

FLORENCE AVENUE TOWNHOMES

PROJECT NO. 21-036

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TRAFFIC IMPACT ANALYSIS

E | P | D
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FLORENCE AVENUE TOWNHOMES

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1 EXECUTIVE SUMMARY

This Traffic Impact Analysis (TIA) evaluates the potential for traffic operational deficiencies caused by the Florence Avenue Townhomes project, a proposed 54 townhome development. It should be noted that the analysis utilizes a previous version of the project, which proposed 63 townhomes. Because the analysis for 63 homes is more conservative than 54 homes and the type of residence did not change, the analysis has assumed 63 homes. Any project impacts would be the same or less significant with the reduction of proposed units.

The project is located on a 3.02-acre site located at 11733 Florence Avenue in the City of Santa Fe Springs. Based on the Institute of Transportation Engineers *Trip Generation* 10th Edition vehicle trip generation rates, the project would generate 343 daily trips, including 23 trips during the AM peak hour and 28 trips during the PM peak hour.

Five study area intersections were evaluated during the AM and PM peak hours, which are defined as the hours with the highest traffic volumes during the 7 AM to 9 AM and 4 PM to 6 PM peak commute periods. AM and PM peak hour traffic operations were evaluated for the following scenarios:

- Existing Condition
- Existing plus Project Condition
- Opening Year Baseline (corresponding to the proposed project opening year 2023)
- Opening Year plus project

Existing plus Project Intersection Analysis Results

All study intersections are anticipated to operate at LOS D or better in the Existing plus Project condition.

Opening Year plus Project Intersection Analysis Results

All study intersections are anticipated to operate at LOS D or better in the Opening Year plus Project condition. Based on this analysis, the project would not cause unsatisfactory operation at any study area intersection.

Accident History on Florence Avenue

Accident data for Florence Avenue from Orr and Day Road to Pioneer Boulevard was obtained from City of Santa Fe Springs staff for the period of January 2018 to August 2021. At the intersection of Orr and Day Road and Florence Avenue there were five rear end accidents, two broadside accidents, and two sideswipe accidents. A total of four crashes resulted in injuries, with none resulting in fatalities. At the intersection of Pioneer Boulevard and Florence Avenue there were eight rear end accidents, ten broadside accidents, and one sideswipe accident. A total of twelve crashes resulted in injuries, with none resulting in fatalities.

Between Ringwood Avenue and Pioneer Boulevard near the project site, there were eight rear end accidents, two broadside accidents, and three sideswipe accidents. A total of six crashes resulted in injuries, with none resulting in fatalities.

Of the 13 multi-car accidents near the project site, three were caused by drivers under the influence of alcohol/drugs and seven were caused by vehicles traveling at an unsafe speed. Thus, 77 percent of the accidents within the 43-month period were related to illegal vehicle operation along the major arterial roadway. These are vehicular law enforcement issues and should not be considered when determining the potential increase in collisions due to project construction and operation.

Two of the rear end accidents and one of the sideswipe accidents occurred on the north side of Florence Avenue (adjacent to the project site). Both rear end accidents were westbound and caused by unsafe speed, and the sideswipe accident was caused by unsafe turning/merging between two westbound vehicles. These accidents do not involve vehicles exiting or entering the project driveway. Use of the driveway by future residents is unlikely to result in an increase in these types of accidents because the sight distance for vehicles exiting the project driveway is, and will remain, unrestricted. As such, the project is not anticipated to exacerbate these types of collisions from occurring on the north side of Florence Avenue.

The two broadside accidents near the project site involved vehicles exiting out of the driveways of the multi-family residential development on the south side of Florence Avenue across the street from the project site. On-street parking is currently permitted between the two driveways on the south side of Florence Avenue across the street from the site, which results in a restricted sight distance for drivers exiting those driveways. The project would not exacerbate accidents happening at those driveways, as both accidents involved vehicles and sight distance issues on the opposite side of the street. Furthermore, the project does not propose on-street parking on the north side of Florence Avenue on either side of the project driveway and will have one right-in/right-out only access. Therefore, sight distance would be unrestricted for vehicles exiting the project site and would enable safe merging onto Florence Avenue.

2 INTRODUCTION

This Traffic Impact Analysis (TIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential transportation-related operational deficiencies of the proposed Florence Avenue Townhomes project (proposed project). The TIA was prepared according to the requirements of Los Angeles County Department of Public Works Traffic Impact Analysis Report Guidelines (that are utilized by the City of Santa Fe Springs) and applicable provisions of the California Environmental Quality Act (CEQA).

2.1 Project Description

The proposed project is located on a 3.02-acre site located at 11733 Florence Avenue in the City of Santa Fe Springs. The location of the project is shown in Figure 1, and the project site plan is shown in Figure 2. The project proposes to construct 54 townhomes.

It should be noted that the analysis utilizes a previous version of the project, which proposed 63 townhomes. Because the analysis for 63 homes is more conservative than 54 homes and the type of residence did not change, the analysis has assumed 63 homes. Any project impacts would be the same or less significant with the reduction of proposed units.

The project site is currently occupied by a church building that has not been used for several years and would be removed and replaced by the proposed project. The Project proposes to utilize the existing church's west driveway at Florence Avenue to provide access.

The project site currently has two driveways serving the property. The proposed project proposes to close and eliminate the existing east driveway of the existing church site. In the City's General Plan Circulation Element, Policy 1.6 of the Goals and Policies section states "Limit driveway access on arterial streets to maintain a desired quality of flow." Similarly, Policy 8.6 requires that "the driveway access points onto arterial roadways be limited in number and location in order to ensure the smooth and safe flow of vehicles and bicycles." Because the project will eliminate the eastern access point, the project will help maintain and ensure a smooth and safe flow for bicycles and vehicles along Florence Avenue.

Figure 1: Project Location Map



Figure 2: Project Site Plan



2.2 Study Area and Analysis Scenarios

The following five intersections were analyzed in the Existing and Opening Year (2023) analysis:

1. Orr and Day Road/Florence Avenue
2. Roseton Avenue/Florence Avenue
3. Lake Center Park Lane/Ringwood Avenue/Florence Avenue
4. Project Driveway/Florence Avenue
5. Pioneer Boulevard/Florence Avenue

The location of the study area intersections is shown on Figure 3.

Study area intersections were evaluated during the AM and PM peak hours, which are defined as the hour with the highest traffic volumes during the 7 AM to 9 AM and 4 PM to 6 PM peak commute periods. AM and PM peak hour traffic operations were evaluated for the following scenarios:

- Existing Condition
- Existing plus Project Condition
- Opening Year Baseline (corresponding to the project opening year 2023)
- Opening Year plus Project

Forecast traffic volumes for the Opening Year conditions were developed by applying a growth rate of 2 percent per year (factor of 1.04) to the 2021 traffic counts. Cumulative development projects were obtained from the City of Santa Fe Springs' website¹.

¹ [blobdload.aspx \(santafesprings.org\)](#)

Figure 3: Project Study Area

2.3 Methodology

Intersection operations are evaluated using Level of Service (LOS), which is a measure of the delay experienced by drivers on a roadway facility. LOS A indicates free-flow traffic conditions and is generally the best operating conditions. LOS F is an extremely congested condition and is the worst operating condition from the driver's perspective. In this report, LOS at signalized intersections is calculated using the Highway Capacity Manual (HCM), 6th Edition methodology.

LOS at signalized intersections is defined in terms of the weighted average control delay for the intersection as a whole. Control delay is a measure of the increase in travel time that is experienced due to traffic signal control and is expressed in terms of average control delay per vehicle (in seconds). Control delay is determined based on the intersection geometry and volume, signal cycle length, phasing and coordination along the arterial corridor. Table 1 shows the relationship between control delay and LOS at a signalized intersection.

Table 1. Relationship between Control Delay and LOS at a Signalized Intersection

LOS	Delay (Seconds per Vehicle)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	>80

Unsignalized intersections are categorized as either all-way stop control (AWSC) or two-way stop control (TWSC). LOS at AWSC intersections is determined by the weighted average control delay of the overall intersection. The HCM TWSC intersection methodology calculates LOS based on the delay experienced by drivers on the minor (stop-controlled) approaches to the intersection. For TWSC intersections, LOS is determined for each minor-street movement, as well as the major-street left-turns. The relationship between delay and LOS at Unsignalized intersections is shown in Table 2.

Table 2. Relationship between Delay and LOS an Unsignalized Intersection

LOS	Delay (seconds)
A	0-10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	>50

2.4 Significance Criteria

The Los Angeles County Department of Public Works Traffic Impact Analysis Report Guidelines (that are utilized by the City of Santa Fe Springs) set the threshold as LOS D. An operational deficiency would occur if the project causes:

- An intersection operating at an acceptable LOS to degrade to an unacceptable LOS; or
- The delay at an intersection operating at an unacceptable LOS (LOS E or F) to increase by 1.0 or more seconds.

3 BASELINE CONDITIONS

This section discusses the baseline (without project) conditions. Baseline conditions are those conditions that exist within the study area in the existing condition and that are forecast to occur in the future, without the proposed project.

3.1 Existing Transportation System

Access to the project site is provided by Florence Avenue. Florence Avenue has a speed limit of 40 miles per hour (mph) near the project site. There is sidewalk built along both sides of Florence Avenue. The project site is served by Norwalk Transit System (NTS) Routes 1 and 3 and Los Angeles Metro Route 120, which runs along Florence Avenue and provides service seven days a week.

3.2 Existing Traffic Volumes and Levels of Service

Traffic counts at the existing study area intersections shown in Figure 3 were collected on Thursday September 16, 2021. All traffic count sheets are provided in Appendix A. Existing AM and PM peak hour traffic volumes are shown on Figure 4.

The existing LOS at the study area intersections were determined using the methodology described in section 2.3. Table 3 shows the existing AM and PM peak hour LOS at study intersections. All LOS calculations are provided in Appendix B. As shown in Table 3, all intersections operate at LOS D or better in the baseline existing condition.

3.3 Accident History on Florence Avenue

Accident data for Florence Avenue between Ringwood Avenue and Pioneer Boulevard was obtained from City of Santa Fe Springs staff for the 43-month period between January 2018 and August 2021. The data is provided in Appendix C. At the intersection of Orr and Day Road and Florence Avenue there were five rear end accidents, two broadside accidents, and one sideswipe accident. A total of four crashes resulted in injuries, with none resulting in fatalities. At the intersection of Pioneer Boulevard and Florence Avenue there were eight rear end accidents, ten broadside accidents, and two sideswipe accidents. A total of twelve crashes resulted in injuries, with none resulting in fatalities.

Between Ringwood Avenue and Pioneer Boulevard near the project site, there were eight rear end accidents, two broadside accidents, and four sideswipe accidents. A total of six crashes resulted in injuries, with none resulting in fatalities.

Figure 4a: Existing Baseline AM Peak Hour Traffic Volumes

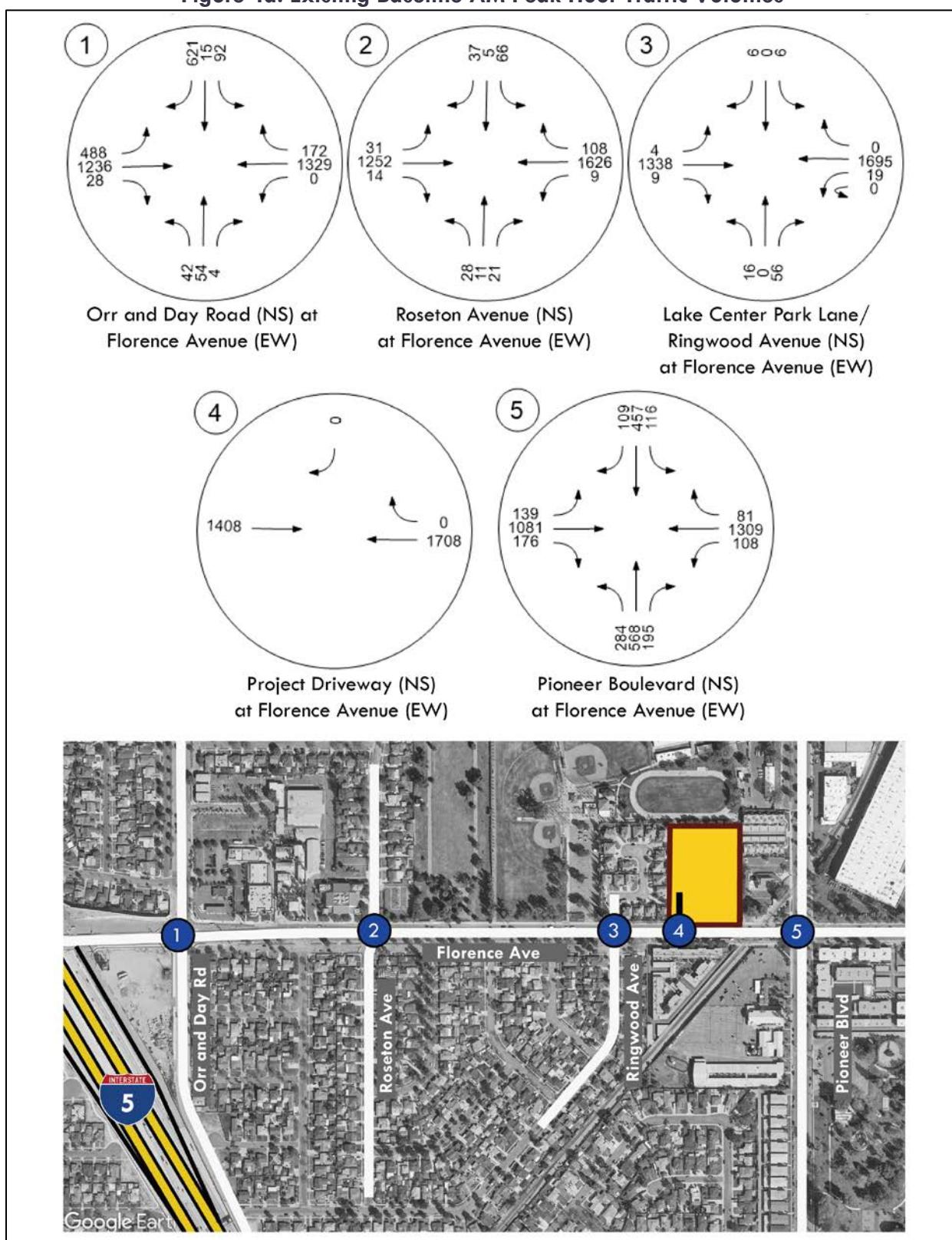


Figure 4b: Existing Baseline PM Peak Hour Traffic Volumes

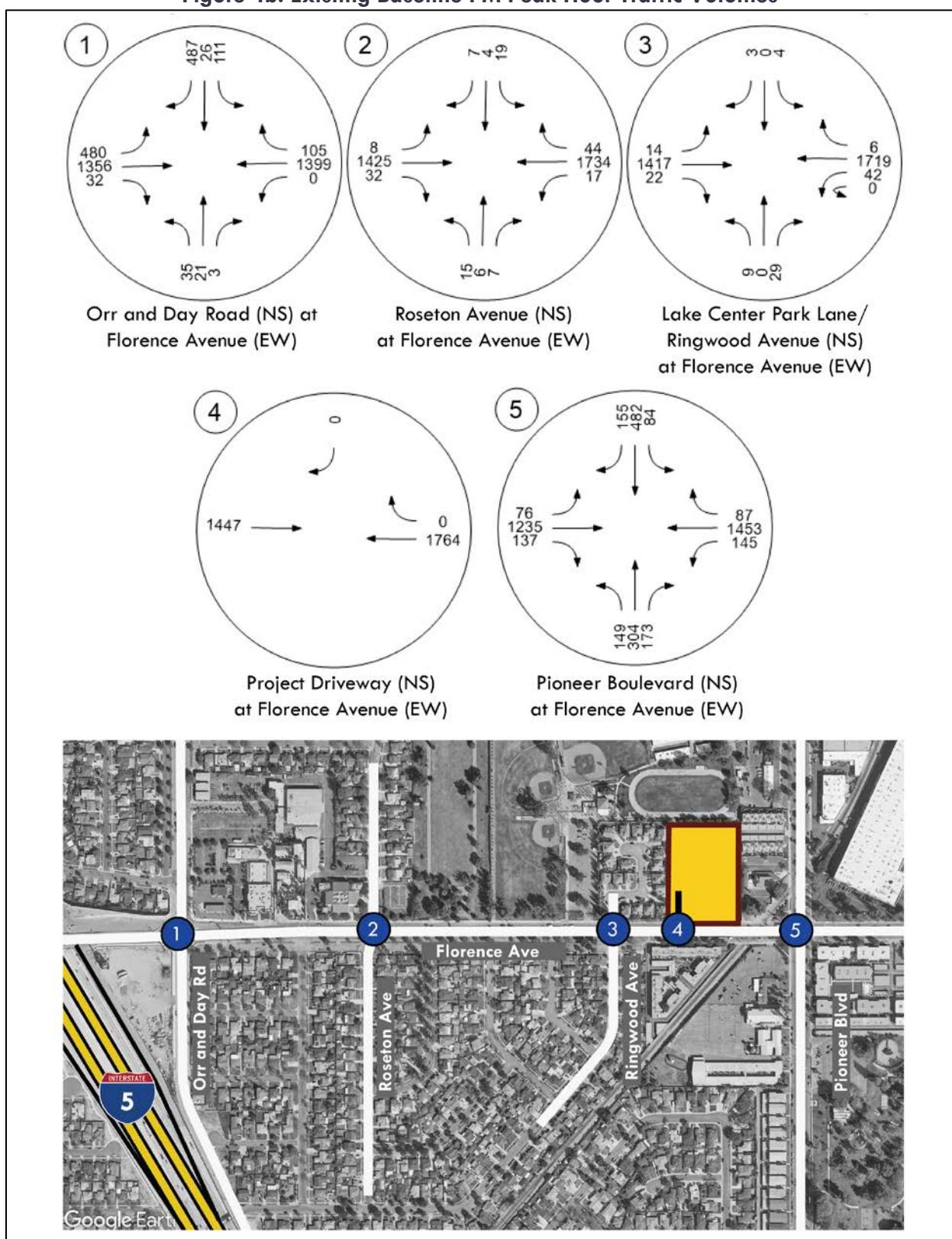


Table 3. Existing AM and PM Peak Hour Levels of Service

Intersection	Traffic Control	AM Peak		PM Peak	
		Delay ¹	LOS ²	Delay ¹	LOS ²
1. Orr and Day Road/Florence Avenue	Signalized	44.9	D	34.8	C
2. Roseton Avenue/Florence Avenue	Signalized	17.9	B	8.6	A
3. Lake Center Park Lane/Ringwood Avenue/Florence Avenue	Signalized	5.5	A	4.5	A
4. Project Driveway/Florence Avenue	TWSC ³	0.0	A	0.0	A
5. Pioneer Boulevard/Florence Avenue	Signalized	36.2	D	27.4	C

¹ Delay in Seconds² Level of Service³ Two Way Stop Control

3.4 Opening Year Baseline (2023) Traffic Volumes and LOS

Opening Year Baseline (2023) traffic volumes were developed by applying a growth rate of 2 percent per year to the existing (2021) traffic volumes (factor of 1.04) and adding traffic generated by other approved and pending development projects. One cumulative project has been identified to impact the study area – a 137,000 sf tilt-up industrial building located at 11401 Greenstone Avenue. The trip generation of the cumulative project is shown in Table 4. The Opening Year Baseline traffic volumes are illustrated in Figure 5.

The logistics facility at 11811 Florence Avenue is within the project's study area; however, it would result in a net decrease in trip generation compared to the existing use. Therefore, the logistics facility project was not included as a cumulative project to provide a conservative analysis of the project's impact. The technical memorandum demonstrating the trip generation of the logistics facility is provided in Appendix D.

The Opening Year Baseline LOS at the study area intersections were determined using the methodology described previously in Section 2.3 - Methodology. Table 5 shows the Opening Year Baseline AM and PM peak hour LOS at study intersections. As shown in Table 5, all intersections operate at LOS D or better in the baseline opening year condition.

Table 4. Cumulative Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	
<u>Trip Rates</u>									
Industrial Building ¹	TSF		4.96	0.62	0.08	0.70	0.08	0.55	0.63
<u>Total Vehicle Trip Generation</u>									
Greenstone Industrial Project	137	TSF	680	84	12	96	11	75	86
<u>Vehicle Mix²</u>									
Passenger Vehicles	72.50%	493	61	8	70	8	54	63	
2-Axle Trucks	4.60%	31	4	1	4	1	3	4	
3-Axle Trucks	5.70%	39	5	1	5	1	4	5	
4+-Axle Trucks	17.20%	117	15	2	16	2	13	15	
	100%	680	84	12	96	11	75	86	
<u>PCE Trip Generation³</u>									
Passenger Vehicles	1.0	493	61	9	70	8	55	63	
2-Axle Trucks	1.5	47	6	1	7	1	5	6	
3-Axle Trucks	2.0	77	10	1	11	1	9	10	
4+-Axle Trucks	3.0	351	44	5	49	6	39	45	
Total PCE Trip Generation		968	121	16	137	16	108	124	
TSF = Thousand Square Feet									
PCE = Passenger Car Equivalent									
¹ Trip rates from the Institute of Transportation Engineers, <i>Trip Generation, 10th Edition</i> , 2017. Land Use Code 110 - General Light Industrial.									
² Vehicle Mix from the Warehouse Truck Trip Study Data Results and Usage, July 17, 2014. Without Cold Storage									
³ Passenger Car Equivalent (PCE) factors from San Bernardino County CMP, Appendix B - Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County, 2016									

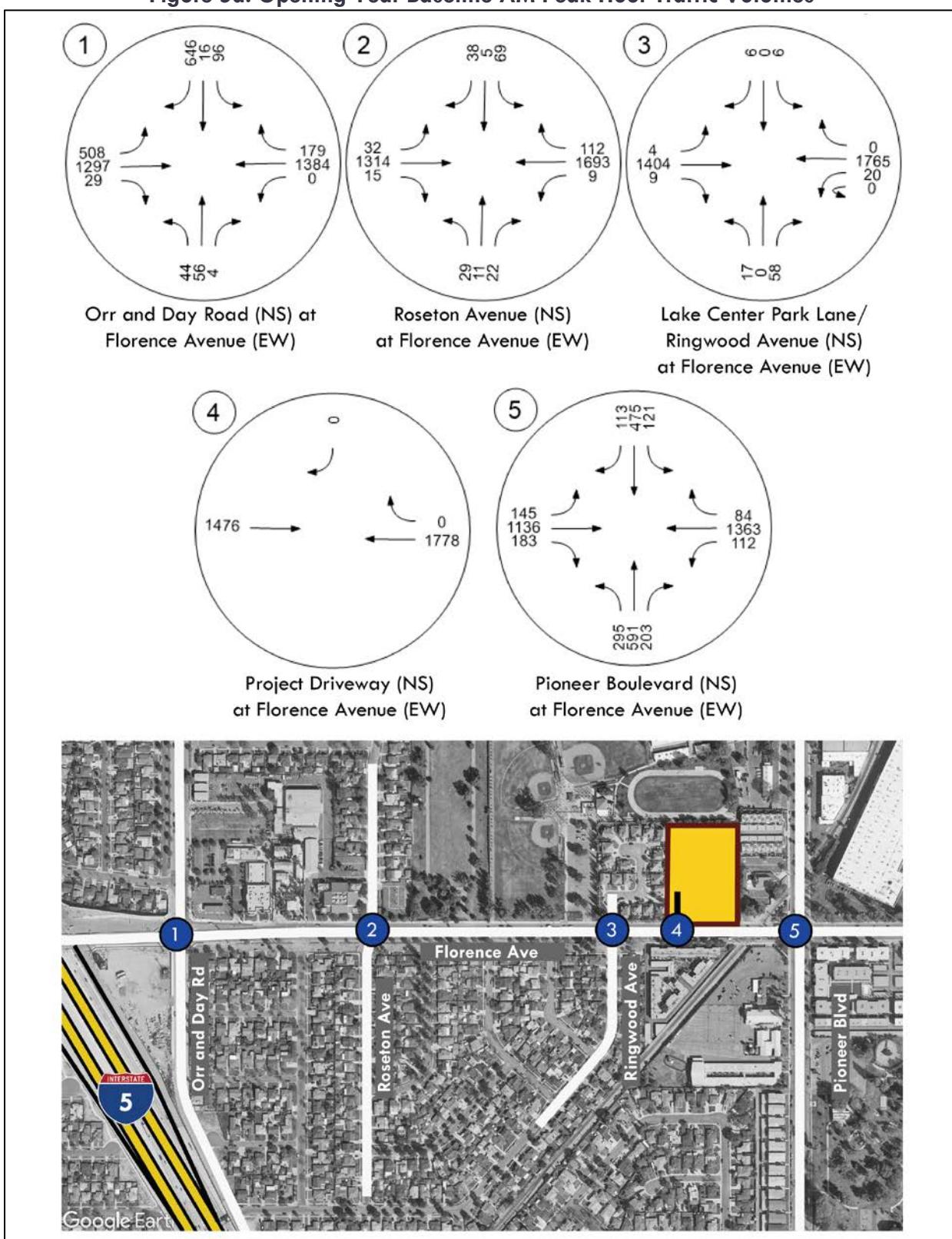
Figure 5a: Opening Year Baseline AM Peak Hour Traffic Volumes

Figure 5b: Opening Year Baseline PM Peak Hour Traffic Volumes

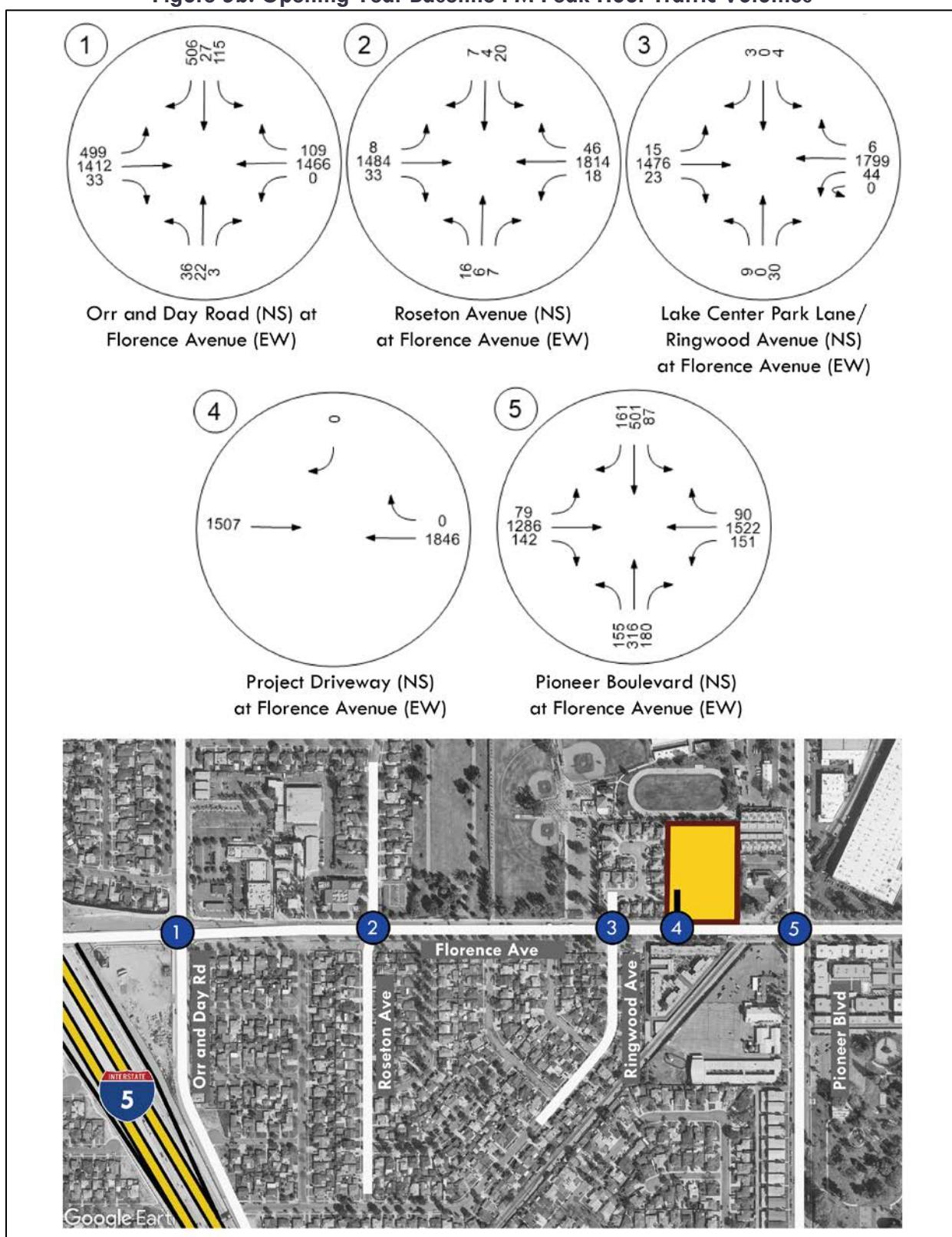


Table 5. Opening Year Baseline AM and PM Peak Hour Levels of Service

Intersection	Traffic Control	AM Peak		PM Peak	
		Delay¹	LOS²	Delay¹	LOS²
1. Orr and Day Road/Florence Avenue	Signalized	50.3	D	37.5	C
2. Roseton Avenue/Florence Avenue	Signalized	18.7	B	8.8	A
3. Lake Center Park Lane/Ringwood Avenue/Florence Avenue	Signalized	5.6	A	4.7	A
4. Project Driveway/Florence Avenue	TWSC ³	0.0	A	0.0	A
5. Pioneer Boulevard/Florence Avenue	Signalized	41.2	D	29.7	C

¹ Delay in Seconds² Level of Service³ Two Way Stop Control

4 PROPOSED PROJECT

4.1 Project Description and Project Access

As described in Section 2.1 – Project Description, the proposed project would remove the existing church and replace it with 54 townhomes. The analysis utilizes a previous version of the project, which proposed 63 townhomes. Because the analysis for 63 homes is more conservative than 54 homes and the type of residence did not change, the analysis has assumed 63 homes. Any project impacts would be the same or less significant with the reduction of proposed units.

The project site currently has two driveways serving the property. The proposed project proposes to close and eliminate the existing east driveway of the existing Church site. In the City's General Plan Circulation Element, Policy 1.6 under the Goals and Policies section states "Limit driveway access on arterial streets to maintain a desired quality of flow." Similarly, Policy 8.6 requires that "the driveway access points onto arterial roadways be limited in number and location in order to ensure the smooth and safe flow of vehicles and bicycles." Because the project will eliminate the eastern access point, the project will help maintain and ensure a smooth and safe flow for bicycles and vehicles along Florence Avenue.

The remaining access will allow right-in/right-out movements only, which will be achieved by installing a raised median along Florence Avenue. This raised median will be constructed to allow current residents of the communities on the south side of Florence Avenue near the project site to retain full access driveways.

4.2 Project Trip Generation

Vehicle trips were generated for the project using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition, 2017). The project trip generation is shown in Table 6. The project would generate 343 daily trips, including 23 AM peak hour trips and 28 PM peak hour trips. The project trip distribution and assignment are shown in Figure 6 and Figure 7 respectively.

Table 6. Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Rates</u>								
Multifamily Housing (Mid-Rise) ¹	DU	5.440	0.094	0.266	0.360	0.268	0.172	0.440
<u>Project Trip Generation</u>								
Townhomes (Analyzed)	63 DU	343	6	17	23	17	11	28
Townhomes (Proposed)	54 DU	294	5	14	19	14	9	24
DU = Dwelling Units								
¹ Trip rates from the Institute of Transportation Engineers, <i>Trip Generation</i> , 10th Edition, 2017. Land Use Code 221 - Multifamily Housing (Mid-Rise).								

Figure 6a: Project Outbound Trip Distribution



Figure 6b: Project Inbound Trip Distribution



Figure 7a: Project Trip AM Assignment

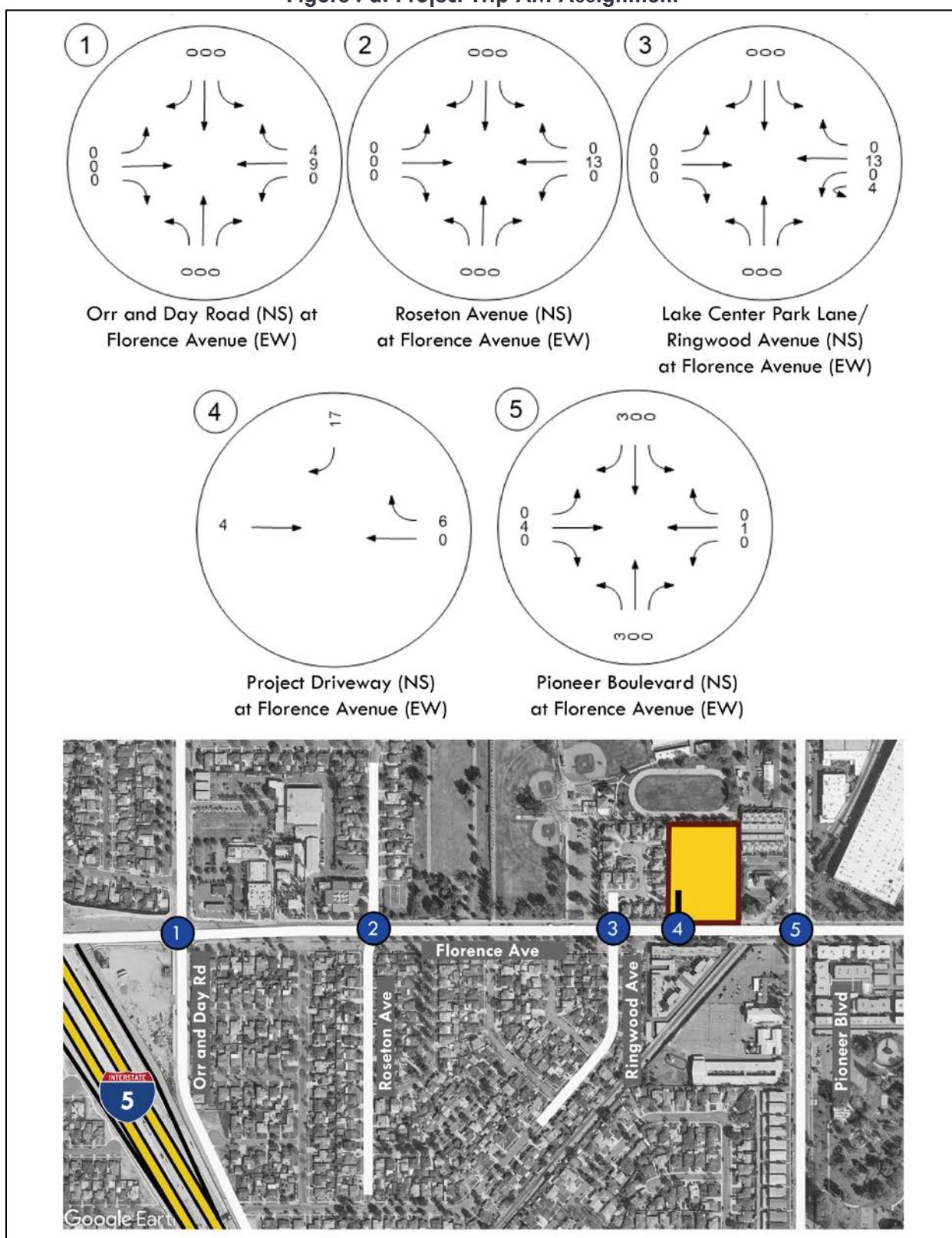
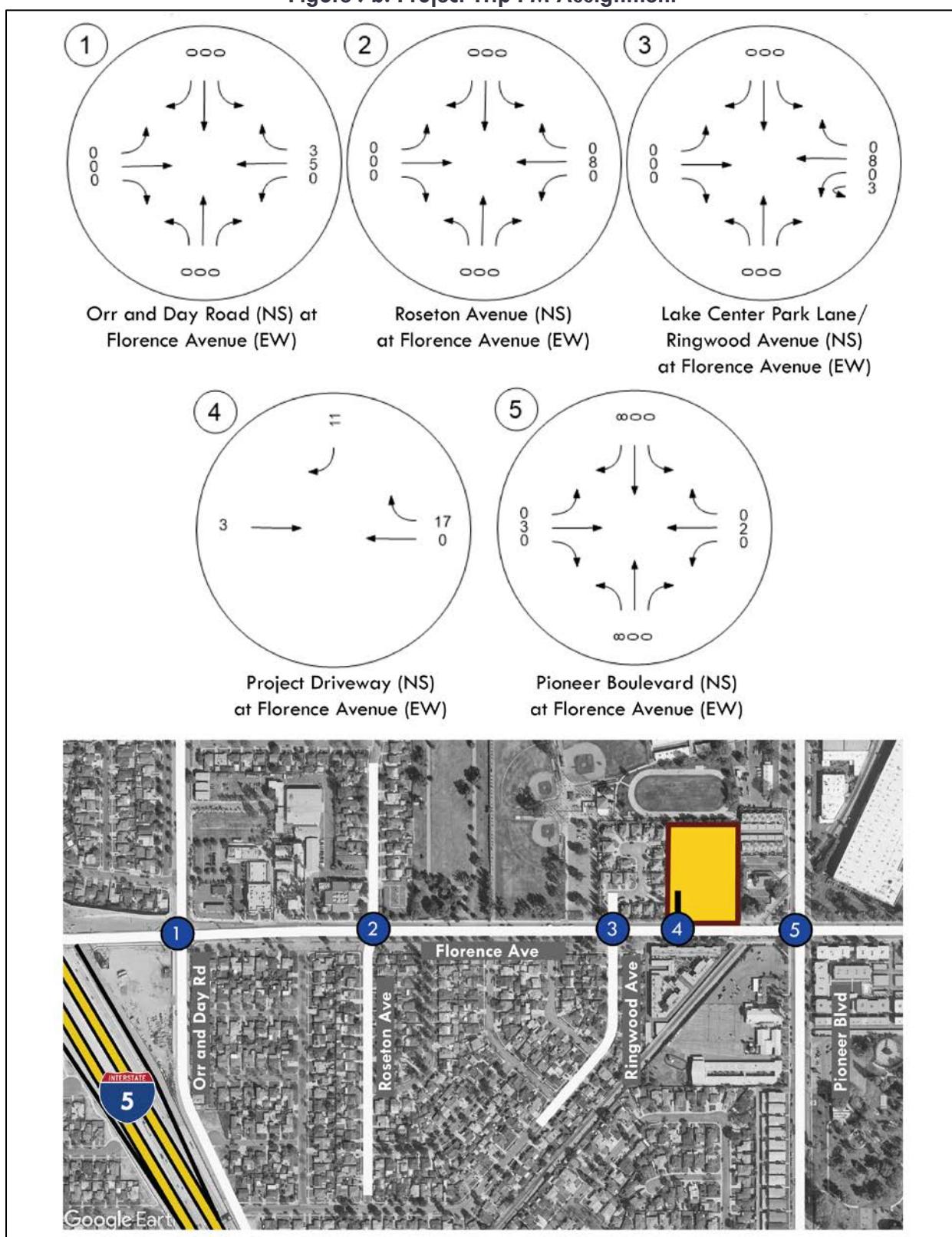


Figure 7b: Project Trip PM Assignment



5 PLUS PROJECT RESULTS

5.1 Existing Plus Project Traffic Volumes and Intersection Operations

Existing plus Project traffic volumes were determined by adding the project trips to Existing traffic volumes. Figure 8 shows the Existing plus Project weekday AM and PM peak hour traffic volumes at the study intersections.

An intersection operations analysis was conducted for the study area to evaluate the Existing plus Project weekday AM and PM peak hour conditions. Intersection operations were calculated using the LOS methodology described previously in Section 2.3 - Methodology. Table 7 provides a comparison between the Existing Without and With Project conditions. As shown in Table 7, the study intersections are anticipated to operate at LOS D or better in the Existing plus Project condition.

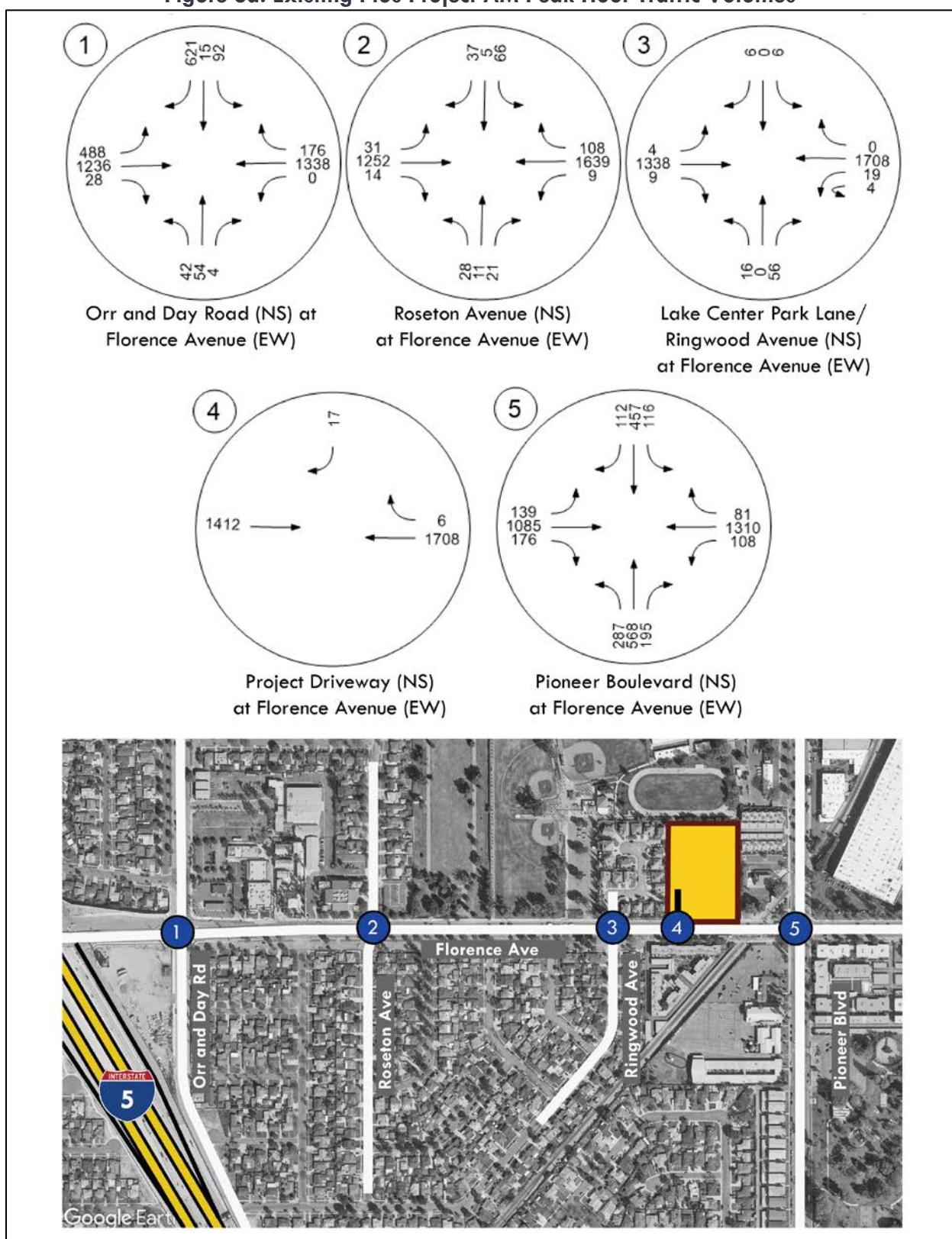
Figure 8a: Existing Plus Project AM Peak Hour Traffic Volumes

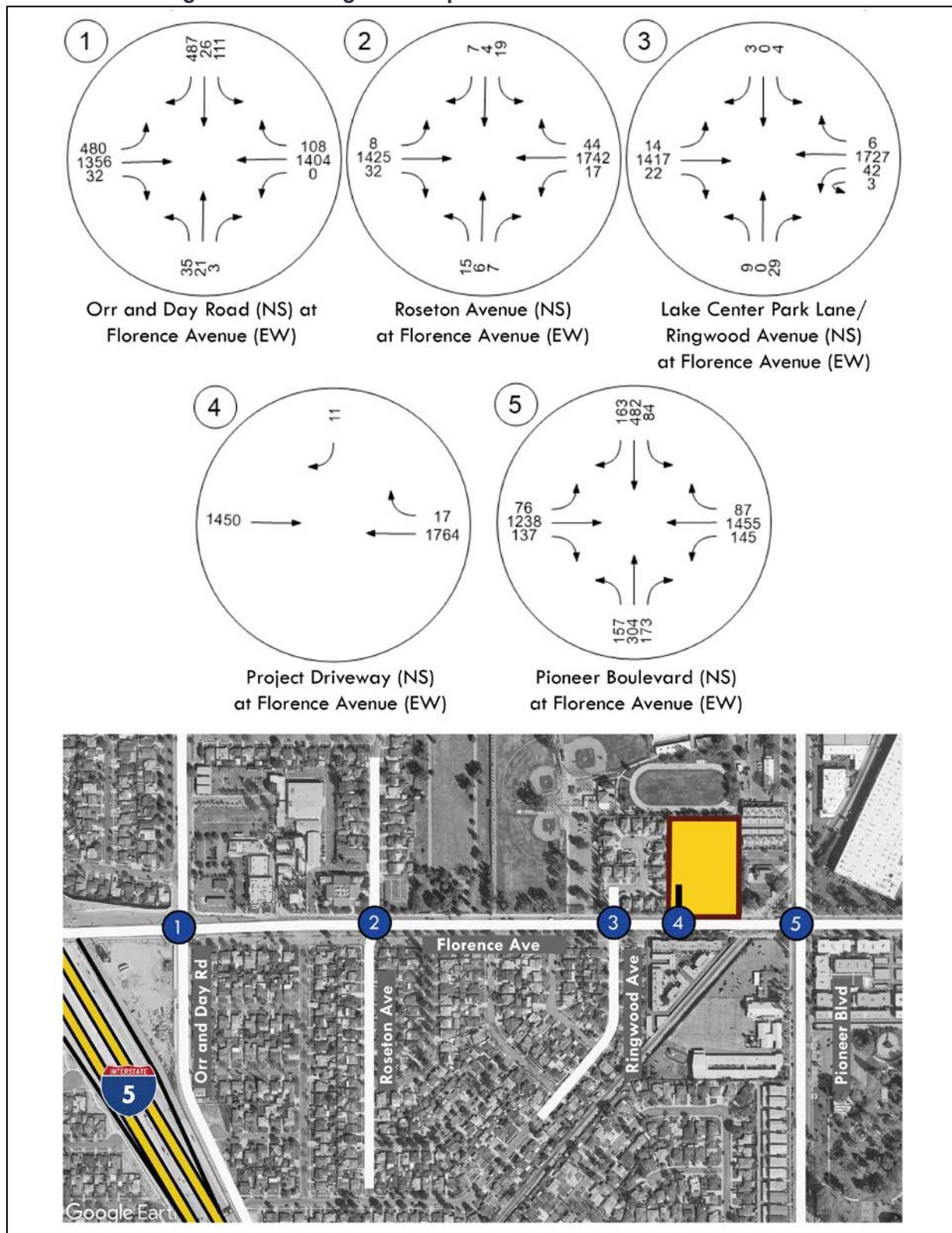
Figure 8b: Existing Plus Project PM Peak Hour Traffic Volumes

Table 7. Existing Baseline and Existing plus Project Peak Hour Levels of Service

Traffic Control		Existing				Existing plus Project				Degraded Operation?	
		AM Peak		PM Peak		AM Peak		PM Peak		AM	PM
		Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²		
1. Orr and Day Road/ Florence Avenue	Signal	44.9	D	34.8	C	45.3	D	35.0	C	No	No
2. Roseton Avenue/ Florence Avenue	Signal	17.9	B	8.6	A	17.9	B	8.6	A	No	No
3. Lake Center Park Lane/ Ringwood Avenue/ Florence Avenue	Signal	5.5	A	4.5	A	5.6	A	4.6	A	No	No
4. Project Driveway/ Florence Avenue	TWSC ³	0.0	A	0.0	A	17.5	C	17.7	C	No	No
5. Pioneer Boulevard/ Florence Avenue	Signal	36.2	D	27.4	C	36.3	D	27.7	C	No	No

¹ Delay in Seconds² Level of Service³ Two Way Stop Control

5.2 Opening Year (2023) Plus Project Traffic Volumes and Intersection Operations

Opening Year plus Project traffic volumes were determined by adding the project trips to the Opening Year Baseline traffic volumes. Figure 9 shows the Opening Year with-project weekday AM and PM peak hour traffic volumes at the study intersections.

An intersection operations analysis was conducted for the study area to evaluate the Opening Year plus Project weekday AM and PM peak hour conditions. Intersection operations were calculated using the LOS methodology described previously in Section 2.3 - Methodology. Table 8 provides a comparison between the Opening Year and Opening Year plus Project conditions. As shown in Table 8, the study intersections are anticipated to operate at LOS D or better in the opening year plus project condition.

Figure 9a: Opening Year Plus Project AM Peak Hour Traffic Volumes

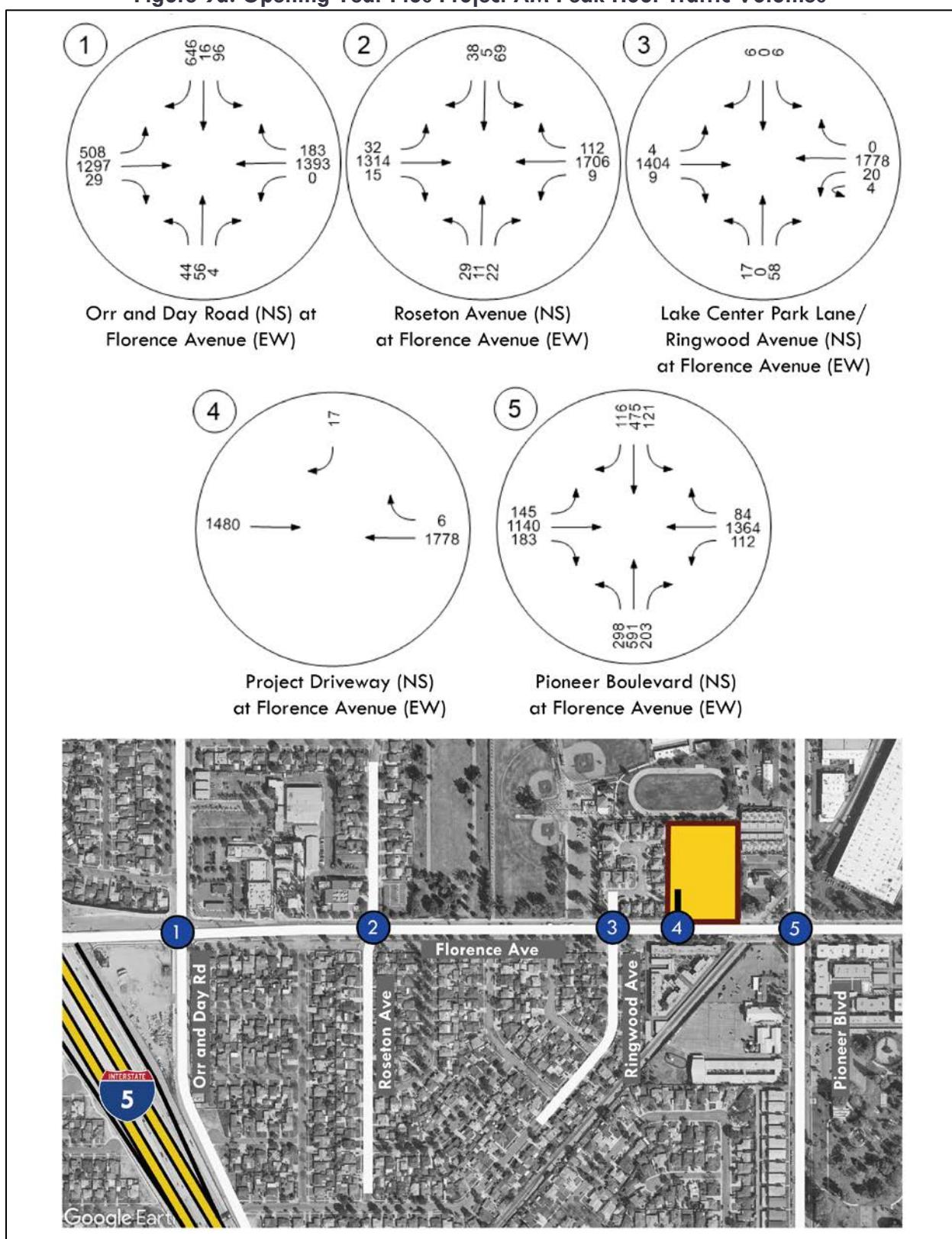


Figure 9b: Opening Year Plus Project PM Peak Hour Traffic Volumes

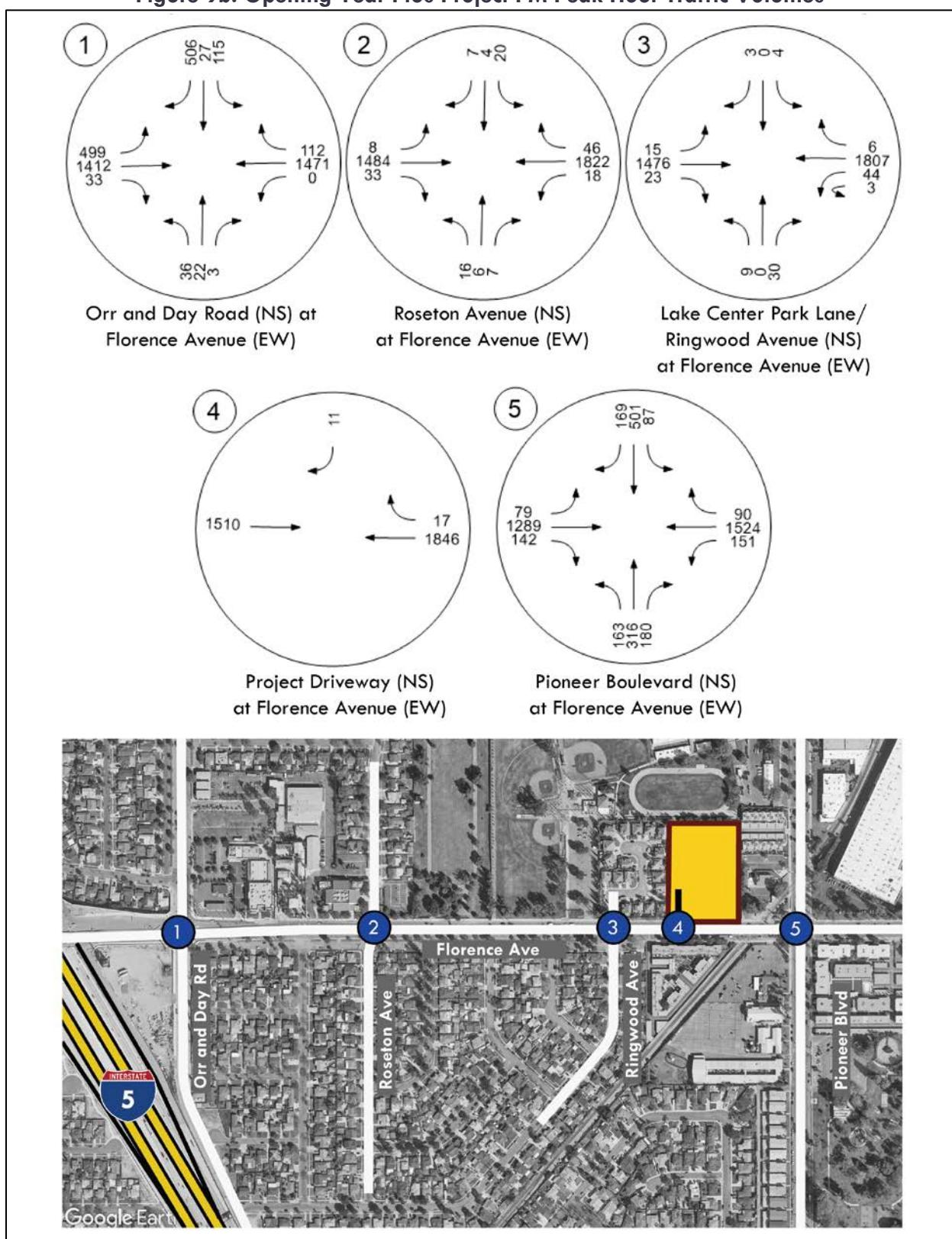


Table 8. Opening Year Baseline and Opening Year plus Project Peak Hour Levels of Service

	Traffic Control	Opening Year (2023)				Opening Year (2023) plus Project				Degraded Operation?	
		AM Peak		PM Peak		AM Peak		PM Peak		AM	PM
		Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²		
1. Orr and Day Road/ Florence Avenue	Signal	50.3	D	37.5	C	51.0	D	37.8	C	No	No
2. Roseton Avenue/ Florence Avenue	Signal	18.7	B	8.8	A	18.8	B	8.9	A	No	No
3. Lake Center Park Lane/ Ringwood Avenue/ Florence Avenue	Signal	5.6	A	4.7	A	5.7	A	4.7	A	No	No
4. Project Driveway/ Florence Avenue	TWSC ³	0.0	A	0.0	A	18.2	C	18.6	C	No	No
5. Pioneer Boulevard/ Florence Avenue	Signal	41.2	D	29.7	C	41.3	D	30.1	C	No	No

¹ Delay in Seconds² Level of Service³ Two Way Stop Control

5.3 Accident Rate for Florence Avenue

Accident data for Florence Avenue from Orr and Day Road to Pioneer Boulevard was obtained from City of Santa Fe Springs staff for the period of January 2018 to August 2021. At the intersection of Orr and Day Road and Florence Avenue there were five rear end accidents, two broadside accidents, and two sideswipe accidents. A total of four crashes resulted in injuries, with none resulting in fatalities. At the intersection of Pioneer Boulevard and Florence Avenue there were eight rear end accidents, ten broadside accidents, and one sideswipe accident. A total of twelve crashes resulted in injuries, with none resulting in fatalities. The accident data is provided in Appendix C.

Between Ringwood Avenue and Pioneer Boulevard near the project site, there were eight rear end accidents, two broadside accidents, and three sideswipe accidents. A total of six crashes resulted in injuries, with none resulting in fatalities.

Between Orr and Day Road and Ringwood Avenue west of the project site, there were three rear end accidents, one broadside accident, and no sideswipe accidents. One of these accidents resulted in injuries. Additionally, it should be noted that one fatality occurred east of Roseton Avenue as a result of a vehicle running off road and hitting an object.

The number of collisions per million vehicle miles (C/MVM) has been calculated for Florence Avenue from Orr and Day Road to Pioneer Boulevard using the following formula from *Fundamentals of Traffic Engineering*, 14th Edition, Institute of Transportation Studies, University of California Berkeley, 1996 (“Fundamentals of Traffic Engineering”):

$$\text{Collision Rate} = \frac{\text{Number of Accidents (A)} * 1,000,000}{\text{Years} * 365 * \text{Length (miles)} * \text{Average Daily Traffic (v)}}$$

The total number of accidents for the midblock and bounding intersections is 55. The length of roadway from the west leg of Orr and Day Road/Florence Avenue to the east leg of Pioneer Boulevard/Florence Avenue is 0.82 miles. The average daily traffic (ADT) was calculated by multiplying the Opening Year plus Project PM peak hour volumes at the west leg of Orr and Day Road/Florence Avenue by the Los Angeles County peak-to-daily factor of 10.0 (ADT of 39,660). The west leg of Orr and Day Road/Florence Avenue was utilized because it currently services the highest number of vehicles along the study area.

It should be noted that comparing existing conditions to Opening Year plus Project conditions does not indicate the likelihood of the rates of accidents increasing due to additional traffic. With the addition of ambient growth and project trips to existing volumes, the ADT increases by five percent. This five percent increase results in about one additional car every two minutes on the roadway compared to existing conditions, which is not a noticeable or considerable increase in congestion. If the number of accidents remains the same, the C/MVM would decrease. While there is not a reliable way to predict accident frequency changes resulting from increased traffic, the number of accidents could also be increased by five percent to provide a more accurate estimate. When doing so, the number of accidents increases from 55 to 58, but the C/MVM remains the same. As such, collision rates are not indicative of a traffic to accident ratio.

Under Opening Year plus Project conditions, Florence Avenue experiences 1.35 C/MVM when accidents at the intersections of Orr and Day Road/Florence Avenue and Pioneer Boulevard/Florence Avenue are considered in addition to the midblock collisions near the project site and between Orr and Day Road and Ringwood Avenue. This is lower than the expected midblock collision rate of 1.73 C/MVM for Urban Roadways that are Major Arterials with six or more lanes and have a speed limit of less than 40 miles per hour. The expected collision rate is presented in the County of Los Angeles Department of Public Works 2013 Collision Rate Analysis Report, Table B.

Because Florence Avenue experiences a lower collision rate than similar types of roadways in the County and the addition of project trips will not affect the collision rate in a negative or noticeable manner, no mitigation measures for accident reduction along Florence Avenue are recommended. It should be noted that the proposed project will only have one right-in/right-out only access controlled by a raised median, eliminating left-turn conflicts and queuing issues in the two-way left-turn lane near the project site.

5.4 Accident Analysis on Florence Avenue Near the Project Site

As noted above, there were eight rear end accidents, two broadside accidents, and three sideswipe accidents between Ringwood Avenue and Pioneer Boulevard near the project site. A total of six crashes resulted in injuries, with none resulting in fatalities.

Of the 13 multi-car accidents near the project site, three were caused by drivers under the influence of alcohol/drugs and seven were caused by vehicles traveling at an unsafe speed. Thus, 77 percent of the accidents within the 43-month period were related to illegal vehicle operation along the major arterial roadway. These are vehicular law enforcement issues and should not be considered when determining the potential increase in collisions due to project construction and operation.

Two of the rear end accidents and one of the sideswipe accidents occurred on the north side of Florence Avenue (adjacent to the project site). Both rear end accidents were westbound and caused by unsafe speed, and the sideswipe accident was caused by unsafe turning/merging between two westbound vehicles. These accidents do not involve vehicles exiting or entering the project driveway. Use of the driveway by future residents is unlikely to result in an increase in these types of accidents because the sight distance for vehicles exiting the project driveway is, and will remain, unrestricted. As such, the project is not anticipated to exacerbate these types of collisions from occurring on the north side of Florence Avenue.

The two broadside accidents near the project site involved vehicles exiting out of the driveways of the multi-family residential development on the south side of Florence Avenue across the street from the project site. On-street parking is currently permitted between the two driveways on the south side of Florence Avenue across the street from the site, which results in a restricted sight distance for drivers exiting those driveways. The project would not exacerbate accidents happening at those driveways, as both accidents involved vehicles and sight distance issues on the opposite side of the street. Furthermore, the project does not propose on-street parking on the north side of Florence Avenue on either side of the project driveway and will have one right-in/right-out only access. Therefore, sight distance would be unrestricted for vehicles exiting the project site and would enable safe merging onto Florence Avenue.

In addition, as described previously, the project will consolidate the two existing driveways into one driveway. This eliminates a conflict point, which helps with the goal of the City's General Plan Circulation Element Policy 1.6 to limit driveway access on arterial streets to maintain a desired quality of flow. This also contributes to the goal of the City's General Plan Circulation Element Policy 8.6, which states that the driveway access points onto arterial roadways be limited in number and location to ensure the smooth and safe flow of vehicles and bicycles.

6 FINDINGS AND RECOMMENDATIONS

The following is a summary of the findings and recommendations based of the LOS analysis for Florence Avenue Townhomes Project:

Existing plus Project Intersection Analysis Results

All study intersections are anticipated to operate at LOS D or better in the Existing plus Project condition.

Opening Year plus Project Intersection Analysis Results

All study intersections are anticipated to operate at LOS D or better in the Opening Year plus Project condition.

Residential use of the project site is unlikely to result in an increase in vehicular accidents along Florence Avenue because the sight distance for vehicles exiting the project driveway will remain unrestricted. This is maintained by continuing to restrict parking along the north side of Florence Avenue. In addition, the proposed project will utilize one right-in/right-out only access controlled by a raised median, eliminating potential left-turn conflicts and queuing issues in the two-way left-turn lane near the project site.

APPENDIX A – TRAFFIC COUNTS

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Thu, Sep 16, 21

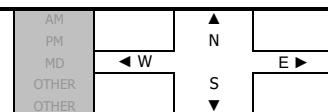
LOCATION:
NORTH & SOUTH:
EAST & WEST:

Santa Fe Springs
Orr & Day
Florence

PROJECT #:
SC3063
LOCATION #:
5
CONTROL:
SIGNAL

NOTES:

Queue WB AM/PM



Add U-Turns to Left Turns

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
	Orr & Day			Orr & Day			Florence			Florence				
	NL 1.5	NT 1	NR 0.5	SL 1.5	ST 0.5	SR 2	EL 2	ET 3	ER 0	WL 1	WT 3	WR 0		
7:00 AM	10	2	0	9	2	114	45	305	0	0	301	16	804	
7:15 AM	13	10	1	13	3	124	83	290	2	0	298	23	860	
7:30 AM	9	10	0	22	2	140	115	286	6	0	339	54	983	
7:45 AM	7	24	0	23	4	174	171	331	15	0	249	57	1,055	
8:00 AM	10	7	3	30	4	171	111	217	4	0	279	31	867	
8:15 AM	3	5	1	20	5	95	49	228	3	0	304	15	728	
8:30 AM	6	5	0	9	1	78	54	242	1	1	296	12	705	
8:45 AM	3	4	0	9	2	63	32	266	2	0	280	14	675	
VOLUMES	61	67	5	135	23	959	660	2,165	33	1	2,346	222	6,677	
APPROACH %	46%	50%	4%	12%	2%	86%	23%	76%	1%	0%	91%	9%		
APP/DEPART	133	/	948	1,117	/	57	2,858	/	2,305	2,569	/	3,367	0	
BEGIN PEAK HR	7:15 AM												3,765	
VOLUMES	39	51	4	88	13	609	480	1,124	27	0	1,165	165		
APPROACH %	41%	54%	4%	12%	2%	86%	29%	69%	2%	0%	88%	12%		
PEAK HR FACTOR	0.758			0.866			0.789				0.846		0.892	
APP/DEPART	94	/	696	710	/	40	1,631	/	1,216	1,330	/	1,813	0	
4:00 PM	3	0	0	22	3	152	89	286	6	0	357	24	942	
4:15 PM	6	1	0	18	4	112	106	359	6	0	350	16	978	
4:30 PM	6	1	1	19	3	107	99	300	7	0	379	26	948	
4:45 PM	6	4	0	21	1	114	126	322	6	0	314	17	931	
5:00 PM	5	6	0	21	4	116	105	289	3	0	407	21	977	
5:15 PM	12	3	2	32	12	137	98	350	8	0	323	24	1,001	
5:30 PM	7	4	1	19	3	115	133	339	7	0	287	21	936	
5:45 PM	9	7	0	33	6	112	134	306	12	0	311	35	965	
VOLUMES	54	26	4	185	36	965	890	2,551	55	0	2,728	184	7,678	
APPROACH %	64%	31%	5%	16%	3%	81%	25%	73%	2%	0%	94%	6%		
APP/DEPART	84	/	1,100	1,186	/	91	3,496	/	2,740	2,912	/	3,747	0	
BEGIN PEAK HR	5:00 PM												3,879	
VOLUMES	33	20	3	105	25	480	470	1,284	30	0	1,328	101		
APPROACH %	59%	36%	5%	17%	4%	79%	26%	72%	2%	0%	93%	7%		
PEAK HR FACTOR	0.824			0.843			0.931				0.835		0.969	
APP/DEPART	56	/	591	610	/	55	1,784	/	1,392	1,429	/	1,841	0	

Orr & Day

NORTH SIDE

Florence WEST SIDE

EAST SIDE

Florence

SOUTH SIDE

Orr & Day

AM	ALL PED AND BIKE				TOTAL
	N SIDE	S SIDE	E SIDE	W SIDE	
7:00 AM	0	3	2	0	5
7:15 AM	1	1	2	0	4
7:30 AM	0	9	7	0	16
7:45 AM	0	11	14	0	25
8:00 AM	0	3	6	0	9
8:15 AM	0	2	1	0	3
8:30 AM	1	1	1	0	3
8:45 AM	0	3	3	0	6
TOTAL	2	33	36	0	71
4:00 PM	2	0	5	0	7
4:15 PM	0	3	1	0	4
4:30 PM	0	1	1	0	2
4:45 PM	0	4	6	0	10
5:00 PM	0	0	1	0	1
5:15 PM	0	1	1	0	2
5:30 PM	0	1	0	0	1
5:45 PM	0	1	2	0	3
TOTAL	2	11	17	0	30

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	1	1	0	2
0	1	2	0	3
0	4	3	0	7
0	5	9	0	14
0	3	6	0	9
0	1	0	0	1
1	1	1	0	3
0	1	2	0	3
1	17	24	0	42
2	0	5	0	7
0	2	0	0	2
0	0	1	0	1
0	4	6	0	10
0	0	0	0	0
0	1	0	0	1
0	1	1	0	2
0	0	0	0	0
0	1	1	0	2
0	0	1	0	1
0	1	0	0	1
2	8	13	0	23

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	2	1	0	3
1	0	0	0	1
0	5	4	0	9
0	6	5	0	11
0	0	0	0	0
0	1	1	0	2
0	1	0	0	1
0	0	0	0	0
0	2	1	0	3
1	16	12	0	29
0	0	0	0	0
0	1	1	0	2
0	1	0	0	1
0	0	0	0	0
0	0	1	0	1
0	1	1	0	2
0	0	0	0	0
0	0	1	0	1
0	3	4	0	7

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Thu, Sep 16, 21

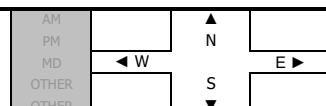
LOCATION:
NORTH & SOUTH:
EAST & WEST:

Santa Fe Springs
Roseton
Florence

PROJECT #:
SC3063
LOCATION #:
4
CONTROL:
SIGNAL

NOTES:

Queue EB/WB AM/PM



Add U-Turns to Left Turns

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
	Roseton			Roseton			Florence			Florence				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		
7:00 AM	5	0	2	7	0	2	0	327	2	1	300	8	654	
7:15 AM	4	1	5	3	0	4	2	282	2	2	376	7	688	
7:30 AM	8	5	7	8	0	5	8	304	6	1	373	33	758	
7:45 AM	9	4	5	36	1	21	17	316	1	2	337	47	796	
8:00 AM	5	1	2	19	4	7	2	236	4	3	364	18	665	
8:15 AM	2	0	4	4	0	1	2	273	1	3	304	0	594	
8:30 AM	6	0	1	4	0	2	3	258	1	0	286	3	564	
8:45 AM	5	0	2	1	0	5	4	283	1	1	301	0	603	
VOLUMES	44	11	28	82	5	47	38	2,279	18	13	2,641	116	5,322	
APPROACH %	53%	13%	34%	61%	4%	35%	2%	98%	1%	0%	95%	4%		
APP/DEPART	83	/	162	134	/	34	2,335	/	2,391	2,770	/	2,735	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	26	11	19	66	5	37	29	1,138	13	8	1,450	105	2,907	
APPROACH %	46%	20%	34%	61%	5%	34%	2%	96%	1%	1%	93%	7%		
PEAK HR FACTOR	0.700			0.466			0.883			0.960		0.913		
APP/DEPART	56	/	144	108	/	25	1,180	/	1,224	1,563	/	1,514	0	
4:00 PM	4	0	2	5	0	1	2	321	9	4	426	2	776	
4:15 PM	7	0	3	2	0	1	5	362	4	5	358	8	755	
4:30 PM	5	2	1	4	1	1	2	295	11	0	453	7	782	
4:45 PM	4	1	3	4	1	1	2	325	6	3	377	12	739	
5:00 PM	2	2	3	7	1	3	2	303	5	8	446	12	794	
5:15 PM	4	1	0	4	1	2	2	382	10	5	378	12	801	
5:30 PM	0	1	5	10	0	2	6	327	11	2	342	9	715	
5:45 PM	4	1	5	5	0	2	4	344	4	4	296	6	675	
VOLUMES	30	8	22	41	4	13	25	2,659	60	31	3,076	68	6,037	
APPROACH %	50%	13%	37%	71%	7%	22%	1%	97%	2%	1%	97%	2%		
APP/DEPART	60	/	100	58	/	91	2,744	/	2,726	3,175	/	3,120	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	15	6	7	19	4	7	8	1,305	32	16	1,654	43	3,116	
APPROACH %	54%	21%	25%	63%	13%	23%	1%	97%	2%	1%	97%	3%		
PEAK HR FACTOR	0.875			0.682			0.853			0.919		0.973		
APP/DEPART	28	/	57	30	/	50	1,345	/	1,333	1,713	/	1,676	0	

Roseton

NORTH SIDE

Florence

WEST SIDE

EAST SIDE

Florence

SOUTH SIDE

Roseton

AM	ALL PED AND BIKE				TOTAL
	N SIDE	S SIDE	E SIDE	W SIDE	
7:00 AM	0	0	2	0	2
7:15 AM	1	0	2	0	3
7:30 AM	8	1	5	0	14
7:45 AM	1	0	5	0	6
8:00 AM	0	0	1	0	1
8:15 AM	0	0	0	0	0
8:30 AM	4	1	1	0	6
8:45 AM	1	0	0	0	1
TOTAL	15	2	16	0	33
4:00 PM	1	0	1	0	2
4:15 PM	0	0	1	0	1
4:30 PM	0	0	2	0	2
4:45 PM	1	1	2	0	4
5:00 PM	0	0	1	0	1
5:15 PM	1	0	0	0	1
5:30 PM	5	1	2	0	8
5:45 PM	0	0	0	0	0
TOTAL	8	2	9	0	19

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	2	0	2
1	0	2	0	3
8	0	5	0	13
0	0	5	0	5
0	0	1	0	1
0	0	0	0	0
4	0	0	0	4
0	0	0	0	0
13	0	15	0	28
1	0	1	0	2
0	0	1	0	1
0	0	2	0	2
1	1	2	0	4
0	0	1	0	1
1	0	0	0	1
3	0	2	0	5
0	0	0	0	0
6	1	9	0	16

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	1	0	2
1	0	0	0	1
2	2	1	0	5
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	1	0	0	3
0	0	0	0	0
2	1	0	0	3

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Thu, Sep 16, 21

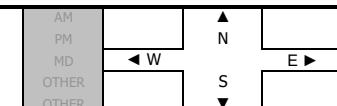
LOCATION:
NORTH & SOUTH:
EAST & WEST:

Santa Fe Springs
Ringwood
Florence

PROJECT #:
SC3063
LOCATION #:
3
CONTROL:
SIGNAL

NOTES:

Queue EB AM/PM



Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
	Ringwood-Lake Center Park			Ringwood-Lake Center Park			Florence			Florence				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
AM	7:00 AM	2	0	3	0	0	2	0	349	0	2	275	1	634
	7:15 AM	7	0	9	1	0	1	1	291	1	4	375	0	690
	7:30 AM	2	0	14	3	0	1	0	312	3	3	397	0	735
	7:45 AM	4	0	21	1	0	1	1	331	4	6	405	0	774
	8:00 AM	2	0	10	1	0	3	2	287	1	5	338	0	649
	8:15 AM	3	0	6	0	0	1	1	294	3	11	294	1	614
	8:30 AM	1	0	5	1	0	0	0	253	2	3	296	0	561
	8:45 AM	0	0	4	1	0	2	2	268	2	4	293	1	577
	VOLUMES	21	0	72	8	0	11	7	2,385	16	38	2,673	3	5,234
	APPROACH %	23%	0%	77%	42%	0%	58%	0%	99%	1%	1%	98%	0%	
	APP/DEPART	93	/	7	19	/	53	2,408	/	2,466	2,714	/	2,708	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	15	0	54	6	0	6	4	1,221	9	18	1,515	0	2,848
	APPROACH %	22%	0%	78%	50%	0%	50%	0%	99%	1%	1%	99%	0%	
	PEAK HR FACTOR	0.690			0.750			0.918			0.932			0.920
	APP/DEPART	69	/	1	12	/	27	1,234	/	1,281	1,533	/	1,539	0
PM	4:00 PM	3	0	7	0	0	1	1	303	6	8	410	2	741
	4:15 PM	1	0	7	2	0	1	1	358	4	10	344	0	728
	4:30 PM	3	0	6	1	0	1	5	284	9	9	460	0	778
	4:45 PM	2	0	10	1	0	0	2	332	5	12	385	2	751
	5:00 PM	0	0	9	2	0	0	3	288	2	10	389	2	705
	5:15 PM	3	0	4	0	0	2	4	392	6	10	407	2	830
	5:30 PM	3	0	8	1	0	4	2	327	3	10	349	2	709
	5:45 PM	4	0	9	0	0	0	1	373	10	4	280	2	683
	VOLUMES	19	0	60	7	0	9	19	2,657	45	73	3,024	12	5,925
	APPROACH %	24%	0%	76%	44%	0%	56%	1%	98%	2%	2%	97%	0%	
	APP/DEPART	79	/	24	16	/	117	2,721	/	2,725	3,109	/	3,059	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	8	0	29	4	0	3	14	1,296	22	41	1,641	6	3,064
	APPROACH %	22%	0%	78%	57%	0%	43%	1%	97%	2%	2%	97%	0%	
	PEAK HR FACTOR	0.771			0.875			0.828			0.900			0.923
	APP/DEPART	37	/	14	7	/	62	1,332	/	1,330	1,688	/	1,658	0

Ringwood

NORTH SIDE

Florence WEST SIDE

EAST SIDE

Florence

SOUTH SIDE

Ringwood

	ALL PED AND BIKE				TOTAL	
	N SIDE	S SIDE	E SIDE	W SIDE		
AM	7:00 AM	4	2	3	0	9
	7:15 AM	4	0	6	0	10
	7:30 AM	23	5	4	3	35
	7:45 AM	12	5	5	6	28
	8:00 AM	0	1	0	0	1
	8:15 AM	1	3	0	1	5
	8:30 AM	4	1	0	1	6
	8:45 AM	3	2	0	0	5
	TOTAL	51	19	18	11	99
PM	4:00 PM	3	0	2	0	5
	4:15 PM	2	0	1	0	3
	4:30 PM	1	2	0	0	3
	4:45 PM	1	6	0	1	8
	5:00 PM	1	1	0	0	2
	5:15 PM	1	3	0	1	5
	5:30 PM	3	4	0	1	8
	5:45 PM	0	1	0	0	1
	TOTAL	12	17	3	3	35

	PEDESTRIAN CROSSINGS				TOTAL
	N SIDE	S SIDE	E SIDE	W SIDE	
	3	1	3	0	7
	3	0	5	0	8
	20	2	4	2	28
	8	5	4	6	23
	0	1	0	0	1
	1	1	0	1	3
	4	1	0	1	6
	1	1	0	0	2
	40	12	16	10	78
	3	0	2	0	5
	2	0	1	0	3
	1	2	0	0	3
	1	5	0	0	6
	0	1	0	0	1
	1	2	0	0	3
	1	3	0	1	5
	0	1	0	0	1
	9	14	3	1	27

	BICYCLE CROSSINGS				TOTAL
	NS	SS	ES	WS	
	1	1	0	0	2
	1	0	1	0	2
	3	3	0	1	7
	4	0	1	0	5
	0	0	0	0	0
	0	2	0	0	2
	0	0	0	0	0
	2	1	0	0	3
	11	7	2	1	21
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	1	0	1	2
	1	0	0	1	1
	0	1	0	1	2
	2	1	0	0	3
	0	0	0	0	0
	3	3	0	2	8

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Thu, Sep 16, 21

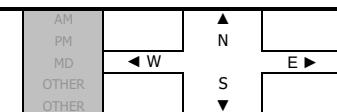
LOCATION:
NORTH & SOUTH:
EAST & WEST:

Santa Fe Springs
Pioneer
Florence

PROJECT #:
SC3063
LOCATION #:
1
CONTROL:
SIGNAL

NOTES:

Queue WB AM/PM



Add U-Turns to Left Turns

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
	Pioneer			Pioneer			Florence			Florence				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		
7:00 AM	34	54	32	16	47	7	15	335	24	21	234	9	828	
7:15 AM	39	88	41	12	51	13	33	268	14	19	336	8	922	
7:30 AM	81	165	38	28	113	28	36	242	41	34	291	22	1,119	
7:45 AM	103	209	57	37	168	33	31	234	49	27	255	19	1,222	
8:00 AM	53	99	52	37	115	32	34	228	66	25	254	25	1,020	
8:15 AM	38	62	49	21	57	17	22	253	30	21	248	13	831	
8:30 AM	28	55	43	14	38	14	28	218	16	10	263	16	743	
8:45 AM	29	51	42	17	32	14	16	249	13	16	249	13	741	
VOLUMES	405	783	354	182	621	158	215	2,027	253	173	2,130	125	7,426	
APPROACH %	26%	51%	23%	19%	65%	16%	9%	81%	10%	7%	88%	5%		
APP/DEPART	1,542	/	1,138	961	/	1,047	2,495	/	2,548	2,428	/	2,693	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	276	561	188	114	447	106	134	972	170	105	1,136	74	4,283	
APPROACH %	27%	55%	18%	17%	67%	16%	11%	76%	13%	8%	86%	6%		
PEAK HR FACTOR	0.694			0.701			0.973			0.906		0.876		
APP/DEPART	1,025	/	783	667	/	722	1,276	/	1,260	1,315	/	1,518	0	
4:00 PM	39	89	45	17	146	36	16	246	35	38	353	18	1,078	
4:15 PM	35	75	51	19	105	33	21	294	40	30	284	11	998	
4:30 PM	28	69	40	21	103	45	16	274	28	44	396	29	1,093	
4:45 PM	37	73	39	28	105	35	13	278	28	24	321	13	994	
5:00 PM	44	57	43	18	124	42	22	263	37	42	319	24	1,035	
5:15 PM	38	97	44	12	140	32	23	303	40	34	343	17	1,123	
5:30 PM	43	76	26	11	110	21	17	303	51	28	306	15	1,007	
5:45 PM	36	48	44	13	85	14	33	282	48	27	230	19	879	
VOLUMES	300	584	332	139	918	258	161	2,243	307	267	2,552	146	8,207	
APPROACH %	25%	48%	27%	11%	70%	20%	6%	83%	11%	9%	86%	5%		
APP/DEPART	1,216	/	894	1,315	/	1,490	2,711	/	2,713	2,965	/	3,110	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	147	296	166	79	472	154	74	1,118	133	144	1,379	83	4,245	
APPROACH %	24%	49%	27%	11%	67%	22%	6%	84%	10%	9%	86%	5%		
PEAK HR FACTOR	0.851			0.958			0.905			0.856		0.945		
APP/DEPART	609	/	454	705	/	748	1,325	/	1,363	1,606	/	1,680	0	

Pioneer

NORTH SIDE

Florence WEST SIDE

EAST SIDE

Florence

SOUTH SIDE

Pioneer

AM	ALL PED AND BIKE				TOTAL
	N SIDE	S SIDE	E SIDE	W SIDE	
7:00 AM	0	2	1	9	12
7:15 AM	1	6	0	8	15
7:30 AM	2	12	1	27	42
7:45 AM	2	7	3	24	36
8:00 AM	0	1	0	2	3
8:15 AM	0	0	1	0	1
8:30 AM	1	3	0	0	4
8:45 AM	0	0	1	1	2
TOTAL	6	31	7	71	115
4:00 PM	4	2	1	1	8
4:15 PM	1	1	1	1	4
4:30 PM	0	1	2	1	4
4:45 PM	0	1	0	2	3
5:00 PM	0	0	1	6	7
5:15 PM	1	0	0	3	4
5:30 PM	2	1	4	2	9
5:45 PM	0	0	1	2	3
TOTAL	8	6	10	18	42

AM	PEDESTRIAN CROSSINGS				TOTAL
	N SIDE	S SIDE	E SIDE	W SIDE	
7:00 AM	0	1	1	7	9
7:15 AM	1	5	0	7	13
7:30 AM	1	11	0	23	35
7:45 AM	1	6	3	23	33
8:00 AM	0	1	0	2	3
8:15 AM	0	0	1	0	1
8:30 AM	1	2	0	0	3
8:45 AM	0	0	1	0	1
TOTAL	4	26	6	62	98
4:00 PM	3	0	0	1	4
4:15 PM	0	1	1	1	3
4:30 PM	0	1	2	1	4
4:45 PM	0	1	0	2	3
5:00 PM	0	0	1	3	4
5:15 PM	1	0	0	3	4
5:30 PM	0	0	4	2	6
5:45 PM	0	0	1	1	2
TOTAL	4	3	9	14	30

PM	BICYCLE CROSSINGS				TOTAL
	NS	SS	ES	WS	
7:00 AM	0	1	0	2	3
7:15 AM	0	1	0	1	2
7:30 AM	1	1	1	4	7
7:45 AM	1	1	0	1	3
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	1	1
8:45 AM	0	0	0	1	1
TOTAL	2	5	1	9	17
4:00 PM	1	2	1	0	4
4:15 PM	1	0	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	3	3
5:30 PM	2	1	0	0	3
5:45 PM	0	0	0	1	1
TOTAL	4	3	1	4	12

APPENDIX B – LEVEL OF SERVICE CALCULATIONS

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Florence Avenue Townhomes
Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\E AM.pdfScenario 1 Existing AM
1/3/2022**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.778	44.9	D
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.508	17.9	B
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.389	5.5	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	WB Thru	0.017	0.0	A
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.801	36.2	D

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	44.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	42	54	4	92	15	621	488	1236	28	0	1329	172
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	54	4	92	15	621	488	1236	28	0	1329	172
Peak Hour Factor	0.7800	0.7800	0.7800	0.8600	0.8600	0.8600	0.8000	0.8000	0.8000	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	17	1	27	4	181	153	386	9	0	391	51
Total Analysis Volume [veh/h]	54	69	5	107	17	722	610	1545	35	0	1564	202
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			2			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		2		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0		0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	5.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	37	0	9	46	0	9	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	33	33	33	25	71	71	0	46	46
g / C, Green / Cycle	0.08	0.08	0.08	0.25	0.25	0.25	0.19	0.55	0.55	0.00	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.02	0.02	0.02	0.03	0.03	0.25	0.17	0.29	0.29	0.00	0.33	0.33
s, saturation flow rate [veh/h]	1810	1878	1692	1810	1833	2859	3514	3618	1879	1810	3618	1789
c, Capacity [veh/h]	139	144	130	459	465	725	674	1974	1025	2	1283	635
d1, Uniform Delay [s]	56.79	56.75	56.76	37.49	37.48	48.44	51.39	18.83	18.86	0.00	40.18	40.24
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	1.19	1.33	0.13	0.13	14.53	4.94	1.01	1.95	0.00	12.05	21.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.31	0.31	0.13	0.13	1.00	0.91	0.53	0.53	0.00	0.92	0.92
d, Delay for Lane Group [s/veh]	58.07	57.94	58.09	37.62	37.61	62.97	56.34	19.84	20.80	0.00	52.22	61.36
Lane Group LOS	E	E	E	D	D	E	E	B	C	A	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.41	1.42	1.29	1.54	1.55	12.98	10.08	9.95	10.64	0.00	19.84	21.31
50th-Percentile Queue Length [ft/ln]	35.13	35.38	32.24	38.56	38.78	324.43	252.05	248.81	266.07	0.00	495.98	532.85
95th-Percentile Queue Length [veh/ln]	2.53	2.55	2.32	2.78	2.79	18.88	15.29	15.13	15.99	0.00	27.14	28.89
95th-Percentile Queue Length [ft/ln]	63.24	63.69	58.04	69.41	69.80	472.12	382.23	378.15	399.83	0.00	678.60	722.14

Movement, Approach, & Intersection Results

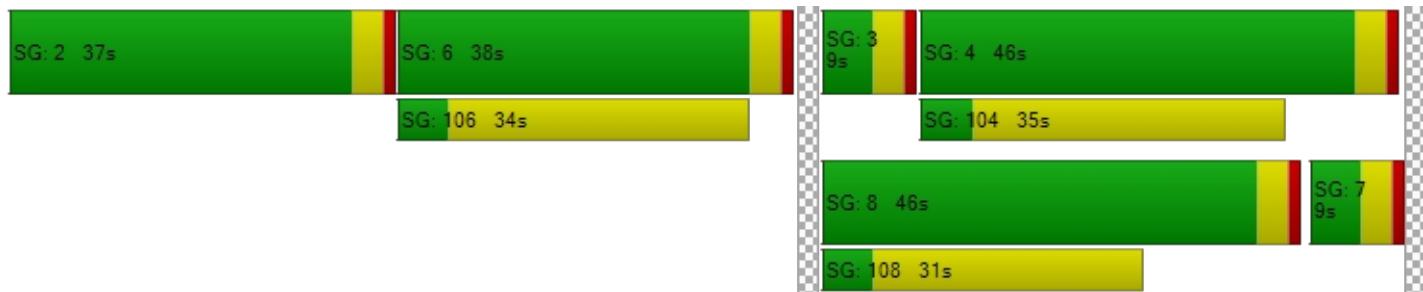
d_M, Delay for Movement [s/veh]	58.04	58.01	58.09	37.62	37.61	62.97	56.34	20.16	20.80	0.00	54.46	61.36
Movement LOS	E	E	E	D	D	E	E	C	C	A	D	E
d_A, Approach Delay [s/veh]	58.03			59.25			30.24			55.25		
Approach LOS		E			E			C			E	
d_I, Intersection Delay [s/veh]				44.90								
Intersection LOS						D						
Intersection V/C				0.778								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	2178.31	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	0.00	56.32
I_p,int, Pedestrian LOS Score for Intersection	2.201	2.799	0.000	3.169
Crosswalk LOS	B	C	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	523	508	646	646
d_b, Bicycle Delay [s]	35.45	36.19	29.79	29.79
I_b,int, Bicycle LOS Score for Intersection	1.665	2.956	2.764	2.531
Bicycle LOS	A	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.508

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	28	11	21	66	5	37	31	1252	14	9	1626	108
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	11	21	66	5	37	31	1252	14	9	1626	108
Peak Hour Factor	0.7200	0.7200	0.7200	0.4700	0.4700	0.4700	0.9000	0.9000	0.9000	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	4	7	35	3	20	9	348	4	2	423	28
Total Analysis Volume [veh/h]	39	15	29	140	11	79	34	1391	16	9	1694	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			1			1		
v_di, Inbound Pedestrian Volume crossing major street	[	1			1			0		1		
v_co, Outbound Pedestrian Volume crossing minor street	2			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street	[	1		0			0			2		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		2		0			0			3		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	17	0	12	29	0	9	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	13	55	50	50	55	48	48
g / C, Green / Cycle	0.11	0.11	0.14	0.62	0.56	0.56	0.62	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.13	0.09	0.26	0.26	0.02	0.34	0.34
s, saturation flow rate [veh/h]	1781	1647	1714	397	3560	1859	462	3560	1801
c, Capacity [veh/h]	192	177	248	298	1985	1036	339	1912	967
d1, Uniform Delay [s]	36.71	36.89	38.08	10.08	11.92	11.92	8.02	14.56	14.61
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.72	13.86	0.17	0.79	1.50	0.14	1.56	3.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.25	0.93	0.11	0.47	0.47	0.03	0.63	0.63
d, Delay for Lane Group [s/veh]	37.23	37.62	51.94	10.24	12.71	13.43	8.17	16.12	17.73
Lane Group LOS	D	D	D	B	B	B	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.81	0.93	5.94	0.24	5.17	5.60	0.07	8.03	8.63
50th-Percentile Queue Length [ft/ln]	20.31	23.14	148.40	6.00	129.19	140.08	1.82	200.75	215.65
95th-Percentile Queue Length [veh/ln]	1.46	1.67	9.93	0.43	8.90	9.49	0.13	12.68	13.44
95th-Percentile Queue Length [ft/ln]	36.57	41.65	248.30	10.80	222.40	237.13	3.27	316.93	336.06

Movement, Approach, & Intersection Results

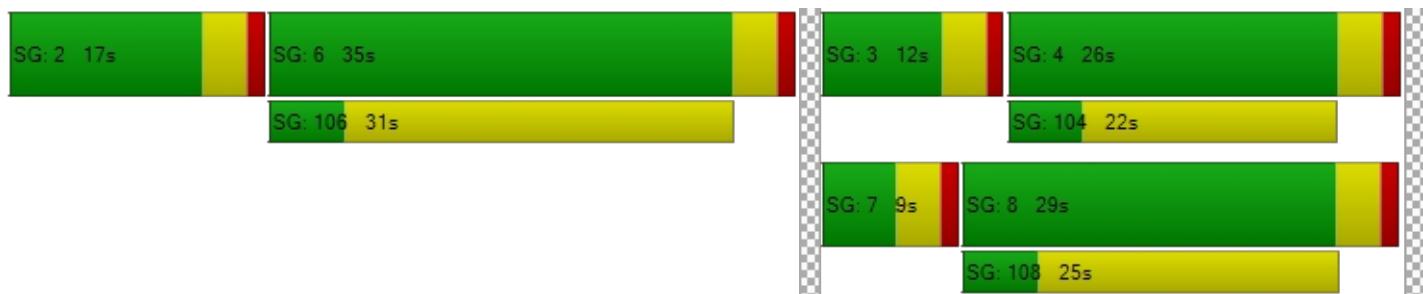
d_M, Delay for Movement [s/veh]	37.23	37.62	37.62	51.94	51.94	51.94	10.24	12.95	13.43	8.17	16.59	17.73
Movement LOS	D	D	D	D	D	D	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	37.44			51.94			12.89			16.62		
Approach LOS		D		D			B			B		
d_I, Intersection Delay [s/veh]				17.88								
Intersection LOS							B					
Intersection V/C					0.508							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	12579.52	4805.30	0.00	4316.01
d_p, Pedestrian Delay [s]	36.49	36.49	0.00	36.49
I_p,int, Pedestrian LOS Score for Intersection	1.981	1.903	0.000	3.144
Crosswalk LOS	A	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	688	289	555	488
d_b, Bicycle Delay [s]	19.40	32.98	23.51	25.77
I_b,int, Bicycle LOS Score for Intersection	1.697	1.939	2.352	2.558
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	5.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.389

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	16	0	56	6	0	6	4	1338	9	0	19	1695	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	0	56	6	0	6	4	1338	9	0	19	1695	0
Peak Hour Factor	0.7100	0.7100	0.7100	0.7500	0.7500	0.7500	0.9400	0.9400	0.9400	1.00	0.92	0.92	0.92
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	6	0	20	2	0	2	1	356	2	0	5	461	0
Total Analysis Volume [veh/h]	23	0	79	8	0	8	4	1423	10	0	21	1842	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0		0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0		0		0]
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0		0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0		0		0]
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0		0			0	
Bicycle Volume [bicycles/h]	0			0			0		0			0	

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	104.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	9	87	0	0	9	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No			No	No	
Maximum Recall		No			No		No	No			No	No	
Pedestrian Recall		No			No		No	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	112	106	106	112	108	108
g / C, Green / Cycle	0.08	0.08	0.08	0.86	0.81	0.81	0.86	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.01	0.01	0.26	0.26	0.05	0.34	0.34
s, saturation flow rate [veh/h]	1474	1589	1304	288	3560	1863	432	3560	1870
c, Capacity [veh/h]	166	120	140	308	2889	1512	428	2944	1546
d1, Uniform Delay [s]	56.40	58.46	56.09	1.83	3.14	3.14	1.61	2.95	2.95
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	6.07	0.36	0.02	0.30	0.57	0.22	0.42	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.66	0.11	0.01	0.33	0.33	0.05	0.41	0.41
d, Delay for Lane Group [s/veh]	56.77	64.53	56.45	1.85	3.44	3.71	1.82	3.38	3.76
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.73	2.76	0.51	0.01	2.47	2.70	0.06	3.03	3.35
50th-Percentile Queue Length [ft/ln]	18.37	68.91	12.76	0.22	61.83	67.58	1.61	75.85	83.78
95th-Percentile Queue Length [veh/ln]	1.32	4.96	0.92	0.02	4.45	4.87	0.12	5.46	6.03
95th-Percentile Queue Length [ft/ln]	33.07	124.05	22.96	0.39	111.29	121.65	2.90	136.52	150.81

Movement, Approach, & Intersection Results

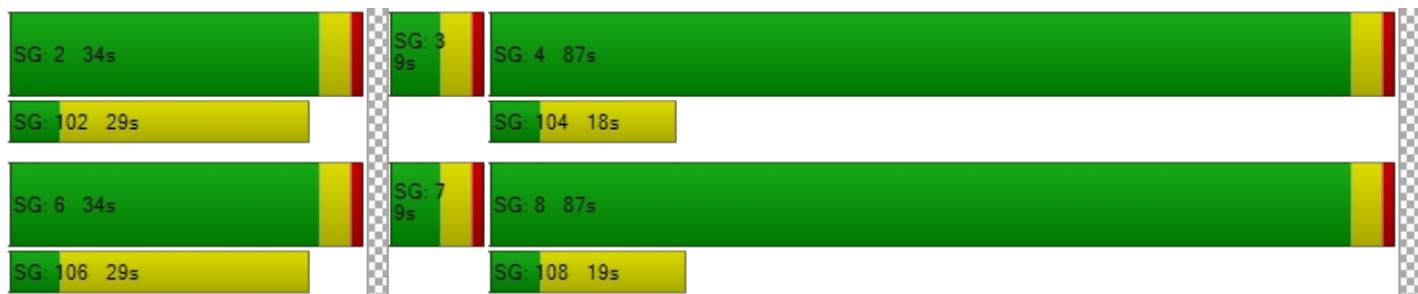
d_M, Delay for Movement [s/veh]	56.77	56.77	64.53	56.45	56.45	56.45	1.85	3.53	3.71	1.82	1.82	3.51	3.76
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	62.78			56.45			3.53			3.49			
Approach LOS		E		E			A			A			A
d_I, Intersection Delay [s/veh]				5.52									
Intersection LOS							A						
Intersection V/C					0.389								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.020	1.747	3.183	3.197
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1277	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.49	8.49
I_b,int, Bicycle LOS Score for Intersection	1.728	1.586	2.350	2.584
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound	Westbound	
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1408	1708
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1408	1708
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	352	427
Total Analysis Volume [veh/h]	0	0	0	1408	1708
Pedestrian Volume [ped/h]	0		0		0

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	16.76	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		16.76		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]			0.00			
Intersection LOS				A		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	36.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	284	568	195	116	457	109	139	1081	176	108	1309	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	284	568	195	116	457	109	139	1081	176	108	1309	81
Peak Hour Factor	0.7000	0.7000	0.7000	0.7100	0.7100	0.7100	0.9600	0.9600	0.9600	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	203	70	41	161	38	36	282	46	29	356	22
Total Analysis Volume [veh/h]	406	811	279	163	644	154	145	1126	183	117	1423	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	42	0	10	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	42	33	33	42	31	31	50	41	41	50	41	41
g / C, Green / Cycle	0.42	0.33	0.33	0.42	0.31	0.31	0.50	0.41	0.41	0.50	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.22	0.30	0.30	0.22	0.22	0.22	0.25	0.31	0.12	0.17	0.39	0.06
s, saturation flow rate [veh/h]	1810	1900	1738	740	1900	1775	583	3618	1550	696	3618	1550
c, Capacity [veh/h]	636	626	572	263	588	549	256	1476	633	324	1484	636
d1, Uniform Delay [s]	21.85	31.95	32.29	24.17	30.47	30.47	22.45	25.45	19.88	17.80	28.68	18.45
k, delay calibration	0.11	0.34	0.36	0.21	0.20	0.20	0.50	0.50	0.50	0.13	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.07	13.55	17.71	4.56	2.87	3.06	8.82	3.79	1.15	0.80	15.44	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.90	0.92	0.62	0.70	0.70	0.57	0.76	0.29	0.36	0.96	0.14
d, Delay for Lane Group [s/veh]	22.93	45.50	50.00	28.74	33.33	33.53	31.27	29.24	21.03	18.60	44.13	18.90
Lane Group LOS	C	D	D	C	C	C	C	C	C	B	D	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.98	14.39	14.22	2.58	8.70	8.15	2.33	11.69	2.97	1.42	18.76	1.32
50th-Percentile Queue Length [ft/ln]	74.39	359.64	355.46	64.55	217.39	203.82	58.14	292.16	74.30	35.51	468.96	32.98
95th-Percentile Queue Length [veh/ln]	5.36	20.61	20.40	4.65	13.53	12.84	4.19	17.29	5.35	2.56	25.86	2.37
95th-Percentile Queue Length [ft/ln]	133.90	515.15	510.06	116.19	338.29	320.89	104.64	432.32	133.74	63.91	646.53	59.36

Movement, Approach, & Intersection Results

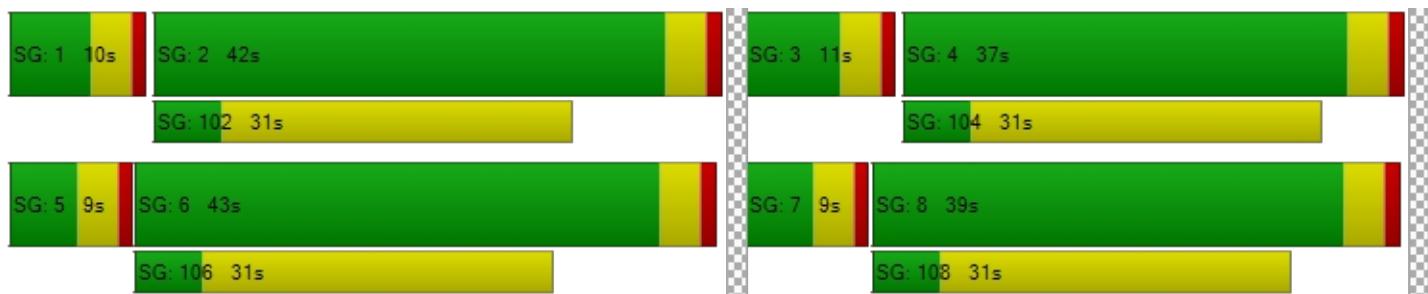
d_M, Delay for Movement [s/veh]	22.93	46.88	50.00	28.74	33.40	33.53	31.27	29.24	21.03	18.60	44.13	18.90
Movement LOS	C	D	D	C	C	C	C	C	C	B	D	B
d_A, Approach Delay [s/veh]	40.96			32.63			28.41			40.93		
Approach LOS		D			C			C			D	
d_I, Intersection Delay [s/veh]				36.21								
Intersection LOS							D					
Intersection V/C							0.801					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	3.125	3.037	3.302	3.147
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	660	760	780
d_b, Bicycle Delay [s]	21.13	22.45	19.23	18.61
I_b,int, Bicycle LOS Score for Intersection	2.794	2.352	2.759	2.903
Bicycle LOS	C	B	C	C

Sequence

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



Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\E AM.pdf

Florence Avenue Townhomes

Scenario 1 Existing AM
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	42	54	4	92	15	621	488	1236	28	0	1329	172	4081

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	28	11	21	66	5	37	31	1252	14	9	1626	108	3208

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	16	0	56	6	0	6	4	1338	9	0	19	1695	0	3149

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	0			1408			1708		0	3116

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	284	568	195	116	457	109	139	1081	176	108	1309	81	4623

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Florence Avenue Townhomes
Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\E PM.pdfScenario 2 Existing PM
1/3/2022**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.696	34.8	C
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.398	8.6	A
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.374	4.5	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	WB Thru	0.018	0.0	A
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.702	27.4	C

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	35	21	3	111	26	487	480	1356	32	0	1399	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	21	3	111	26	487	480	1356	32	0	1399	105
Peak Hour Factor	0.8100	0.8100	0.8100	0.8400	0.8400	0.8400	0.9600	0.9600	0.9600	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	6	1	33	8	145	125	353	8	0	427	32
Total Analysis Volume [veh/h]	43	26	4	132	31	580	500	1413	33	0	1706	128
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		1		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0		0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	6.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	29	0	9	39	0	9	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	25	25	25	19	65	65	0	46	46
g / C, Green / Cycle	0.08	0.08	0.08	0.22	0.22	0.22	0.17	0.56	0.56	0.00	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.01	0.04	0.04	0.20	0.14	0.26	0.26	0.00	0.34	0.34
s, saturation flow rate [veh/h]	1810	1834	1677	1810	1843	2859	3514	3618	1878	1810	3618	1832
c, Capacity [veh/h]	143	145	133	393	400	621	585	2038	1058	2	1440	729
d1, Uniform Delay [s]	49.47	49.46	49.45	36.91	36.90	44.24	46.62	14.88	14.88	0.00	31.40	31.45
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.56	0.61	0.26	0.25	7.16	3.71	0.77	1.48	0.00	6.23	11.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.17	0.17	0.21	0.20	0.93	0.86	0.47	0.47	0.00	0.84	0.85
d, Delay for Lane Group [s/veh]	50.04	50.01	50.06	37.17	37.15	51.39	50.33	15.65	16.37	0.00	37.64	43.11
Lane Group LOS	D	D	D	D	D	D	D	B	B	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.69	0.69	0.63	1.88	1.91	8.59	7.16	7.20	7.69	0.00	16.01	17.38
50th-Percentile Queue Length [ft/ln]	17.29	17.31	15.81	47.12	47.72	214.69	178.98	179.88	192.30	0.00	400.16	434.39
95th-Percentile Queue Length [veh/ln]	1.24	1.25	1.14	3.39	3.44	13.39	11.55	11.59	12.24	0.00	22.57	24.21
95th-Percentile Queue Length [ft/ln]	31.11	31.16	28.46	84.81	85.90	334.84	288.68	289.85	306.02	0.00	564.19	605.30

Movement, Approach, & Intersection Results

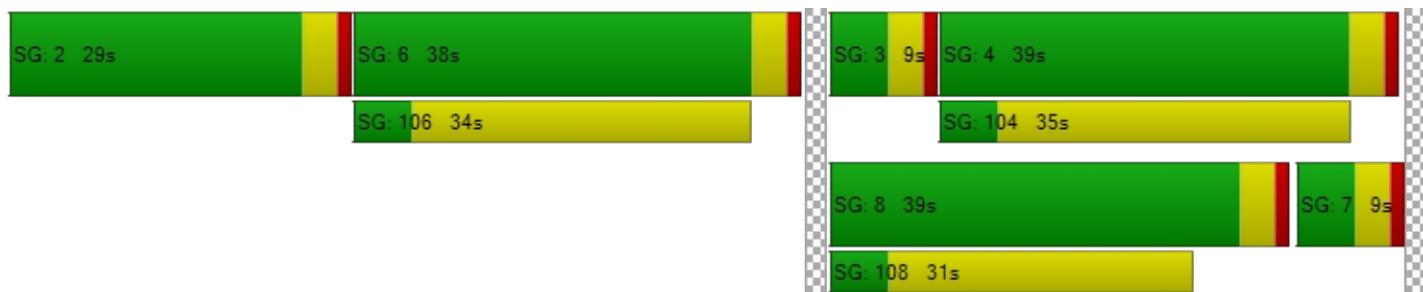
d_M, Delay for Movement [s/veh]	50.03	50.05	50.06	37.17	37.15	51.39	50.33	15.88	16.37	0.00	39.21	43.11
Movement LOS	D	D	D	D	D	D	D	B	B	A	D	D
d_A, Approach Delay [s/veh]	50.04			48.27			24.74			39.48		
Approach LOS		D			D		C			D		
d_I, Intersection Delay [s/veh]				34.83								
Intersection LOS					C							
Intersection V/C				0.696								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	4418.17	0.00	0.00
d_p, Pedestrian Delay [s]	48.87	48.87	0.00	48.87
I_p,int, Pedestrian LOS Score for Intersection	2.183	2.731	0.000	3.157
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	435	608	608
d_b, Bicycle Delay [s]	28.54	35.24	27.84	27.84
I_b,int, Bicycle LOS Score for Intersection	1.620	2.786	2.630	2.568
Bicycle LOS	A	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	15	6	7	19	4	7	8	1425	32	17	1734	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	6	7	19	4	7	8	1425	32	17	1734	44
Peak Hour Factor	0.8800	0.8800	0.8800	0.6800	0.6800	0.6800	0.8900	0.8900	0.8900	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	2	2	7	1	3	2	400	9	5	476	12
Total Analysis Volume [veh/h]	17	7	8	28	6	10	9	1601	36	19	1905	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	1			3			0			4		
v_di, Inbound Pedestrian Volume crossing major street	[	0		4			1			3		
v_co, Outbound Pedestrian Volume crossing minor street	2			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street	[	1		0			0			2		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		1		0			1			1		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	181.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	15	0	9	71	0	9	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	102	95	95	102	96	96
g / C, Green / Cycle	0.06	0.06	0.06	0.78	0.73	0.73	0.78	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.03	0.03	0.30	0.30	0.05	0.36	0.36
s, saturation flow rate [veh/h]	1781	1680	1745	278	3560	1846	372	3560	1843
c, Capacity [veh/h]	112	106	107	265	2609	1353	336	2639	1366
d1, Uniform Delay [s]	57.62	57.58	58.73	4.72	6.65	6.66	4.15	6.81	6.83
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	0.61	2.49	0.05	0.48	0.94	0.32	0.65	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.14	0.41	0.03	0.41	0.41	0.06	0.49	0.49
d, Delay for Lane Group [s/veh]	58.24	58.19	61.22	4.77	7.14	7.59	4.47	7.46	8.08
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.55	0.49	1.48	0.05	5.21	5.59	0.12	6.49	6.98
50th-Percentile Queue Length [ft/ln]	13.86	12.24	37.11	1.16	130.26	139.65	3.01	162.16	174.54
95th-Percentile Queue Length [veh/ln]	1.00	0.88	2.67	0.08	8.95	9.46	0.22	10.66	11.31
95th-Percentile Queue Length [ft/ln]	24.95	22.04	66.79	2.09	223.84	236.55	5.42	266.58	282.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.24	58.19	58.19	61.22	61.22	61.22	4.77	7.29	7.59	4.47	7.66	8.08
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	58.21			61.22			7.28			7.64		
Approach LOS		E		E			A			A		
d_I, Intersection Delay [s/veh]				8.56								
Intersection LOS							A					
Intersection V/C					0.398							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	7981.70	1073.90	0.00	3057.33
d_p, Pedestrian Delay [s]	56.31	56.31	0.00	56.31
I_p,int, Pedestrian LOS Score for Intersection	2.005	1.787	0.000	3.199
Crosswalk LOS	B	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	169	1031	1031
d_b, Bicycle Delay [s]	37.72	54.47	15.28	15.28
I_b,int, Bicycle LOS Score for Intersection	1.612	1.632	2.465	2.644
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	4.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.374

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	9	0	29	4	0	3	14	1417	22	0	42	1719	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	0	29	4	0	3	14	1417	22	0	42	1719	6
Peak Hour Factor	0.7800	0.7800	0.7800	0.8800	0.8800	0.8800	0.8500	0.8500	0.8500	1.00	0.91	0.91	0.91
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	3	0	9	1	0	1	4	417	6	0	12	472	2
Total Analysis Volume [veh/h]	12	0	37	5	0	3	16	1667	26	0	46	1889	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0		0			0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0		0			0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		0	
Bicycle Volume [bicycles/h]	0			0			0			0		0	

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	148.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	9	86	0	0	10	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No			No	No	
Maximum Recall		No			No		No	No			No	No	
Pedestrian Recall		No			No		No	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	114	106	106	114	107	107
g / C, Green / Cycle	0.06	0.06	0.06	0.87	0.81	0.81	0.87	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.01	0.05	0.31	0.31	0.12	0.35	0.35
s, saturation flow rate [veh/h]	1572	1589	1252	296	3560	1855	370	3560	1866
c, Capacity [veh/h]	156	102	125	318	2891	1507	380	2942	1542
d1, Uniform Delay [s]	57.31	58.27	57.18	1.74	3.34	3.34	1.71	3.01	3.01
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	2.16	0.21	0.06	0.39	0.75	0.65	0.45	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.36	0.06	0.05	0.38	0.39	0.12	0.42	0.42
d, Delay for Lane Group [s/veh]	57.52	60.43	57.39	1.80	3.73	4.09	2.36	3.46	3.87
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.39	1.24	0.26	0.03	3.12	3.40	0.14	3.19	3.52
50th-Percentile Queue Length [ft/ln]	9.63	31.02	6.44	0.72	78.03	85.08	3.40	79.78	88.01
95th-Percentile Queue Length [veh/ln]	0.69	2.23	0.46	0.05	5.62	6.13	0.24	5.74	6.34
95th-Percentile Queue Length [ft/ln]	17.34	55.83	11.59	1.29	140.45	153.14	6.11	143.61	158.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.52	57.52	60.43	57.39	57.39	57.39	1.80	3.85	4.09	2.36	2.36	3.60	3.87
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	59.72			57.39			3.83			3.57			
Approach LOS		E		E			A			A			A
d_I, Intersection Delay [s/veh]				4.55									
Intersection LOS							A						
Intersection V/C					0.374								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.046	1.766	3.217	3.267
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1262	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.85	8.49
I_b,int, Bicycle LOS Score for Intersection	1.640	1.573	2.500	2.628
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound		Westbound
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00 8.00
No. of Lanes in Entry Pocket	0	0	1	0	0 1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00 245.00
No. of Lanes in Exit Pocket	0	0	0	0	0 0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00 0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1447	1764 0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000 1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00 0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000 1.0000
In-Process Volume [veh/h]	0	0	0	0	0 0
Site-Generated Trips [veh/h]	0	0	0	0	0 0
Diverted Trips [veh/h]	0	0	0	0	0 0
Pass-by Trips [veh/h]	0	0	0	0	0 0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0 0
Other Volume [veh/h]	0	0	0	0	0 0
Total Hourly Volume [veh/h]	0	0	0	1447	1764 0
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000 0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000 1.0000
Total 15-Minute Volume [veh/h]	0	0	0	362	441 0
Total Analysis Volume [veh/h]	0	0	0	1447	1764 0
Pedestrian Volume [ped/h]	0		0		0

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	17.27	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		17.27		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]			0.00			
Intersection LOS				A		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	149	304	173	84	482	155	76	1235	137	145	1453	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	149	304	173	84	482	155	76	1235	137	145	1453	87
Peak Hour Factor	0.8600	0.8600	0.8600	0.9600	0.9600	0.9600	0.9300	0.9300	0.9300	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	88	50	22	126	40	20	332	37	42	418	25
Total Analysis Volume [veh/h]	173	353	201	88	502	161	82	1328	147	167	1670	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	47	0	9	47	0	9	35	0	9	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	30	21	21	30	21	21	62	53	53	62	53	53
g / C, Green / Cycle	0.30	0.21	0.21	0.30	0.21	0.21	0.62	0.53	0.53	0.62	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.16	0.08	0.18	0.18	0.18	0.37	0.09	0.29	0.46	0.06
s, saturation flow rate [veh/h]	1987	1900	1672	1087	1900	1744	463	3618	1550	579	3618	1550
c, Capacity [veh/h]	483	406	357	315	406	373	267	1898	813	343	1916	821
d1, Uniform Delay [s]	27.16	36.61	36.66	26.59	37.82	37.85	19.70	17.88	12.50	15.12	20.58	11.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.42	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	2.45	2.85	0.48	5.03	5.58	2.96	2.17	0.49	4.13	5.80	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.72	0.73	0.28	0.85	0.85	0.31	0.70	0.18	0.49	0.87	0.12
d, Delay for Lane Group [s/veh]	27.61	39.06	39.51	27.06	42.84	43.44	22.66	20.05	12.99	19.25	26.37	12.14
Lane Group LOS	C	D	D	C	D	D	C	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.47	6.63	5.93	1.50	8.28	7.70	0.87	11.14	1.75	1.78	16.94	1.13
50th-Percentile Queue Length [ft/ln]	36.66	165.79	148.19	37.55	207.02	192.41	21.72	278.44	43.64	44.60	423.56	28.27
95th-Percentile Queue Length [veh/ln]	2.64	10.85	9.92	2.70	13.00	12.25	1.56	16.61	3.14	3.21	23.69	2.04
95th-Percentile Queue Length [ft/ln]	65.99	271.37	248.01	67.60	325.01	306.16	39.09	415.27	78.54	80.28	592.31	50.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.61	39.13	39.51	27.06	43.03	43.44	22.66	20.05	12.99	19.25	26.37	12.14
Movement LOS	C	D	D	C	D	D	C	C	B	B	C	B
d_A, Approach Delay [s/veh]	36.50			41.25			19.52			25.02		
Approach LOS	D			D			B			C		
d_I, Intersection Delay [s/veh]				27.43								
Intersection LOS					C							
Intersection V/C				0.702								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.44	41.44	41.44	41.44
I_p,int, Pedestrian LOS Score for Intersection	2.965	2.837	3.192	3.163
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	859	859	620	620
d_b, Bicycle Delay [s]	16.27	16.27	23.84	23.84
I_b,int, Bicycle LOS Score for Intersection	2.159	2.179	2.844	3.158
Bicycle LOS	B	B	C	C

Sequence

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



Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\E PM.pdf

Florence Avenue Townhomes

Scenario 2 Existing PM
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	35	21	3	111	26	487	480	1356	32	0	1399	105	4055

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	15	6	7	19	4	7	8	1425	32	17	1734	44	3318

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	9	0	29	4	0	3	14	1417	22	0	42	1719	6	3265

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	0			1447			1764		0	3211

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	149	304	173	84	482	155	76	1235	137	145	1453	87	4480

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Florence Avenue Townhomes
Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\EP AM.pdfScenario 3 Existing AM + P
1/3/2022**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.781	45.3	D
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.510	17.9	B
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.392	5.6	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	SB Right	0.056	17.5	C
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.801	36.3	D

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.781

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	42	54	4	92	15	621	488	1236	28	0	1329	172
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	9	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	54	4	92	15	621	488	1236	28	0	1338	176
Peak Hour Factor	0.7800	0.7800	0.7800	0.8600	0.8600	0.8600	0.8000	0.8000	0.8000	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	17	1	27	4	181	153	386	9	0	394	52
Total Analysis Volume [veh/h]	54	69	5	107	17	722	610	1545	35	0	1574	207
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			2			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		2		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0		0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	42.5											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	37	0	9	46	0	9	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	33	33	33	25	71	71	0	46	46
g / C, Green / Cycle	0.08	0.08	0.08	0.25	0.25	0.25	0.19	0.55	0.55	0.00	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.02	0.02	0.02	0.03	0.03	0.25	0.17	0.29	0.29	0.00	0.33	0.33
s, saturation flow rate [veh/h]	1810	1878	1692	1810	1833	2859	3514	3618	1879	1810	3618	1788
c, Capacity [veh/h]	139	144	130	459	465	725	674	1974	1025	2	1283	634
d1, Uniform Delay [s]	56.79	56.75	56.76	37.49	37.48	48.44	51.39	18.83	18.86	0.00	40.35	40.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	1.19	1.33	0.13	0.13	14.53	4.94	1.01	1.95	0.00	12.89	22.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.31	0.31	0.13	0.13	1.00	0.91	0.53	0.53	0.00	0.93	0.93
d, Delay for Lane Group [s/veh]	58.07	57.94	58.09	37.62	37.61	62.97	56.34	19.84	20.80	0.00	53.24	62.76
Lane Group LOS	E	E	E	D	D	E	E	B	C	A	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.41	1.42	1.29	1.54	1.55	12.98	10.08	9.95	10.64	0.00	20.22	21.75
50th-Percentile Queue Length [ft/ln]	35.13	35.38	32.24	38.56	38.78	324.43	252.05	248.81	266.07	0.00	505.48	543.65
95th-Percentile Queue Length [veh/ln]	2.53	2.55	2.32	2.78	2.79	18.88	15.29	15.13	15.99	0.00	27.59	29.39
95th-Percentile Queue Length [ft/ln]	63.24	63.69	58.04	69.41	69.80	472.12	382.23	378.15	399.83	0.00	689.84	734.84

Movement, Approach, & Intersection Results

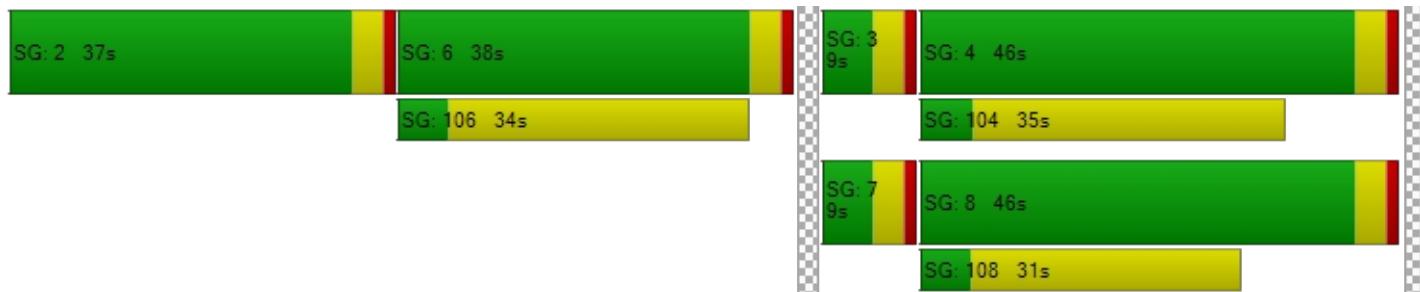
d_M, Delay for Movement [s/veh]	58.04	58.01	58.09	37.62	37.61	62.97	56.34	20.16	20.80	0.00	55.56	62.76
Movement LOS	E	E	E	D	D	E	E	C	C	A	E	E
d_A, Approach Delay [s/veh]	58.03			59.25			30.24			56.39		
Approach LOS		E			E			C			E	
d_I, Intersection Delay [s/veh]				45.34								
Intersection LOS						D						
Intersection V/C						0.781						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	2154.23	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	0.00	56.32
I_p,int, Pedestrian LOS Score for Intersection	2.201	2.800	0.000	3.172
Crosswalk LOS	B	C	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	523	508	646	646
d_b, Bicycle Delay [s]	35.45	36.19	29.79	29.79
I_b,int, Bicycle LOS Score for Intersection	1.665	2.956	2.764	2.539
Bicycle LOS	A	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	28	11	21	66	5	37	31	1252	14	9	1626	108
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	13	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	11	21	66	5	37	31	1252	14	9	1639	108
Peak Hour Factor	0.7200	0.7200	0.7200	0.4700	0.4700	0.4700	0.9000	0.9000	0.9000	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	4	7	35	3	20	9	348	4	2	427	28
Total Analysis Volume [veh/h]	39	15	29	140	11	79	34	1391	16	9	1707	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			1			1		
v_di, Inbound Pedestrian Volume crossing major street	[	1			1			0		1		
v_co, Outbound Pedestrian Volume crossing minor street	2			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street	[	1		0			0			2		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		2		0			0			3		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	31.5											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	17	0	12	29	0	9	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	13	55	50	50	55	48	48
g / C, Green / Cycle	0.11	0.11	0.14	0.62	0.56	0.56	0.62	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.13	0.09	0.26	0.26	0.02	0.34	0.34
s, saturation flow rate [veh/h]	1781	1647	1714	394	3560	1859	462	3560	1802
c, Capacity [veh/h]	192	177	248	296	1985	1036	339	1912	968
d1, Uniform Delay [s]	36.71	36.89	38.08	10.15	11.92	11.92	8.02	14.61	14.67
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.72	13.86	0.17	0.79	1.50	0.14	1.59	3.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.25	0.93	0.11	0.47	0.47	0.03	0.63	0.64
d, Delay for Lane Group [s/veh]	37.23	37.62	51.94	10.32	12.71	13.43	8.17	16.20	17.84
Lane Group LOS	D	D	D	B	B	B	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.81	0.93	5.94	0.24	5.17	5.60	0.07	8.12	8.73
50th-Percentile Queue Length [ft/ln]	20.31	23.14	148.40	6.00	129.19	140.08	1.82	202.98	218.21
95th-Percentile Queue Length [veh/ln]	1.46	1.67	9.93	0.43	8.90	9.49	0.13	12.79	13.57
95th-Percentile Queue Length [ft/ln]	36.57	41.65	248.30	10.80	222.40	237.13	3.27	319.80	339.35

Movement, Approach, & Intersection Results

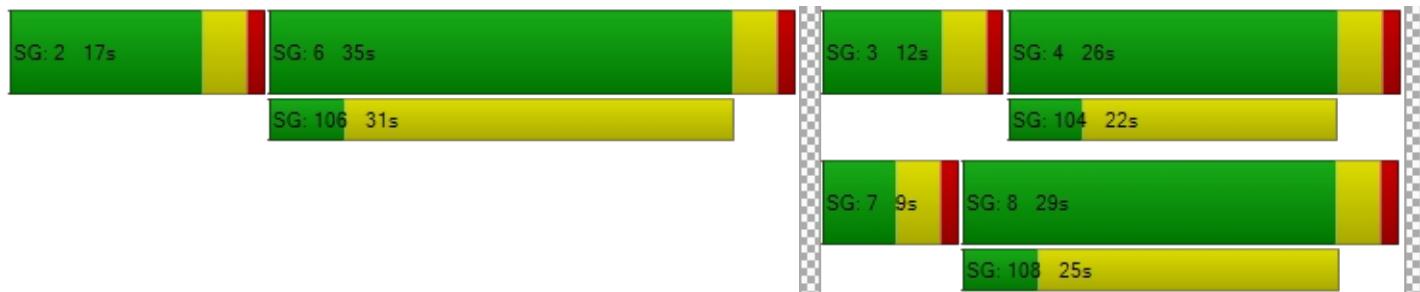
d_M, Delay for Movement [s/veh]	37.23	37.62	37.62	51.94	51.94	51.94	10.32	12.95	13.43	8.17	16.69	17.84
Movement LOS	D	D	D	D	D	D	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	37.44			51.94			12.90			16.72		
Approach LOS		D		D			B			B		
d_I, Intersection Delay [s/veh]				17.92								
Intersection LOS							B					
Intersection V/C					0.510							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	12579.52	4805.30	0.00	4316.01
d_p, Pedestrian Delay [s]	36.49	36.49	0.00	36.49
I_p,int, Pedestrian LOS Score for Intersection	1.981	1.903	0.000	3.146
Crosswalk LOS	A	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	688	289	555	488
d_b, Bicycle Delay [s]	19.40	32.98	23.51	25.77
I_b,int, Bicycle LOS Score for Intersection	1.697	1.939	2.352	2.566
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	5.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.392

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	16	0	56	6	0	6	4	1338	9	0	19	1695	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	4	0	13	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	0	56	6	0	6	4	1338	9	4	19	1708	0
Peak Hour Factor	0.7100	0.7100	0.7100	0.7500	0.7500	0.7500	0.9400	0.9400	0.9400	1.00	0.92	0.92	0.92
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	6	0	20	2	0	2	1	356	2	1	5	464	0
Total Analysis Volume [veh/h]	23	0	79	8	0	8	4	1423	10	4	21	1857	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0		0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0		0		0]
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0		0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0		0		0]
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0		0			0	
Bicycle Volume [bicycles/h]	0			0			0		0			0	

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	117.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	9	87	0	0	9	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No			No	No	
Maximum Recall		No			No		No	No			No	No	
Pedestrian Recall		No			No		No	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	112	105	105	112	108	108
g / C, Green / Cycle	0.08	0.08	0.08	0.86	0.81	0.81	0.86	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.01	0.01	0.26	0.26	0.06	0.34	0.34
s, saturation flow rate [veh/h]	1474	1589	1304	285	3560	1863	436	3560	1870
c, Capacity [veh/h]	166	120	140	305	2881	1508	431	2944	1546
d1, Uniform Delay [s]	56.40	58.46	56.09	1.85	3.22	3.22	1.62	2.96	2.96
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	6.07	0.36	0.02	0.30	0.58	0.26	0.43	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.66	0.11	0.01	0.33	0.33	0.06	0.41	0.41
d, Delay for Lane Group [s/veh]	56.77	64.53	56.45	1.86	3.52	3.80	1.88	3.39	3.78
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.73	2.76	0.51	0.01	2.53	2.76	0.08	3.07	3.39
50th-Percentile Queue Length [ft/ln]	18.37	68.91	12.76	0.22	63.24	69.07	1.93	76.79	84.83
95th-Percentile Queue Length [veh/ln]	1.32	4.96	0.92	0.02	4.55	4.97	0.14	5.53	6.11
95th-Percentile Queue Length [ft/ln]	33.07	124.05	22.96	0.39	113.83	124.33	3.47	138.23	152.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.77	56.77	64.53	56.45	56.45	56.45	1.86	3.61	3.80	1.88	1.88	3.53	3.78
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	62.78			56.45			3.61			3.51			
Approach LOS		E		E			A			A			A
d_I, Intersection Delay [s/veh]				5.55									
Intersection LOS							A						
Intersection V/C					0.392								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.024	1.747	3.186	3.205
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1277	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.49	8.49
I_b,int, Bicycle LOS Score for Intersection	1.728	1.586	2.350	2.593
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type: Two-way stop Delay (sec / veh): 17.5
 Analysis Method: HCM 6th Edition Level Of Service: C
 Analysis Period: 15 minutes Volume to Capacity (v/c): 0.056

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound	Westbound	
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1408	1708
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0
Total Hourly Volume [veh/h]	0	17	0	1412	1708
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	4	0	353	427
Total Analysis Volume [veh/h]	0	17	0	1412	1708
Pedestrian Volume [ped/h]	0			0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	17.45	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.18	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.39	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		17.45		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]				0.09		
Intersection LOS				C		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	284	568	195	116	457	109	139	1081	176	108	1309	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	3	0	4	0	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	287	568	195	116	457	112	139	1085	176	108	1310	81
Peak Hour Factor	0.7000	0.7000	0.7000	0.7100	0.7100	0.7100	0.9600	0.9600	0.9600	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	203	70	41	161	39	36	283	46	29	356	22
Total Analysis Volume [veh/h]	410	811	279	163	644	158	145	1130	183	117	1424	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	42	0	10	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	42	33	33	42	31	31	50	41	41	50	41	41
g / C, Green / Cycle	0.42	0.33	0.33	0.42	0.31	0.31	0.50	0.41	0.41	0.50	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.23	0.30	0.30	0.22	0.22	0.22	0.25	0.31	0.12	0.17	0.39	0.06
s, saturation flow rate [veh/h]	1806	1900	1738	740	1900	1772	583	3618	1550	695	3618	1550
c, Capacity [veh/h]	634	626	573	263	588	549	255	1476	632	323	1484	636
d1, Uniform Delay [s]	21.93	31.94	32.29	24.17	30.51	30.51	22.46	25.50	19.88	17.86	28.70	18.45
k, delay calibration	0.11	0.34	0.36	0.21	0.21	0.21	0.50	0.50	0.50	0.13	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	13.50	17.70	4.56	2.96	3.16	8.85	3.85	1.15	0.82	15.57	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.90	0.92	0.62	0.71	0.71	0.57	0.77	0.29	0.36	0.96	0.14
d, Delay for Lane Group [s/veh]	23.05	45.45	49.99	28.73	33.47	33.67	31.31	29.35	21.04	18.67	44.28	18.91
Lane Group LOS	C	D	D	C	C	C	C	C	C	B	D	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.01	14.37	14.22	2.58	8.77	8.21	2.33	11.76	2.97	1.42	18.81	1.32
50th-Percentile Queue Length [ft/ln]	75.27	359.35	355.51	64.54	219.23	205.29	58.17	293.90	74.31	35.54	470.13	32.99
95th-Percentile Queue Length [veh/ln]	5.42	20.59	20.40	4.65	13.63	12.91	4.19	17.38	5.35	2.56	25.92	2.37
95th-Percentile Queue Length [ft/ln]	135.49	514.79	510.12	116.17	340.64	322.78	104.71	434.48	133.76	63.96	647.93	59.37

Movement, Approach, & Intersection Results

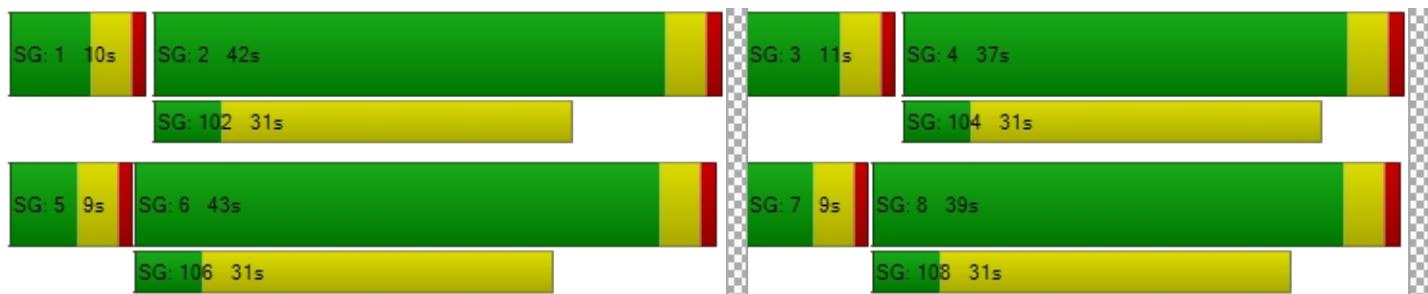
d_M, Delay for Movement [s/veh]	23.05	46.84	49.99	28.73	33.54	33.67	31.31	29.35	21.04	18.67	44.28	18.91
Movement LOS	C	D	D	C	C	C	C	C	C	B	D	B
d_A, Approach Delay [s/veh]	40.92			32.75			28.50			41.07		
Approach LOS		D		C		C		C		D		
d_I, Intersection Delay [s/veh]				36.28								
Intersection LOS						D						
Intersection V/C						0.801						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	3.126	3.038	3.306	3.147
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	660	760	780
d_b, Bicycle Delay [s]	21.13	22.45	19.23	18.61
I_b,int, Bicycle LOS Score for Intersection	2.797	2.356	2.762	2.904
Bicycle LOS	C	B	C	C

Sequence

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



Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\EP AM.pdf

Florence Avenue Townhomes

Scenario 3 Existing AM + P
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	42	54	4	92	15	621	488	1236	28	0	1338	176	4094

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	28	11	21	66	5	37	31	1252	14	9	1639	108	3221

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	16	0	56	6	0	6	4	1338	9	4	19	1708	0	3166

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	17			1412			1708	6		3143

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	287	568	195	116	457	112	139	1085	176	108	1310	81	4634

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Florence Avenue Townhomes
Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\EP PM.pdfScenario 4 Existing PM + P
1/3/2022**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.698	35.0	C
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.400	8.6	A
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.376	4.6	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	SB Right	0.037	17.7	C
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.708	27.7	C

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	35	21	3	111	26	487	480	1356	32	0	1399	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	5	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	21	3	111	26	487	480	1356	32	0	1404	108
Peak Hour Factor	0.8100	0.8100	0.8100	0.8400	0.8400	0.8400	0.9600	0.9600	0.9600	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	6	1	33	8	145	125	353	8	0	428	33
Total Analysis Volume [veh/h]	43	26	4	132	31	580	500	1413	33	0	1712	132
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		1		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0		0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	110.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	29	0	9	39	0	9	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	25	25	25	19	65	65	0	46	46
g / C, Green / Cycle	0.08	0.08	0.08	0.22	0.22	0.22	0.17	0.56	0.56	0.00	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.01	0.04	0.04	0.20	0.14	0.26	0.26	0.00	0.34	0.34
s, saturation flow rate [veh/h]	1810	1834	1677	1810	1843	2859	3514	3618	1878	1810	3618	1831
c, Capacity [veh/h]	143	145	133	393	400	621	585	2038	1058	2	1440	729
d1, Uniform Delay [s]	49.47	49.46	49.45	36.91	36.90	44.24	46.62	14.88	14.88	0.00	31.50	31.54
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.56	0.61	0.26	0.25	7.16	3.71	0.77	1.48	0.00	6.44	12.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.17	0.17	0.21	0.20	0.93	0.86	0.47	0.47	0.00	0.85	0.85
d, Delay for Lane Group [s/veh]	50.04	50.01	50.06	37.17	37.15	51.39	50.33	15.65	16.37	0.00	37.93	43.57
Lane Group LOS	D	D	D	D	D	D	D	B	B	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.69	0.69	0.63	1.88	1.91	8.59	7.16	7.20	7.69	0.00	16.17	17.57
50th-Percentile Queue Length [ft/ln]	17.29	17.31	15.81	47.12	47.72	214.69	178.98	179.88	192.30	0.00	404.35	439.16
95th-Percentile Queue Length [veh/ln]	1.24	1.25	1.14	3.39	3.44	13.39	11.55	11.59	12.24	0.00	22.77	24.44
95th-Percentile Queue Length [ft/ln]	31.11	31.16	28.46	84.81	85.90	334.84	288.68	289.85	306.02	0.00	569.23	611.00

Movement, Approach, & Intersection Results

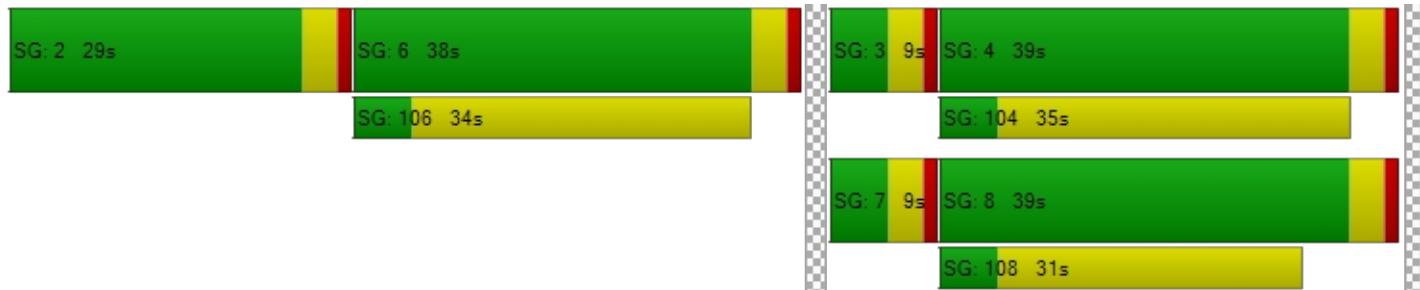
d_M, Delay for Movement [s/veh]	50.03	50.05	50.06	37.17	37.15	51.39	50.33	15.88	16.37	0.00	39.54	43.57
Movement LOS	D	D	D	D	D	D	D	B	B	A	D	D
d_A, Approach Delay [s/veh]	50.04			48.27			24.74			39.83		
Approach LOS		D			D		C			D		
d_I, Intersection Delay [s/veh]				34.98								
Intersection LOS					C							
Intersection V/C				0.698								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	4389.26	0.00	0.00
d_p, Pedestrian Delay [s]	48.87	48.87	0.00	48.87
I_p,int, Pedestrian LOS Score for Intersection	2.183	2.732	0.000	3.159
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	435	608	608
d_b, Bicycle Delay [s]	28.54	35.24	27.84	27.84
I_b,int, Bicycle LOS Score for Intersection	1.620	2.786	2.630	2.574
Bicycle LOS	A	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.400

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	15	6	7	19	4	7	8	1425	32	17	1734	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	6	7	19	4	7	8	1425	32	17	1742	44
Peak Hour Factor	0.8800	0.8800	0.8800	0.6800	0.6800	0.6800	0.8900	0.8900	0.8900	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	2	2	7	1	3	2	400	9	5	479	12
Total Analysis Volume [veh/h]	17	7	8	28	6	10	9	1601	36	19	1914	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	1			3			0			4		
v_di, Inbound Pedestrian Volume crossing major street	[	0		4			1			3		
v_co, Outbound Pedestrian Volume crossing minor street	2			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street	[	1		0			0			2		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		1		0			1			1		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	106.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	15	0	9	71	0	9	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	102	95	95	102	96	96
g / C, Green / Cycle	0.06	0.06	0.06	0.78	0.73	0.73	0.78	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.03	0.03	0.30	0.30	0.05	0.36	0.36
s, saturation flow rate [veh/h]	1781	1680	1745	276	3560	1846	372	3560	1843
c, Capacity [veh/h]	112	106	107	264	2609	1353	336	2639	1366
d1, Uniform Delay [s]	57.62	57.58	58.73	4.74	6.65	6.66	4.15	6.83	6.84
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	0.61	2.49	0.05	0.48	0.94	0.32	0.65	1.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.14	0.41	0.03	0.41	0.41	0.06	0.49	0.49
d, Delay for Lane Group [s/veh]	58.24	58.19	61.22	4.79	7.14	7.59	4.47	7.48	8.11
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.55	0.49	1.48	0.05	5.21	5.59	0.12	6.53	7.03
50th-Percentile Queue Length [ft/ln]	13.86	12.24	37.11	1.16	130.26	139.65	3.01	163.33	175.84
95th-Percentile Queue Length [veh/ln]	1.00	0.88	2.67	0.08	8.95	9.46	0.22	10.73	11.38
95th-Percentile Queue Length [ft/ln]	24.95	22.04	66.79	2.09	223.84	236.55	5.42	268.13	284.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.24	58.19	58.19	61.22	61.22	61.22	4.79	7.29	7.59	4.47	7.68	8.11
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	58.21			61.22			7.28			7.66		
Approach LOS		E		E			A			A		
d_I, Intersection Delay [s/veh]				8.57								
Intersection LOS							A					
Intersection V/C					0.400							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	7981.70	1073.90	0.00	3057.33
d_p, Pedestrian Delay [s]	56.31	56.31	0.00	56.31
I_p,int, Pedestrian LOS Score for Intersection	2.005	1.787	0.000	3.201
Crosswalk LOS	B	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	169	1031	1031
d_b, Bicycle Delay [s]	37.72	54.47	15.28	15.28
I_b,int, Bicycle LOS Score for Intersection	1.612	1.632	2.465	2.649
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	4.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.376

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	9	0	29	4	0	3	14	1417	22	0	42	1719	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	3	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	0	29	4	0	3	14	1417	22	3	42	1727	6
Peak Hour Factor	0.7800	0.7800	0.7800	0.8800	0.8800	0.8800	0.8500	0.8500	0.8500	1.00	0.91	0.91	0.91
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	3	0	9	1	0	1	4	417	6	1	12	474	2
Total Analysis Volume [veh/h]	12	0	37	5	0	3	16	1667	26	3	46	1898	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0		0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0		0		0]
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0		0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0		0		0]
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0		0			0	
Bicycle Volume [bicycles/h]	0			0			0		0			0	

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	107.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	9	86	0	0	10	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No			No	No	
Maximum Recall		No			No		No	No			No	No	
Pedestrian Recall		No			No		No	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	114	105	105	114	107	107
g / C, Green / Cycle	0.06	0.06	0.06	0.87	0.81	0.81	0.87	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.01	0.05	0.31	0.31	0.13	0.35	0.35
s, saturation flow rate [veh/h]	1572	1589	1252	294	3560	1855	372	3560	1866
c, Capacity [veh/h]	156	102	125	316	2889	1505	381	2942	1542
d1, Uniform Delay [s]	57.31	58.27	57.18	1.75	3.37	3.37	1.72	3.02	3.02
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	2.16	0.21	0.07	0.39	0.75	0.70	0.45	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.36	0.06	0.05	0.39	0.39	0.13	0.42	0.42
d, Delay for Lane Group [s/veh]	57.52	60.43	57.39	1.82	3.76	4.11	2.42	3.47	3.88
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.39	1.24	0.26	0.03	3.14	3.43	0.15	3.21	3.55
50th-Percentile Queue Length [ft/ln]	9.63	31.02	6.44	0.72	78.58	85.66	3.63	80.37	88.66
95th-Percentile Queue Length [veh/ln]	0.69	2.23	0.46	0.05	5.66	6.17	0.26	5.79	6.38
95th-Percentile Queue Length [ft/ln]	17.34	55.83	11.59	1.29	141.45	154.19	6.54	144.66	159.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.52	57.52	60.43	57.39	57.39	57.39	1.82	3.87	4.11	2.42	2.42	3.61	3.88
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	59.72			57.39			3.86			3.58			
Approach LOS		E		E			A			A			
d_I, Intersection Delay [s/veh]				4.56									
Intersection LOS							A						
Intersection V/C					0.376								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.050	1.766	3.218	3.273
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1262	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.85	8.49
I_b,int, Bicycle LOS Score for Intersection	1.640	1.573	2.500	2.633
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound		Westbound
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1447	1764
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0
Total Hourly Volume [veh/h]	0	11	0	1450	1764
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	0	363	441
Total Analysis Volume [veh/h]	0	11	0	1450	1764
Pedestrian Volume [ped/h]	0			0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	17.75	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.12	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	2.91	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		17.75		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]				0.06		
Intersection LOS				C		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	27.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	149	304	173	84	482	155	76	1235	137	145	1453	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	0	0	0	8	0	3	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	157	304	173	84	482	163	76	1238	137	145	1455	87
Peak Hour Factor	0.8600	0.8600	0.8600	0.9600	0.9600	0.9600	0.9300	0.9300	0.9300	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	88	50	22	126	42	20	333	37	42	418	25
Total Analysis Volume [veh/h]	183	353	201	88	502	170	82	1331	147	167	1672	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	47	0	9	47	0	9	35	0	9	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	22	22	31	22	22	61	52	52	61	53	53
g / C, Green / Cycle	0.31	0.22	0.22	0.31	0.22	0.22	0.61	0.52	0.52	0.61	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.16	0.08	0.18	0.19	0.18	0.37	0.09	0.29	0.46	0.06
s, saturation flow rate [veh/h]	1973	1900	1672	1085	1900	1738	463	3618	1550	579	3618	1550
c, Capacity [veh/h]	483	412	362	318	412	377	265	1888	809	341	1906	817
d1, Uniform Delay [s]	27.09	36.34	36.39	26.37	37.67	37.70	19.95	18.12	12.65	15.38	20.85	11.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.42	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	2.31	2.68	0.47	5.02	5.59	3.02	2.24	0.49	4.23	6.09	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.71	0.72	0.28	0.85	0.85	0.31	0.71	0.18	0.49	0.88	0.12
d, Delay for Lane Group [s/veh]	27.59	38.65	39.07	26.83	42.69	43.29	22.97	20.36	13.14	19.61	26.94	12.29
Lane Group LOS	C	D	D	C	D	D	C	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.55	6.59	5.89	1.49	8.40	7.78	0.88	11.27	1.76	1.80	17.17	1.14
50th-Percentile Queue Length [ft/ln]	38.73	164.85	147.19	37.35	209.97	194.45	21.95	281.86	43.98	45.12	429.27	28.49
95th-Percentile Queue Length [veh/ln]	2.79	10.81	9.87	2.69	13.15	12.35	1.58	16.78	3.17	3.25	23.97	2.05
95th-Percentile Queue Length [ft/ln]	69.71	270.13	246.67	67.24	328.79	308.79	39.50	419.53	79.16	81.22	599.17	51.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.59	38.72	39.07	26.83	42.87	43.29	22.97	20.36	13.14	19.61	26.94	12.29
Movement LOS	C	D	D	C	D	D	C	C	B	B	C	B
d_A, Approach Delay [s/veh]	36.05			41.11			19.82			25.55		
Approach LOS		D			D			B			C	
d_I, Intersection Delay [s/veh]				27.68								
Intersection LOS					C							
Intersection V/C				0.708								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.44	41.44	41.44	41.44
I_p,int, Pedestrian LOS Score for Intersection	2.967	2.839	3.201	3.164
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	859	859	620	620
d_b, Bicycle Delay [s]	16.27	16.27	23.84	23.84
I_b,int, Bicycle LOS Score for Intersection	2.168	2.187	2.847	3.159
Bicycle LOS	B	B	C	C

Sequence

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



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Florence Avenue Townhomes

Scenario 4 Existing PM + P
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	35	21	3	111	26	487	480	1356	32	0	1404	108	4063

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	15	6	7	19	4	7	8	1425	32	17	1742	44	3326

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	9	0	29	4	0	3	14	1417	22	3	42	1727	6	3276

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	11			1450			1764		17	3242

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	157	304	173	84	482	163	76	1238	137	145	1455	87	4501

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Florence Avenue Townhomes
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Report File: C:\...\OY AM.pdf

Scenario 5 OY AM
1/3/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.810	50.3	D
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.529	18.7	B
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.405	5.6	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	WB Thru	0.018	0.0	A
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	WB Thru	0.835	41.1	D

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	50.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	42	54	4	92	15	621	488	1236	28	0	1329	172
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	12	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	56	4	96	16	646	508	1297	29	0	1384	179
Peak Hour Factor	0.7800	0.7800	0.7800	0.8600	0.8600	0.8600	0.8000	0.8000	0.8000	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	18	1	28	5	188	159	405	9	0	407	53
Total Analysis Volume [veh/h]	56	72	5	112	19	751	635	1621	36	0	1628	211
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			2			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		2		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		0		0			0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	44.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	37	0	9	46	0	9	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	33	33	33	26	71	71	0	45	45
g / C, Green / Cycle	0.08	0.08	0.08	0.25	0.25	0.25	0.20	0.55	0.55	0.00	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.02	0.02	0.04	0.04	0.26	0.18	0.30	0.30	0.00	0.34	0.34
s, saturation flow rate [veh/h]	1810	1878	1693	1810	1835	2859	3514	3618	1879	1810	3618	1789
c, Capacity [veh/h]	139	144	130	459	466	725	695	1973	1025	2	1261	624
d1, Uniform Delay [s]	56.83	56.79	56.80	37.56	37.55	48.52	51.08	19.22	19.25	0.00	41.76	41.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.35	1.25	1.40	0.14	0.14	25.70	5.24	1.12	2.16	0.00	19.84	31.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.32	0.32	0.14	0.14	1.04	0.91	0.55	0.55	0.00	0.97	0.98
d, Delay for Lane Group [s/veh]	58.18	58.04	58.20	37.71	37.69	74.22	56.32	20.34	21.41	0.00	61.60	73.06
Lane Group LOS	E	E	E	D	D	F	E	C	C	A	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.46	1.47	1.34	1.63	1.64	14.17	10.52	10.66	11.42	0.00	22.48	24.34
50th-Percentile Queue Length [ft/ln]	36.55	36.81	33.55	40.85	41.03	354.30	262.98	266.38	285.51	0.00	561.88	608.43
95th-Percentile Queue Length [veh/ln]	2.63	2.65	2.42	2.94	2.95	20.76	15.84	16.01	16.96	0.00	30.25	32.43
95th-Percentile Queue Length [ft/ln]	65.78	66.26	60.39	73.53	73.85	519.09	395.96	400.21	424.07	0.00	756.26	810.69

Movement, Approach, & Intersection Results

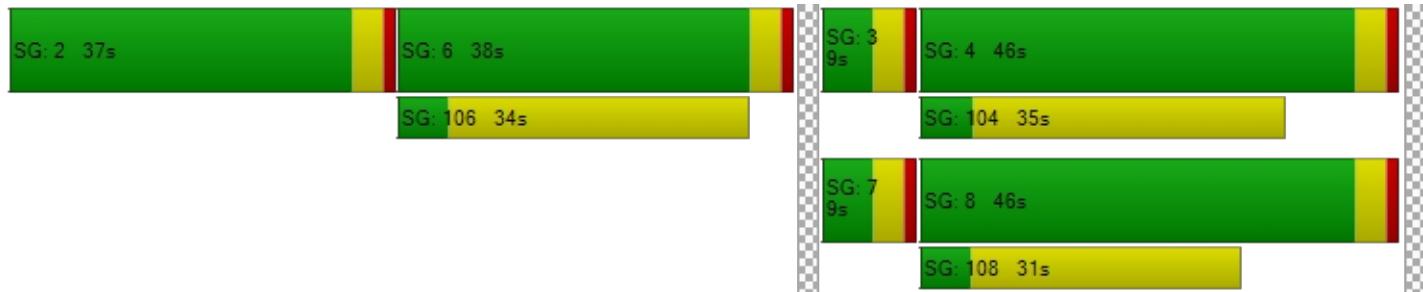
d_M, Delay for Movement [s/veh]	58.15	58.12	58.20	37.71	37.69	74.22	56.32	20.69	21.41	0.00	64.41	73.06
Movement LOS	E	E	E	D	D	F	E	C	C	A	E	E
d_A, Approach Delay [s/veh]	58.13			68.80			30.57			65.41		
Approach LOS		E			E			C			E	
d_I, Intersection Delay [s/veh]				50.28								
Intersection LOS						D						
Intersection V/C					0.810							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	2134.96	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	0.00	56.32
I_p,int, Pedestrian LOS Score for Intersection	2.203	2.813	0.000	3.194
Crosswalk LOS	B	C	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	523	508	646	646
d_b, Bicycle Delay [s]	35.45	36.19	29.79	29.79
I_b,int, Bicycle LOS Score for Intersection	1.669	3.015	2.820	2.571
Bicycle LOS	A	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	28	11	21	66	5	37	31	1252	14	9	1626	108
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	12	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	11	22	69	5	38	32	1314	15	9	1693	112
Peak Hour Factor	0.7200	0.7200	0.7200	0.4700	0.4700	0.4700	0.9000	0.9000	0.9000	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	4	8	37	3	20	9	365	4	2	441	29
Total Analysis Volume [veh/h]	40	15	31	147	11	81	36	1460	17	9	1764	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				1			1			1	
v_di, Inbound Pedestrian Volume crossing major street	[	1			1			0			1	
v_co, Outbound Pedestrian Volume crossing minor street	2				0			0			1	
v_ci, Inbound Pedestrian Volume crossing minor street	[	1			0			0			2	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			0			0			3	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	32.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	17	0	12	29	0	9	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	13	55	50	50	55	48	48
g / C, Green / Cycle	0.11	0.11	0.14	0.61	0.56	0.56	0.61	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.14	0.09	0.27	0.27	0.02	0.35	0.35
s, saturation flow rate [veh/h]	1781	1642	1715	383	3560	1859	438	3560	1802
c, Capacity [veh/h]	193	178	248	290	1982	1035	324	1905	964
d1, Uniform Delay [s]	36.66	36.86	38.31	10.64	12.19	12.19	8.24	15.00	15.07
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.76	18.85	0.19	0.87	1.66	0.16	1.77	3.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.26	0.96	0.12	0.49	0.49	0.03	0.65	0.66
d, Delay for Lane Group [s/veh]	37.18	37.62	57.16	10.83	13.06	13.85	8.40	16.77	18.60
Lane Group LOS	D	D	E	B	B	B	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.83	0.97	6.51	0.26	5.54	6.02	0.07	8.61	9.29
50th-Percentile Queue Length [ft/ln]	20.82	24.20	162.67	6.40	138.61	150.41	1.84	215.21	232.15
95th-Percentile Queue Length [veh/ln]	1.50	1.74	10.69	0.46	9.41	10.04	0.13	13.42	14.28
95th-Percentile Queue Length [ft/ln]	37.47	43.56	267.25	11.51	235.15	250.98	3.31	335.51	357.09

Movement, Approach, & Intersection Results

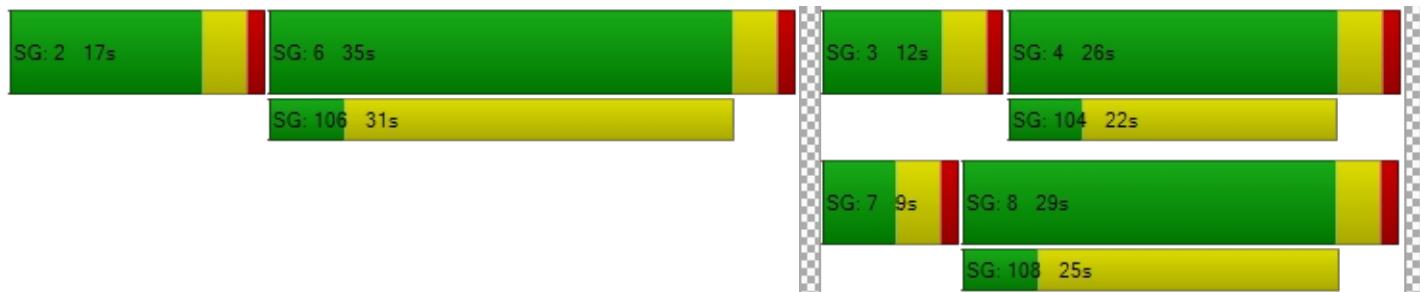
d_M, Delay for Movement [s/veh]	37.18	37.62	37.62	57.16	57.16	57.16	10.83	13.32	13.85	8.40	17.31	18.60
Movement LOS	D	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	37.42			57.16			13.27			17.34		
Approach LOS	D			E			B			B		
d_I, Intersection Delay [s/veh]				18.70								
Intersection LOS				B								
Intersection V/C				0.529								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	12559.01	4745.79	0.00	4304.94
d_p, Pedestrian Delay [s]	36.49	36.49	0.00	36.49
I_p,int, Pedestrian LOS Score for Intersection	1.982	1.910	0.000	3.169
Crosswalk LOS	A	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	688	289	555	488
d_b, Bicycle Delay [s]	19.40	32.98	23.51	25.77
I_b,int, Bicycle LOS Score for Intersection	1.702	1.954	2.392	2.599
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	5.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	16	0	56	6	0	6	4	1338	9	0	19	1695	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	12	0	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	0	58	6	0	6	4	1404	9	0	20	1765	0
Peak Hour Factor	0.7100	0.7100	0.7100	0.7500	0.7500	0.7500	0.9400	0.9400	0.9400	1.00	0.92	0.92	0.92
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	6	0	20	2	0	2	1	373	2	0	5	480	0
Total Analysis Volume [veh/h]	24	0	82	8	0	8	4	1494	10	0	22	1918	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0		0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0		0		0]
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0		0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0		0		0]
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0		0			0	
Bicycle Volume [bicycles/h]	0			0			0		0			0	

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	117.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	9	87	0	0	9	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No			No	No	
Maximum Recall		No			No		No	No			No	No	
Pedestrian Recall		No			No		No	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	112	105	105	112	107	107
g / C, Green / Cycle	0.08	0.08	0.08	0.86	0.81	0.81	0.86	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.01	0.01	0.28	0.28	0.05	0.35	0.35
s, saturation flow rate [veh/h]	1468	1589	1292	271	3560	1864	410	3560	1870
c, Capacity [veh/h]	166	120	139	293	2886	1511	409	2943	1546
d1, Uniform Delay [s]	56.41	58.54	56.06	1.92	3.22	3.22	1.67	3.02	3.02
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	6.66	0.36	0.02	0.32	0.62	0.25	0.46	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.68	0.11	0.01	0.34	0.34	0.05	0.43	0.43
d, Delay for Lane Group [s/veh]	56.80	65.20	56.42	1.94	3.55	3.84	1.92	3.48	3.89
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77	2.88	0.51	0.01	2.67	2.91	0.07	3.24	3.58
50th-Percentile Queue Length [ft/ln]	19.18	71.96	12.76	0.22	66.64	72.85	1.73	80.95	89.44
95th-Percentile Queue Length [veh/ln]	1.38	5.18	0.92	0.02	4.80	5.25	0.12	5.83	6.44
95th-Percentile Queue Length [ft/ln]	34.53	129.53	22.96	0.40	119.96	131.13	3.12	145.71	160.99

Movement, Approach, & Intersection Results

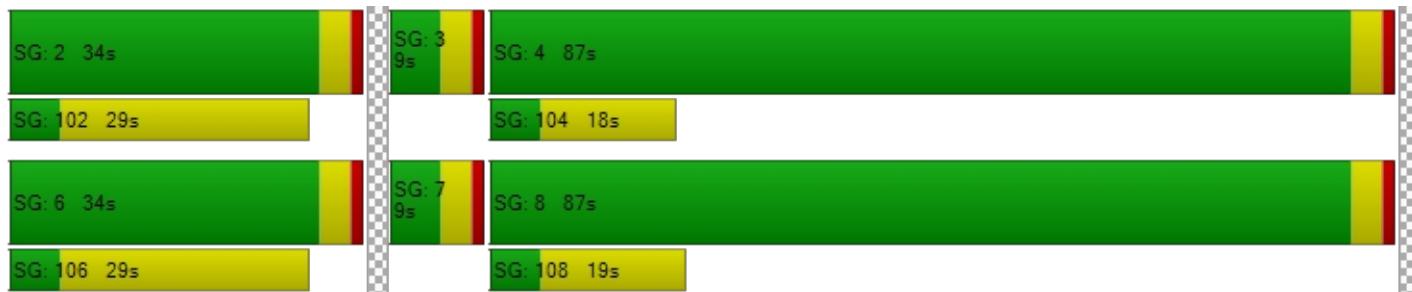
d_M, Delay for Movement [s/veh]	56.80	56.80	65.20	56.42	56.42	56.42	1.94	3.65	3.84	1.92	1.92	3.62	3.89
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	63.30			56.42			3.64			3.60			
Approach LOS		E		E			A			A			
d_I, Intersection Delay [s/veh]				5.63									
Intersection LOS							A						
Intersection V/C					0.405								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.022	1.747	3.209	3.223
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1277	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.49	8.49
I_b,int, Bicycle LOS Score for Intersection	1.735	1.586	2.389	2.627
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type: Two-way stop Delay (sec / veh): 0.0
 Analysis Method: HCM 6th Edition Level Of Service: A
 Analysis Period: 15 minutes Volume to Capacity (v/c): 0.018

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound	Westbound	
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1408	1708
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	12	2
Diverted Trips [veh/h]	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1476	1778
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	369	445
Total Analysis Volume [veh/h]	0	0	0	1476	1778
Pedestrian Volume [ped/h]	0		0		0

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	17.40	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		17.40		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]			0.00			
Intersection LOS				A		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	41.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.835

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	284	568	195	116	457	109	139	1081	176	108	1309	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	12	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	295	591	203	121	475	113	145	1136	183	112	1363	84
Peak Hour Factor	0.7000	0.7000	0.7000	0.7100	0.7100	0.7100	0.9600	0.9600	0.9600	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	105	211	73	43	167	40	38	296	48	30	370	23
Total Analysis Volume [veh/h]	421	844	290	170	669	159	151	1183	191	122	1482	91
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	42	0	10	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	43	34	34	43	32	32	49	40	40	49	40	40
g / C, Green / Cycle	0.43	0.34	0.34	0.43	0.32	0.32	0.49	0.40	0.40	0.49	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.24	0.23	0.23	0.27	0.33	0.12	0.18	0.41	0.06
s, saturation flow rate [veh/h]	1771	1900	1738	718	1900	1775	568	3618	1550	683	3618	1550
c, Capacity [veh/h]	630	642	587	258	604	564	243	1438	616	307	1453	623
d1, Uniform Delay [s]	21.75	31.64	32.09	24.15	30.04	30.04	22.92	26.99	20.72	19.24	29.93	19.02
k, delay calibration	0.11	0.37	0.39	0.25	0.22	0.22	0.50	0.50	0.50	0.15	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	15.03	20.57	6.36	3.13	3.35	11.32	5.45	1.31	1.18	28.71	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.91	0.94	0.66	0.71	0.71	0.62	0.82	0.31	0.40	1.02	0.15
d, Delay for Lane Group [s/veh]	22.98	46.68	52.66	30.51	33.17	33.39	34.24	32.44	22.02	20.42	58.64	19.51
Lane Group LOS	C	D	D	C	C	C	C	C	C	C	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.05	15.15	15.29	2.77	9.02	8.46	2.58	13.09	3.20	1.54	22.22	1.39
50th-Percentile Queue Length [ft/ln]	76.28	378.78	382.24	69.14	225.38	211.46	64.54	327.19	79.95	38.57	555.54	34.83
95th-Percentile Queue Length [veh/ln]	5.49	21.53	21.70	4.98	13.94	13.23	4.65	19.02	5.76	2.78	30.38	2.51
95th-Percentile Queue Length [ft/ln]	137.30	538.37	542.56	124.46	348.48	330.70	116.17	475.52	143.91	69.43	759.60	62.69

Movement, Approach, & Intersection Results

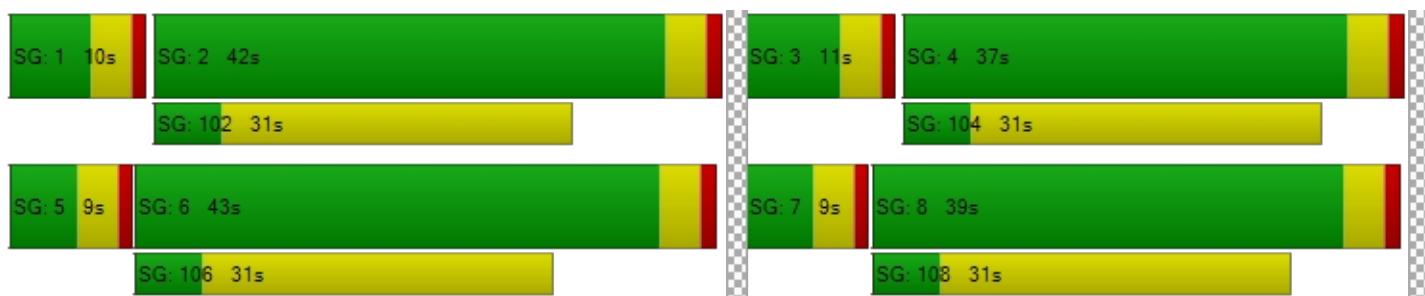
d_M, Delay for Movement [s/veh]	22.98	48.52	52.66	30.51	33.25	33.39	34.24	32.44	22.02	20.42	58.64	19.51
Movement LOS	C	D	D	C	C	C	C	C	C	C	F	B
d_A, Approach Delay [s/veh]	42.38			32.80			31.31			53.79		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]				41.15								
Intersection LOS					D							
Intersection V/C					0.835							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	3.150	3.058	3.342	3.179
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	660	760	780
d_b, Bicycle Delay [s]	21.13	22.45	19.23	18.61
I_b,int, Bicycle LOS Score for Intersection	2.842	2.383	2.818	2.958
Bicycle LOS	C	B	C	C

Sequence

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



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Report File: C:\...\OY AM.pdf

Florence Avenue Townhomes

Scenario 5 OY AM
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	44	56	4	96	16	646	508	1297	29	0	1384	179	4259

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	29	11	22	69	5	38	32	1314	15	9	1693	112	3349

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	17	0	58	6	0	6	4	1404	9	0	20	1765	0	3289

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	0			1476			1778		0	3254

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	295	591	203	121	475	113	145	1136	183	112	1363	84	4821

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Florence Avenue Townhomes
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Florence Avenue Townhomes

Scenario 6 OY PM
1/3/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.726	37.5	D
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.417	8.8	A
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.391	4.7	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	WB Thru	0.018	0.0	A
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.734	29.7	C

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	37.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	35	21	3	111	26	487	480	1356	32	0	1399	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	2	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	22	3	115	27	506	499	1412	33	0	1466	109
Peak Hour Factor	0.8100	0.8100	0.8100	0.8400	0.8400	0.8400	0.9600	0.9600	0.9600	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	7	1	34	8	151	130	368	9	0	447	33
Total Analysis Volume [veh/h]	44	27	4	137	32	602	520	1471	34	0	1788	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		1		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0		0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	109.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	29	0	9	39	0	9	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	25	25	25	20	65	65	0	45	45
g / C, Green / Cycle	0.08	0.08	0.08	0.22	0.22	0.22	0.17	0.56	0.56	0.00	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.01	0.05	0.05	0.21	0.15	0.27	0.27	0.00	0.35	0.35
s, saturation flow rate [veh/h]	1810	1835	1679	1810	1843	2859	3514	3618	1878	1810	3618	1833
c, Capacity [veh/h]	144	146	134	393	401	621	605	2036	1057	2	1417	718
d1, Uniform Delay [s]	49.43	49.42	49.42	36.96	36.95	44.64	46.29	15.15	15.16	0.00	32.86	32.92
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	0.57	0.62	0.27	0.26	10.91	3.73	0.83	1.61	0.00	9.34	16.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.18	0.18	0.21	0.21	0.97	0.86	0.49	0.49	0.00	0.90	0.90
d, Delay for Lane Group [s/veh]	50.01	49.99	50.03	37.22	37.21	55.55	50.02	15.98	16.76	0.00	42.20	49.66
Lane Group LOS	D	D	D	D	D	E	D	B	B	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.71	0.71	0.65	1.96	1.98	9.29	7.44	7.62	8.16	0.00	17.87	19.68
50th-Percentile Queue Length [ft/ln]	17.75	17.78	16.24	48.95	49.52	232.28	185.93	190.52	203.95	0.00	446.78	492.03
95th-Percentile Queue Length [veh/ln]	1.28	1.28	1.17	3.52	3.57	14.29	11.91	12.15	12.84	0.00	24.80	26.96
95th-Percentile Queue Length [ft/ln]	31.95	32.00	29.23	88.11	89.13	357.26	297.74	303.70	321.05	0.00	620.11	673.92

Movement, Approach, & Intersection Results

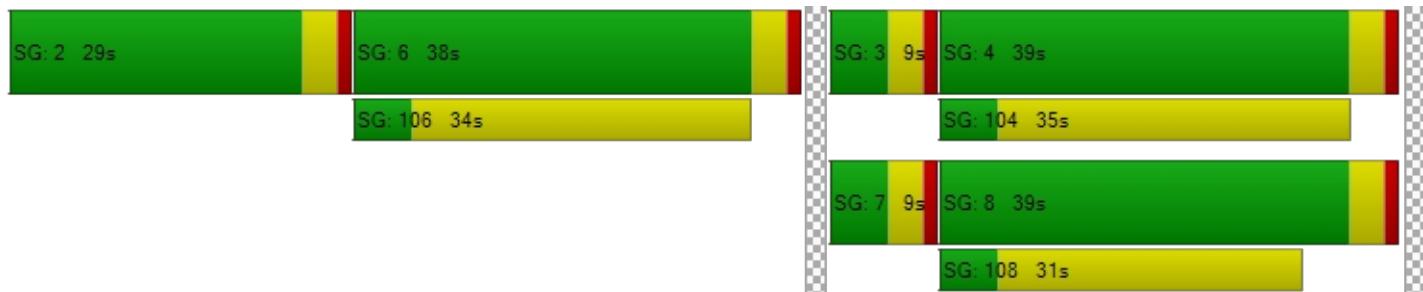
d_M, Delay for Movement [s/veh]	50.00	50.02	50.03	37.22	37.21	55.55	50.02	16.24	16.76	0.00	44.34	49.66
Movement LOS	D	D	D	D	D	E	D	B	B	A	D	D
d_A, Approach Delay [s/veh]	50.01			51.53			24.92			44.71		
Approach LOS		D			D		C			D		
d_I, Intersection Delay [s/veh]				37.53								
Intersection LOS						D						
Intersection V/C						0.726						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	4382.03	0.00	0.00
d_p, Pedestrian Delay [s]	48.87	48.87	0.00	48.87
I_p,int, Pedestrian LOS Score for Intersection	2.184	2.741	0.000	3.181
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	435	608	608
d_b, Bicycle Delay [s]	28.54	35.24	27.84	27.84
I_b,int, Bicycle LOS Score for Intersection	1.621	2.832	2.673	2.616
Bicycle LOS	A	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	15	6	7	19	4	7	8	1425	32	17	1734	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	2	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	6	7	20	4	7	8	1484	33	18	1814	46
Peak Hour Factor	0.8800	0.8800	0.8800	0.6800	0.6800	0.6800	0.8900	0.8900	0.8900	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	2	2	7	1	3	2	417	9	5	498	13
Total Analysis Volume [veh/h]	18	7	8	29	6	10	9	1667	37	20	1993	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	1			3			0			4		
v_di, Inbound Pedestrian Volume crossing major street	[	0		4			1			3		
v_co, Outbound Pedestrian Volume crossing minor street	2			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street	[	1		0			0			2		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		1		0			1			1		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	105.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	15	0	9	71	0	9	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	102	95	95	102	96	96
g / C, Green / Cycle	0.06	0.06	0.06	0.78	0.73	0.73	0.78	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.03	0.03	0.31	0.32	0.06	0.38	0.38
s, saturation flow rate [veh/h]	1781	1680	1745	259	3560	1846	355	3560	1842
c, Capacity [veh/h]	114	107	108	251	2602	1349	323	2634	1363
d1, Uniform Delay [s]	57.55	57.48	58.69	5.03	6.88	6.88	4.35	7.07	7.09
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	0.59	2.52	0.06	0.52	1.01	0.37	0.71	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.14	0.42	0.04	0.43	0.43	0.06	0.51	0.51
d, Delay for Lane Group [s/veh]	58.19	58.07	61.22	5.09	7.40	7.89	4.72	7.78	8.47
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.59	0.49	1.52	0.05	5.58	5.99	0.13	7.03	7.58
50th-Percentile Queue Length [ft/ln]	14.67	12.23	37.95	1.18	139.61	149.75	3.23	175.73	189.43
95th-Percentile Queue Length [veh/ln]	1.06	0.88	2.73	0.08	9.46	10.00	0.23	11.38	12.09
95th-Percentile Queue Length [ft/ln]	26.41	22.01	68.31	2.12	236.50	250.10	5.82	284.44	302.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.19	58.07	58.07	61.22	61.22	61.22	5.09	7.56	7.89	4.72	8.00	8.47
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	58.14			61.22			7.56			7.98		
Approach LOS		E		E			A			A		
d_I, Intersection Delay [s/veh]				8.84								
Intersection LOS							A					
Intersection V/C					0.417							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	7946.38	1063.85	0.00	3057.33
d_p, Pedestrian Delay [s]	56.31	56.31	0.00	56.31
I_p,int, Pedestrian LOS Score for Intersection	2.006	1.789	0.000	3.225
Crosswalk LOS	B	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	169	1031	1031
d_b, Bicycle Delay [s]	37.72	54.47	15.28	15.28
I_b,int, Bicycle LOS Score for Intersection	1.614	1.634	2.502	2.695
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.391

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	9	0	29	4	0	3	14	1417	22	0	42	1719	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	2	0	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	0	30	4	0	3	15	1476	23	0	44	1799	6
Peak Hour Factor	0.7800	0.7800	0.7800	0.8800	0.8800	0.8800	0.8500	0.8500	0.8500	1.00	0.91	0.91	0.91
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	3	0	10	1	0	1	4	434	7	0	12	494	2
Total Analysis Volume [veh/h]	12	0	38	5	0	3	18	1736	27	0	48	1977	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0		0			0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0		0			0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		0	
Bicycle Volume [bicycles/h]	0			0			0			0		0	

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	106.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	34	0	0	34	0	9	86	0	0	10	87	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0
Minimum Recall		No			No		No	No			No	No		
Maximum Recall		No			No		No	No			No	No		
Pedestrian Recall		No			No		No	No			No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	114	105	105	114	107	107
g / C, Green / Cycle	0.06	0.06	0.06	0.87	0.81	0.81	0.87	0.82	0.82
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.01	0.06	0.33	0.33	0.14	0.37	0.37
s, saturation flow rate [veh/h]	1571	1589	1254	280	3560	1855	353	3560	1867
c, Capacity [veh/h]	157	103	126	303	2888	1505	365	2935	1539
d1, Uniform Delay [s]	57.25	58.25	57.12	1.88	3.44	3.44	1.82	3.16	3.16
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	2.21	0.21	0.08	0.42	0.80	0.75	0.49	0.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.37	0.06	0.06	0.40	0.40	0.13	0.44	0.44
d, Delay for Lane Group [s/veh]	57.46	60.46	57.33	1.96	3.86	4.24	2.57	3.65	4.09
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	1.27	0.26	0.03	3.34	3.65	0.15	3.50	3.86
50th-Percentile Queue Length [ft/ln]	9.62	31.86	6.44	0.82	83.60	91.17	3.66	87.50	96.50
95th-Percentile Queue Length [veh/ln]	0.69	2.29	0.46	0.06	6.02	6.56	0.26	6.30	6.95
95th-Percentile Queue Length [ft/ln]	17.32	57.36	11.58	1.48	150.47	164.11	6.59	157.49	173.69

Movement, Approach, & Intersection Results

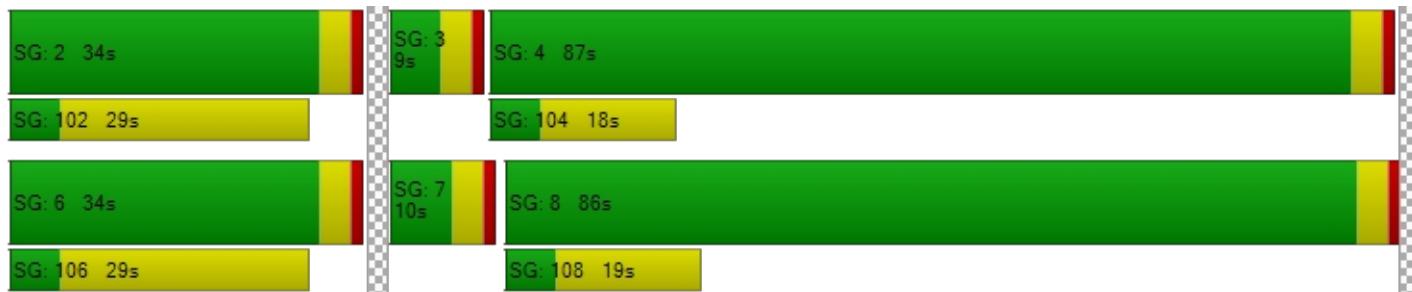
d_M, Delay for Movement [s/veh]	57.46	57.46	60.46	57.33	57.33	57.33	1.96	3.98	4.24	2.57	2.57	3.80	4.09
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	59.74			57.33			3.97			3.77			
Approach LOS		E		E			A			A			
d_I, Intersection Delay [s/veh]				4.69									
Intersection LOS							A						
Intersection V/C							0.391						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.049	1.769	3.243	3.296
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1262	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.85	8.49
I_b,int, Bicycle LOS Score for Intersection	1.642	1.573	2.539	2.677
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type: Two-way stop Delay (sec / veh): 0.0
 Analysis Method: HCM 6th Edition Level Of Service: A
 Analysis Period: 15 minutes Volume to Capacity (v/c): 0.018

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound	Westbound	
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1447	1764
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	2	11
Diverted Trips [veh/h]	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1507	1846
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	377	462
Total Analysis Volume [veh/h]	0	0	0	1507	1846
Pedestrian Volume [ped/h]	0		0		0

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	18.06	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		18.06		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]			0.00			
Intersection LOS				A		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	149	304	173	84	482	155	76	1235	137	145	1453	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	2	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	155	316	180	87	501	161	79	1286	142	151	1522	90
Peak Hour Factor	0.8600	0.8600	0.8600	0.9600	0.9600	0.9600	0.9300	0.9300	0.9300	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	92	52	23	130	42	21	346	38	43	437	26
Total Analysis Volume [veh/h]	180	367	209	91	522	168	85	1383	153	174	1749	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	47	0	9	47	0	9	35	0	9	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	22	22	31	22	22	61	52	52	61	52	52
g / C, Green / Cycle	0.31	0.22	0.22	0.31	0.22	0.22	0.61	0.52	0.52	0.61	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.09	0.16	0.16	0.09	0.19	0.19	0.19	0.38	0.10	0.31	0.48	0.07
s, saturation flow rate [veh/h]	1946	1900	1672	1068	1900	1744	446	3618	1550	562	3618	1550
c, Capacity [veh/h]	482	421	370	316	421	386	251	1870	801	325	1887	809
d1, Uniform Delay [s]	26.81	36.16	36.20	26.16	37.43	37.45	21.70	18.91	12.96	17.20	22.19	12.28
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.48	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	2.40	2.78	0.50	5.01	5.54	3.65	2.67	0.53	5.87	9.42	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.73	0.73	0.29	0.85	0.86	0.34	0.74	0.19	0.53	0.93	0.13
d, Delay for Lane Group [s/veh]	27.29	38.57	38.99	26.66	42.44	42.99	25.34	21.58	13.49	23.07	31.61	12.60
Lane Group LOS	C	D	D	C	D	D	C	C	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.51	6.87	6.12	1.54	8.60	7.98	0.95	12.21	1.86	2.03	19.66	1.19
50th-Percentile Queue Length [ft/ln]	37.74	171.64	153.06	38.40	214.98	199.42	23.67	305.15	46.59	50.67	491.47	29.83
95th-Percentile Queue Length [veh/ln]	2.72	11.16	10.18	2.76	13.41	12.61	1.70	17.94	3.35	3.65	26.93	2.15
95th-Percentile Queue Length [ft/ln]	67.93	279.08	254.51	69.12	335.20	315.22	42.60	448.39	83.85	91.20	673.26	53.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.29	38.64	38.99	26.66	42.61	42.99	25.34	21.58	13.49	23.07	31.61	12.60
Movement LOS	C	D	D	C	D	D	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	36.03			40.84			21.02			29.91		
Approach LOS		D			D		C			C		
d_I, Intersection Delay [s/veh]				29.67								
Intersection LOS					C							
Intersection V/C				0.734								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.44	41.44	41.44	41.44
I_p,int, Pedestrian LOS Score for Intersection	2.984	2.851	3.226	3.194
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	859	859	620	620
d_b, Bicycle Delay [s]	16.27	16.27	23.84	23.84
I_b,int, Bicycle LOS Score for Intersection	2.183	2.204	2.897	3.231
Bicycle LOS	B	B	C	C

Sequence

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



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Florence Avenue Townhomes

Scenario 6 OY PM
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	36	22	3	115	27	506	499	1412	33	0	1466	109	4228

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	16	6	7	20	4	7	8	1484	33	18	1814	46	3463

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	9	0	30	4	0	3	15	1476	23	0	44	1799	6	3409

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	0			1507			1846	0		3353

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	155	316	180	87	501	161	79	1286	142	151	1522	90	4670

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Florence Avenue Townhomes
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Scenario 7 OY AM + P
1/3/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	WB Right	0.813	51.0	D
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.531	18.8	B
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.408	5.7	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	SB Right	0.059	18.2	C
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	WB Thru	0.835	41.3	D

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	51.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.813

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	42	54	4	92	15	621	488	1236	28	0	1329	172
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	12	0	0	11	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	56	4	96	16	646	508	1297	29	0	1393	183
Peak Hour Factor	0.7800	0.7800	0.7800	0.8600	0.8600	0.8600	0.8000	0.8000	0.8000	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	18	1	28	5	188	159	405	9	0	410	54
Total Analysis Volume [veh/h]	56	72	5	112	19	751	635	1621	36	0	1639	215
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			2			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		2		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		0		0			0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	44.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	37	0	9	46	0	9	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	33	33	33	26	71	71	0	45	45
g / C, Green / Cycle	0.08	0.08	0.08	0.25	0.25	0.25	0.20	0.55	0.55	0.00	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.02	0.02	0.04	0.04	0.26	0.18	0.30	0.30	0.00	0.34	0.34
s, saturation flow rate [veh/h]	1810	1878	1693	1810	1835	2859	3514	3618	1879	1810	3618	1788
c, Capacity [veh/h]	139	144	130	459	466	725	695	1973	1025	2	1261	623
d1, Uniform Delay [s]	56.83	56.79	56.80	37.56	37.55	48.52	51.08	19.22	19.25	0.00	41.94	42.06
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.35	1.25	1.40	0.14	0.14	25.70	5.24	1.12	2.16	0.00	21.39	33.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.32	0.32	0.14	0.14	1.04	0.91	0.55	0.55	0.00	0.98	0.99
d, Delay for Lane Group [s/veh]	58.18	58.04	58.20	37.71	37.69	74.22	56.32	20.34	21.41	0.00	63.34	75.11
Lane Group LOS	E	E	E	D	D	F	E	C	C	A	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.46	1.47	1.34	1.63	1.64	14.17	10.52	10.66	11.42	0.00	22.99	24.89
50th-Percentile Queue Length [ft/ln]	36.55	36.81	33.55	40.85	41.03	354.30	262.98	266.38	285.51	0.00	574.67	622.31
95th-Percentile Queue Length [veh/ln]	2.63	2.65	2.42	2.94	2.95	20.76	15.84	16.01	16.96	0.00	30.85	33.07
95th-Percentile Queue Length [ft/ln]	65.78	66.26	60.39	73.53	73.85	519.09	395.96	400.21	424.07	0.00	771.24	826.86

Movement, Approach, & Intersection Results

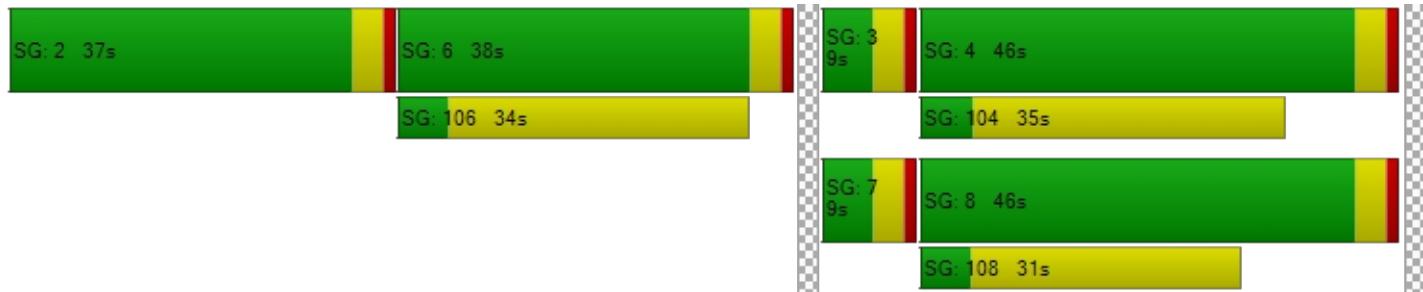
d_M, Delay for Movement [s/veh]	58.15	58.12	58.20	37.71	37.69	74.22	56.32	20.69	21.41	0.00	66.21	75.11
Movement LOS	E	E	E	D	D	F	E	C	C	A	E	E
d_A, Approach Delay [s/veh]	58.13			68.80			30.57			67.25		
Approach LOS		E			E			C			E	
d_I, Intersection Delay [s/veh]				50.99								
Intersection LOS						D						
Intersection V/C					0.813							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	2115.69	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	0.00	56.32
I_p,int, Pedestrian LOS Score for Intersection	2.203	2.814	0.000	3.197
Crosswalk LOS	B	C	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	523	508	646	646
d_b, Bicycle Delay [s]	35.45	36.19	29.79	29.79
I_b,int, Bicycle LOS Score for Intersection	1.669	3.015	2.820	2.579
Bicycle LOS	A	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	28	11	21	66	5	37	31	1252	14	9	1626	108
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	12	0	0	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	11	22	69	5	38	32	1314	15	9	1706	112
Peak Hour Factor	0.7200	0.7200	0.7200	0.4700	0.4700	0.4700	0.9000	0.9000	0.9000	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	4	8	37	3	20	9	365	4	2	444	29
Total Analysis Volume [veh/h]	40	15	31	147	11	81	36	1460	17	9	1777	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				1			1			1	
v_di, Inbound Pedestrian Volume crossing major street	[	1			1			0			1	
v_co, Outbound Pedestrian Volume crossing minor street	2				0			0			1	
v_ci, Inbound Pedestrian Volume crossing minor street	[	1			0			0			2	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			0			0			3	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	32.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	17	0	12	29	0	9	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	13	55	50	50	55	48	48
g / C, Green / Cycle	0.11	0.11	0.14	0.61	0.56	0.56	0.61	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.14	0.09	0.27	0.27	0.02	0.35	0.36
s, saturation flow rate [veh/h]	1781	1642	1715	381	3560	1859	438	3560	1802
c, Capacity [veh/h]	193	178	248	288	1982	1035	324	1905	964
d1, Uniform Delay [s]	36.66	36.86	38.31	10.73	12.19	12.19	8.24	15.06	15.12
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.76	18.85	0.19	0.87	1.66	0.16	1.80	3.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.26	0.96	0.12	0.49	0.49	0.03	0.66	0.66
d, Delay for Lane Group [s/veh]	37.18	37.62	57.16	10.92	13.06	13.85	8.40	16.86	18.72
Lane Group LOS	D	D	E	B	B	B	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.83	0.97	6.51	0.26	5.54	6.02	0.07	8.70	9.40
50th-Percentile Queue Length [ft/ln]	20.82	24.20	162.67	6.40	138.61	150.41	1.84	217.57	234.90
95th-Percentile Queue Length [veh/ln]	1.50	1.74	10.69	0.46	9.41	10.04	0.13	13.54	14.42
95th-Percentile Queue Length [ft/ln]	37.47	43.56	267.25	11.52	235.15	250.98	3.31	338.52	360.58

Movement, Approach, & Intersection Results

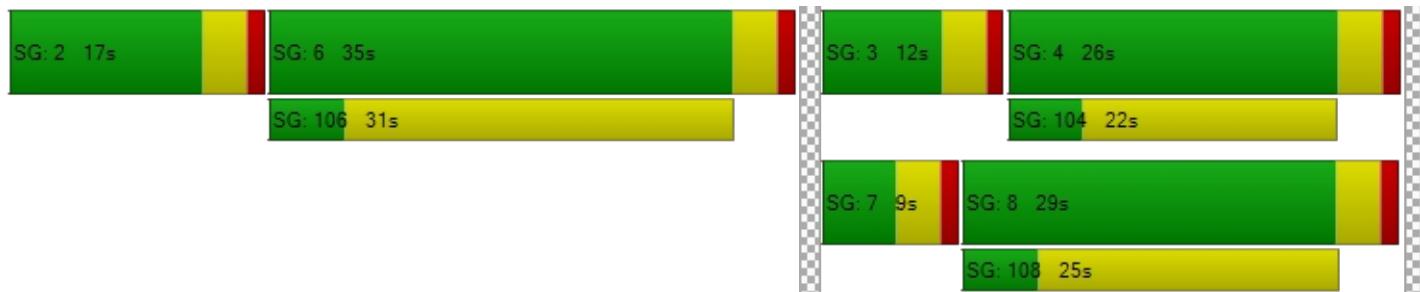
d_M, Delay for Movement [s/veh]	37.18	37.62	37.62	57.16	57.16	57.16	10.92	13.32	13.85	8.40	17.41	18.72
Movement LOS	D	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	37.42			57.16			13.27			17.44		
Approach LOS	D			E			B			B		
d_I, Intersection Delay [s/veh]				18.75								
Intersection LOS				B								
Intersection V/C				0.531								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	12559.01	4745.79	0.00	4304.94
d_p, Pedestrian Delay [s]	36.49	36.49	0.00	36.49
I_p,int, Pedestrian LOS Score for Intersection	1.982	1.910	0.000	3.171
Crosswalk LOS	A	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	688	289	555	488
d_b, Bicycle Delay [s]	19.40	32.98	23.51	25.77
I_b,int, Bicycle LOS Score for Intersection	1.702	1.954	2.392	2.606
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.408

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	16	0	56	6	0	6	4	1338	9	0	19	1695	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	12	0	4	0	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	0	58	6	0	6	4	1404	9	4	20	1778	0
Peak Hour Factor	0.7100	0.7100	0.7100	0.7500	0.7500	0.7500	0.9400	0.9400	0.9400	1.00	0.92	0.92	0.92
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	6	0	20	2	0	2	1	373	2	1	5	483	0
Total Analysis Volume [veh/h]	24	0	82	8	0	8	4	1494	10	4	22	1933	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0		0		0		0
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0		0		0]
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0		0		0		0
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0		0		0]
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0		0		0		0
Bicycle Volume [bicycles/h]	0			0			0		0		0		0

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	117.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	34	0	0	34	0	9	87	0	0	9	87	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0
Minimum Recall		No			No		No	No			No	No		
Maximum Recall		No			No		No	No			No	No		
Pedestrian Recall		No			No		No	No			No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	112	105	105	112	107	107
g / C, Green / Cycle	0.08	0.08	0.08	0.86	0.81	0.81	0.86	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.01	0.01	0.28	0.28	0.06	0.36	0.36
s, saturation flow rate [veh/h]	1468	1589	1292	268	3560	1864	414	3560	1870
c, Capacity [veh/h]	166	120	139	290	2878	1506	412	2943	1546
d1, Uniform Delay [s]	56.41	58.54	56.06	1.93	3.30	3.30	1.69	3.04	3.04
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	6.66	0.36	0.02	0.33	0.62	0.29	0.46	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.68	0.11	0.01	0.34	0.34	0.06	0.43	0.43
d, Delay for Lane Group [s/veh]	56.80	65.20	56.42	1.95	3.63	3.93	1.98	3.50	3.92
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.77	2.88	0.51	0.01	2.72	2.98	0.08	3.28	3.62
50th-Percentile Queue Length [ft/ln]	19.18	71.96	12.76	0.22	68.10	74.39	2.05	81.94	90.54
95th-Percentile Queue Length [veh/ln]	1.38	5.18	0.92	0.02	4.90	5.36	0.15	5.90	6.52
95th-Percentile Queue Length [ft/ln]	34.53	129.53	22.96	0.40	122.57	133.90	3.69	147.50	162.97

Movement, Approach, & Intersection Results

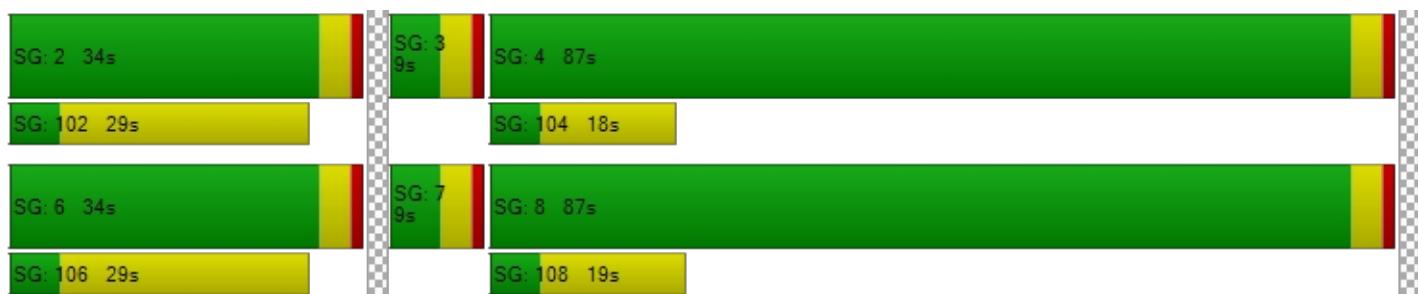
d_M, Delay for Movement [s/veh]	56.80	56.80	65.20	56.42	56.42	56.42	1.95	3.73	3.93	1.98	1.98	3.64	3.92
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	63.30			56.42			3.73			3.62			
Approach LOS		E		E			A			A			
d_I, Intersection Delay [s/veh]				5.66									
Intersection LOS							A						
Intersection V/C					0.408								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.027	1.747	3.211	3.230
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1277	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.49	8.49
I_b,int, Bicycle LOS Score for Intersection	1.735	1.586	2.389	2.635
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type: Two-way stop Delay (sec / veh): 18.2
 Analysis Method: HCM 6th Edition Level Of Service: C
 Analysis Period: 15 minutes Volume to Capacity (v/c): 0.059

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound	Westbound	
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1408	1708
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	16	2
Diverted Trips [veh/h]	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0
Total Hourly Volume [veh/h]	0	17	0	1480	1778
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	4	0	370	445
Total Analysis Volume [veh/h]	0	17	0	1480	1778
Pedestrian Volume [ped/h]	0			0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	18.17	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.19	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.64	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		18.17		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]				0.09		
Intersection LOS				C		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	41.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.835

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	284	568	195	116	457	109	139	1081	176	108	1309	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	3	0	16	0	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	298	591	203	121	475	116	145	1140	183	112	1364	84
Peak Hour Factor	0.7000	0.7000	0.7000	0.7100	0.7100	0.7100	0.9600	0.9600	0.9600	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	211	73	43	167	41	38	297	48	30	371	23
Total Analysis Volume [veh/h]	426	844	290	170	669	163	151	1188	191	122	1483	91
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	42	0	10	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	43	34	34	43	32	32	49	40	40	49	40	40
g / C, Green / Cycle	0.43	0.34	0.34	0.43	0.32	0.32	0.49	0.40	0.40	0.49	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.24	0.23	0.23	0.27	0.33	0.12	0.18	0.41	0.06
s, saturation flow rate [veh/h]	1767	1900	1738	718	1900	1773	568	3618	1550	681	3618	1550
c, Capacity [veh/h]	628	642	588	258	604	564	243	1437	616	306	1453	623
d1, Uniform Delay [s]	21.84	31.63	32.09	24.15	30.08	30.08	22.92	27.05	20.72	19.32	29.93	19.03
k, delay calibration	0.11	0.37	0.39	0.25	0.22	0.22	0.50	0.50	0.50	0.16	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	14.98	20.58	6.36	3.23	3.45	11.33	5.57	1.31	1.20	28.96	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.91	0.94	0.66	0.71	0.71	0.62	0.83	0.31	0.40	1.02	0.15
d, Delay for Lane Group [s/veh]	23.13	46.61	52.66	30.51	33.30	33.53	34.25	32.62	22.03	20.53	58.89	19.52
Lane Group LOS	C	D	D	C	C	C	C	C	C	C	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.10	15.13	15.29	2.77	9.09	8.52	2.58	13.19	3.20	1.54	22.27	1.39
50th-Percentile Queue Length [ft/ln]	77.39	378.37	382.37	69.13	227.25	212.96	64.56	329.75	79.96	38.62	556.69	34.83
95th-Percentile Queue Length [veh/ln]	5.57	21.52	21.71	4.98	14.03	13.31	4.65	19.15	5.76	2.78	30.46	2.51
95th-Percentile Queue Length [ft/ln]	139.30	537.88	542.72	124.44	350.86	332.63	116.21	478.65	143.93	69.51	761.45	62.70

Movement, Approach, & Intersection Results

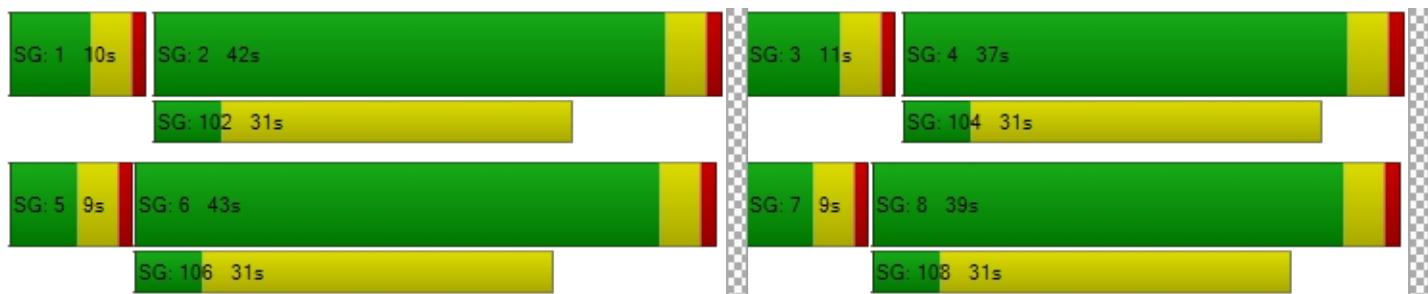
d_M, Delay for Movement [s/veh]	23.13	48.48	52.66	30.51	33.39	33.53	34.25	32.62	22.03	20.53	58.89	19.52
Movement LOS	C	D	D	C	C	C	C	C	C	C	F	B
d_A, Approach Delay [s/veh]	42.34			32.92			31.46			54.02		
Approach LOS		D			C			C			D	
d_I, Intersection Delay [s/veh]				41.25								
Intersection LOS					D							
Intersection V/C					0.835							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	3.151	3.059	3.348	3.180
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	660	760	780
d_b, Bicycle Delay [s]	21.13	22.45	19.23	18.61
I_b,int, Bicycle LOS Score for Intersection	2.847	2.386	2.822	2.959
Bicycle LOS	C	B	C	C

Sequence

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



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Report File: C:\...\OYP AM.pdf

Florence Avenue Townhomes

Scenario 7 OY AM + P
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	44	56	4	96	16	646	508	1297	29	0	1393	183	4272

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	29	11	22	69	5	38	32	1314	15	9	1706	112	3362

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	17	0	58	6	0	6	4	1404	9	4	20	1778	0	3306

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	17			1480			1778		6	3281

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	298	591	203	121	475	116	145	1140	183	112	1364	84	4832

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Florence Avenue Townhomes
Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\OYP PM.pdfScenario 8 OY PM + P
1/3/2022**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Orr and Day Rd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.728	37.8	D
2	Roseton Ave/Florence Ave	Signalized	HCM 6th Edition	SB Left	0.418	8.9	A
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	Signalized	HCM 6th Edition	NB Right	0.393	4.7	A
4	Project Driveway/Florence Ave	Two-way stop	HCM 6th Edition	SB Right	0.040	18.6	C
5	Pioneer Blvd/Florence Ave	Signalized	HCM 6th Edition	SB Right	0.739	30.0	C

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

Intersection Level Of Service Report
Intersection 1: Orr and Day Rd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	37.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

Intersection Setup

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Entry Pocket Length [ft]	215.00	100.00	100.00	120.00	100.00	120.00	350.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Orr and Day Rd			Orr and Day Rd			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	35	21	3	111	26	487	480	1356	32	0	1399	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	2	0	0	16	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	22	3	115	27	506	499	1412	33	0	1471	112
Peak Hour Factor	0.8100	0.8100	0.8100	0.8400	0.8400	0.8400	0.9600	0.9600	0.9600	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	7	1	34	8	151	130	368	9	0	448	34
Total Analysis Volume [veh/h]	44	27	4	137	32	602	520	1471	34	0	1794	137
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			0			1		
v_di, Inbound Pedestrian Volume crossing major street	[	0			1			0		1		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0		0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0		0			0		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	109.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	29	0	9	39	0	9	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	29	0	0	10	0	0	26	0	0	30	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	25	25	25	20	65	65	0	45	45
g / C, Green / Cycle	0.08	0.08	0.08	0.22	0.22	0.22	0.17	0.56	0.56	0.00	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.01	0.05	0.05	0.21	0.15	0.27	0.27	0.00	0.35	0.36
s, saturation flow rate [veh/h]	1810	1835	1679	1810	1843	2859	3514	3618	1878	1810	3618	1831
c, Capacity [veh/h]	144	146	134	393	401	621	605	2036	1057	2	1417	717
d1, Uniform Delay [s]	49.43	49.42	49.42	36.96	36.95	44.64	46.29	15.15	15.16	0.00	32.95	33.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	0.57	0.62	0.27	0.26	10.91	3.73	0.83	1.61	0.00	9.71	17.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.18	0.18	0.21	0.21	0.97	0.86	0.49	0.49	0.00	0.90	0.91
d, Delay for Lane Group [s/veh]	50.01	49.99	50.03	37.22	37.21	55.55	50.02	15.98	16.76	0.00	42.67	50.36
Lane Group LOS	D	D	D	D	D	E	D	B	B	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.71	0.71	0.65	1.96	1.98	9.29	7.44	7.62	8.16	0.00	18.08	19.93
50th-Percentile Queue Length [ft/ln]	17.75	17.78	16.24	48.95	49.52	232.28	185.93	190.52	203.95	0.00	451.98	498.15
95th-Percentile Queue Length [veh/ln]	1.28	1.28	1.17	3.52	3.57	14.29	11.91	12.15	12.84	0.00	25.05	27.25
95th-Percentile Queue Length [ft/ln]	31.95	32.00	29.23	88.11	89.13	357.26	297.74	303.70	321.05	0.00	626.31	681.17

Movement, Approach, & Intersection Results

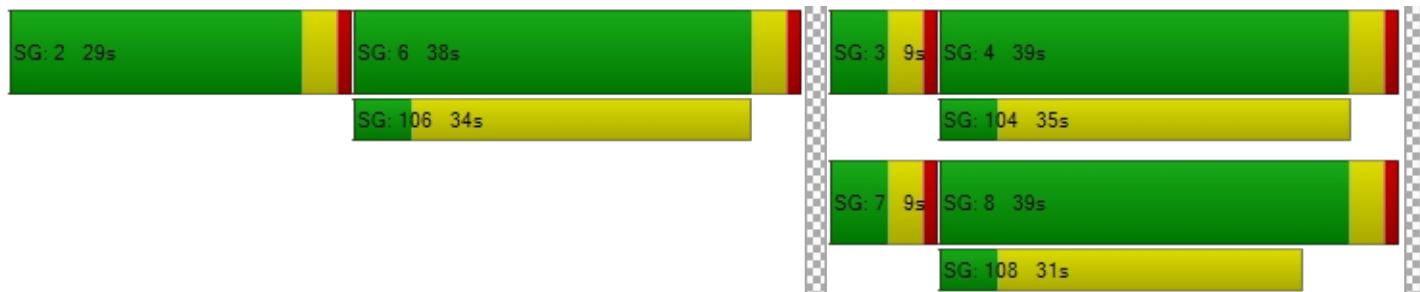
d_M, Delay for Movement [s/veh]	50.00	50.02	50.03	37.22	37.21	55.55	50.02	16.24	16.76	0.00	44.87	50.36
Movement LOS	D	D	D	D	D	E	D	B	B	A	D	D
d_A, Approach Delay [s/veh]	50.01			51.53			24.92			45.26		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]				37.76								
Intersection LOS							D					
Intersection V/C							0.728					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	4353.12	0.00	0.00
d_p, Pedestrian Delay [s]	48.87	48.87	0.00	48.87
I_p,int, Pedestrian LOS Score for Intersection	2.184	2.742	0.000	3.183
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	435	608	608
d_b, Bicycle Delay [s]	28.54	35.24	27.84	27.84
I_b,int, Bicycle LOS Score for Intersection	1.621	2.832	2.673	2.622
Bicycle LOS	A	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Roseton Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

Intersection Setup

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	30.00	100.00	100.00	100.00	100.00	100.00	450.00	100.00	100.00	115.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Roseton Ave			Roseton Ave			Florence Ave			Florence Ave		
Base Volume Input [veh/h]	15	6	7	19	4	7	8	1425	32	17	1734	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	2	0	0	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	6	7	20	4	7	8	1484	33	18	1822	46
Peak Hour Factor	0.8800	0.8800	0.8800	0.6800	0.6800	0.6800	0.8900	0.8900	0.8900	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	2	2	7	1	3	2	417	9	5	501	13
Total Analysis Volume [veh/h]	18	7	8	29	6	10	9	1667	37	20	2002	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	1			3			0			4		
v_di, Inbound Pedestrian Volume crossing major street	[	0		4			1			3		
v_co, Outbound Pedestrian Volume crossing minor street	2			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street	[	1		0			0			2		
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0			0		
Bicycle Volume [bicycles/h]		1		0			1			1		

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	105.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	15	0	9	71	0	9	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	10	0	0	20	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	102	95	95	102	96	96
g / C, Green / Cycle	0.06	0.06	0.06	0.78	0.73	0.73	0.78	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.03	0.03	0.31	0.32	0.06	0.38	0.38
s, saturation flow rate [veh/h]	1781	1680	1745	258	3560	1846	355	3560	1842
c, Capacity [veh/h]	114	107	108	250	2602	1349	323	2634	1363
d1, Uniform Delay [s]	57.55	57.48	58.69	5.06	6.88	6.88	4.35	7.09	7.11
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	0.59	2.52	0.06	0.52	1.01	0.37	0.72	1.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.14	0.42	0.04	0.43	0.43	0.06	0.51	0.52
d, Delay for Lane Group [s/veh]	58.19	58.07	61.22	5.12	7.40	7.89	4.72	7.80	8.50
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.59	0.49	1.52	0.05	5.58	5.99	0.13	7.08	7.63
50th-Percentile Queue Length [ft/ln]	14.67	12.23	37.95	1.18	139.61	149.75	3.23	176.98	190.82
95th-Percentile Queue Length [veh/ln]	1.06	0.88	2.73	0.08	9.46	10.00	0.23	11.44	12.16
95th-Percentile Queue Length [ft/ln]	26.41	22.01	68.31	2.12	236.50	250.10	5.82	286.07	304.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.19	58.07	58.07	61.22	61.22	61.22	5.12	7.56	7.89	4.72	8.03	8.50
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	58.14			61.22			7.56			8.01		
Approach LOS		E		E			A			A		
d_I, Intersection Delay [s/veh]				8.86								
Intersection LOS							A					
Intersection V/C					0.418							

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	7946.38	1063.85	0.00	3057.33
d_p, Pedestrian Delay [s]	56.31	56.31	0.00	56.31
I_p,int, Pedestrian LOS Score for Intersection	2.006	1.789	0.000	3.227
Crosswalk LOS	B	A	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	169	1031	1031
d_b, Bicycle Delay [s]	37.72	54.47	15.28	15.28
I_b,int, Bicycle LOS Score for Intersection	1.614	1.634	2.502	2.700
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 3: Lake Center Park Ln/Ringwood Ave/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

Intersection Setup

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Approach	Northbound			Southbound			Eastbound			Westbound			
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	40.00	100.00	100.00	100.00	285.00	100.00	100.00	100.	100.	100.	100.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0
Speed [mph]	25.00			25.00			35.00			35.00			
Grade [%]	0.00			0.00			0.00			0.00			
Curb Present	No			No			No			No			
Crosswalk	Yes			Yes			Yes			Yes			

Volumes

Name	Ringwood Ave			Lake Center Park Ln			Florence Ave			Florence Ave			
Base Volume Input [veh/h]	9	0	29	4	0	3	14	1417	22	0	42	1719	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	2	0	3	0	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	0	30	4	0	3	15	1476	23	3	44	1807	6
Peak Hour Factor	0.7800	0.7800	0.7800	0.8800	0.8800	0.8800	0.8500	0.8500	0.8500	1.00	0.91	0.91	0.91
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	3	0	10	1	0	1	4	434	7	1	12	496	2
Total Analysis Volume [veh/h]	12	0	38	5	0	3	18	1736	27	3	48	1986	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0		0
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0		0
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		0	
Bicycle Volume [bicycles/h]	0			0			0			0		0	

Intersection Settings

Located in CBD	No												
Signal Coordination Group	1 - Florence Ave												
Cycle Length [s]	130												
Coordination Type	Time of Day Pattern Isolated												
Actuation Type	Fully actuated												
Offset [s]	106.0												
Offset Reference	Lead Green - Beginning of First Green												
Permissive Mode	SingleBand												
Lost time [s]	0.00												

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	Permis	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	3	8	0	0	7	4	0	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	5	10	0	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	34	0	0	34	0	9	86	0	0	10	87	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	5	0	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	0	13	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0
Minimum Recall		No			No		No	No			No	No		
Maximum Recall		No			No		No	No			No	No		
Pedestrian Recall		No			No		No	No			No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	114	105	105	114	107	107
g / C, Green / Cycle	0.06	0.06	0.06	0.87	0.81	0.81	0.87	0.82	0.82
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.01	0.06	0.33	0.33	0.14	0.37	0.37
s, saturation flow rate [veh/h]	1571	1589	1254	278	3560	1855	354	3560	1867
c, Capacity [veh/h]	157	103	126	302	2885	1504	366	2935	1539
d1, Uniform Delay [s]	57.25	58.25	57.12	1.89	3.46	3.46	1.84	3.17	3.17
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	2.21	0.21	0.08	0.42	0.80	0.80	0.49	0.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.37	0.06	0.06	0.40	0.40	0.14	0.45	0.45
d, Delay for Lane Group [s/veh]	57.46	60.46	57.33	1.98	3.88	4.27	2.63	3.66	4.11
Lane Group LOS	E	E	E	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	1.27	0.26	0.03	3.37	3.67	0.16	3.53	3.89
50th-Percentile Queue Length [ft/ln]	9.62	31.86	6.44	0.82	84.14	91.75	3.91	88.13	97.20
95th-Percentile Queue Length [veh/ln]	0.69	2.29	0.46	0.06	6.06	6.61	0.28	6.35	7.00
95th-Percentile Queue Length [ft/ln]	17.32	57.36	11.58	1.48	151.46	165.14	7.03	158.63	174.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.46	57.46	60.46	57.33	57.33	57.33	1.98	4.01	4.27	2.63	2.63	3.81	4.11
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	59.74			57.33			3.99			3.78			
Approach LOS		E		E			A			A			
d_I, Intersection Delay [s/veh]				4.71									
Intersection LOS							A						
Intersection V/C					0.393								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.30	56.30	56.30	56.30
I_p,int, Pedestrian LOS Score for Intersection	2.053	1.769	3.244	3.301
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1262	1277
d_b, Bicycle Delay [s]	38.45	38.45	8.85	8.49
I_b,int, Bicycle LOS Score for Intersection	1.642	1.573	2.539	2.682
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 4: Project Driveway/Florence Ave

Control Type: Two-way stop Delay (sec / veh): 18.6
 Analysis Method: HCM 6th Edition Level Of Service: C
 Analysis Period: 15 minutes Volume to Capacity (v/c): 0.040

Intersection Setup

Name	Florence Ave				
Approach	Southbound		Eastbound	Westbound	
Lane Configuration					
Turning Movement	Left	Right	Left	Thru	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		35.00
Grade [%]	0.00		0.00		0.00
Crosswalk	Yes		No		No

Volumes

Name	Florence Ave				
Base Volume Input [veh/h]	0	0	0	1447	1764
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	5	11
Diverted Trips [veh/h]	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0
Total Hourly Volume [veh/h]	0	11	0	1510	1846
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	0	378	462
Total Analysis Volume [veh/h]	0	11	0	1510	1846
Pedestrian Volume [ped/h]	0		0		0

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	18.60	0.00	0.00	0.00	0.00
Movement LOS		C		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.12	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	3.11	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		18.60		0.00		0.00
Approach LOS		C		A		A
d_I, Intersection Delay [s/veh]			0.06			
Intersection LOS				C		

Intersection Level Of Service Report
Intersection 5: Pioneer Blvd/Florence Ave

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.00	12.00	12.00	8.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	145.00	100.00	100.00	125.00	100.00	195.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	149	304	173	84	482	155	76	1235	137	145	1453	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	0	0	0	8	0	5	0	0	13	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	316	180	87	501	169	79	1289	142	151	1524	90
Peak Hour Factor	0.8600	0.8600	0.8600	0.9600	0.9600	0.9600	0.9300	0.9300	0.9300	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	92	52	23	130	44	21	347	38	43	438	26
Total Analysis Volume [veh/h]	190	367	209	91	522	176	85	1386	153	174	1752	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0				0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street	0				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No											
Signal Coordination Group	1 - Florence Ave											
Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Fully actuated											
Offset [s]	0.0											
Offset Reference	Lead Green - Beginning of First Green											
Permissive Mode	SingleBand											
Lost time [s]	0.00											

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	47	0	9	47	0	9	35	0	9	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	26	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	22	22	31	22	22	61	52	52	61	52	52
g / C, Green / Cycle	0.31	0.22	0.22	0.31	0.22	0.22	0.61	0.52	0.52	0.61	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.10	0.16	0.16	0.09	0.19	0.19	0.19	0.38	0.10	0.31	0.48	0.07
s, saturation flow rate [veh/h]	1934	1900	1672	1066	1900	1738	446	3618	1550	562	3618	1550
c, Capacity [veh/h]	482	426	375	318	426	389	249	1861	798	323	1877	805
d1, Uniform Delay [s]	26.76	35.93	35.96	25.97	37.29	37.32	21.82	19.14	13.10	17.45	22.47	12.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.48	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	2.28	2.64	0.49	5.01	5.54	3.71	2.76	0.53	6.01	10.04	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.72	0.72	0.29	0.86	0.86	0.34	0.74	0.19	0.54	0.93	0.13
d, Delay for Lane Group [s/veh]	27.29	38.21	38.60	26.46	42.30	42.86	25.53	21.90	13.64	23.46	32.50	12.74
Lane Group LOS	C	D	D	C	D	D	C	C	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.59	6.83	6.09	1.53	8.70	8.05	0.96	12.35	1.88	2.05	19.99	1.20
50th-Percentile Queue Length [ft/ln]	39.80	170.78	152.14	38.22	217.58	201.22	23.89	308.63	46.91	51.22	499.68	30.04
95th-Percentile Queue Length [veh/ln]	2.87	11.12	10.13	2.75	13.54	12.70	1.72	18.11	3.38	3.69	27.32	2.16
95th-Percentile Queue Length [ft/ln]	71.64	277.94	253.29	68.79	338.54	317.53	43.01	452.69	84.43	92.19	682.98	54.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.29	38.28	38.60	26.46	42.47	42.86	25.53	21.90	13.64	23.46	32.50	12.74
Movement LOS	C	D	D	C	D	D	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	35.64			40.71			21.31		30.72			
Approach LOS		D			D		C		C			
d_I, Intersection Delay [s/veh]				30.02								
Intersection LOS					C							
Intersection V/C				0.739								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.44	41.44	41.44	41.44
I_p,int, Pedestrian LOS Score for Intersection	2.986	2.852	3.235	3.195
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	859	859	620	620
d_b, Bicycle Delay [s]	16.27	16.27	23.84	23.84
I_b,int, Bicycle LOS Score for Intersection	2.192	2.211	2.899	3.234
Bicycle LOS	B	B	C	C

Sequence

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



Vistro File: C:\...\Florence Ave Vistro.vistro
Report File: C:\...\OYP PM.pdf

Florence Avenue Townhomes

Scenario 8 OY PM + P
1/3/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Orr and Day Rd/Florence Ave	36	22	3	115	27	506	499	1412	33	0	1471	112	4236

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Roseton Ave/Florence Ave	16	6	7	20	4	7	8	1484	33	18	1822	46	3471

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume	
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-T	Left	Thru	Right	
3	Lake Center Park Ln/Ringwood Ave/Florence Ave	9	0	30	4	0	3	15	1476	23	3	44	1807	6	3420

ID	Intersection Name	Southbound			Eastbound			Westbound			Total Volume
		Right		Thru	Thru		Right	Thru		Right	
4	Project Driveway/Florence Ave	11			1510			1846			3384

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Pioneer Blvd/Florence Ave	163	316	180	87	501	169	79	1289	142	151	1524	90	4691

APPENDIX C – ACCIDENT HISTORY ON FLORENCE AVENUE (01/18 – 08/21)

FLORENCE/ORR AND DAY INTERSECTION COLLISIONS

1/1/2018-12/31/2021

ID	Report No	On Street	Side Street	of Vehicle Preceding	II MPC	I Direction	II Direction	Collision Type	Dist To Int	Day of the Week	Date	Time	PCF	Spec Cond	#Killed	#Inj	Block	@ Int.	Dir from Int	Spec Cond II
16065	21-900713	FLORENCE AV	ORR AND DAY RD	Proceeding Straight	Proceeding Straight	West Bound	North Bound	Broadside	0	Wed	3/17/2021	14:37	Red Light	Hit & Run	0	0	11405	TRUE		N/A
16300	21-902026	ORR AND DAY RD	FLORENCE AV	Proceeding Straight	Making Left Turn	West Bound	East Bound	Broadside	0	Thur	7/22/2021	09:48	Red Light	N/A	0	2		TRUE		N/A
15905	20-902374	ORR AND DAY RD	FLORENCE AV	Making Left Turn		North Bound		Hit Object	27	Fri	9/17/2020	17:49	Unsafe Turning	C.P. Dam.	0	1	10700	TRUE	N	Pursuit
14626	18-902589	FLORENCE AV	ORR AND DAY RD	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	90	Sun	7/15/2018	20:59	Unsafe Speed	NDL	0	1	11400	TRUE	W	N/A
14760	18-903370	FLORENCE AV	ORR AND DAY RD	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	27	Sun	9/16/2018	08:13	Unsafe Speed	C. Zone	0	1	11300	TRUE	W	N/A
15005	19-900326	FLORENCE AV	ORR AND DAY RD	Proceeding Straight	Making Right Turn	South Bound	South Bound	Rear End	0	Fri	2/1/2019	15:52	Following too Closely	N/A	0	0	11405	TRUE		N/A
15737	20-900477	FLORENCE AV	ORR AND DAY RD	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	77	Fri	2/12/2020	17:30	Unsafe Speed	Hit & Run	0	0	11300	TRUE	W	N/A
16038	21-900259	FLORENCE AV	ORR AND DAY RD	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	54	Wed	2/3/2021	19:00	Unsafe Speed	Hit & Run	0	0		TRUE	W	N/A
14547	18-901625	FLORENCE AV	ORR AND DAY RD		Proceeding Straight	West Bound	West Bound	Sideswipe	40	Fri	4/27/2018	18:03	Unsafe Turning	C. Zone	0	0	11405	TRUE	E	Hit & Run
14788	18-903763	FLORENCE AV	ORR AND DAY RD	Proceeding Straight	Proceeding Straight	West Bound	West Bound	Sideswipe	30	Thur	10/18/2018	13:31	Unsafe Lane Change	C. Zone	0	0	11300	TRUE	W	N/A

FLORENCE/PIONEER INTERSECTION COLLISIONS 1/1/2018 - 12/31/21

FLORENCE AVE BETWEEN ORR AND DAY RD AND PIONEER BL

MIDBLOCK COLLISIONS

01/01/18 TO 08/08/21

ID	Report No.	On Street	Side Street	t of Vehicle Precedin	II MPC	I Direction	II Direction	Collision Type	Dist To Int	Day of the Week	Date	Time	PCF	Spec Cond	#Killed	#Inj	Block	@ Int.	Dir from Int	Spec Cond II
14522	18-901423	FLORENCE AV	PIONEER BLVD	Slowing/Stopping	Stopped	East Bound	East Bound	Rear End	426	Thur	4/12/2018	14:40	Unsafe Speed	N/A	0	4	11730	FALSE	W	N/A
14740	18-903388	FLORENCE AV	LAKE CENTER PARK LN	Proceeding Straight	Making Right Turn	West Bound	West Bound	Rear End	60	Mon	9/17/2018	15:41	Unsafe Speed	N/A	0	0	11641	FALSE	W	N/A
14748	18-903439	FLORENCE AV	RINGWOOD AV	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	65	Fri	9/21/2018	07:59	Unsafe Speed	Hit & Run	0	0	11641	FALSE	W	N/A
14787	18-903759	FLORENCE AV	RINGWOOD AV	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	237	Thur	10/18/2018	08:47	Unsafe Speed	NDL	0	0		FALSE	E	NI
14860	18-903860	FLORENCE AV	PIONEER BLVD	Slowing/Stopping	Stopped	West Bound	West Bound	Rear End	137		10/26/2018	16:45	Unsafe Speed	NDL	0	0	11901	FALSE	W	NI
14948	18-904481	FLORENCE AV	RINGWOOD AV	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	110	Thur	12/20/2018	18:27	Unsafe Speed	N/A	0	2	11600	FALSE	E	N/A
15162	19-901425	FLORENCE AV	ROSETON AV	Proceeding Straight	Slowing/Stopping	East Bound	East Bound	Rear End	62	Sun	5/12/2019	23:33	Unsafe Speed	N/A	0	1	11482	FALSE	W	N/A
15174	19-901533	FLORENCE AV	PIONEER BLVD	Ran Off Road		West Bound		Hit Object	19	Mon	5/20/2019	12:52	Unsafe Speed	N/A	0	0	11700	FALSE	W	N/A
15249	19-901878	FLORENCE AV	RINGWOOD AV	Entering Traffic	Proceeding Straight	North Bound	East Bound	Broadside	134	Thur	6/20/2019	17:24	Right of Way	N/A	0	0	11730	FALSE	E	N/A
15302	19-901912	FLORENCE AV	PIONEER BLVD	Proceeding Straight	Parked	East Bound	East Bound	Sideswipe	314	Mon	6/24/2019	03:30	Unsafe Turning	Hit & Run	0	0	11730	FALSE	W	N/A
15327	19-902286	FLORENCE AV	PIONEER BLVD	Other Unsafe Turning	Stopped	East Bound	East Bound	Rear End	87	Wed	7/31/2019	05:27	Driving Influence Alcohol/Drug	SDL	0	0	11795	FALSE	W	N/A
15547	19-903773	FLORENCE AV	PIONEER BLVD	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	39	Wed	12/11/2019	06:23	Unsafe Speed	NI	0	0	11790	FALSE	W	N/A
15731	20-900431	FLORENCE AV	PIONEER BLVD	Proceeding Straight	Slowing/Stopping	West Bound	West Bound	Rear End	120	Tues	2/11/2020	10:15	Unsafe Speed	Hit & Run	0	0	11733	FALSE	W	N/A
15643	20-900596	FLORENCE AV	ROSETON AV	Ran Off Road		East Bound		Hit Object	532	Tues	2/25/2020	22:48	Unknown	Fatal	1	0	11600	FALSE	E	C.P. Dam.
15641	20-900676	FLORENCE AV	LAKE CENTER PARK LN	Proceeding Straight	Making U Turn	West Bound	North Bound	Broadside	100	Tues	3/3/2020	17:32	Right of Way	Hit & Run	0	0	11641	FALSE	W	N/A
15613	20-900905	FLORENCE AV	PIONEER BLVD	Entering Traffic	Proceeding Straight	North Bound	East Bound	Broadside	264	Mon	3/23/2020	16:17	Right of Way	N/A	0	0	11730	FALSE	W	N/A
15966	20-902983	FLORENCE AV	LAKE CENTER PARK LN		Proceeding Straight	South Bound	West Bound	Vehicle/Ped.	195	Tues	11/17/2020	15:56	Pedestrian Violation	Pedestrian	0	1	11641	FALSE	W	N/A
16003	20-903313	FLORENCE AV	PIONEER BLVD	Other Unsafe Turning		West Bound		Hit Object	45	Mon	12/21/2020	14:43	Unsafe Turning	C.P. Dam.	0	1	11795	FALSE	W	N/A
16071	21-900755	FLORENCE AV	PIONEER BLVD	Other Unsafe Turning	Proceeding Straight	West Bound	West Bound	Sideswipe	250	Sun	3/21/2021	14:55	Unsafe Turning	Motorcycle	0	2	11733	FALSE	W	N/A
16175	21-900847	FLORENCE AV	PIONEER BLVD	Slowing/Stopping	Backing	East Bound		Other	182	Wed	3/31/2021	08:03	Other	Train	0	1	11762	FALSE	W	N/A
16156	21-901328	FLORENCE AV	RINGWOOD AV	Other Unsafe Turning	Parked	East Bound	East Bound	Sideswipe	209	Tues	5/18/2021	22:27	Driving Influence Alcohol/Drug	Hit & Run	0	0	11730	FALSE	E	N/A
16169	21-901443	FLORENCE AV	ROSETON AV	Ran Off Road		East Bound		Hit Object	300	Mon	5/31/2021	02:10	Driving Influence Alcohol/Drug	NDL	0	0	11439	FALSE	W	C.P. Dam.
16258	21-901844	FLORENCE AV	PIONEER BLVD	Proceeding Straight	Stopped	East Bound	East Bound	Rear End	362	Sun	7/4/2021	23:06	Driving Influence Alcohol/Drug	N/A	0	1	11730	FALSE	W	N/A

APPENDIX D – LOGISTICS FACILITY TECHNICAL MEMORANDUM



505 E. Colorado Blvd.
Suite 202
Pasadena, CA 91101
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TECHNICAL MEMORANDUM

TO: Mr. Kent Heller, Sr. Leasing Director, PS Business Parks
CC: Mr. Francis Park, Park & Velayos, LLP

FROM: Srinath Raju, P.E.
Chris Munoz

SUBJECT: 11811 Florence & 10513 Hathaway Parcel Delivery Service Facility Project
Updated Traffic Generation Analysis & Evaluation

DATE: July 31, 2020

REF: RA652

This memorandum briefly summarizes an analysis and evaluation of daily vehicular trip generation metrics associated with the proposed re-leasing of an existing logistics facility located at 11811-11831 E. Florence Avenue in the City of Santa Fe Springs, California (the “Florence Site”), for a parcel delivery service use. The Project also intends to use the adjacent existing building and site located at 10513 Hathaway Drive (the “Hathaway Site”) for solely the purposes of additional parking and access / circulation to and from the Florence Site to Hathaway Drive.

A comparison of the daily trips associated with the proposed parcel delivery service Project and the existing logistics facility, estimated using the ITE Trip Generation 10th Edition trip generation rates as well as anticipated operational details at the Florence Site, is also provided. An evaluation comparing existing uses and to the proposed Project, during both steady state (typical) and peak state (peak) conditions, has also been provided using comparisons of number of employees, daily truck trips, van trips and other trips in passenger car equivalents (PCEs).

An overall executive summary of the findings of the study is provided on the following page.

Executive Summary:

- *The proposed use replacing the existing use at the Florence Site would not change the overall gross square feet of the building. The existing building at the Hathaway Site will only be used for parking and for obtaining access to and from the Florence Site to Hathaway Drive, consequently improving overall circulation.*
- *The trip generation of the existing logistics facility (identified in the ITE, Trip Generation Manual as a Land Use 155: High-Cube Fulfillment Center Warehouse - Sort) and that of the proposed use, also identified as a Land Use 155: High-Cube Fulfillment Center Warehouse – Sort would not be different, given that the gross square feet of the building remains the same.*
- *Based on trip generation estimates developed using the ITE Trip Generation, 10th Edition, it can be observed that no net new additional daily trips or peak hour trips would occur due to the proposed Project compared to those associated with the existing use at the Florence Site or at both the Florence Site and the Hathaway Site.*
- *An analysis of operations of the Project indicates that the proposed use is estimated to generate far fewer number of daily tractor-trailer truck trips compared to the existing facility use (approximately 14 daily truck trips under steady state conditions with the proposed Project, compared to approximately 120 to 160 daily truck trips associated with the existing facility use). Steady state operations associated with the proposed Project are reflective of conditions that would occur for approximately 11 months in a year.*
- *An evaluation of operations under steady and peak states for the existing and proposed uses was conducted. Comparisons of number of employees and daily trips, truck trips, van trips and other trips expressed in passenger car equivalent (PCE) units indicate that under steady state conditions, the proposed use would produce fewer trips (PCE units) compared to the existing uses at the Florence Site and the Hathaway Site. Under peak state conditions, the proposed use would generate a marginally higher number of trips on a daily basis, equivalent to approximately 30 PCE units more than those associated with the existing uses at the Florence Site and the Hathaway Site.*
- *However, with improved Project access and circulation from the Florence Site to Hathaway Drive, which will permit the dispersion of Project-associated traffic to*

Norwalk Boulevard and Florence Avenue (via the Hathaway Site), as well as less overall trip generation during steady state conditions and very little or marginal additional daily traffic generation during peak state conditions, traffic conditions under proposed Project would not be substantially different than those with existing uses. Therefore, no further analysis would be required.

DESCRIPTION OF EXISTING FACILITIES & USES

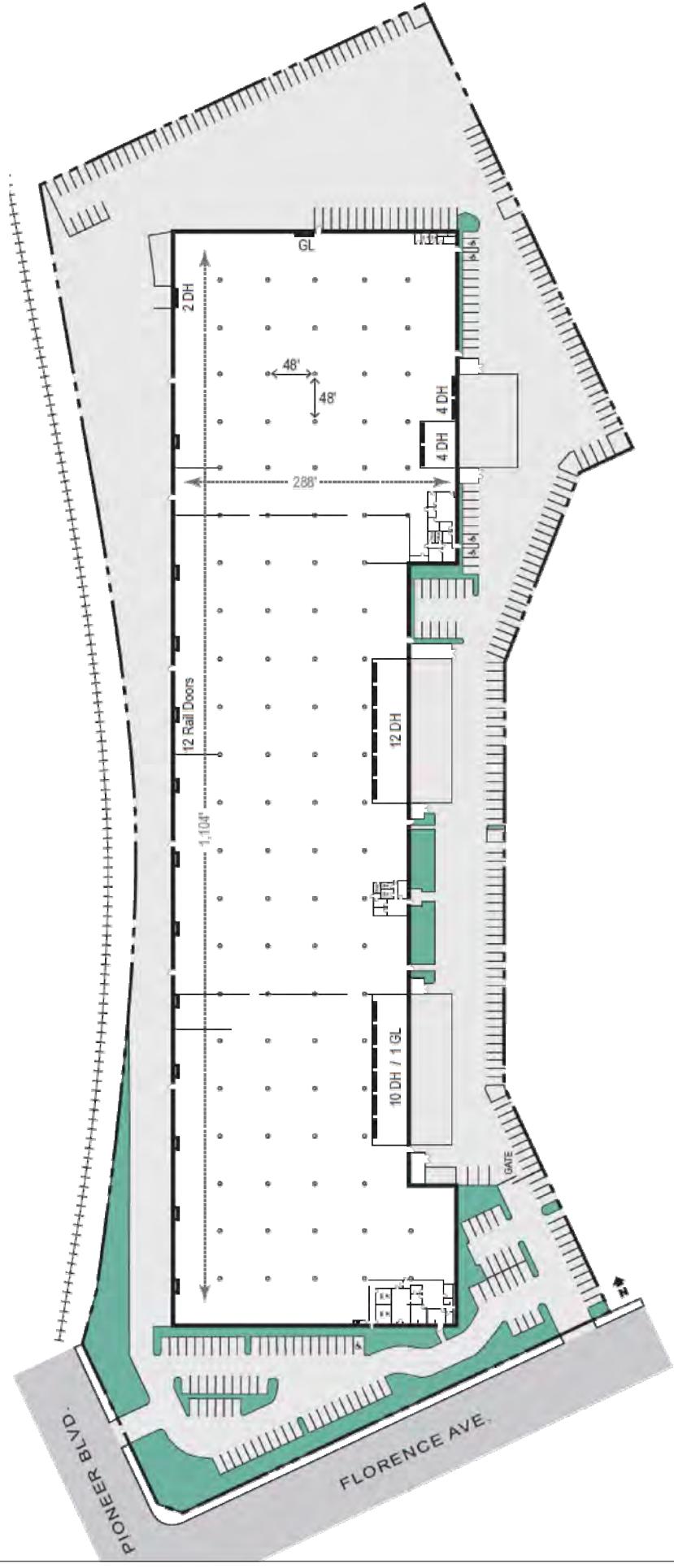
Based on information received from P.S. Business Parks, the existing building located at 11811-11831 E. Florence Avenue in the City of Santa Fe Springs, California, is a logistics facility that is 288,000 gross square feet (287,199 net square feet) in size. This facility is situated on 12.93 acres of M2 zoned land and was designed and built in 1984 for large scale warehouse and substantial distribution. The facility features 28' minimum ceiling clearance for greater cubic storage capacity. It also features 30 dock high positions for 53' trailers to deliver and load product to and from the building and two ground level doors. These features have attracted heavy distribution operators as tenants since it was constructed.

For over the last 20 years, this building has been occupied by third party logistics firms that warehouse and distribute products for their clients. These tenants have averaged approximately 60-80 trailers daily delivering product to and out of the building 24 hours a day in three employee shifts Monday through Saturday and 6:00 AM to 6:00 PM Sunday. Typical employee counts per shift consisted of 50-70 employees, and 70-110 employees at peak capacity (not including truck drivers). The property also has a large fenced yard area which can store over 100 trailers that measure 53'. This yard has been filled to the full trailer capacity during these tenants' occupancy.

Access to and from the Florence Site is via Florence Avenue and Pioneer Boulevard. Figure 1 shows a representation of the Existing Site Plan of the Florence Site.

The 41,967 square-foot single-tenant building located at 10513 Hathaway Dr. was previously used to warehouse and distribute electrical products and equipment. This building features three ground level loading doors and three dock high loading doors. The previous user ran one daily 9-hour shift (7 AM - 4 PM) Monday through Friday, with seven warehouse employees and ten office employees (17 total). A total of ten inbound deliveries were typically received per week by 40' container trucks. Outbound shipments consisted of 50-75 will-call orders picked up per day, with vehicles/delivery sizes ranging from passenger cars, box vans, 20' stake bed trucks to the occasional semi-truck trailer. In addition to the will-call pickups, several van or LTL shipments would go out daily (UPS, Yellow Freight, etc.).

11811 – 11831 Florence Ave, Santa Fe Springs
288,000 S.F.



Source:PS Business Parks

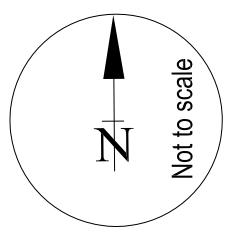


FIGURE 1
EXISTING USE - SITE PLAN



RAJU Associates, Inc.

DESCRIPTION OF PROPOSED USES AT FLORENCE SITE AND HATHAWAY SITE

Based on information received from P.S. Business Parks, the existing facility at the Florence Site would function as a delivery station for an e-commerce company. Delivery stations provide the last mile of order fulfillment process for customers. Packages are transported to delivery stations via trailer trucks (18 wheelers) from neighboring fulfillment and sortation centers and are sorted, picked and loaded into delivery vehicles. Trips associated with delivery stations include those associated with employees such as associates, managers and drivers, and those associated with independent contractors and line-haul trucks.

During steady state operations, the proposed use would operate 24/7 to support delivery of packages to customer locations. The Project anticipates approximately seven (7) line haul trucks delivering packages to the delivery station in any 24-hour period. Approximately 100 Project associates in total, including managers, would support this operation on a daily basis.

Additionally, during steady state operations, on a daily basis, 94 drivers would arrive at the site, park their personal vehicles and drive delivery vans to destinations to make deliveries. These drivers would return to the site, park the delivery van and leave using a personal vehicle or public transport.

Finally, the Project will also use independent contractors to deliver packages from this location. This program anticipates approximately 30 vehicles will arrive at the facility, load and depart the facility on a daily basis.

During peak state operations, the Project anticipates 19 line-haul trucks delivering packages to the delivery station on a daily basis. Approximately 235 associates including managers in 3 shifts will support the operations on a daily basis during peak state conditions. Additionally, 249 drivers would arrive at the site, park their personal vehicles and drive delivery vans to destinations to make deliveries. These drivers would return to the site, park the delivery van and leave using a personal vehicle or public transport on a daily basis during peak state operations. Finally, the Project will also use thirty independent contractors that will arrive at the facility, load and depart the facility on a daily basis, similar to steady state operations.

Attachment A provides a comparison of number of employees, trucks, vans and associated total daily trips in passenger car equivalents (PCEs) between existing and proposed uses during steady and peak states (Table A and Table B, respectively).

It can be seen that during typical steady state conditions, the total daily trips (in PCEs) associated with the proposed Project would be less than those for the existing uses at the two sites. During peak state operations, the total daily trips (in PCEs) associated with the proposed Project would be marginally higher (approximately 30 trips) than those for the existing uses at the two sites.

Trip Generation of Existing and Proposed Uses

The existing use consists of 288,000 gross square feet of logistics facility uses (identified in the ITE Trip Generation Manual Supplement, 10th Edition as High Cube Fulfillment Center Warehouse - Sort). The proposed Project includes a parcel delivery service use (also referred to as a delivery station) of size 288,000 gross square feet. The Project use is also identified in the ITE Trip Generation Manual Supplement, 10th Edition as High Cube Fulfillment Center Warehouse – Sort. No change in existing logistics facility size of 288,000 gross square feet is proposed as part of the Project.

The proposed Project Site Plan is shown in Figure 2. Since the existing and Project uses are both identified in the ITE Trip Generation Manual Supplement as High Cube Fulfillment Center Warehouse – Sort, and their functional sizes are the same, the trip generation associated with both the existing and proposed Project are estimated to remain the same. The proposed Project will only be using the Hathaway Site for additional parking and access to/from Hathaway Drive from the Florence Site. As indicated in Figure 2, it is proposed that Hathaway Drive would serve as the main access for vans.

Trips associated with the existing uses and proposed Project uses at the Florence Site, are estimated to be 1,855 daily trips, as shown in Table 1. These estimates have been calculated using the ITE *Trip Generation Manual* 10th Edition Supplement, released in 2020. As the Project would only use the existing building at the Hathaway Site for parking, these estimates do not remove the trips associated with the existing uses at 10513 Hathaway Drive. It can be observed that the proposed Project would not generate trips greater than those generated by the existing



FIGURE 2
PROPOSED PROJECT - OVERALL SITE PLAN

Source: Architects Orange



TABLE 1
ESTIMATED PROJECT TRIP GENERATION

	Size	Daily	AM Peak Hour			PM Peak Hour			TOTAL
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Proposed Project									
High-Cube Fulfillment Center at 11811 Florence Av Parking Only at 10513 Hathaway Dr	288,000 s.f. 41,967 s.f.	1,855	203	48	251	135	211	346	
Existing Uses									
High-Cube Fulfillment Center at 11811 Florence Av Warehouse at 10513 Hathaway Dr	288,000 s.f. 41,967 s.f.	1,855	203	48	251	135	211	346	
Trip Rates [1]									
High-Cube Fulfillment Center (ITE Land Use 155 - Sort) Warehousing (ITE Land Use 150)	Trips per 1,000 s.f. Trips per 1,000 s.f.	6.44 [2]	81% 77%	19% 23%	0.87 [2]	39% 27%	61% 73%	1.20 [2]	

[1] *Trip Generation Manual Supplemental*, 10th Edition, ITE 2020.

[2] Trip generation estimates for Warehousing' was calculated using the following equations:

Daily: $T = 1.58 (X) + 45.54$
 AM Peak Hour: $T = 0.12 (X) + 25.32$
 PM Peak Hour: $T = 0.12 (X) + 27.82$

Where:
 T = Two-way volume of traffic (total trip-ends)
 X = Area in 1,000 gross square feet of floor area

uses.

Vehicular access to the proposed Project would be obtained from Florence Avenue, Pioneer Boulevard, and Hathaway Drive. Improved circulation to and from the Project site will result from the Hathaway Drive access offering connections to Norwalk Boulevard and Florence Avenue.

ANALYSIS OF PROPOSED PROJECT OPERATIONS

The proposed Project would operate as a delivery station for an e-commerce company. Delivery stations provide the last mile of order fulfillment process for customers. Packages are transported to delivery stations via trailer trucks (18 wheelers) from neighboring fulfillment and sortation centers and are sorted, picked and loaded into delivery vehicles. Trips associated with delivery stations include those associated with employees such as associates, managers and drivers, and those associated with independent contractors and line-haul trucks. Project operations would vary between “steady state” for most of the year and a “peak state” for three days in mid-July and the holiday season between Black Friday in November and December 31st.

Steady State Operations

During steady state operations, the delivery stations operate 24/7 to support delivery of packages to customer locations between 10:30 AM and 9:00 PM. At the proposed Santa Fe Springs, CA facility, the Project anticipates approximately seven (7) line haul trucks (total of 14 truck trips in and out) delivering packages to the delivery station in any 24-hour period. Approximately 100 Project associates in total, including managers, support this operation, with the shift structure designed to concentrate operations between 2:00 AM and 12:30 PM (55 at those times) to minimize traffic generation during peak periods. The additional 45 associates arrive and depart between 6:00 AM and 10:30 PM that make up additional support of operations.

During steady state operations, the associates arrive at a delivery station at 9:20 AM. Between 10:00 AM and 11:30 AM, approximately 94 delivery vans will load and depart from the delivery station at a uniform rate to facilitate a regulated traffic flow into the surrounding area. Approximately 8-10 hours after dispatch, deliveries are completed, and the vans return to the

station. The drivers park the delivery van onsite and leave using a personal vehicle or public transport.

The Project will also use independent contractors to deliver packages from this location. This program anticipates approximately 30 vehicles will load and depart the facility staggered between 4:00 PM and 5:30 PM.

Based on the operations noted above, the trip generation profile over the entire day for steady state operations is provided in Attachment B.

Peak State Operations

As mentioned previously, for a short period of time each year, the delivery stations would operate at “peak state”. For typically three days in mid-July and after “Black Friday” in November through December 31st (Holiday Season), the Project could expect an increase in package ordering, which will cause an increase in employees and consequently daily trips at the proposed Santa Fe Springs, CA location.

During peak state operations, the Project anticipates approximately nineteen (19) line haul trucks delivering packages to the delivery station daily. Approximately 235 associates (in total) support this operation, working in various shifts. Shift one would operate between 5:30 PM through 1:00 AM and encompass approximately 94 employees. Shift two would operate between 2:00 AM through 2:30 PM and encompass approximately 110 employees in that time frame. The Project also anticipates two other shifts for supporting work operating between 2:00 PM and 10:30 PM which would encompass 31 employees.

During peak state operations, the initial drivers begin arrival at the delivery station at 6:30 AM. Starting at 7:00 AM and ending at 8:30 AM, approximately 94 delivery vans will load and depart from the delivery station. The next group of delivery employees begin arrival at the delivery station at 9:00 AM. Starting at 10:00 AM and ending at noon, approximately 155 delivery vans load and depart from the delivery station. Approximately 8-10 hours after dispatch, deliveries are completed, and the vans return to the station. The drivers park the delivery van onsite and leave using a personal vehicle or public transportation.

The trips associated with the independent contractors would be similar in peak state to those during steady state.

OBSERVATIONS AND CONCLUSIONS

Based on the above analysis and evaluations, the following observations and conclusions can be made:

- The proposed use replacing the existing use at the Florence Site would not change the overall gross square feet of the building.
- The trip generation of the existing logistics facility (identified in the ITE, Trip General Manual as a Land Use 155: High-Cube Fulfillment Center Warehouse - Sort) and that of the proposed use also identified as a Land Use 155: High-Cube Fulfillment Center Warehouse - Sort, would not be different, given that the gross square feet of the building remains the same.
- Based on trip generation estimates developed using the ITE Trip Generation, 10th Edition, it can be observed that no net new additional daily trips or peak hour trips would occur due to the proposed Project compared to those associated with the existing uses at the Florence Site and the Hathaway Site.
- An analysis of operations of the Project indicates that the proposed use is estimated to generate far fewer number of daily tractor-trailer truck trips compared to the existing facility use (approximately 14 daily truck trips with the proposed Project, compared to approximately 120 to 160 daily truck trips associated with the use of the existing facility at the Florence Site under steady state conditions). Steady state operations associated with the proposed Project are reflective of conditions that would occur for approximately 11 months in a year.
- An evaluation of operations under steady and peak states for the existing and proposed uses was conducted. Comparisons of number of employees and daily trips, truck trips, van trips and other trips expressed in passenger car equivalent (PCE) units indicate that under steady state conditions, the proposed use would produce fewer trips (PCE units) compared to the existing uses at the Florence Site and the Hathaway Site. Under peak state conditions, the proposed use would generate a marginally higher number of trips

equivalent to approximately 30 PCE units more than those associated with the existing uses at the Florence and Hathaway sites.

- However, with improved Project access and circulation from the Florence Site to Hathaway Drive, which will permit the dispersion of Project-associated traffic to Norwalk Boulevard and Florence Avenue (via the Hathaway site), as well as less overall trip generation during steady state conditions and very little or marginal additional daily traffic generation during peak state conditions, traffic conditions under proposed Project would not be substantially different than those with existing uses. Therefore, no further analysis would be required.

ATTACHMENT A

TABLE A
COMPARISON OF NUMBER OF EMPLOYEES, TRUCKS, AND VANS AND TOTAL DAILY TRIPS - STEADY STATE

LOCATION	NO. OF EMPLOYEES PER SHIFT (TYPICAL)	NO. OF DAILY TRUCKS	TRUCK DAILY PCEs*	NO. OF DRIVERS	NO. OF VANS	DAILY TRIPS VANS/DRIVERS	DAILY TRIPS EMPLOYEES	TOTAL DAILY TRIPS (PCEs)*
11811 FLORENCE AVENUE BUILDING								
EXISTING Average	50 - 70 per shift - 3 shifts 60	60-80 70		420	50		100	360
10513 HATHAWAY DRIVE	1 9-hour shift (M-F) 17	10 per week (2 daily) 2		12	50 -75 daily 62	10	144	34
11811 FLORENCE AVENUE BUILDING								
<u>PROPOSED</u>								
Steady State (Typical)	55 (maximum in any one shift) 3 shifts per day (101 total daily)	7		42	94		376	202
10513 HATHAWAY DRIVE								680**
PROPOSED USED ONLY FOR PARKING AND ACCESS/EGRESS TO HATHAWAY DRIVE								
Steady State (Typical)	None Used for parking only	0		0	0		0	0
								680**
OVERALL EXISTING DAILY TRIPS								
OVERALL PROPOSED DAILY TRIPS								

Source for Employee Data: Mr. Kent Heller, PS Business Parks, for Existing; and Ms. Maria Poyer, Amazon Worldwide Real Estate, for Proposed conditions

* - Truck trips have been converted to Passenger Car Equivalents (PCEs) using a factor of 3.0

** includes 30 daily Flex trips inbound and 30 daily flex trips outbound (total of 60 daily Flex trips)

**TABLE B
COMPARISON OF NUMBER OF EMPLOYEES, TRUCKS, AND VANS AND TOTAL DAILY TRIPS - PEAK STATE**

Source for Employee Data: Mr. Kent Heller, PS Business Parks, for Existing; and Ms. Maria Poyer, Amazon Worldwide Real Estate, for Proposed conditions

* - Truck trips have been converted to Passenger Car Equivalents (PCEs) using a factor of 3.0
** includes 30 daily Flex trips inbound and 30 daily flex trips outbound (total of 60 daily Flex trips)

Includes 30 daily Flex trips inbound and 30 daily flex trips outbound (total of 60 daily Flex trips)

ATTACHMENT B

ATTACHMENT B: DELIVERY STATION TRIP GENERATION BASED ON OPERATIONS

Starting at	Associates			Trucks			DSP Drivers			DSP Vans			Independent Operators			DLX1 in Santa Fe Springs, CA - Site Specific			Total Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
12 Midnight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	55	0	55	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	56	0	56
2:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2
5:00 AM	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	15	0
6:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	1	0	1	45	0	45	0	0	0	0	0	0	0	0	46	0	46	0
10:00 AM	0	0	0	0	1	1	49	0	49	0	81	81	0	0	0	0	0	49	82	131	131
11:00 AM	3	0	3	0	0	0	0	0	0	0	13	13	0	0	0	0	0	3	13	16	16
12 Noon	0	55	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	55	55
1:00 PM	28	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	28	0
2:00 PM	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	15
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	14	44	30	14	44
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	0	16	16
6:00 PM	0	13	13	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	13	13	14
7:00 PM	0	0	0	0	1	1	0	21	21	42	0	0	0	0	0	0	42	22	64	64	64
8:00 PM	0	0	0	1	0	1	0	62	62	51	0	51	0	0	0	0	52	62	114	114	114
9:00 PM	0	0	0	0	1	1	0	11	11	1	0	1	0	0	0	0	1	12	13	13	13
10:00 PM	0	18	18	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	18	19	19
11:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
TOTAL DAILY	101	101	202	7	7	14	94	94	188	94	94	188	30	30	30	60	60	326	326	652	652