay (s)	294.1	-	-	9.2	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	21.3	-	-	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	52	147	1	1	220	6	1	1	1	9	1	34
Future Vol, veh/h	52	147	1	1	220	6	1	1	1	9	1	34
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	186	1	1	278	8	1	1	1	11	1	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	287	0	0	188	0	0	627	609	189	606	605	284
Stage 1	-	-	-	-	-	-	320	320	-	285	285	-
Stage 2	-	-	-	-	-	-	307	289	-	321	320	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1275	-	-	1386	-	-	396	410	853	409	412	755
Stage 1	-	-	-	-	-	-	692	652	-	722	676	-
Stage 2	-	-	-	-	-	-	703	673	-	691	652	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1274	-	-	1385	-	-	355	385	851	388	387	754
Mov Cap-2 Maneuver	-	-	-	-	-	-	355	385	-	388	387	-
Stage 1	-	-	-	-	-	-	651	614	-	679	675	-
Stage 2	-	-	-	-	-	-	660	672	-	648	614	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	13	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	455	1274	-	-	1385	-	-	621
HCM Lane V/C Ratio	0.008	0.052	-	-	0.001	-	-	0.09
HCM Control Delay (s)	13	8	0	-	7.6	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	56.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	212	3	4	13	9	195	4	432	24	83	443	177
Future Vol, veh/h	212	3	4	13	9	195	4	432	24	83	443	177
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	272	4	5	17	12	250	5	554	31	106	568	227
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	33.4	22.8	29.5	92.6
HCM LOS	D	C	D	F

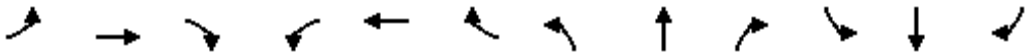
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	97%	59%	0%	27%	0%
Vol Thru, %	98%	90%	1%	41%	0%	73%	56%
Vol Right, %	0%	10%	2%	0%	100%	0%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	220	240	219	22	195	305	399
LT Vol	4	0	212	13	0	83	0
Through Vol	216	216	3	9	0	222	222
RT Vol	0	24	4	0	195	0	177
Lane Flow Rate	282	308	281	28	250	390	511
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.67	0.724	0.719	0.075	0.597	0.931	1.153
Departure Headway (Hd)	8.82	8.738	9.512	9.917	8.878	8.587	8.122
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	412	415	382	364	410	422	450
Service Time	6.52	6.438	7.512	7.617	6.578	6.349	5.884
HCM Lane V/C Ratio	0.684	0.742	0.736	0.077	0.61	0.924	1.136
HCM Control Delay	27.7	31.2	33.4	13.4	23.9	58	119
HCM Lane LOS	D	D	D	B	C	F	F
HCM 95th-tile Q	4.8	5.6	5.4	0.2	3.8	10.4	18.6

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	62	33	43	51	84	30	327	24	112	298	48
Future Vol, veh/h	58	62	33	43	51	84	30	327	24	112	298	48
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	76	40	52	62	102	37	399	29	137	363	59
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	14.5	14.9	15.5	18.3
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	16%	0%	38%	24%	43%	0%
Vol Thru, %	84%	87%	41%	29%	57%	76%
Vol Right, %	0%	13%	22%	47%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	188	153	178	261	197
LT Vol	30	0	58	43	112	0
Through Vol	164	164	62	51	149	149
RT Vol	0	24	33	84	0	48
Lane Flow Rate	236	229	187	217	318	240
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.464	0.439	0.373	0.417	0.625	0.446
Departure Headway (Hd)	7.078	6.906	7.189	6.916	7.072	6.678
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	521	500	519	509	538
Service Time	4.831	4.66	5.245	4.969	4.825	4.43
HCM Lane V/C Ratio	0.465	0.44	0.374	0.418	0.625	0.446
HCM Control Delay	15.9	15	14.5	14.9	21	14.7
HCM Lane LOS	C	B	B	B	C	B
HCM 95th-tile Q	2.4	2.2	1.7	2	4.2	2.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	115	142	88	133	108	128	235	75	69	343	80
Future Volume (veh/h)	41	115	142	88	133	108	128	235	75	69	343	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	116	92	89	134	66	129	237	59	70	346	78
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	259	215	141	321	264	172	479	395	122	654	145
Arrive On Green	0.05	0.14	0.14	0.08	0.17	0.17	0.10	0.26	0.26	0.07	0.23	0.23
Sat Flow, veh/h	1781	1870	1553	1781	1870	1536	1781	1870	1542	1781	2872	638
Grp Volume(v), veh/h	41	116	92	89	134	66	129	237	59	70	212	212
Grp Sat Flow(s),veh/h/ln	1781	1870	1553	1781	1870	1536	1781	1870	1542	1781	1777	1734
Q Serve(g_s), s	0.9	2.2	2.1	1.9	2.5	1.4	2.7	4.2	1.2	1.5	4.1	4.2
Cycle Q Clear(g_c), s	0.9	2.2	2.1	1.9	2.5	1.4	2.7	4.2	1.2	1.5	4.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	82	259	215	141	321	264	172	479	395	122	405	395
V/C Ratio(X)	0.50	0.45	0.43	0.63	0.42	0.25	0.75	0.49	0.15	0.58	0.52	0.54
Avail Cap(c_a), veh/h	366	967	803	550	1159	952	687	1351	1114	504	1101	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	15.4	15.3	17.3	14.4	13.9	17.1	12.3	11.2	17.6	13.2	13.2
Incr Delay (d2), s/veh	4.7	1.2	1.3	4.5	0.9	0.5	6.4	0.8	0.2	4.3	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	1.5	1.2	1.4	1.6	0.8	2.3	2.7	0.6	1.2	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	16.6	16.7	21.9	15.2	14.4	23.5	13.1	11.4	21.8	14.2	14.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		249			289			425			494	
Approach Delay, s/veh		17.6			17.1			16.0			15.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	14.9	7.1	10.3	7.8	13.8	5.8	11.6
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	11.0	28.1	12.0	20.1	15.0	24.1	8.0	24.1
Max Q Clear Time (g_c+I1), s	3.5	6.2	3.9	4.2	4.7	6.2	2.9	4.5
Green Ext Time (p_c), s	0.1	1.5	0.1	0.7	0.2	2.4	0.0	0.8

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	41	116	143	89	134	109	129	237	76	70	427
v/c Ratio	0.16	0.33	0.35	0.29	0.24	0.20	0.36	0.28	0.10	0.24	0.32
Control Delay	29.6	27.7	8.3	28.4	21.4	5.7	27.6	19.5	1.9	28.6	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	27.7	8.3	28.4	21.4	5.7	27.6	19.5	1.9	28.6	19.9
Queue Length 50th (ft)	13	36	0	28	30	0	40	70	0	22	64
Queue Length 95th (ft)	48	96	45	80	101	32	104	155	12	68	130
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	326	859	794	489	956	848	612	1053	922	449	1771
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.14	0.18	0.18	0.14	0.13	0.21	0.23	0.08	0.16	0.24

Intersection Summary

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	25	7	273	34	9
Future Vol, veh/h	212	25	7	273	34	9
Conflicting Peds, #/hr	0	7	7	0	7	7
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	241	28	8	310	39	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	276	0	581	255
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	333	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1287	-	476	784
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	726	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1278	-	466	774
Mov Cap-2 Maneuver	-	-	-	-	466	-
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	717	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	508	-	-	1278	-
HCM Lane V/C Ratio	0.096	-	-	0.006	-
HCM Control Delay (s)	12.8	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	15	174	1	1	215	8	1	1	1	5	1	16
Future Vol, veh/h	15	174	1	1	215	8	1	1	1	5	1	16
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	215	1	1	265	10	1	1	1	6	1	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	217	0	0	539	533	218	529	528	272
Stage 1	-	-	-	-	-	-	255	255	-	273	273	-
Stage 2	-	-	-	-	-	-	284	278	-	256	255	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1287	-	-	1353	-	-	453	453	822	460	456	767
Stage 1	-	-	-	-	-	-	749	696	-	733	684	-
Stage 2	-	-	-	-	-	-	723	680	-	749	696	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1286	-	-	1352	-	-	434	444	820	451	447	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	434	444	-	451	447	-
Stage 1	-	-	-	-	-	-	736	683	-	720	683	-
Stage 2	-	-	-	-	-	-	702	679	-	733	683	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	12	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	519	1286	-	-	1352	-	-	643
HCM Lane V/C Ratio	0.007	0.014	-	-	0.001	-	-	0.042
HCM Control Delay (s)	12	7.8	0	-	7.7	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	5	6	21	9	104	9	435	37	109	445	85
Future Vol, veh/h	87	5	6	21	9	104	9	435	37	109	445	85
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	91	5	6	22	9	108	9	453	39	114	464	89
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	13	11.5	14.1	17.1
HCM LOS	B	B	B	C

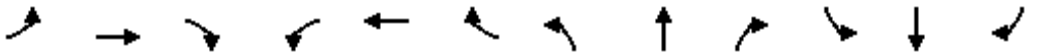
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	89%	70%	0%	33%	0%
Vol Thru, %	96%	85%	5%	30%	0%	67%	72%
Vol Right, %	0%	15%	6%	0%	100%	0%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	227	255	98	30	104	332	308
LT Vol	9	0	87	21	0	109	0
Through Vol	218	218	5	9	0	223	223
RT Vol	0	37	6	0	104	0	85
Lane Flow Rate	236	265	102	31	108	345	320
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.42	0.463	0.219	0.069	0.208	0.609	0.533
Departure Headway (Hd)	6.414	6.29	7.72	7.98	6.904	6.35	5.987
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	559	570	462	447	517	566	599
Service Time	4.188	4.064	5.806	5.767	4.691	4.118	3.754
HCM Lane V/C Ratio	0.422	0.465	0.221	0.069	0.209	0.61	0.534
HCM Control Delay	13.8	14.4	13	11.4	11.5	18.6	15.5
HCM Lane LOS	B	B	B	B	B	C	C
HCM 95th-tile Q	2.1	2.4	0.8	0.2	0.8	4.1	3.1

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	27	25	28	34	58	24	374	27	67	340	48
Future Vol, veh/h	38	27	25	28	34	58	24	374	27	67	340	48
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	30	28	31	38	65	27	420	30	75	382	54
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.9	11.1	12.6	13
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	11%	0%	42%	23%	28%	0%
Vol Thru, %	89%	87%	30%	28%	72%	78%
Vol Right, %	0%	13%	28%	48%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	214	90	120	237	218
LT Vol	24	0	38	28	67	0
Through Vol	187	187	27	34	170	170
RT Vol	0	27	25	58	0	48
Lane Flow Rate	237	240	101	135	266	245
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.398	0.393	0.181	0.232	0.45	0.393
Departure Headway (Hd)	6.038	5.891	6.44	6.187	6.081	5.782
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	595	608	555	578	591	622
Service Time	3.789	3.642	4.504	4.246	3.831	3.532
HCM Lane V/C Ratio	0.398	0.395	0.182	0.234	0.45	0.394
HCM Control Delay	12.8	12.4	10.9	11.1	13.7	12.3
HCM Lane LOS	B	B	B	B	B	B
HCM 95th-tile Q	1.9	1.9	0.7	0.9	2.3	1.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	195	135	226	170	142	95	337	186	49	212	50
Future Volume (veh/h)	64	195	135	226	170	142	95	337	186	49	212	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.93	1.00		0.91	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	81	247	120	286	215	142	120	427	198	62	268	41
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	103	390	309	336	634	497	152	516	399	86	728	109
Arrive On Green	0.06	0.22	0.22	0.19	0.35	0.35	0.09	0.28	0.28	0.05	0.25	0.25
Sat Flow, veh/h	1725	1811	1435	1725	1811	1421	1725	1811	1402	1725	2953	443
Grp Volume(v), veh/h	81	247	120	286	215	142	120	427	198	62	154	155
Grp Sat Flow(s),veh/h/ln	1725	1811	1435	1725	1811	1421	1725	1811	1402	1725	1721	1675
Q Serve(g_s), s	3.2	8.6	5.0	11.2	6.1	5.0	4.8	15.4	8.2	2.5	5.2	5.4
Cycle Q Clear(g_c), s	3.2	8.6	5.0	11.2	6.1	5.0	4.8	15.4	8.2	2.5	5.2	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	103	390	309	336	634	497	152	516	399	86	424	413
V/C Ratio(X)	0.78	0.63	0.39	0.85	0.34	0.29	0.79	0.83	0.50	0.72	0.36	0.38
Avail Cap(c_a), veh/h	230	470	372	494	748	587	247	703	545	148	570	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	24.9	23.4	27.1	16.7	16.4	31.2	23.3	20.8	32.6	21.7	21.8
Incr Delay (d2), s/veh	12.1	2.0	0.8	9.2	0.3	0.3	8.7	6.0	1.0	10.5	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	6.5	2.9	8.7	4.2	2.7	4.1	11.3	4.6	2.3	3.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	26.9	24.2	36.3	17.0	16.7	39.8	29.3	21.7	43.2	22.3	22.4
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		448			643			745			371	
Approach Delay, s/veh		29.4			25.5			29.0			25.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	24.8	17.6	19.9	10.2	22.1	8.2	29.3
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	6.0	27.1	20.0	18.1	10.0	23.1	9.3	28.8
Max Q Clear Time (g_c+I1), s	4.5	17.4	13.2	10.6	6.8	7.4	5.2	8.1
Green Ext Time (p_c), s	0.0	2.5	0.5	1.0	0.1	1.6	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	81	247	171	286	215	180	120	427	235	62	331
v/c Ratio	0.44	0.70	0.41	0.75	0.34	0.30	0.58	0.80	0.42	0.45	0.38
Control Delay	45.1	43.6	8.8	44.7	24.2	5.3	49.5	40.1	6.0	51.2	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	43.6	8.8	44.7	24.2	5.3	49.5	40.1	6.0	51.2	24.6
Queue Length 50th (ft)	43	129	0	148	92	0	65	215	0	34	71
Queue Length 95th (ft)	77	179	35	204	131	29	106	275	32	65	94
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	217	445	480	467	708	643	233	666	650	140	1047
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.56	0.36	0.61	0.30	0.28	0.52	0.64	0.36	0.44	0.32

Intersection Summary

Intersection	
Int Delay, s/veh	66

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	363	59	20	409	125	108
Future Vol, veh/h	363	59	20	409	125	108
Conflicting Peds, #/hr	0	36	36	0	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	550	89	30	620	189	164

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	675	0	1302	622
Stage 1	-	-	-	-	586	-
Stage 2	-	-	-	-	716	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	916	-	~ 177	487
Stage 1	-	-	-	-	556	-
Stage 2	-	-	-	-	484	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	885	-	~ 159	454
Mov Cap-2 Maneuver	-	-	-	-	~ 159	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	452	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	$ 306.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	228	-	-	885	-
HCM Lane V/C Ratio	1.548	-	-	0.034	-
HCM Control Delay (s)	$ 306.1	-	-	9.2	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	21.7	-	-	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	152	1	1	225	6	1	1	1	9	1	34
Future Vol, veh/h	52	152	1	1	225	6	1	1	1	9	1	34
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	192	1	1	285	8	1	1	1	11	1	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	294	0	0	194	0	0	640	622	195	619	618	291
Stage 1	-	-	-	-	-	-	326	326	-	292	292	-
Stage 2	-	-	-	-	-	-	314	296	-	327	326	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1268	-	-	1379	-	-	388	403	846	401	405	748
Stage 1	-	-	-	-	-	-	687	648	-	716	671	-
Stage 2	-	-	-	-	-	-	697	668	-	686	648	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1267	-	-	1378	-	-	348	378	844	381	380	747
Mov Cap-2 Maneuver	-	-	-	-	-	-	348	378	-	381	380	-
Stage 1	-	-	-	-	-	-	646	610	-	674	670	-
Stage 2	-	-	-	-	-	-	654	667	-	643	610	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0	13.1	11.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	448	1267	-	-	1378	-	-	613
HCM Lane V/C Ratio	0.008	0.052	-	-	0.001	-	-	0.091
HCM Control Delay (s)	13.1	8	0	-	7.6	0	-	11.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	70.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	222	3	4	13	9	205	4	447	24	93	458	187
Future Vol, veh/h	222	3	4	13	9	205	4	447	24	93	458	187
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	285	4	5	17	12	263	5	573	31	119	587	240
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	37.7	25.1	32.9	118.6
HCM LOS	E	D	D	F

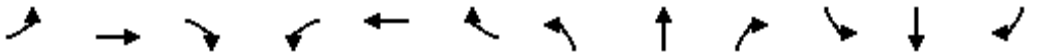
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	97%	59%	0%	29%	0%
Vol Thru, %	98%	90%	1%	41%	0%	71%	55%
Vol Right, %	0%	10%	2%	0%	100%	0%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	228	248	229	22	205	322	416
LT Vol	4	0	222	13	0	93	0
Through Vol	224	224	3	9	0	229	229
RT Vol	0	24	4	0	205	0	187
Lane Flow Rate	292	317	294	28	263	413	533
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.706	0.762	0.763	0.076	0.638	1.011	1.235
Departure Headway (Hd)	8.99	8.91	9.63	10.075	9.035	8.814	8.336
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	405	409	379	358	402	413	437
Service Time	6.69	6.61	7.63	7.775	6.735	6.575	6.097
HCM Lane V/C Ratio	0.721	0.775	0.776	0.078	0.654	1	1.22
HCM Control Delay	30.6	35	37.7	13.6	26.3	77.6	150.4
HCM Lane LOS	D	D	E	B	D	F	F
HCM 95th-tile Q	5.3	6.3	6.2	0.2	4.3	12.7	21.7

Intersection	
Intersection Delay, s/veh	17.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	62	33	43	51	89	30	332	24	117	303	53
Future Vol, veh/h	63	62	33	43	51	89	30	332	24	117	303	53
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	76	40	52	62	109	37	405	29	143	370	65
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	15	15.4	16	19.4
HCM LOS	B	C	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	15%	0%	40%	23%	44%	0%
Vol Thru, %	85%	87%	39%	28%	56%	74%
Vol Right, %	0%	13%	21%	49%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	190	158	183	269	205
LT Vol	30	0	63	43	117	0
Through Vol	166	166	62	51	152	152
RT Vol	0	24	33	89	0	53
Lane Flow Rate	239	232	193	223	327	249
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.477	0.452	0.391	0.435	0.652	0.468
Departure Headway (Hd)	7.19	7.021	7.302	7.009	7.171	6.761
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	500	512	491	513	504	531
Service Time	4.948	4.779	5.362	5.065	4.928	4.518
HCM Lane V/C Ratio	0.478	0.453	0.393	0.435	0.649	0.469
HCM Control Delay	16.4	15.5	15	15.4	22.5	15.4
HCM Lane LOS	C	C	B	C	C	C
HCM 95th-tile Q	2.5	2.3	1.8	2.2	4.6	2.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	120	142	98	138	108	128	283	86	69	387	90
Future Volume (veh/h)	52	120	142	98	138	108	128	283	86	69	387	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	121	92	99	139	66	129	286	70	70	391	88
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	257	214	148	309	253	171	509	420	120	700	156
Arrive On Green	0.06	0.14	0.14	0.08	0.17	0.17	0.10	0.27	0.27	0.07	0.24	0.24
Sat Flow, veh/h	1781	1870	1553	1781	1870	1536	1781	1870	1543	1781	2872	639
Grp Volume(v), veh/h	53	121	92	99	139	66	129	286	70	70	240	239
Grp Sat Flow(s),veh/h/ln	1781	1870	1553	1781	1870	1536	1781	1870	1543	1781	1777	1734
Q Serve(g_s), s	1.2	2.4	2.2	2.2	2.7	1.5	2.9	5.3	1.4	1.5	4.8	4.9
Cycle Q Clear(g_c), s	1.2	2.4	2.2	2.2	2.7	1.5	2.9	5.3	1.4	1.5	4.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	99	257	214	148	309	253	171	509	420	120	433	423
V/C Ratio(X)	0.54	0.47	0.43	0.67	0.45	0.26	0.76	0.56	0.17	0.58	0.55	0.57
Avail Cap(c_a), veh/h	352	929	772	528	1114	915	660	1299	1071	484	1058	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	16.1	16.0	18.0	15.2	14.7	17.8	12.6	11.2	18.3	13.4	13.4
Incr Delay (d2), s/veh	4.5	1.3	1.4	5.2	1.0	0.5	6.6	1.0	0.2	4.4	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	1.6	1.3	1.7	1.8	0.8	2.4	3.5	0.7	1.3	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	17.4	17.4	23.2	16.3	15.3	24.5	13.6	11.4	22.8	14.5	14.6
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		266			304			485			549	
Approach Delay, s/veh		18.5			18.3			16.2			15.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	15.9	7.4	10.5	7.9	14.8	6.2	11.6
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	11.0	28.1	12.0	20.1	15.0	24.1	8.0	24.1
Max Q Clear Time (g_c+I1), s	3.5	7.3	4.2	4.4	4.9	6.9	3.2	4.7
Green Ext Time (p_c), s	0.1	1.9	0.1	0.7	0.2	2.7	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	53	121	143	99	139	109	129	286	87	70	482
v/c Ratio	0.23	0.37	0.36	0.34	0.31	0.23	0.40	0.45	0.14	0.27	0.51
Control Delay	31.9	29.6	8.7	30.8	24.9	6.1	29.9	21.3	2.7	30.7	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	29.6	8.7	30.8	24.9	6.1	29.9	21.3	2.7	30.7	21.8
Queue Length 50th (ft)	18	41	0	33	45	0	43	89	0	24	76
Queue Length 95th (ft)	60	103	47	91	108	34	109	188	17	71	147
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	284	752	713	426	902	807	533	1024	900	391	1673
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.16	0.20	0.23	0.15	0.14	0.24	0.28	0.10	0.18	0.29

Intersection Summary

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	217	25	7	278	34	9
Future Vol, veh/h	217	25	7	278	34	9
Conflicting Peds, #/hr	0	7	7	0	7	7
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	247	28	8	316	39	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	282	0	593	261
Stage 1	-	-	-	-	254	-
Stage 2	-	-	-	-	339	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1280	-	468	778
Stage 1	-	-	-	-	788	-
Stage 2	-	-	-	-	722	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1271	-	459	768
Mov Cap-2 Maneuver	-	-	-	-	459	-
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	713	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	501	-	-	1271	-
HCM Lane V/C Ratio	0.098	-	-	0.006	-
HCM Control Delay (s)	13	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	15	179	1	1	220	8	1	1	1	5	1	16
Future Vol, veh/h	15	179	1	1	220	8	1	1	1	5	1	16
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	221	1	1	272	10	1	1	1	6	1	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	283	0	0	223	0	0	552	546	224	542	541	279
Stage 1	-	-	-	-	-	-	261	261	-	280	280	-
Stage 2	-	-	-	-	-	-	291	285	-	262	261	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1279	-	-	1346	-	-	444	445	815	451	448	760
Stage 1	-	-	-	-	-	-	744	692	-	727	679	-
Stage 2	-	-	-	-	-	-	717	676	-	743	692	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1278	-	-	1345	-	-	425	436	813	442	439	759
Mov Cap-2 Maneuver	-	-	-	-	-	-	425	436	-	442	439	-
Stage 1	-	-	-	-	-	-	731	680	-	714	678	-
Stage 2	-	-	-	-	-	-	696	675	-	727	680	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	12.1	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	511	1278	-	-	1345	-	-	635
HCM Lane V/C Ratio	0.007	0.014	-	-	0.001	-	-	0.043
HCM Control Delay (s)	12.1	7.9	0	-	7.7	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	5	6	21	9	115	9	450	37	119	460	95
Future Vol, veh/h	98	5	6	21	9	115	9	450	37	119	460	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	102	5	6	22	9	120	9	469	39	124	479	99
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	13.7	12	15.3	19.2
HCM LOS	B	B	C	C

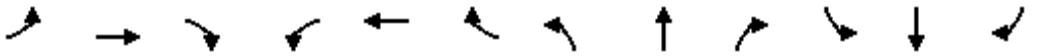
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	90%	70%	0%	34%	0%
Vol Thru, %	96%	86%	5%	30%	0%	66%	71%
Vol Right, %	0%	14%	6%	0%	100%	0%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	234	262	109	30	115	349	325
LT Vol	9	0	98	21	0	119	0
Through Vol	225	225	5	9	0	230	230
RT Vol	0	37	6	0	115	0	95
Lane Flow Rate	244	273	114	31	120	364	339
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.454	0.499	0.252	0.072	0.239	0.658	0.577
Departure Headway (Hd)	6.705	6.585	7.991	8.259	7.18	6.625	6.244
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	541	551	451	435	502	549	582
Service Time	4.405	4.285	6.013	5.979	4.9	4.325	3.944
HCM Lane V/C Ratio	0.451	0.495	0.253	0.071	0.239	0.663	0.582
HCM Control Delay	14.9	15.7	13.7	11.6	12.1	21.2	17.1
HCM Lane LOS	B	C	B	B	B	C	C
HCM 95th-tile Q	2.3	2.8	1	0.2	0.9	4.8	3.7

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	27	25	28	34	63	24	379	27	72	345	53
Future Vol, veh/h	43	27	25	28	34	63	24	379	27	72	345	53
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	30	28	31	38	71	27	426	30	81	388	60
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	11.2	11.3	12.9	13.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	11%	0%	45%	22%	29%	0%
Vol Thru, %	89%	88%	28%	27%	71%	76%
Vol Right, %	0%	12%	26%	50%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	217	95	125	245	226
LT Vol	24	0	43	28	72	0
Through Vol	190	190	27	34	173	173
RT Vol	0	27	25	63	0	53
Lane Flow Rate	240	243	107	140	275	253
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.408	0.404	0.194	0.244	0.47	0.411
Departure Headway (Hd)	6.119	5.973	6.531	6.247	6.155	5.839
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	585	601	547	572	585	616
Service Time	3.876	3.73	4.602	4.314	3.91	3.594
HCM Lane V/C Ratio	0.41	0.404	0.196	0.245	0.47	0.411
HCM Control Delay	13.1	12.8	11.2	11.3	14.3	12.6
HCM Lane LOS	B	B	B	B	B	B
HCM 95th-tile Q	2	1.9	0.7	1	2.5	2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	195	155	234	170	142	156	447	206	49	252	50
Future Volume (veh/h)	64	195	155	234	170	142	156	447	206	49	252	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.92	1.00		0.92	1.00		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	81	247	145	296	215	142	197	566	224	62	319	41
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	104	357	281	333	598	467	235	624	489	80	771	98
Arrive On Green	0.06	0.20	0.20	0.19	0.33	0.33	0.14	0.34	0.34	0.05	0.25	0.25
Sat Flow, veh/h	1725	1811	1428	1725	1811	1416	1725	1811	1420	1725	3031	384
Grp Volume(v), veh/h	81	247	145	296	215	142	197	566	224	62	179	181
Grp Sat Flow(s),veh/h/ln	1725	1811	1428	1725	1811	1416	1725	1811	1420	1725	1721	1695
Q Serve(g_s), s	3.8	10.3	7.4	13.6	7.3	6.1	9.0	24.2	10.0	2.9	7.0	7.2
Cycle Q Clear(g_c), s	3.8	10.3	7.4	13.6	7.3	6.1	9.0	24.2	10.0	2.9	7.0	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	104	357	281	333	598	467	235	624	489	80	438	431
V/C Ratio(X)	0.78	0.69	0.52	0.89	0.36	0.30	0.84	0.91	0.46	0.78	0.41	0.42
Avail Cap(c_a), veh/h	212	401	316	361	598	467	299	675	529	125	468	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	30.3	29.2	31.9	20.7	20.3	34.2	25.4	20.7	38.3	25.2	25.3
Incr Delay (d2), s/veh	12.0	4.4	1.5	21.6	0.4	0.4	15.2	15.4	0.7	14.7	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	8.2	0.2	11.7	5.3	3.4	8.2	18.3	5.6	2.7	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	34.7	30.6	53.5	21.0	20.6	49.4	40.8	21.4	53.0	25.8	25.9
LnGrp LOS	D	C	C	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		473			653			987			422	
Approach Delay, s/veh		36.0			35.7			38.1			29.9	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	32.9	19.7	20.9	15.1	25.6	8.9	31.7
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	5.9	30.3	17.0	18.0	14.1	22.1	10.0	25.0
Max Q Clear Time (g_c+I1), s	4.9	26.2	15.6	12.3	11.0	9.2	5.8	9.3
Green Ext Time (p_c), s	0.0	1.8	0.1	0.9	0.2	1.7	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	81	247	196	296	215	180	197	566	261	62	382
v/c Ratio	0.46	0.74	0.44	0.86	0.38	0.33	0.74	0.90	0.43	0.51	0.49
Control Delay	45.9	47.1	6.8	59.8	27.5	6.0	53.1	47.2	8.1	55.6	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	47.1	6.8	59.8	27.5	6.0	53.1	47.2	8.1	55.6	28.1
Queue Length 50th (ft)	43	129	0	163	98	0	106	300	20	34	88
Queue Length 95th (ft)	76	179	24	#252	140	31	#156	#400	53	#66	113
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	211	400	487	359	574	554	298	674	638	124	918
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.62	0.40	0.82	0.37	0.32	0.66	0.84	0.41	0.50	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	72.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	383	59	20	417	125	108
Future Vol, veh/h	383	59	20	417	125	108
Conflicting Peds, #/hr	0	36	36	0	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	580	89	30	632	189	164

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	705	0	1344	652
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	728	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	893	-	~ 167	468
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	862	-	~ 150	436
Mov Cap-2 Maneuver	-	-	-	-	~ 150	-
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	$ 345.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	216	-	-	862	-
HCM Lane V/C Ratio	1.634	-	-	0.035	-
HCM Control Delay (s)	$ 345.1	-	-	9.3	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	22.9	-	-	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	52	172	1	1	233	6	1	1	1	9	1	34
Future Vol, veh/h	52	172	1	1	233	6	1	1	1	9	1	34
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	218	1	1	295	8	1	1	1	11	1	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	304	0	0	220	0	0	676	658	221	655	654	301
Stage 1	-	-	-	-	-	-	352	352	-	302	302	-
Stage 2	-	-	-	-	-	-	324	306	-	353	352	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1257	-	-	1349	-	-	367	384	819	379	386	739
Stage 1	-	-	-	-	-	-	665	632	-	707	664	-
Stage 2	-	-	-	-	-	-	688	662	-	664	632	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1256	-	-	1348	-	-	328	360	817	359	362	738
Mov Cap-2 Maneuver	-	-	-	-	-	-	328	360	-	359	362	-
Stage 1	-	-	-	-	-	-	624	593	-	664	663	-
Stage 2	-	-	-	-	-	-	645	661	-	621	593	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0	13.5	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	425	1256	-	-	1348	-	-	595
HCM Lane V/C Ratio	0.009	0.052	-	-	0.001	-	-	0.094
HCM Control Delay (s)	13.5	8	0	-	7.7	0	-	11.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	118.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	242	3	24	13	9	205	4	614	24	93	514	202
Future Vol, veh/h	242	3	24	13	9	205	4	614	24	93	514	202
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	310	4	31	17	12	263	5	787	31	119	659	259
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	58.9	28.6	86	189.4
HCM LOS	F	D	F	F

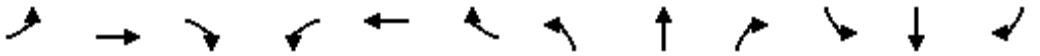
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	0%	90%	59%	0%	27%	0%
Vol Thru, %	99%	93%	1%	41%	0%	73%	56%
Vol Right, %	0%	7%	9%	0%	100%	0%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	311	331	269	22	205	350	459
LT Vol	4	0	242	13	0	93	0
Through Vol	307	307	3	9	0	257	257
RT Vol	0	24	24	0	205	0	202
Lane Flow Rate	399	424	345	28	263	449	588
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	1.005	1.063	0.912	0.08	0.673	1.159	1.444
Departure Headway (Hd)	9.24	9.18	9.662	10.689	9.645	9.431	8.969
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	395	399	379	337	378	390	412
Service Time	6.94	6.88	7.662	8.389	7.345	7.131	6.669
HCM Lane V/C Ratio	1.01	1.063	0.91	0.083	0.696	1.151	1.427
HCM Control Delay	77.7	93.8	58.9	14.3	30.1	126.6	237.3
HCM Lane LOS	F	F	F	B	D	F	F
HCM 95th-tile Q	12.2	14.1	9.4	0.3	4.7	17.2	29.6

Intersection	
Intersection Delay, s/veh	27.4
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	62	53	43	51	89	45	479	24	117	379	53
Future Vol, veh/h	83	62	53	43	51	89	45	479	24	117	379	53
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	101	76	65	52	62	109	55	584	29	143	462	65
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	20.2	18.7	28.8	31.5
HCM LOS	C	C	D	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	16%	0%	42%	23%	38%	0%
Vol Thru, %	84%	91%	31%	28%	62%	78%
Vol Right, %	0%	9%	27%	49%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	285	264	198	183	307	243
LT Vol	45	0	83	43	117	0
Through Vol	240	240	62	51	190	190
RT Vol	0	24	53	89	0	53
Lane Flow Rate	347	321	241	223	374	296
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.757	0.688	0.539	0.494	0.826	0.624
Departure Headway (Hd)	7.85	7.703	8.034	7.971	7.953	7.598
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	458	466	447	451	452	473
Service Time	5.637	5.489	6.118	6.056	5.74	5.385
HCM Lane V/C Ratio	0.758	0.689	0.539	0.494	0.827	0.626
HCM Control Delay	31.4	26	20.2	18.7	38.8	22.3
HCM Lane LOS	D	D	C	C	E	C
HCM 95th-tile Q	6.4	5.1	3.1	2.7	7.9	4.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	120	210	121	138	108	168	364	100	69	520	90
Future Volume (veh/h)	52	120	210	121	138	108	168	364	100	69	520	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	121	161	122	139	66	170	368	84	70	525	88
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	303	252	160	374	307	223	614	507	111	805	134
Arrive On Green	0.05	0.16	0.16	0.09	0.20	0.20	0.13	0.33	0.33	0.06	0.27	0.27
Sat Flow, veh/h	1781	1870	1555	1781	1870	1539	1781	1870	1544	1781	3033	506
Grp Volume(v), veh/h	53	121	161	122	139	66	170	368	84	70	307	306
Grp Sat Flow(s),veh/h/ln	1781	1870	1555	1781	1870	1539	1781	1870	1544	1781	1777	1763
Q Serve(g_s), s	1.4	2.9	4.8	3.3	3.2	1.8	4.6	8.2	1.9	1.9	7.6	7.7
Cycle Q Clear(g_c), s	1.4	2.9	4.8	3.3	3.2	1.8	4.6	8.2	1.9	1.9	7.6	7.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	93	303	252	160	374	307	223	614	507	111	472	468
V/C Ratio(X)	0.57	0.40	0.64	0.76	0.37	0.21	0.76	0.60	0.17	0.63	0.65	0.65
Avail Cap(c_a), veh/h	250	680	565	458	897	738	572	1172	967	325	867	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	18.7	19.5	22.2	17.2	16.7	21.1	14.0	11.9	22.8	16.2	16.3
Incr Delay (d2), s/veh	5.4	0.8	2.7	7.3	0.6	0.3	5.3	0.9	0.2	5.8	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	2.0	3.0	2.8	2.2	1.0	3.7	5.6	1.0	1.6	5.2	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	19.5	22.2	29.5	17.8	17.0	26.4	14.9	12.0	28.6	17.8	17.8
LnGrp LOS	C	B	C	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		335			327			622			683	
Approach Delay, s/veh		22.2			22.0			17.7			18.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	21.3	8.5	13.0	10.2	18.1	6.6	14.9
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	9.1	31.2	12.8	18.1	16.0	24.3	7.0	23.9
Max Q Clear Time (g_c+I1), s	3.9	10.2	5.3	6.8	6.6	9.7	3.4	5.2
Green Ext Time (p_c), s	0.1	2.5	0.2	0.8	0.3	3.3	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	53	121	212	122	139	109	170	368	101	70	616
v/c Ratio	0.25	0.37	0.47	0.41	0.30	0.21	0.49	0.52	0.15	0.30	0.61
Control Delay	37.3	33.0	8.4	35.0	26.3	2.1	33.9	21.6	1.0	36.1	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	33.0	8.4	35.0	26.3	2.1	33.9	21.6	1.0	36.1	24.7
Queue Length 50th (ft)	21	47	0	47	51	0	65	128	0	27	116
Queue Length 95th (ft)	64	109	53	115	112	12	148	244	6	77	205
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	233	636	676	427	840	787	534	1018	917	304	1593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.19	0.31	0.29	0.17	0.14	0.32	0.36	0.11	0.23	0.39

Intersection Summary

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	231	25	7	301	34	9
Future Vol, veh/h	231	25	7	301	34	9
Conflicting Peds, #/hr	0	7	7	0	7	7
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	263	28	8	342	39	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	298	0	635	277
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	365	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1263	-	443	762
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1255	-	434	752
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	770	-
Stage 2	-	-	-	-	693	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	476	-	-	1255	-
HCM Lane V/C Ratio	0.103	-	-	0.006	-
HCM Control Delay (s)	13.4	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	15	193	1	1	243	8	1	1	1	5	1	16
Future Vol, veh/h	15	193	1	1	243	8	1	1	1	5	1	16
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	238	1	1	300	10	1	1	1	6	1	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	311	0	0	240	0	0	597	591	241	587	586	307
Stage 1	-	-	-	-	-	-	278	278	-	308	308	-
Stage 2	-	-	-	-	-	-	319	313	-	279	278	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1249	-	-	1327	-	-	415	420	798	421	422	733
Stage 1	-	-	-	-	-	-	728	680	-	702	660	-
Stage 2	-	-	-	-	-	-	693	657	-	728	680	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1248	-	-	1326	-	-	396	411	796	413	413	732
Mov Cap-2 Maneuver	-	-	-	-	-	-	396	411	-	413	413	-
Stage 1	-	-	-	-	-	-	714	667	-	689	659	-
Stage 2	-	-	-	-	-	-	672	656	-	712	667	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	12.5	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	483	1248	-	-	1326	-	-	605
HCM Lane V/C Ratio	0.008	0.015	-	-	0.001	-	-	0.045
HCM Control Delay (s)	12.5	7.9	0	-	7.7	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	32.1
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	113	5	20	21	9	115	9	570	37	119	634	144
Future Vol, veh/h	113	5	20	21	9	115	9	570	37	119	634	144
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	118	5	21	22	9	120	9	594	39	124	660	150
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	15.8	13.5	22.7	44
HCM LOS	C	B	C	E

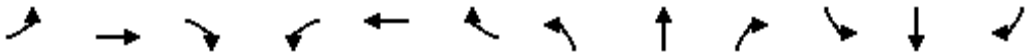
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	82%	70%	0%	27%	0%
Vol Thru, %	97%	89%	4%	30%	0%	73%	69%
Vol Right, %	0%	11%	14%	0%	100%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	294	322	138	30	115	436	461
LT Vol	9	0	113	21	0	119	0
Through Vol	285	285	5	9	0	317	317
RT Vol	0	37	20	0	115	0	144
Lane Flow Rate	306	335	144	31	120	454	480
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.623	0.673	0.339	0.079	0.267	0.894	0.897
Departure Headway (Hd)	7.326	7.228	8.486	9.112	8.026	7.09	6.727
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	493	500	424	393	448	513	538
Service Time	5.068	4.97	6.52	6.86	5.773	4.83	4.467
HCM Lane V/C Ratio	0.621	0.67	0.34	0.079	0.268	0.885	0.892
HCM Control Delay	21.5	23.7	15.8	12.6	13.7	44.6	43.5
HCM Lane LOS	C	C	C	B	B	E	E
HCM 95th-tile Q	4.2	5	1.5	0.3	1.1	10.1	10.4

Intersection	
Intersection Delay, s/veh	20.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	27	39	28	34	63	73	484	27	72	533	53
Future Vol, veh/h	58	27	39	28	34	63	73	484	27	72	533	53
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	30	44	31	38	71	82	544	30	81	599	60
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	13.3	13	20.5	22.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	23%	0%	47%	22%	21%	0%
Vol Thru, %	77%	90%	22%	27%	79%	83%
Vol Right, %	0%	10%	31%	50%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	315	269	124	125	339	320
LT Vol	73	0	58	28	72	0
Through Vol	242	242	27	34	267	267
RT Vol	0	27	39	63	0	53
Lane Flow Rate	354	302	139	140	380	359
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.677	0.562	0.285	0.281	0.715	0.653
Departure Headway (Hd)	6.881	6.691	7.359	7.201	6.771	6.544
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	527	541	489	500	536	553
Service Time	4.616	4.426	5.395	5.237	4.505	4.278
HCM Lane V/C Ratio	0.672	0.558	0.284	0.28	0.709	0.649
HCM Control Delay	22.9	17.7	13.3	13	24.8	20.8
HCM Lane LOS	C	C	B	B	C	C
HCM 95th-tile Q	5.1	3.4	1.2	1.1	5.8	4.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	239	166	276	208	175	156	447	225	62	259	70
Future Volume (veh/h)	77	239	166	276	208	175	156	447	225	62	259	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.92	1.00		0.92	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	97	303	159	349	263	184	197	566	248	78	328	67
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	123	358	282	370	617	484	232	596	466	99	706	141
Arrive On Green	0.07	0.20	0.20	0.21	0.34	0.34	0.13	0.33	0.33	0.06	0.25	0.25
Sat Flow, veh/h	1725	1811	1428	1725	1811	1419	1725	1811	1416	1725	2801	560
Grp Volume(v), veh/h	97	303	159	349	263	184	197	566	248	78	199	196
Grp Sat Flow(s),veh/h/ln	1725	1811	1428	1725	1811	1419	1725	1811	1416	1725	1721	1641
Q Serve(g_s), s	4.9	14.3	8.9	17.6	9.9	8.7	9.9	27.0	12.6	4.0	8.7	9.0
Cycle Q Clear(g_c), s	4.9	14.3	8.9	17.6	9.9	8.7	9.9	27.0	12.6	4.0	8.7	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	123	358	282	370	617	484	232	596	466	99	434	414
V/C Ratio(X)	0.79	0.85	0.56	0.94	0.43	0.38	0.85	0.95	0.53	0.79	0.46	0.47
Avail Cap(c_a), veh/h	212	368	290	370	617	484	277	599	469	115	434	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	34.2	32.1	34.2	22.5	22.1	37.4	29.0	24.1	41.2	28.0	28.1
Incr Delay (d2), s/veh	10.5	16.2	2.4	32.3	0.5	0.5	18.8	24.7	1.1	26.3	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.3	12.1	5.6	15.6	7.3	5.0	9.1	21.7	7.4	4.3	6.4	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	50.4	34.4	66.6	23.0	22.6	56.2	53.7	25.3	67.5	28.7	29.0
LnGrp LOS	D	D	C	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		559			796			1011			473	
Approach Delay, s/veh		46.0			42.0			47.2			35.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	34.1	23.0	22.4	15.9	27.2	10.3	35.1
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	5.9	29.3	19.0	18.0	14.2	21.0	10.9	26.1
Max Q Clear Time (g_c+I1), s	6.0	29.0	19.6	16.3	11.9	11.0	6.9	11.9
Green Ext Time (p_c), s	0.0	0.2	0.0	0.4	0.1	1.7	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	43.5
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	97	303	210	349	263	222	197	566	285	78	417
v/c Ratio	0.53	0.86	0.46	0.93	0.44	0.37	0.77	0.94	0.48	0.67	0.55
Control Delay	48.5	59.0	7.9	68.5	27.9	5.6	56.8	56.0	9.3	70.4	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	59.0	7.9	68.5	27.9	5.6	56.8	56.0	9.3	70.4	30.4
Queue Length 50th (ft)	53	167	0	198	123	0	108	315	26	44	100
Queue Length 95th (ft)	88	#242	33	#298	169	32	#158	#420	62	#93	124
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	215	374	468	375	603	602	280	609	604	116	814
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.81	0.45	0.93	0.44	0.37	0.70	0.93	0.47	0.67	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	180.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	446	73	25	503	154	132
Future Vol, veh/h	446	73	25	503	154	132
Conflicting Peds, #/hr	0	36	36	0	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	676	111	38	762	233	200

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	823	0	1586	748
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	874	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	807	-	~ 119	412
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	408	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	779	-	~ 106	384
Mov Cap-2 Maneuver	-	-	-	-	~ 106	-
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	375	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	$ 838.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	159	-	-	779	-
HCM Lane V/C Ratio	2.725	-	-	0.049	-
HCM Control Delay (s)	$ 838.3	-	-	9.9	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	38.5	-	-	0.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	64	186	1	1	276	7	1	1	1	11	1	42
Future Vol, veh/h	64	186	1	1	276	7	1	1	1	11	1	42
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	235	1	1	349	9	1	1	1	14	1	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	359	0	0	237	0	0	783	760	238	757	756	356
Stage 1	-	-	-	-	-	-	399	399	-	357	357	-
Stage 2	-	-	-	-	-	-	384	361	-	400	399	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1200	-	-	1330	-	-	311	336	801	324	337	688
Stage 1	-	-	-	-	-	-	627	602	-	661	628	-
Stage 2	-	-	-	-	-	-	639	626	-	626	602	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1199	-	-	1329	-	-	268	309	799	302	310	687
Mov Cap-2 Maneuver	-	-	-	-	-	-	268	309	-	302	310	-
Stage 1	-	-	-	-	-	-	577	554	-	609	627	-
Stage 2	-	-	-	-	-	-	587	625	-	574	554	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	15	12.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	1199	-	-	1329	-	-	536
HCM Lane V/C Ratio	0.01	0.068	-	-	0.001	-	-	0.128
HCM Control Delay (s)	15	8.2	0	-	7.7	0	-	12.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.4

Intersection	
Intersection Delay, s/veh	165.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	271	4	24	16	11	250	5	614	29	112	561	228
Future Vol, veh/h	271	4	24	16	11	250	5	614	29	112	561	228
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	347	5	31	21	14	321	6	787	37	144	719	292
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	96.9	42.4	102.8	272.2
HCM LOS	F	E	F	F

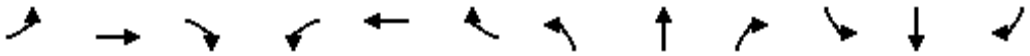
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	91%	59%	0%	29%	0%
Vol Thru, %	98%	91%	1%	41%	0%	71%	55%
Vol Right, %	0%	9%	8%	0%	100%	0%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	312	336	299	27	250	393	509
LT Vol	5	0	271	16	0	112	0
Through Vol	307	307	4	11	0	281	281
RT Vol	0	29	24	0	250	0	228
Lane Flow Rate	400	431	383	35	321	503	652
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	1.05	1.122	1.065	0.099	0.833	1.341	1.654
Departure Headway (Hd)	9.448	9.379	9.667	10.615	9.571	10.029	9.547
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	388	392	379	340	381	367	385
Service Time	7.158	7.086	7.667	8.315	7.271	7.729	7.247
HCM Lane V/C Ratio	1.031	1.099	1.011	0.103	0.843	1.371	1.694
HCM Control Delay	91.2	113.6	96.9	14.5	45.4	198.7	329
HCM Lane LOS	F	F	F	B	E	F	F
HCM 95th-tile Q	13.5	16	13.8	0.3	7.6	23.1	37.1

Intersection	
Intersection Delay, s/veh	38.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	76	53	53	63	109	47	481	29	143	382	64
Future Vol, veh/h	84	76	53	53	63	109	47	481	29	143	382	64
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	102	93	65	65	77	133	57	587	35	174	466	78
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	25.1	25.5	37.5	50.4
HCM LOS	D	D	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	16%	0%	39%	24%	43%	0%
Vol Thru, %	84%	89%	36%	28%	57%	75%
Vol Right, %	0%	11%	25%	48%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	288	270	213	225	334	255
LT Vol	47	0	84	53	143	0
Through Vol	241	241	76	63	191	191
RT Vol	0	29	53	109	0	64
Lane Flow Rate	351	329	260	274	407	311
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.83	0.763	0.625	0.643	0.973	0.708
Departure Headway (Hd)	8.523	8.36	8.662	8.437	8.597	8.192
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	434	418	428	424	442
Service Time	6.265	6.102	6.702	6.474	6.339	5.934
HCM Lane V/C Ratio	0.828	0.758	0.622	0.64	0.96	0.704
HCM Control Delay	41.3	33.5	25.1	25.5	67.1	28.5
HCM Lane LOS	E	D	D	D	F	D
HCM 95th-tile Q	7.8	6.4	4.1	4.4	11.6	5.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	147	210	121	169	133	168	364	103	90	520	161
Future Volume (veh/h)	74	147	210	121	169	133	168	364	103	90	520	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	148	161	122	171	91	170	368	87	91	525	160
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	301	250	159	350	288	221	644	532	124	773	234
Arrive On Green	0.06	0.16	0.16	0.09	0.19	0.19	0.12	0.34	0.34	0.07	0.29	0.29
Sat Flow, veh/h	1781	1870	1555	1781	1870	1538	1781	1870	1545	1781	2667	809
Grp Volume(v), veh/h	75	148	161	122	171	91	170	368	87	91	349	336
Grp Sat Flow(s),veh/h/ln	1781	1870	1555	1781	1870	1538	1781	1870	1545	1781	1777	1699
Q Serve(g_s), s	2.2	3.8	5.1	3.5	4.3	2.7	4.9	8.5	2.1	2.7	9.2	9.3
Cycle Q Clear(g_c), s	2.2	3.8	5.1	3.5	4.3	2.7	4.9	8.5	2.1	2.7	9.2	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	112	301	250	159	350	288	221	644	532	124	515	492
V/C Ratio(X)	0.67	0.49	0.64	0.77	0.49	0.32	0.77	0.57	0.16	0.73	0.68	0.68
Avail Cap(c_a), veh/h	316	639	531	403	731	601	504	1126	930	343	909	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	20.3	20.8	23.6	19.3	18.6	22.5	14.2	12.1	24.2	16.6	16.7
Incr Delay (d2), s/veh	6.7	1.2	2.8	7.5	1.1	0.6	5.6	0.8	0.1	8.1	1.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	2.8	3.3	3.0	3.1	1.6	4.0	5.8	1.1	2.4	6.3	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	21.5	23.6	31.0	20.3	19.2	28.0	15.0	12.2	32.3	18.2	18.3
LnGrp LOS	C	C	C	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h		384			384			625			776	
Approach Delay, s/veh		24.2			23.5			18.1			19.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	23.1	8.7	13.4	10.6	20.3	7.3	14.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.2	31.9	12.0	18.1	15.0	27.1	9.4	20.7
Max Q Clear Time (g_c+I1), s	4.7	10.5	5.5	7.1	6.9	11.3	4.2	6.3
Green Ext Time (p_c), s	0.1	2.5	0.1	0.9	0.3	4.0	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	75	148	212	122	171	134	170	368	104	91	688
v/c Ratio	0.36	0.48	0.49	0.48	0.49	0.31	0.56	0.51	0.15	0.41	0.67
Control Delay	39.4	35.8	9.1	39.6	33.5	4.9	38.6	23.3	3.8	39.6	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	35.8	9.1	39.6	33.5	4.9	38.6	23.3	3.8	39.6	25.4
Queue Length 50th (ft)	32	62	0	52	71	0	72	137	0	39	134
Queue Length 95th (ft)	84	131	57	121	143	28	155	253	26	97	225
Internal Link Dist (ft)		1225			1212			1492			1499
Turn Bay Length (ft)	100		55	100		100	100		160	105	
Base Capacity (vph)	256	520	587	328	595	605	410	918	818	278	1445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.28	0.36	0.37	0.29	0.22	0.41	0.40	0.13	0.33	0.48

Intersection Summary

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	266	31	9	341	42	11
Future Vol, veh/h	266	31	9	341	42	11
Conflicting Peds, #/hr	0	7	7	0	7	7
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	110	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	302	35	10	388	48	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	344	0	724	316
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	415	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1215	-	393	724
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1207	-	384	714
Mov Cap-2 Maneuver	-	-	-	-	384	-
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	425	-	-	1207	-
HCM Lane V/C Ratio	0.142	-	-	0.008	-
HCM Control Delay (s)	14.9	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	219	1	1	270	10	1	1	1	6	1	20
Future Vol, veh/h	18	219	1	1	270	10	1	1	1	6	1	20
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	270	1	1	333	12	1	1	1	7	1	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	346	0	0	272	0	0	671	664	273	659	658	341
Stage 1	-	-	-	-	-	-	316	316	-	342	342	-
Stage 2	-	-	-	-	-	-	355	348	-	317	316	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1213	-	-	1291	-	-	370	381	766	377	384	701
Stage 1	-	-	-	-	-	-	695	655	-	673	638	-
Stage 2	-	-	-	-	-	-	662	634	-	694	655	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1212	-	-	1290	-	-	349	372	765	368	375	700
Mov Cap-2 Maneuver	-	-	-	-	-	-	349	372	-	368	375	-
Stage 1	-	-	-	-	-	-	680	641	-	658	637	-
Stage 2	-	-	-	-	-	-	636	633	-	676	641	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	13.3	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	437	1212	-	-	1290	-	-	568
HCM Lane V/C Ratio	0.008	0.018	-	-	0.001	-	-	0.059
HCM Control Delay (s)	13.3	8	0	-	7.8	0	-	11.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.2

Intersection	
Intersection Delay, s/veh	39.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	118	6	20	26	11	139	11	570	45	144	634	144
Future Vol, veh/h	118	6	20	26	11	139	11	570	45	144	634	144
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	123	6	21	27	11	145	11	594	47	150	660	150
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	16.7	14.6	25.3	57.3
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	82%	70%	0%	31%	0%
Vol Thru, %	96%	86%	4%	30%	0%	69%	69%
Vol Right, %	0%	14%	14%	0%	100%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	296	330	144	37	139	461	461
LT Vol	11	0	118	26	0	144	0
Through Vol	285	285	6	11	0	317	317
RT Vol	0	45	20	0	139	0	144
Lane Flow Rate	308	344	150	39	145	480	480
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.651	0.715	0.364	0.099	0.33	0.983	0.932
Departure Headway (Hd)	7.6	7.483	8.728	9.284	8.195	7.369	6.985
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	475	485	413	386	439	495	519
Service Time	5.347	5.229	6.767	7.039	5.95	5.117	4.732
HCM Lane V/C Ratio	0.648	0.709	0.363	0.101	0.33	0.97	0.925
HCM Control Delay	23.5	26.9	16.7	13.1	15	63.7	50.9
HCM Lane LOS	C	D	C	B	B	F	F
HCM 95th-tile Q	4.6	5.7	1.6	0.3	1.4	12.9	11.4

Intersection	
Intersection Delay, s/veh	23.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	33	39	35	42	76	73	485	33	88	533	64
Future Vol, veh/h	60	33	39	35	42	76	73	485	33	88	533	64
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	37	44	39	47	85	82	545	37	99	599	72
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	14.1	14.4	22.7	27.4
HCM LOS	B	B	C	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	23%	0%	45%	23%	25%	0%
Vol Thru, %	77%	88%	25%	27%	75%	81%
Vol Right, %	0%	12%	30%	50%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	316	276	132	153	355	331
LT Vol	73	0	60	35	88	0
Through Vol	243	243	33	42	267	267
RT Vol	0	33	39	76	0	64
Lane Flow Rate	354	310	148	172	398	371
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.706	0.599	0.314	0.352	0.78	0.7
Departure Headway (Hd)	7.171	6.967	7.632	7.371	7.05	6.784
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	503	517	472	488	514	535
Service Time	4.914	4.71	5.675	5.411	4.792	4.526
HCM Lane V/C Ratio	0.704	0.6	0.314	0.352	0.774	0.693
HCM Control Delay	25.4	19.6	14.1	14.4	30.6	23.9
HCM Lane LOS	D	C	B	B	D	C
HCM 95th-tile Q	5.5	3.9	1.3	1.6	7.1	5.5

Warrants Summary Report

Existing-AM

2: Freedom Dr & Walnut St

Intersection Information

	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lane	2	1
Approach Speed	25	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	1 Hours met (8 required)
Condition A and B M	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	1 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	1 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

No

Condition A Met?	No
Condition B Met?	No
Condition C Met?	No

BicycleWarrant

No 0 Hours met (1 required)

Warrant 3: Peak Hour

Existing-PM

2: Freedom Dr & Walnut St

Intersection Information

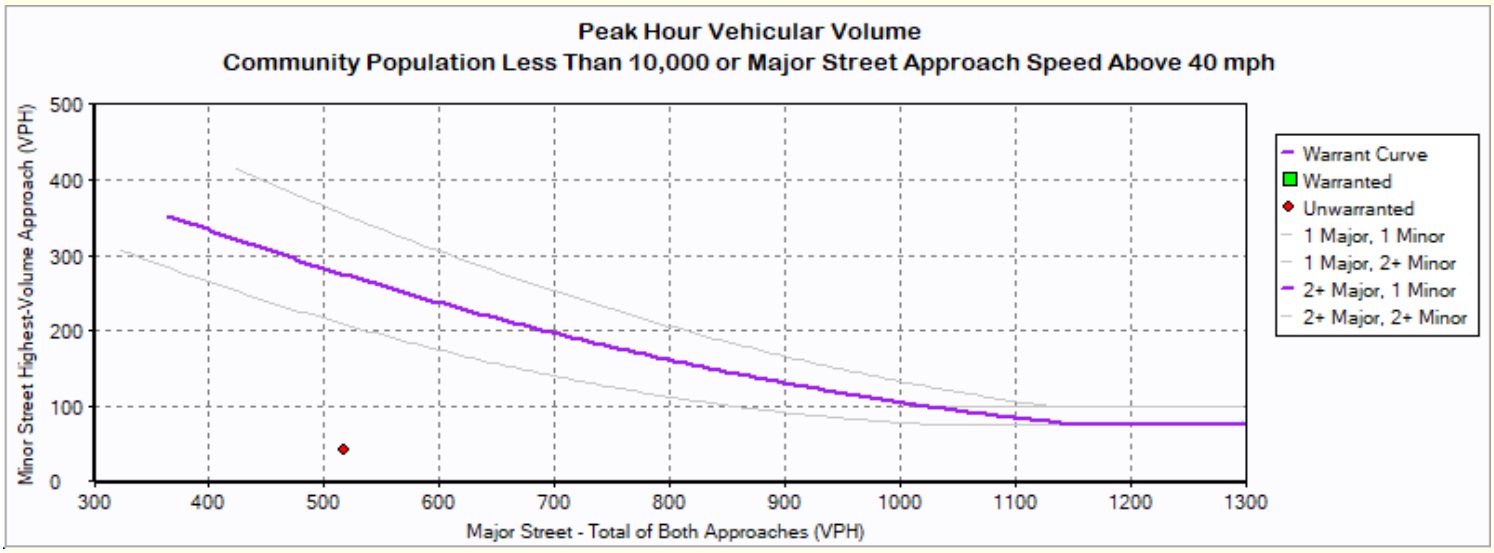
	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lanes	2	1
Approch Speed	45	30

Warrant 3 Met? **No**

Details

Low Population?	No		
Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

2: Freedom Dr & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
16:45	517	43

Warrant 3: Peak Hour

Existing Plus Project-AM

2: Freedom Dr & Walnut St

Intersection Information

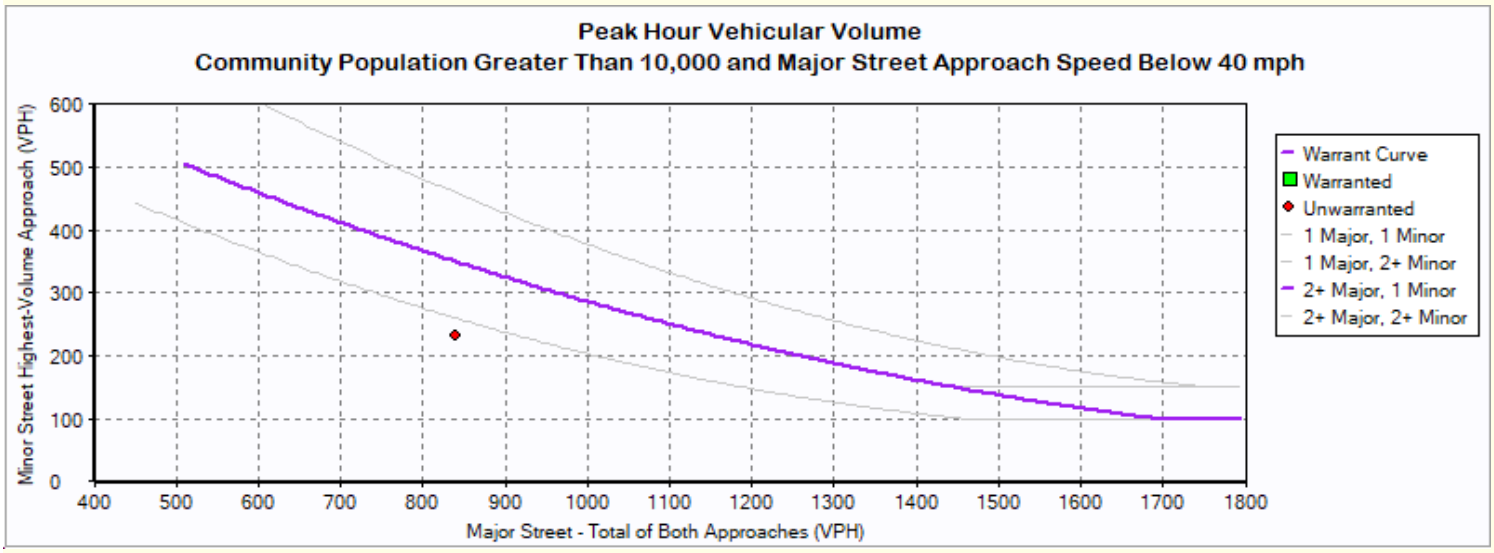
	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lanes	2	1
Approch Speed	25	30

Warrant 3 Met? **No**

Details

Low Population?	No		
Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

2: Freedom Dr & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	841	233

Warrant 3: Peak Hour

Existing Plus Project-PM

2: Freedom Dr & Walnut St

Intersection Information

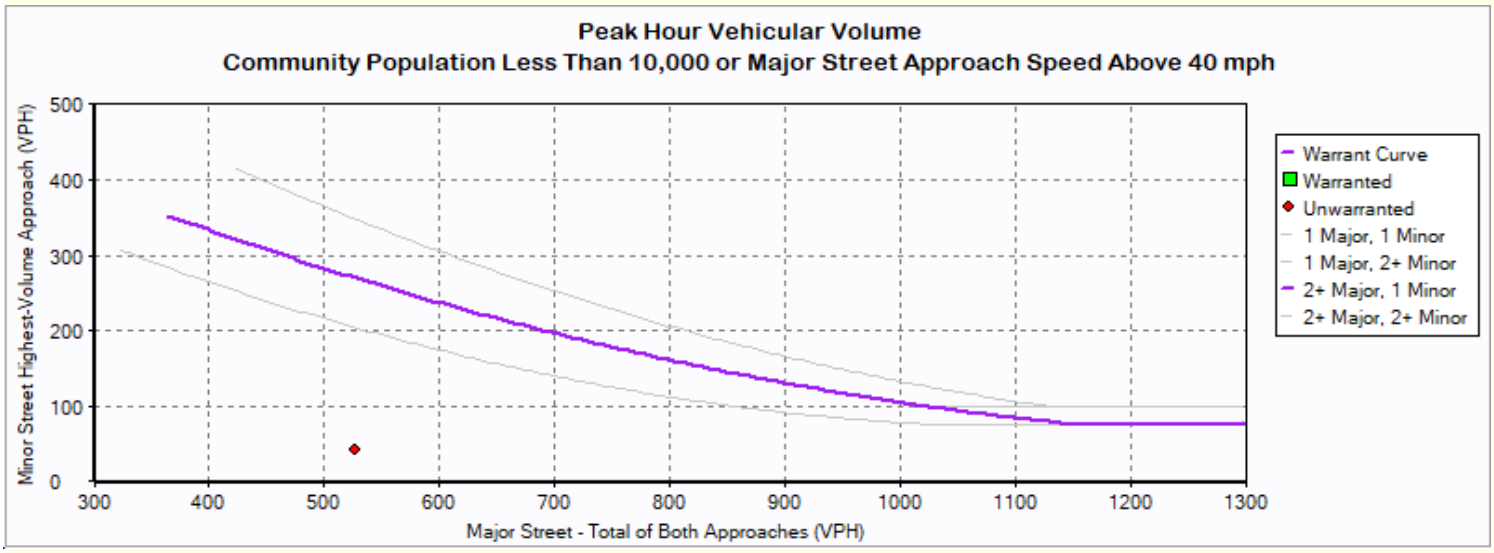
	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lanes	2	1
Approch Speed	45	30

Warrant 3 Met? **No**

Details

Low Population?	No		
Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

2: Freedom Dr & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
16:45	527	43

Warrant 3: Peak Hour

Near-Term With Project-AM

2: Freedom Dr & Walnut St

Intersection Information

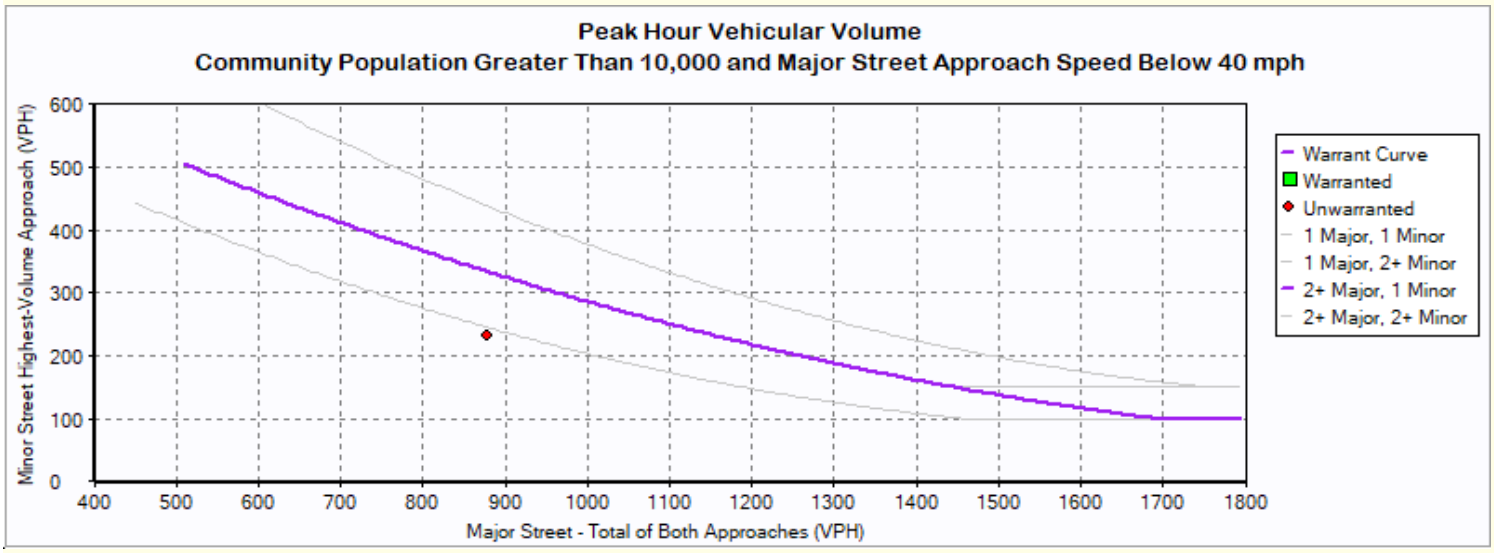
	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lanes	2	1
Approch Speed	25	30

Warrant 3 Met? **No**

Details

Low Population?	No		
Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



2: Freedom Dr & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	879	233

Warrant 3: Peak Hour

Near-Term With Project-PM

2: Freedom Dr & Walnut St

Intersection Information

	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lanes	2	1
Approch Speed	45	30

Warrant 3 Met? **No**

Details

Low Population? No

Condition A Met No

Notes 0 Hours met (1 required)

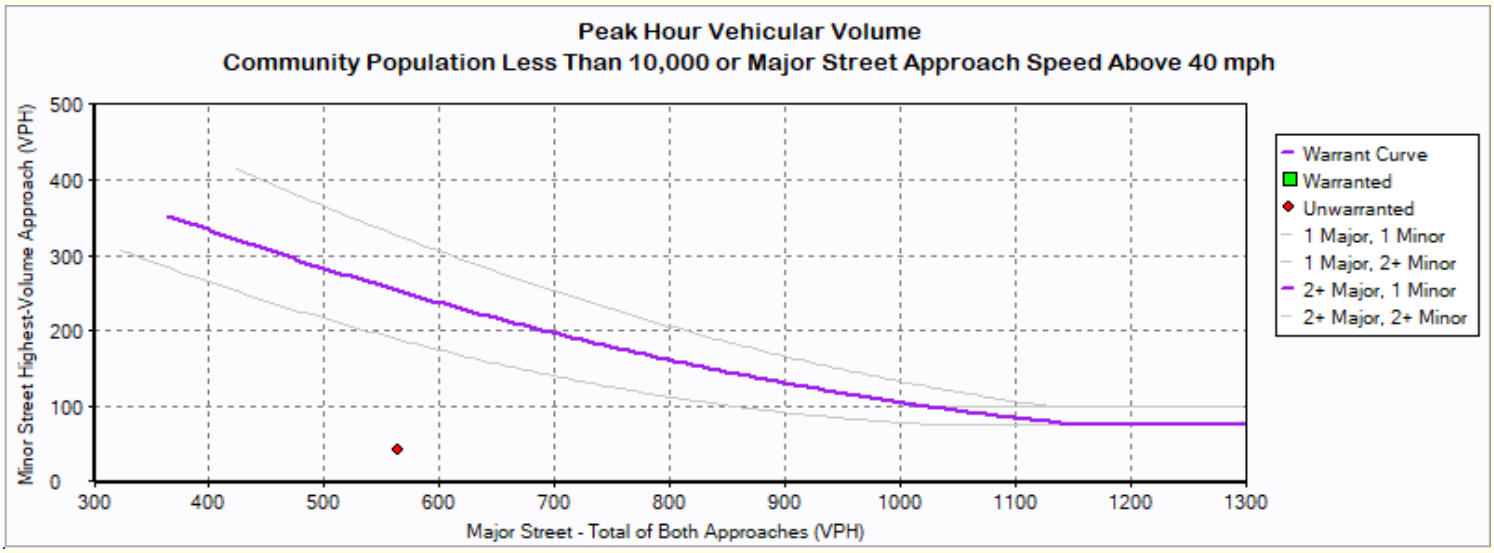
Condition B Met No

Notes 0 Hours met (1 required)

Minor Approach Time Delay Condition Met? Not Met

Minor Approach Volume Condition Met? Met

Total Entering Intersection Volume Condition Met? Not Met



2: Freedom Dr & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
16:45	564	43

Warrant 3: Peak Hour

2043 With Project-AM

2: Freedom Dr & Walnut St

Intersection Information

	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lanes	2	1
Approch Speed	25	30

Warrant 3 Met? **Yes**

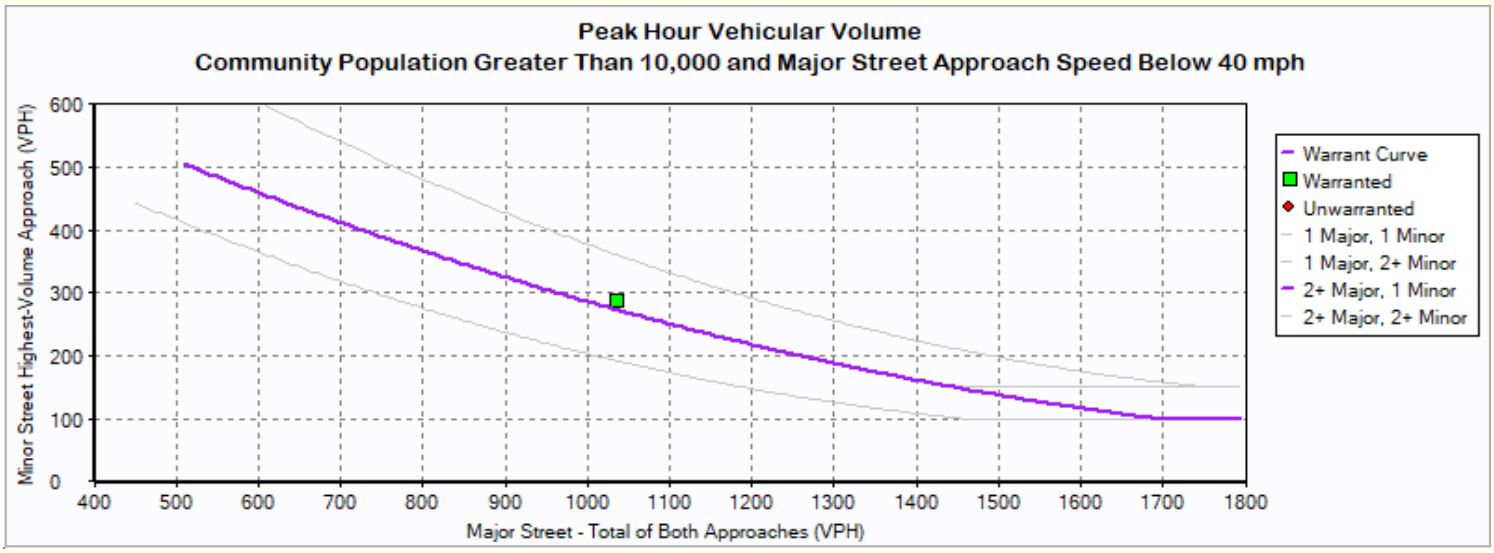
Details

Low Population? No

Condition A Met No — **Condition B Met** Yes

Notes 0 Hours met (1 required) — **Notes** 1 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

2: Freedom Dr & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	1,037	286

Warrant 3: Peak Hour

2043 With Project-PM

2: Freedom Dr & Walnut St

Intersection Information

	Major Street	Minor Street
Street Name	Walnut St	Freedom Dr
Direction	EB/WB	NB
Number of Lanes	2	1
Approch Speed	45	30

Warrant 3 Met? **No**

Details

Low Population? No

Condition A Met No

Notes 0 Hours met (1 required)

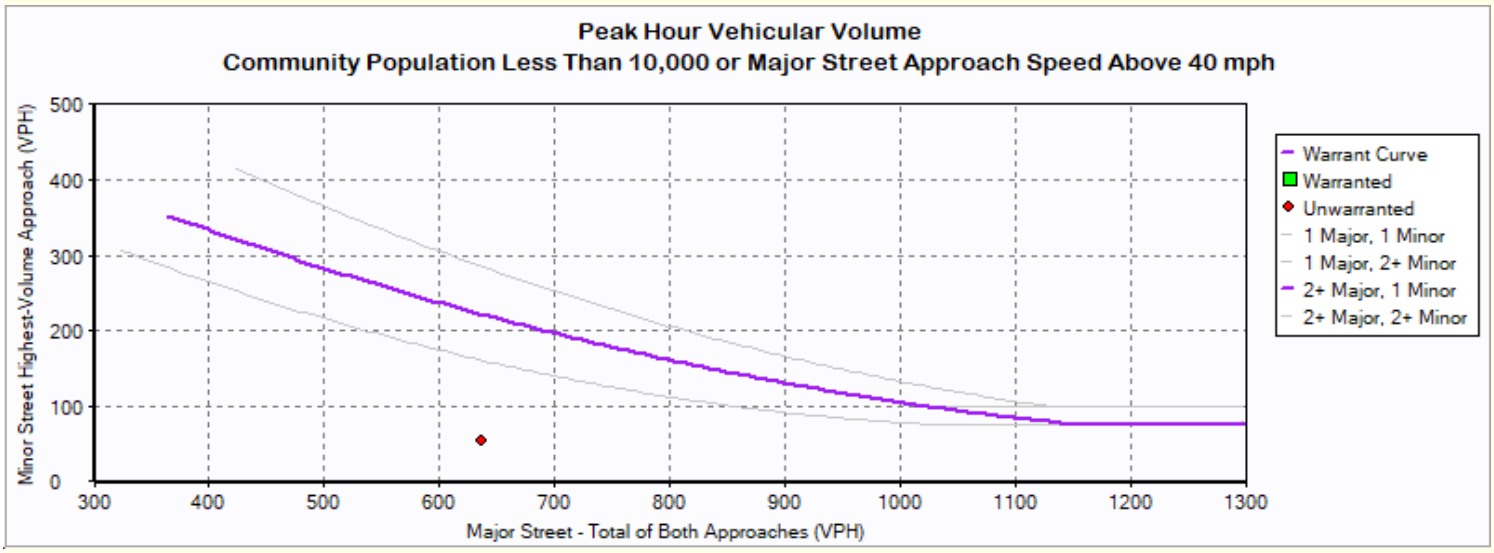
Condition B Met No

Notes 0 Hours met (1 required)

Minor Approach Time Delay Condition Met? Not Met

Minor Approach Volume Condition Met? Met

Total Entering Intersection Volume Condition Met? Not Met



Warrant 3: Peak Hour

2: Freedom Dr & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
16:45	637	53

Warrant 3: Peak Hour

Existing

3: Rd 168 & Walnut St

Intersection Information

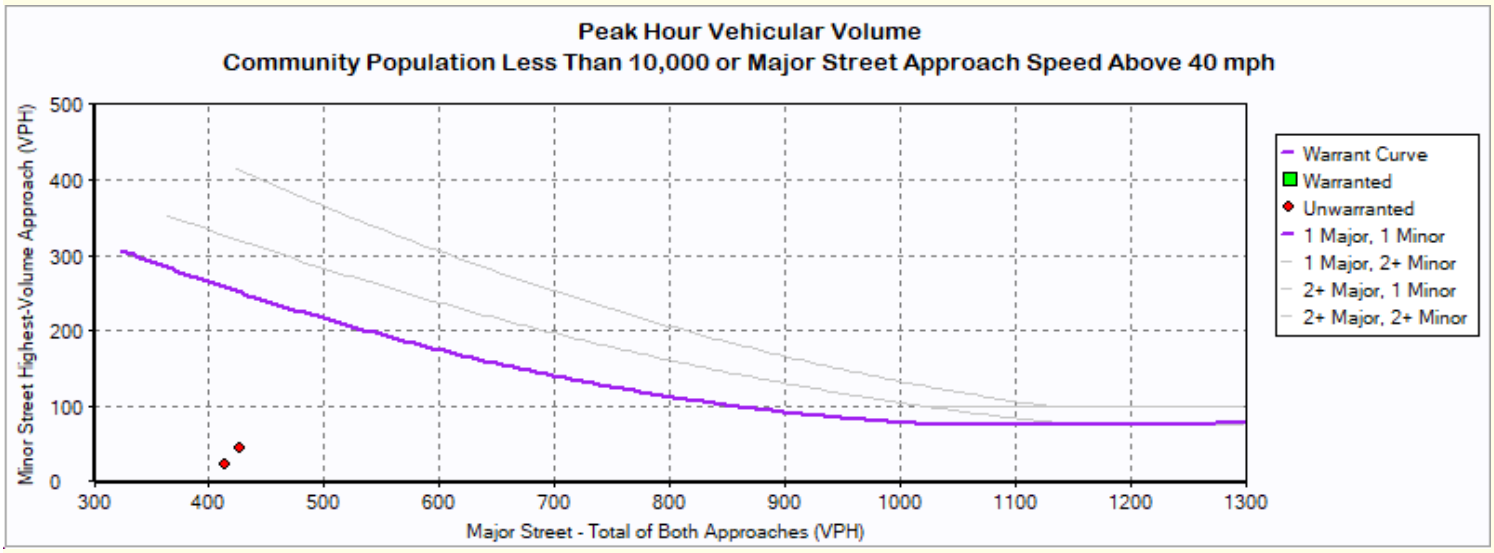
	Major Street	Minor Street
Street Name	Walnut St	Rd 168
Direction	EB/WB	NB/SB
Number of Lanes	1	1
Approch Speed	45	30

Warrant 3 Met? **No**

Details

Low Population?	No		
Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

3: Rd 168 & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:45	427	44
16:45	414	22

Warrant 3: Peak Hour

Existing Plus Project

3: Rd 168 & Walnut St

Intersection Information

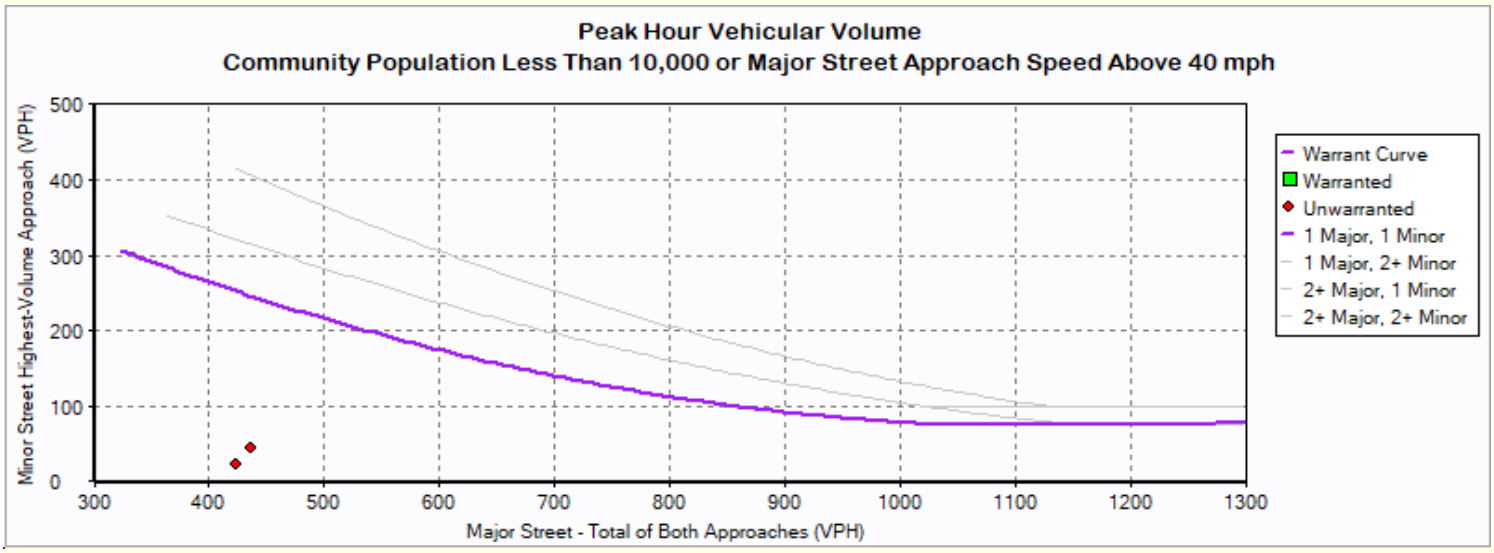
	Major Street	Minor Street
Street Name	Walnut St	Rd 168
Direction	EB/WB	NB/SB
Number of Lanes	1	1
Approch Speed	45	30

Warrant 3 Met? **No**

Details

Low Population?	No		
Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:45	437	44
16:45	424	22

Warrant 3: Peak Hour

Near-Term With Project

3: Rd 168 & Walnut St

Intersection Information

	Major Street	Minor Street
Street Name	Walnut St	Rd 168
Direction	EB/WB	NB/SB
Number of Lanes	1	1
Approch Speed	45	30

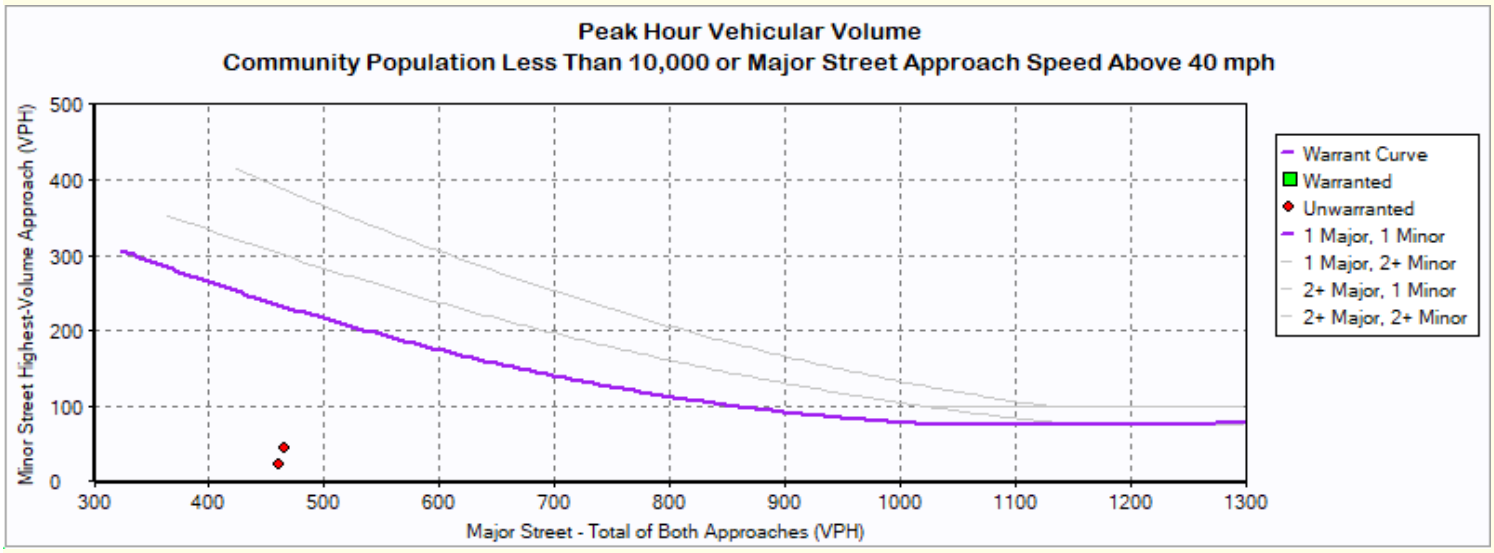
Warrant 3 Met? **No**

Details

Low Population? No

Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

3: Rd 168 & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:45	465	44
16:45	461	22

Warrant 3: Peak Hour

2043 With Project

3: Rd 168 & Walnut St

Intersection Information

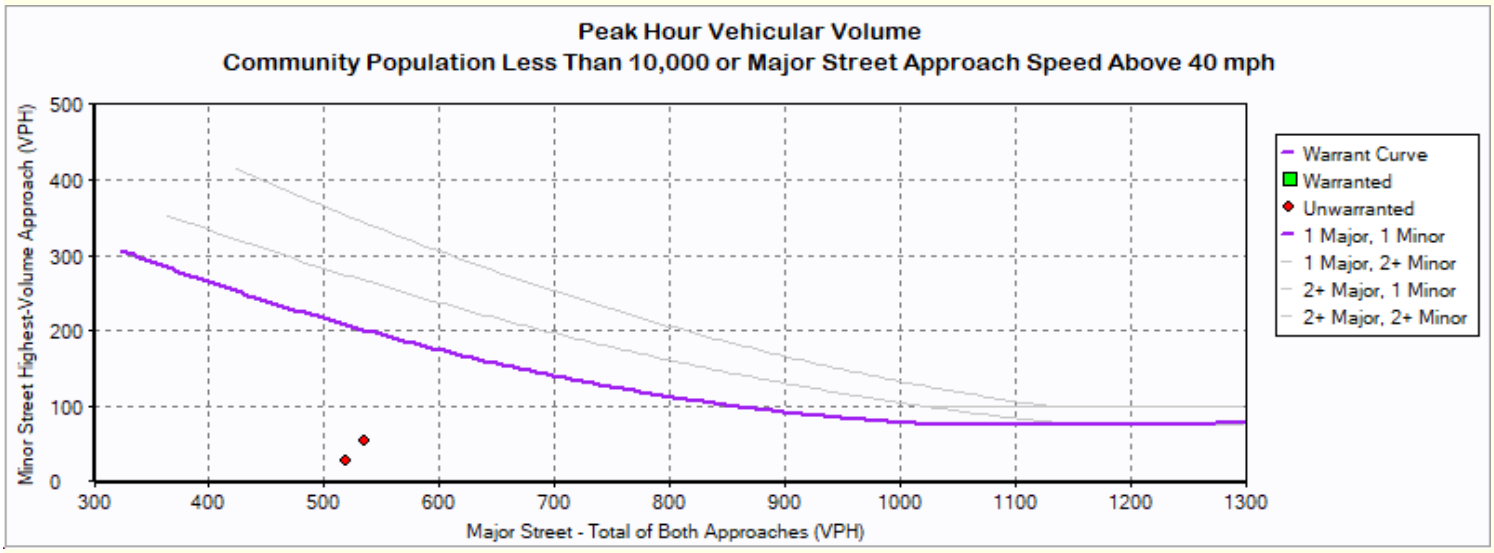
	Major Street	Minor Street
Street Name	Walnut St	Rd 168
Direction	EB/WB	NB/SB
Number of Lanes	1	1
Approch Speed	45	30

Warrant 3 Met? **No**

Details

Low Population?	No		
Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



3: Rd 168 & Walnut St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:45	535	54
16:45	519	27

Warrants Summary Report

Existing

4: Farmersville Blvd & Front St

Intersection Information

	Major Street	Minor Street
Street Name	Farmersville Blvd	Front St
Direction	NB/SB	EB/WB
Number of Lane	2	2
Approach Speed	35	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	2 Hours met (8 required)
Condition A and B M	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	1 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	2 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

No

Condition A Met?	No
Condition B Met?	No
Condition C Met?	No

BicycleWarrant

No 0 Hours met (1 required)

Warrant 3: Peak Hour

Existing Plus Project

4: Farmersville Blvd & Front St

Intersection Information

	Major Street	Minor Street
Street Name	Farmersville Blvd	Front St
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	30

Warrant 3 Met? **No**

Details

Low Population? No

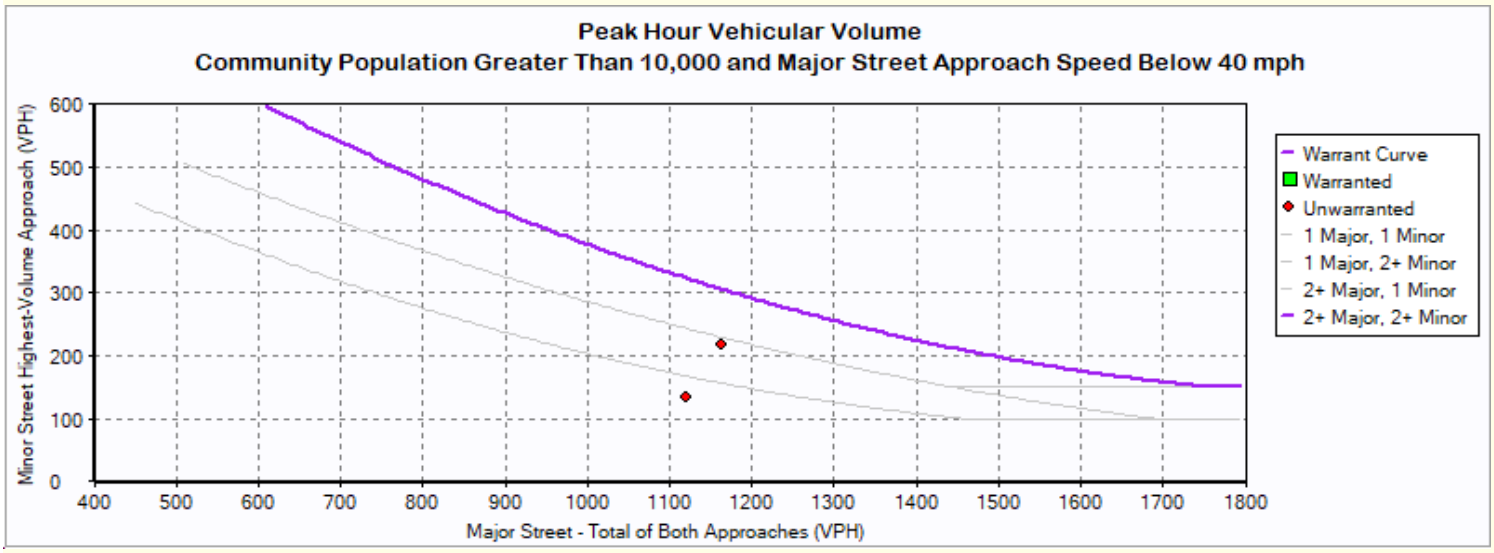
Condition A Met? No

Notes 0 Hours met (1 required)

Condition B Met? No

Notes 0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

4: Farmersville Blvd & Front St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	1,163	219
16:45	1,120	134

Warrant 3: Peak Hour

Near-Term With Project

4: Farmersville Blvd & Front St

Intersection Information

	Major Street	Minor Street
Street Name	Farmersville Blvd	Front St
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	30

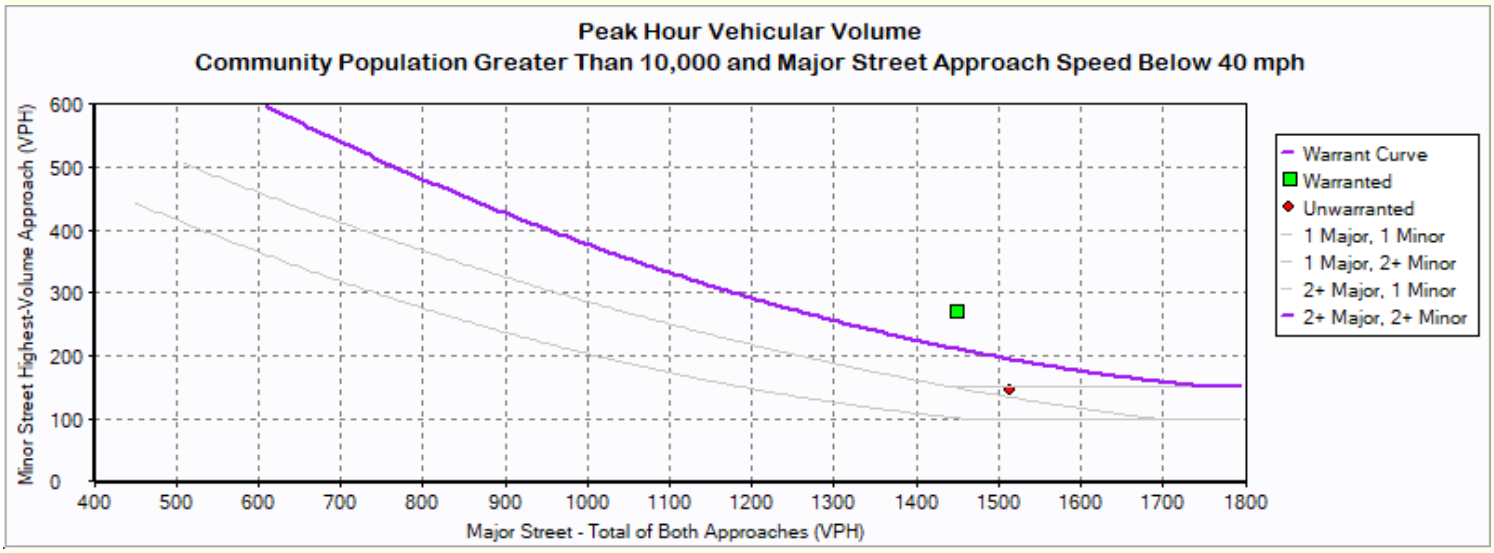
Warrant 3 Met? Yes

Details

Low Population? No

Condition A Met	No	**Condition B Met**	Yes
Notes	0 Hours met (1 required)	**Notes**	1 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

4: Farmersville Blvd & Front St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	1,451	269
16:45	1,513	145

Warrant 3: Peak Hour

2043 With Project

4: Farmersville Blvd & Front St

Intersection Information

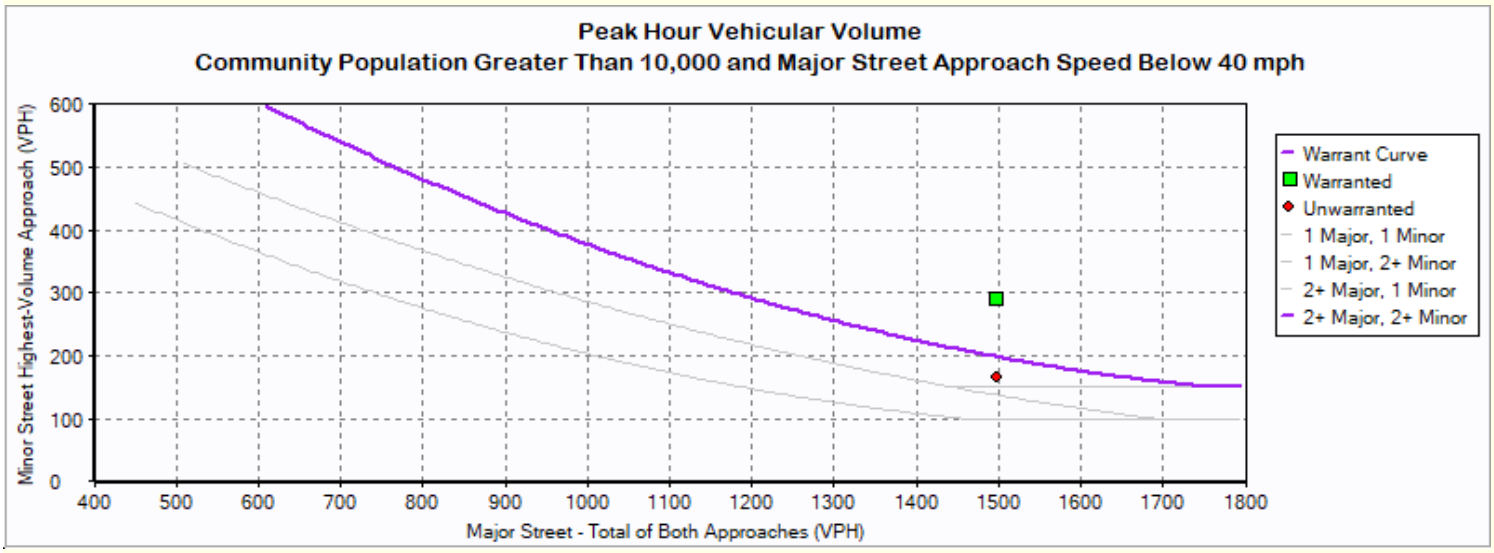
	Major Street	Minor Street
Street Name	Farmersville Blvd	Front St
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	30

Warrant 3 Met? **Yes**

Details

Low Population?	No		
Condition A Met?	No	**Condition B Met?**	Yes
Notes	0 Hours met (1 required)	**Notes**	1 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

4: Farmersville Blvd & Front St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	1,499	289
16:45	1,498	165

Warrants Summary Report

Existing

5: Farmersville Blvd & Ash St

Intersection Information

	Major Street	Minor Street
Street Name	Farmersville Blvd	Ash St
Direction	NB/SB	EB/WB
Number of Lane	2	1
Approach Speed	35	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	1 Hours met (8 required)
Condition A and B M	No	2 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	2 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

No

Condition A Met?	No
Condition B Met?	No
Condition C Met?	No

BicycleWarrant

No 0 Hours met (1 required)

Warrant 3: Peak Hour

Existing Plus Project

5: Farmersville Blvd & Ash St

Intersection Information

	Major Street	Minor Street
Street Name	Farmersville Blvd	Ash St
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approch Speed	35	30

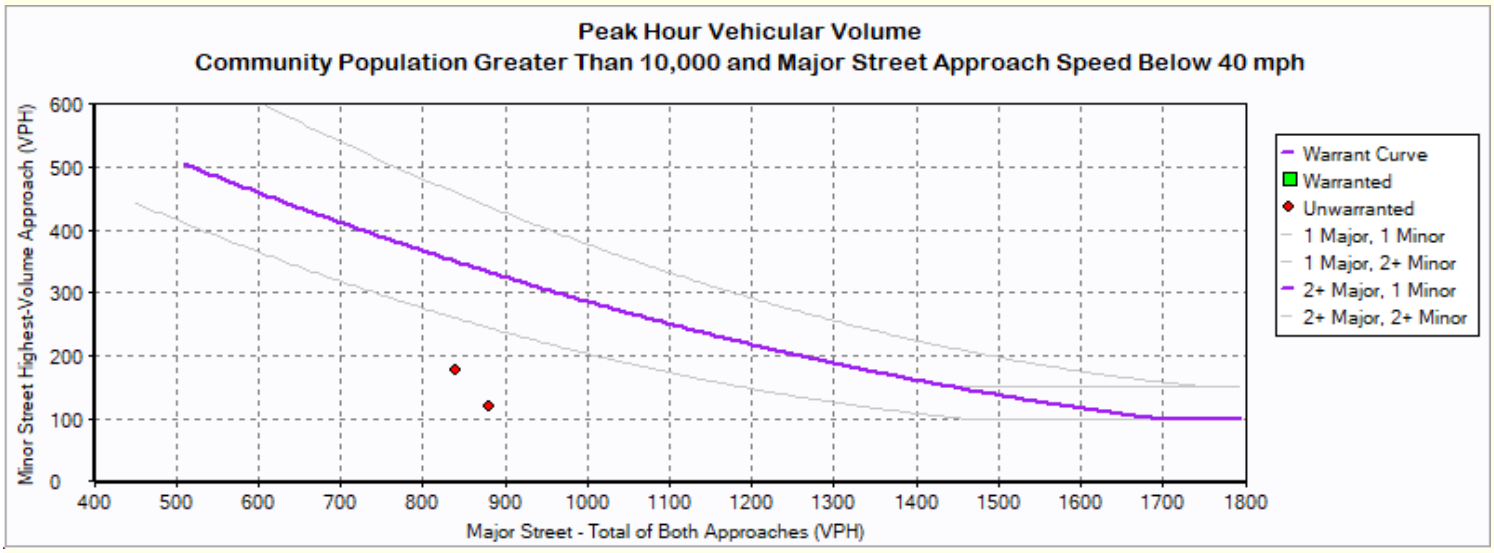
Warrant 3 Met? **No**

Details

Low Population? No

Condition A Met	No	**Condition B Met**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

5: Farmersville Blvd & Ash St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	839	178
16:45	880	120

Warrant 3: Peak Hour

Near-Term With Project

5: Farmersville Blvd & Ash St

Intersection Information

	Major Street	Minor Street
Street Name	Farmersville Blvd	Ash St
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approch Speed	35	30

Warrant 3 Met? **No**

Details

Low Population? No

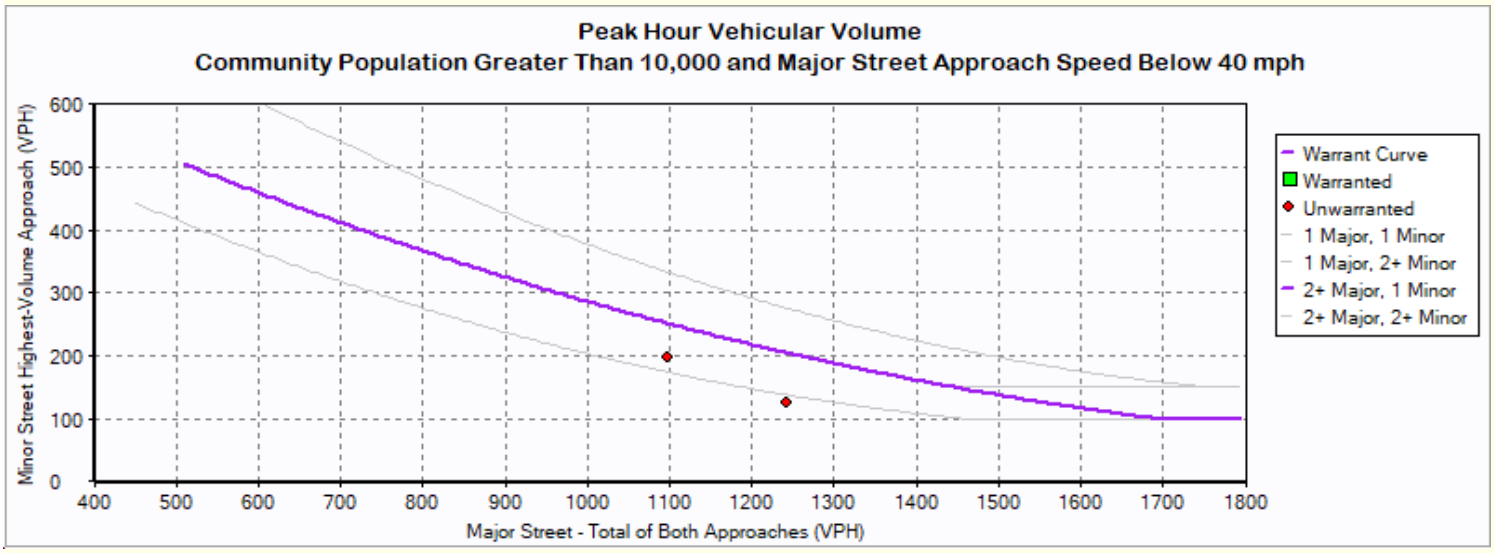
Condition A Met? No

Notes 0 Hours met (1 required)

Condition B Met? No

Notes 0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

5: Farmersville Blvd & Ash St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	1,097	198
16:45	1,242	125

Warrant 3: Peak Hour

2043 With Project

5: Farmersville Blvd & Ash St

Intersection Information

	Major Street	Minor Street
Street Name	Farmersville Blvd	Ash St
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approch Speed	35	30

Warrant 3 Met? **No**

Details

Low Population? No

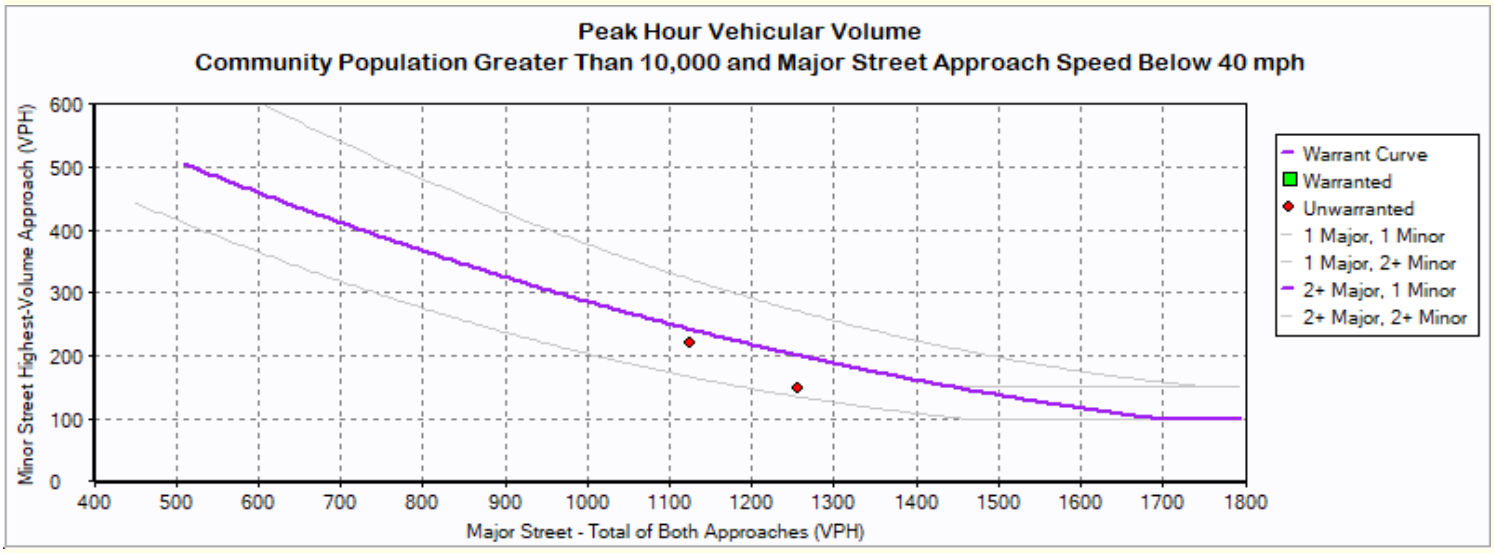
Condition A Met? No

Notes 0 Hours met (1 required)

Condition B Met? No

Notes 0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Met
Total Entering Intersection Volume Condition Met?	Not Met



Warrant 3: Peak Hour

5: Farmersville Blvd & Ash St

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:15	1,126	220
16:45	1,256	148

APPENDIX D

INTERSECTION ANALYSIS SHEETS WITH IMPROVEMENTS

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	446	73	25	503	154	132
Future Volume (veh/h)	446	73	25	503	154	132
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.94	1.00		1.00	0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	676	111	38	762	233	200
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	789	626	70	989	264	227
Arrive On Green	0.42	0.42	0.04	0.53	0.30	0.30
Sat Flow, veh/h	1870	1486	1781	1870	868	745
Grp Volume(v), veh/h	676	111	38	762	434	0
Grp Sat Flow(s),veh/h/ln	1870	1486	1781	1870	1617	0
Q Serve(g_s), s	19.3	2.7	1.2	19.1	15.0	0.0
Cycle Q Clear(g_c), s	19.3	2.7	1.2	19.1	15.0	0.0
Prop In Lane		1.00	1.00		0.54	0.46
Lane Grp Cap(c), veh/h	789	626	70	989	492	0
V/C Ratio(X)	0.86	0.18	0.54	0.77	0.88	0.00
Avail Cap(c_a), veh/h	1020	811	179	1335	638	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.4	10.6	27.7	11.0	19.4	0.0
Incr Delay (d2), s/veh	5.9	0.1	6.4	2.0	11.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.3	1.4	1.1	10.2	10.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	10.8	34.1	13.0	30.6	0.0
LnGrp LOS	C	B	C	B	C	A
Approach Vol, veh/h	787			800	434	
Approach Delay, s/veh	19.8			14.0	30.6	
Approach LOS	B			B	C	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.8	6.3	29.7		36.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s		23.2	5.9	32.1		42.0
Max Q Clear Time (g_c+I1), s		17.0	3.2	21.3		21.1
Green Ext Time (p_c), s		0.9	0.0	3.5		5.2

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	676	111	38	762	433
v/c Ratio	0.83	0.17	0.21	0.79	0.79
Control Delay	28.1	6.6	35.2	19.3	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	6.6	35.2	19.3	31.4
Queue Length 50th (ft)	272	10	17	242	158
Queue Length 95th (ft)	251	21	32	216	163
Internal Link Dist (ft)	1212			1250	958
Turn Bay Length (ft)		110	100		
Base Capacity (vph)	1048	839	183	1313	697
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.13	0.21	0.58	0.62

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	4	24	16	11	250	5	614	29	112	561	228
Future Volume (veh/h)	271	4	24	16	11	250	5	614	29	112	561	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.93	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	347	5	18	21	14	174	6	787	24	144	719	177
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	404	6	21	169	113	229	93	1006	31	183	937	231
Arrive On Green	0.25	0.25	0.25	0.16	0.16	0.16	0.05	0.29	0.29	0.10	0.34	0.34
Sat Flow, veh/h	1631	23	85	1072	715	1450	1753	3455	105	1753	2739	674
Grp Volume(v), veh/h	370	0	0	35	0	174	6	398	413	144	459	437
Grp Sat Flow(s),veh/h/ln	1739	0	0	1787	0	1450	1753	1749	1812	1753	1749	1664
Q Serve(g_s), s	19.1	0.0	0.0	1.6	0.0	10.8	0.3	19.6	19.6	7.5	22.0	22.0
Cycle Q Clear(g_c), s	19.1	0.0	0.0	1.6	0.0	10.8	0.3	19.6	19.6	7.5	22.0	22.0
Prop In Lane	0.94		0.05	0.60		1.00	1.00		0.06	1.00		0.41
Lane Grp Cap(c), veh/h	430	0	0	282	0	229	93	509	528	183	598	570
V/C Ratio(X)	0.86	0.00	0.00	0.12	0.00	0.76	0.06	0.78	0.78	0.79	0.77	0.77
Avail Cap(c_a), veh/h	708	0	0	421	0	341	355	920	954	403	969	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	0.0	0.0	34.0	0.0	37.8	42.2	30.5	30.5	41.0	27.5	27.5
Incr Delay (d2), s/veh	5.9	0.0	0.0	0.2	0.0	5.5	0.3	2.7	2.6	7.3	2.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.4	0.0	0.0	1.3	0.0	7.4	0.2	13.2	13.6	6.4	14.2	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	0.0	0.0	34.2	0.0	43.3	42.5	33.2	33.1	48.3	29.6	29.7
LnGrp LOS	D	A	A	C	A	D	D	C	C	D	C	C
Approach Vol, veh/h		370			209			817			1040	
Approach Delay, s/veh		39.7			41.8			33.2			32.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.8	32.2		28.1	9.0	37.0		19.7				
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9				
Max Green Setting (Gmax), s	21.6	49.4		38.2	19.0	52.0		22.1				
Max Q Clear Time (g_c+I1), s	9.5	21.6		21.1	2.3	24.0		12.8				
Green Ext Time (p_c), s	0.3	5.7		2.1	0.0	6.7		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		34.5	
HCM 6th LOS		C	

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	383	35	321	6	824	144	1011
v/c Ratio	0.81	0.20	0.83	0.06	0.75	0.62	0.78
Control Delay	55.3	55.5	29.2	65.4	41.4	64.0	34.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	55.5	29.2	65.4	41.4	64.0	34.2
Queue Length 50th (ft)	253	24	32	4	284	101	321
Queue Length 95th (ft)	408	57	84	19	373	179	399
Internal Link Dist (ft)	325	604			976		1119
Turn Bay Length (ft)			50				
Base Capacity (vph)	602	358	506	302	1550	343	1608
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.10	0.63	0.02	0.53	0.42	0.63

Intersection Summary

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	383	356	830	1155
Demand Flow Rate, veh/h	398	371	862	1202
Vehicles Circulating, veh/h	920	1185	516	43
Vehicles Exiting, veh/h	325	193	802	1513
Ped Vol Crossing Leg, #/h	30	30	30	30
Ped Cap Adj	1.000	1.000	0.981	0.967
Approach Delay, s/veh	17.5	26.9	11.1	7.8
Approach LOS	C	D	B	A

Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	398	371	405	457	565	637
Cap Entry Lane, veh/h	650	519	840	916	1297	1369
Entry HV Adj Factor	0.962	0.961	0.963	0.962	0.961	0.961
Flow Entry, veh/h	383	356	390	440	543	612
Cap Entry, veh/h	625	498	793	865	1206	1272
V/C Ratio	0.613	0.715	0.491	0.508	0.450	0.481
Control Delay, s/veh	17.5	26.9	11.3	10.9	7.7	7.8
LOS	C	D	B	B	A	A
95th %tile Queue, veh	4	6	3	3	2	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	266	31	9	341	42	11
Future Volume (veh/h)	266	31	9	341	42	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	302	35	10	388	48	12
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	532	436	24	832	266	67
Arrive On Green	0.28	0.28	0.01	0.44	0.20	0.20
Sat Flow, veh/h	1870	1532	1781	1870	1357	339
Grp Volume(v), veh/h	302	35	10	388	61	0
Grp Sat Flow(s),veh/h/ln	1870	1532	1781	1870	1725	0
Q Serve(g_s), s	3.8	0.5	0.2	4.0	0.8	0.0
Cycle Q Clear(g_c), s	3.8	0.5	0.2	4.0	0.8	0.0
Prop In Lane		1.00	1.00		0.79	0.20
Lane Grp Cap(c), veh/h	532	436	24	832	338	0
V/C Ratio(X)	0.57	0.08	0.42	0.47	0.18	0.00
Avail Cap(c_a), veh/h	1379	1129	392	2064	1271	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.3	7.1	13.3	5.3	9.1	0.0
Incr Delay (d2), s/veh	1.0	0.1	11.3	0.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.2	0.2	0.9	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.3	7.2	24.7	5.7	9.4	0.0
LnGrp LOS	A	A	C	A	A	A
Approach Vol, veh/h	337			398	61	
Approach Delay, s/veh	9.1			6.2	9.4	
Approach LOS	A			A	A	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.2	4.4	12.7		17.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s		20.1	6.0	20.1		30.1
Max Q Clear Time (g_c+I1), s		2.8	2.2	5.8		6.0
Green Ext Time (p_c), s		0.1	0.0	1.5		2.2

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	302	35	10	388	61
v/c Ratio	0.43	0.06	0.03	0.49	0.15
Control Delay	9.8	3.9	14.0	8.2	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	3.9	14.0	8.2	11.1
Queue Length 50th (ft)	25	0	1	34	5
Queue Length 95th (ft)	104	12	12	77	33
Internal Link Dist (ft)	1212			1250	958
Turn Bay Length (ft)		110	100		
Base Capacity (vph)	1342	1113	380	1736	1249
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.03	0.03	0.22	0.05

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	6	20	26	11	139	11	570	45	144	634	144
Future Volume (veh/h)	118	6	20	26	11	139	11	570	45	144	634	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	123	6	15	27	11	101	11	594	33	150	660	105
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	199	10	24	151	62	178	25	914	51	195	1108	176
Arrive On Green	0.13	0.13	0.13	0.12	0.12	0.12	0.01	0.27	0.27	0.11	0.37	0.37
Sat Flow, veh/h	1473	72	180	1263	515	1482	1753	3359	186	1753	3003	477
Grp Volume(v), veh/h	144	0	0	38	0	101	11	309	318	150	384	381
Grp Sat Flow(s),veh/h/ln	1725	0	0	1778	0	1482	1753	1749	1796	1753	1749	1731
Q Serve(g_s), s	4.1	0.0	0.0	1.0	0.0	3.3	0.3	8.1	8.1	4.3	9.2	9.2
Cycle Q Clear(g_c), s	4.1	0.0	0.0	1.0	0.0	3.3	0.3	8.1	8.1	4.3	9.2	9.2
Prop In Lane	0.85		0.10	0.71		1.00	1.00		0.10	1.00		0.28
Lane Grp Cap(c), veh/h	233	0	0	213	0	178	25	476	489	195	645	639
V/C Ratio(X)	0.62	0.00	0.00	0.18	0.00	0.57	0.44	0.65	0.65	0.77	0.59	0.60
Avail Cap(c_a), veh/h	604	0	0	623	0	519	204	748	769	441	985	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	0.0	20.4	0.0	21.5	25.3	16.6	16.6	22.3	13.2	13.2
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.4	0.0	2.8	12.0	1.5	1.5	6.3	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	0.0	0.0	0.7	0.0	2.2	0.4	5.5	5.6	3.5	5.7	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	0.0	20.8	0.0	24.3	37.2	18.1	18.1	28.6	14.1	14.1
LnGrp LOS	C	A	A	C	A	C	D	B	B	C	B	B
Approach Vol, veh/h		144			139			638			915	
Approach Delay, s/veh		23.8			23.4			18.4			16.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	19.0		11.9	4.7	24.0		11.1				
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9				
Max Green Setting (Gmax), s	13.0	22.1		18.1	6.0	29.1		18.1				
Max Q Clear Time (g_c+I1), s	6.3	10.1		6.1	2.3	11.2		5.3				
Green Ext Time (p_c), s	0.2	3.1		0.5	0.0	4.7		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		18.2	
HCM 6th LOS		B	

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	38	145	11	641	150	810
v/c Ratio	0.49	0.19	0.44	0.07	0.55	0.51	0.49
Control Delay	31.5	32.7	8.0	33.7	22.8	34.7	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	32.7	8.0	33.7	22.8	34.7	13.7
Queue Length 50th (ft)	54	15	0	4	120	58	100
Queue Length 95th (ft)	116	45	33	21	202	127	227
Internal Link Dist (ft)	325	604			976		1119
Turn Bay Length (ft)			50				
Base Capacity (vph)	527	537	580	175	1277	380	1797
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.07	0.25	0.06	0.50	0.39	0.45

Intersection Summary

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	150	183	652	960
Demand Flow Rate, veh/h	156	190	678	998
Vehicles Circulating, veh/h	870	757	290	50
Vehicles Exiting, veh/h	178	211	736	897
Ped Vol Crossing Leg, #/h	14	14	14	14
Ped Cap Adj	0.998	0.998	0.988	0.985
Approach Delay, s/veh	8.3	8.0	6.8	6.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.471	0.529	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	156	190	319	359	469	529
Cap Entry Lane, veh/h	678	746	1034	1110	1289	1361
Entry HV Adj Factor	0.960	0.961	0.961	0.963	0.962	0.961
Flow Entry, veh/h	150	183	307	346	451	509
Cap Entry, veh/h	649	716	981	1056	1221	1288
V/C Ratio	0.231	0.255	0.312	0.327	0.369	0.395
Control Delay, s/veh	8.3	8.0	6.9	6.7	6.5	6.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	2	2