INSPIRATION SUBDIVISION

TRAFFIC IMPACT ANALYSIS

REVISED SUBMITTAL

JANUARY 28, 2019

Prepared For:
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Engineering
Spatial Data
Advanced Technologies

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I. INTRODUCTION AND SUMMARY

The Inspiration Subdivision development is proposed northwest of the intersection of Arroyo Vista Blvd and Tierra Pintada Blvd. It is primarily residential subdivision with a total of 340 lots on a gross acreage of approximately 88.71 acres developed in six phases.

Inspiration is the next phase in a series of developments for the Westland North Master Plan area now known as Lower Petroglyphs.

A. STUDY PURPOSE

The purpose of the traffic study is to determine the impacts of the proposed development on the surrounding roadway network, and to recommend any mitigation measures that may be necessary to support the additional traffic generated by the proposed development.

The Scoping Report from the City of Albuquerque lists the required components to be completed for this study and can be referenced in Appendix A.

B. EXECUTIVE SUMMARY

1. SITE LOCATION AND STUDY AREA

The site is located northwest of the Arroyo Vista Blvd and Tierra Pintada Blvd intersection, in Albuquerque, New Mexico. A vicinity map is shown in Figure 1, and the proposed site plan of the future development is shown in Figure 2.

The study area was requested to consist of the following intersections:

- Arroyo Vista Blvd and Tierra Pintada Blvd (existing signalized)
- Tierra Pintada Blvd and Stormcloud Ave (existing signalized)
- Arroyo Vista Blvd and Ladera Dr (existing signalized)
- Arroyo Vista Blvd and Driveway 1 (proposed driveway)
- Arroyo Vista Blvd and Driveway 2 (proposed driveway)

The intersection evaluations include analysis for the AM and PM peak hours for the following traffic conditions:

- Existing traffic (2018)
- 2019 Completion Year without proposed development (2019 No Build)
- 2024 Completion Year without proposed development (2024 No Build)
- 2019 Completion Year with buildout of the site (2019 Build)
- 2024 Completion Year with buildout of the site (2024 Build)

2. PRINCIPAL FINDINGS

The traffic analysis shows that under existing 2018, 2019 and 2024 No Build, and 2019 and 2024 Build, all intersections will operate at an acceptable level of service (LOS). Construction of the Inspiration Subdivision development will not result in dramatic increases in traffic delay or degrade in LOS.

The results also found that the entrances to the development will operate at acceptable LOS in the 2040 horizon year when Arroyo Vista is extended up the escarpment to Atrisco Vista and development occurs in Upper Petroglyphs. The analysis found the 2040 v/c ratio for the 6-lane Arroyo Vista would range from 0.31 – 0.37, indicating low congestion.

The intersection of Arroyo Vista Blvd and Tierra Pintada Blvd experiences a LOS E and F in the PM Peak for the northbound left movement, however this is considered acceptable due to the low volumes utilizing this movement. This movement serves the APS Nusenda Community Stadium, and the traffic during non-events is low. The high delay is due to the left turn operating as a protected-only left turn, due to the opposing dual southbound left turn lanes.

As the v/c ratio on Arroyo Vista is low, a right turn lane into the site is not necessary as drivers proceeding westbound the site have sufficient capacity in the inside two through lanes. If the forecast through traffic were to utilize only the two inside lanes, the v/c ratio would range from 0.47 – 0.57, indicating substantial remaining capacity. As there is sufficient capacity in the adjacent through lanes, a dedicated right turn lane into the site is not recommended.

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Site Traffic Analysis

Figure 1
Vicinity Map

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II. PROPOSED DEVELOPMENT

A. LAND USE AND INTENSITY

The proposed development will include 340 lots on gross acreage of approximately 88.71 acres. See the site plan in Figure 2, on page 4.

The immediately surrounding land uses include residential subdivisions, the APS Nusenda Community Stadium, and Albuquerque Baseball Complex, the Tres Volcanes Community Collaborative School, and vacant land.

B. DEVELOPMENT PHASING AND TIMING

The project is anticipated to be constructed in phases, beginning in 2019 and with a completion year of 2024. The years 2019 and 2024 were used as build years in the analysis.

C. FUTURE ROADWAY PROJECTS

The COA Scoping Report did not identify and roadway projects for the area to be considered in the report.

III. STUDY AREA CONDITIONS

A. STUDY AREA

The study area consists of the following intersections:

- Arroyo Vista Blvd and Tierra Pintada Blvd (existing signalized)
- Tierra Pintada Blvd and Stormcloud Ave (existing signalized)
- Arroyo Vista Blvd and Ladera Dr (existing signalized)
- Arroyo Vista Blvd and Driveway 1 (proposed driveway)
- Arroyo Vista Blvd and Driveway 2 (proposed driveway)

B. SITE ACCESSIBILITY

Access to the residential development will be via two (2) driveways from Arroyo Vista Blvd.

C. DATA SOURCES

The data used in this report consist of the traffic counts described below, aerial photography, 2040 Socioeconomic Forecasts from MRCOG, and mapping from Google Earth®.

IV. ANALYSIS OF EXISTING CONDITIONS

A. BACKGROUND

Arroyo Vista Blvd will be the primary access to the development and has a full access interchange with I-40. The posted speed limit is 35 miles per hour (MPH) on Arroyo Vista Blvd. Arroyo Vista Blvd has three (3) travel lanes in each direction south of Tierra Pintada Blvd with a center median. West of Tierra Pintada Blvd, the travel lanes drop to one (1) lane in the westbound direction. The roadway cross section remains approximately 115 feet wide while striping directs multiple lanes into a single lane. The MRCOG Average Weekday Traffic Map indicates in 2016 Arroyo Vista Blvd has an average weekday traffic volume of approximately 3,000 vehicles per day (vpd) south of Tierra Pintada Blvd.

The 2016 MRCOG Roadway Functional Classification map classifies Arroyo Vista Blvd as a Major Collector between Tierra Pintada Blvd and Ladera Dr and a Minor Arterial south of Ladera Dr. Arroyo Vista Blvd is not classified west of Tierra Pintada, however, the 2040 Metropolitan Transportation Plan designates Arroyo Vista Blvd as a future Community Principal Arterial in the Long Range Roadway System (LRRS). Roadways are subject to design guidance based on their functional classification, design speed, or based on Comprehensive Plan “Corridor” designations. Arroyo Vista Blvd is not designated as a “Corridor” and this study applies roadway design guidance from the Development Process Manual (DPM) based on arterial and collector classifications.

Tierra Pintada Blvd is classified as a Major Collector with a posted speed limit of 35 MPH. Tierra Pintada Blvd has two (2) travel lanes in each direction with a center median. The average weekday traffic volume on Tierra Pintada Blvd is approximately 4,700 vpd. Tierra Pintada Blvd and Arroyo Vista Blvd is a signalized intersection.

Ladera Dr is classified as a Minor Arterial with a posted speed limit of 35 MPH. Ladera Dr has two (2) travel lanes in each direction with a center median. The average weekday traffic volume on Ladera Dr is approximately 8,000 vpd. Ladera Dr and Arroyo Vista Blvd is a signalized intersection.

Stormcloud Ave is a local road that provides access to residential neighborhoods and the Tres Volcanes Community Collaborative School. Stormcloud Ave has an assumed speed limit of 25 MPH. Traffic volumes are not collected annually for Stormcloud Ave. Stormcloud Ave and Tierra Pintada Blvd has been recently signalized with the construction of the Tres Volcanes Community Collaborative School.

1. MULTI-MODAL BACKGROUND

Transit currently does not operate on the roadways serving the site. The nearest transit opportunity is the Central and Unser Transit Center, a park-and-ride station with bus routes including ABQ Ride routes 54, 66, 198, and 766 and Rio Metro route 366.

The site is in proximity to walking and bicycle trails, including easy access to the South Point Trailhead. Arroyo Vista Blvd, Tierra Pintada Blvd, and Ladera Dr each have on-street bicycle lanes, buffered multi-use trails, and separated sidewalks. Section IV.C will discuss multi-modal level of service conditions.

B. EXISTING TRAFFIC CONDITIONS

Traffic counts for the intersection analyzed in the study area were collected Tuesday, September 25, 2018, while school was in session. Figure 3 is a summary of the existing peak hour traffic volumes, existing laneage, turning movements, and intersection level of service. Existing traffic counts are included in Appendix B.

The traffic counts included counts for heavy vehicles, pedestrians, and bicyclists.

The heavy vehicle percentage reported by the traffic counts indicates there may been construction activity during the count period at the intersection of Arroyo Vista Blvd and Tierra Pintada Blvd. To reflect typical traffic conditions, the heavy vehicle percentage was adjusted to 6% in movements that were higher. Existing Levels of Service.

The *Sixth Edition of the Highway Capacity Manual* (HCM) defines Level of Service (LOS) for un-signalized intersections is as follows:

Table 1 – LOS Definitions

Level of Service	Definition	Signalized (sec/veh)	Unsignalized (sec/veh)
A	Most vehicles do not stop.	<10	<10
B	Some vehicles stop.	>10 and <20	>10 and <15
C	Significant numbers of vehicles stop.	>20 and <35	>15 and <25
D	Many vehicles stop.	>35 and <55	>25 and <35
E	Limit of acceptable delay.	>55 and <80	>35 and <50
F	Unacceptable delay.	>80	>50

The City of Albuquerque has established LOS D as the generally acceptable level of service in urban areas and when intersections operate below this level, improvements are generally considered, where feasible.

Existing intersection traffic volumes were analyzed using the Synchro version 10 software, that uses the signalized and unsignalized intersection methodology from the Sixth Edition of HCM. Individual intersection output for the existing conditions analysis is included in Appendix C.

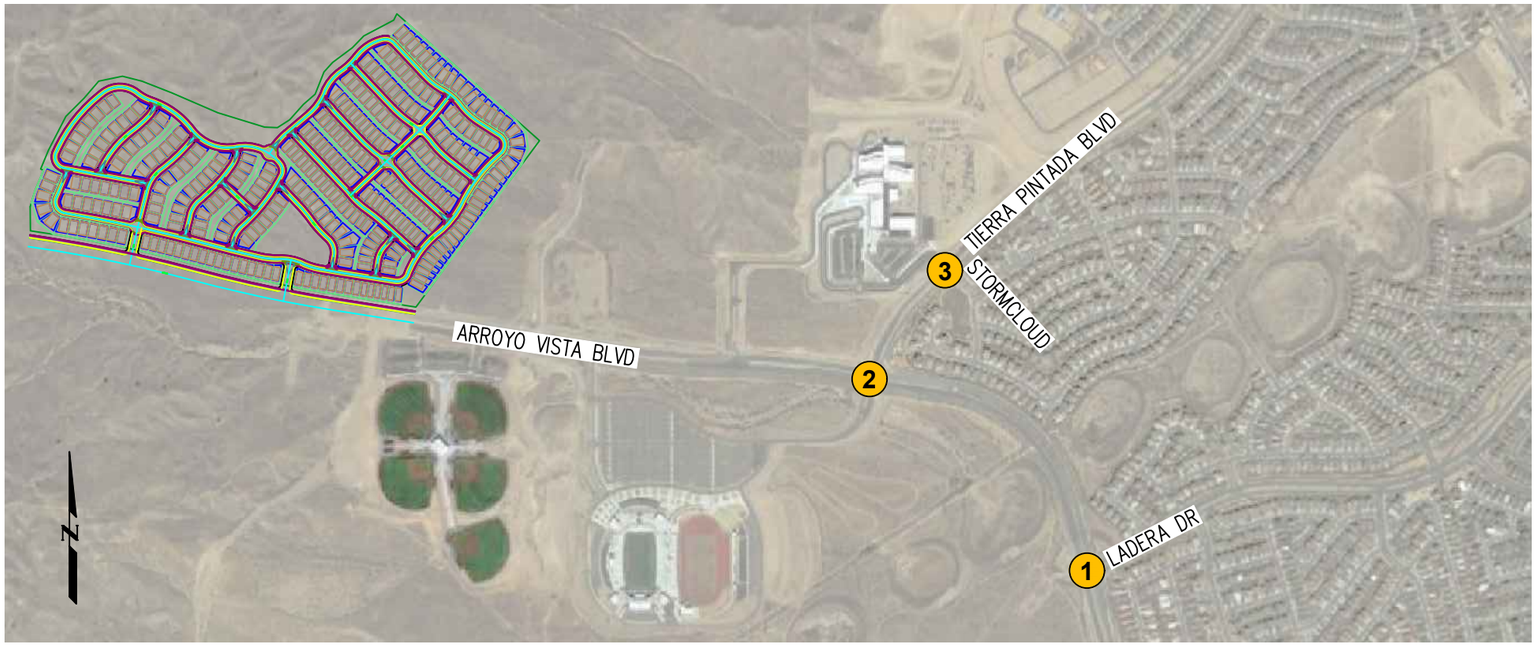
The results are summarized in Table 2, and shown graphically in Figure 3.

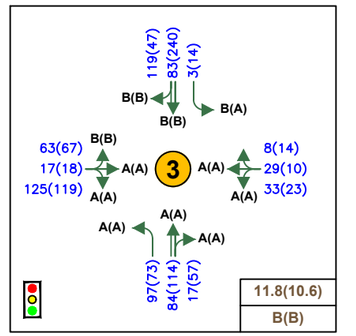
The analysis indicates that the three existing signalized intersections operate at acceptable level of service.

The intersection of Arroyo Vista Blvd and Tierra Pintada Blvd experiences a LOS E in the PM Peak for the northbound left movement. This is likely due to the low volume of this movement and that the movement was assumed to be a protected-only left turn, due to the opposing dual southbound left turns. This movement continues to operate at LOS E and F in the No Build and Build scenarios. This poor performance is considered acceptable due to the low volume of the movement.

Table 2 – 2018 Existing Signalized Intersection Capacity Analysis Results

Signalized Intersections	2018 AM Peak			2018 PM Peak		
	Delay (sec.)	Max V/C	LOS	Delay (sec.)	Max V/C	LOS
Arroyo Vista and Ladera	15.5	0.73	B	14.4	0.69	B
Arroyo Vista and Tierra Pintada	21.3	0.68	C	20.6	0.67	C*
Tierra Pintada and Stormcloud	11.8	0.60	B	10.6	0.49	B
* - some movements LOS E						





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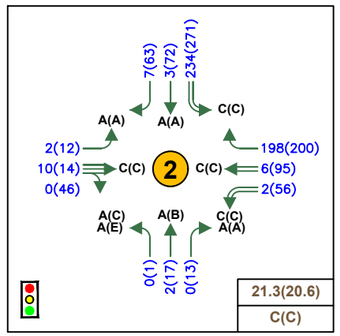

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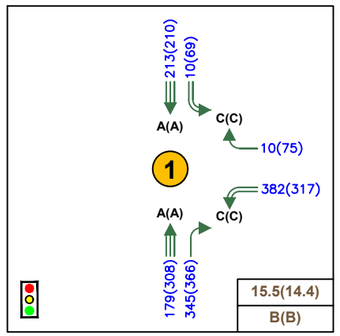

ARROYO VISTA/LADERA

LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)

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Site Traffic Analysis

Figure 3
2018 AM(PM) Peak Hour Traffic Volumes

C. MULTI-MODAL LEVEL OF SERVICE

This study employs multi-modal LOS analysis, which evaluates the quality of bicycle and pedestrian facilities as they are impacted by the adjacent roadway. The multi-modal LOS analysis utilizes formulas and procedures contained in the National Cooperative Highway Research Program's "Multimodal Level of Service Analysis for Urban Streets."

Similar to standard LOS scoring, multi-modal LOS scoring assigns an "A" for best and "F" for worst bicycle and pedestrian infrastructure quality. Table 3 shows the numerical scores associated with each level.

Table 3 – Multi-Modal LOS Scoring

LOS	Numerical Score
A	≤ 2.00
B	> 2.00 and ≤ 2.75
C	> 2.75 and ≤ 3.50
D	> 3.50 and ≤ 4.25
E	> 4.25 and ≤ 5.00
F	≥ 5.00

1. BICYCLE ANALYSIS

The multi-modal LOS analysis conducted for this study evaluates the presence and quality of bicycle infrastructure as it contributes to the comfort and safety of the bicycle user.

Criteria used in the analysis include:

1. Number of vehicle travel lanes
2. Median type
3. Average daily traffic
4. Speed limit
5. Percentage of heavy vehicles
6. Width of the outside vehicle lane
7. Width of the bicycle lane buffer
8. Width of the bicycle lane
9. Width of on-street parking
10. Pavement condition
11. Percentage of on-street parking that is occupied

The results of the bicycle LOS analysis are displayed in Table 4 below. Each roadway section evaluated operates at an acceptable bicycle LOS under existing conditions.

Note that Arroyo Vista Blvd will initially be constructed as a "half section" with one lane in each direction. Additional lanes will be added when Arroyo Vista Blvd connects to Atrisco Vista Blvd in the future. The bicycle LOS evaluates both the "half section" and the "full section."

Table 4 – Bicycle LOS Results

Criteria	Arroyo Vista (half section)	Arroyo Vista (full section)	Ladera	Tierra Pintada
Number of Lanes	2	6	4	4
Median Type	Undivided	Divided	Divided	Divided
Average Weekday Daily Traffic	3,000	3,000	8,000	4,700
Speed Limit	35 MPH	35 MPH	35 MPH	35 MPH
Percent Heavy Vehicles	2	2	2	2
Outside Lane Width	12 feet	12 feet	12 feet	12 feet
Bicycle Lane Buffer Width	N/A	N/A	N/A	N/A
Bicycle Lane Width	8 feet	8 feet	8 feet	8 feet
On-Street Parking Width	N/A	N/A	N/A	N/A
Pavement Condition	4	4	4	4
OSPA	0	0	0	0
Level of Service Score	**-0.01**	**-0.63**	**0.16**	**-0.15**
Level of Service	**A**	**A**	**A**	**A**

2. PEDESTRIAN ANALYSIS

The multi-modal LOS analysis conducted for this study evaluates the presence and quality of pedestrian infrastructure as it contributes to the comfort and safety of the pedestrian.

The pedestrian LOS analysis evaluates similar criteria to the bicycle LOS analysis, in addition to the following:

1. Signals per mile
2. Sidewalk width
3. Sidewalk buffer width
4. Tree spacing

The percentage of heavy vehicles and pavement condition are not evaluated in the pedestrian LOS analysis.

The results of the pedestrian LOS analysis are displayed in Table 5 below. Each roadway section evaluated operates at an acceptable pedestrian LOS under existing conditions.

Table 5 – Pedestrian LOS Results

Criteria	Arroyo Vista (half section)	Arroyo Vista (full section)	Ladera	Tierra Pintada
Number of Lanes	2	6	4	4
Signals per Mile	4	4	4	4
Median Type	Undivided	Divided	Divided	Divided
Average Weekday Daily Traffic	3,000	3,000	8,000	4,700
Speed Limit	35 MPH	35 MPH	35 MPH	35 MPH
Outside Lane Width	12 feet	12 feet	12 feet	12 feet
Bicycle Lane Buffer Width	N/A	N/A	N/A	N/A
Bicycle Lane Width	8 feet	8 feet	8 feet	8 feet
On-Street Parking Width	N/A	N/A	N/A	N/A
OSPA	0	0	0	0
Sidewalk Width	10 feet	10 feet	6 feet	10 feet
Sidewalk Buffer Width	10 feet	20 feet	5 feet	15 feet
Tree Spacing	N/A	45 feet	N/A	30 feet
Level of Service Score	**1.71**	**0.78**	**2.03**	**0.95**
Level of Service	**B**	**A**	**B**	**A**

V. PROJECTED TRAFFIC

A. SITE TRAFFIC FORECASTING

1. TRIP GENERATION

Generated trips are broken down into three types; 1) primary, 2) pass-by trips, and 3) diverted link. The Trip Generation report defines these trips as follows:

- **Primary Trips** - These trips are made for the specific purpose of visiting the generator. The stop at that generator is the primary reason for the trip. For example, a home to shopping to home combination of trips is a primary trip set.
- **Pass-by Trips** - These trips are made as intermediate stops on the way from an origin to a primary trip generation. Pass-by trips are attracted from the traffic passing the site on an adjacent street that contains direct access to the generator site. These trips do not require a diversion from another roadway. For example, stopping at the store on the way home from work is an example of a pass-by trip. No pass-by trips were assigned to this development.
- **Diverted Linked Trips** - These trips are attracted from the traffic volume on the roadway within the vicinity of the generator, but which require a diversion from that roadway to another roadway to gain access to the site. The roadways could include streets or freeways adjacent to the generator, but without access to the generator. For this study, the diverted link trips have been included in with the primary trips.

All trips to the site were considered primary trips.

The Institute of Transportation Engineers Trip Generation Manual, 10th Edition was used to estimate the trips generated by the site. The peak hour of generator rate was used to determine trip generation for this study, which results in slightly more trips than the peak hour of adjacent street equation.

Table 6 – Trip Generation

Land Use	Size	ITE Land Use Type Assumed	Daily	AM Enter	AM Exit	PM Enter	PM Exit
Residential	340	210 – Single-Family Detached	3,206	67	191	218	122
Trip Generation			**3,206**	**67**	**191**	**218**	**122**

2. TRIP DISTRIBUTION AND ASSIGNMENT

A modified gravity model was used to develop the trip distribution. This modified gravity model utilized the Mid Region MPO employment estimates for each zone within the Albuquerque Metropolitan Planning Area to develop the trip distribution. The maps and spreadsheet used to create the modified gravity model is included in Appendix D.

Spreadsheets showing the development of the trips at each intersection for the build scenario are also included in Appendix D. The trip distribution percentages and assigned traffic volumes for the Build analysis is shown in Figure 4 and Figure 5.

Due to the regional nature of the nearby interstate, the majority of trips are expected to travel south toward Interstate 40 (I-40). The trip distribution percentages resulted in 84% of trips to/from Arroyo Vista Blvd to access I-40, 8% of trips to/from Ladera Dr, and 8% of trips to/from Tierra Pintada Blvd.

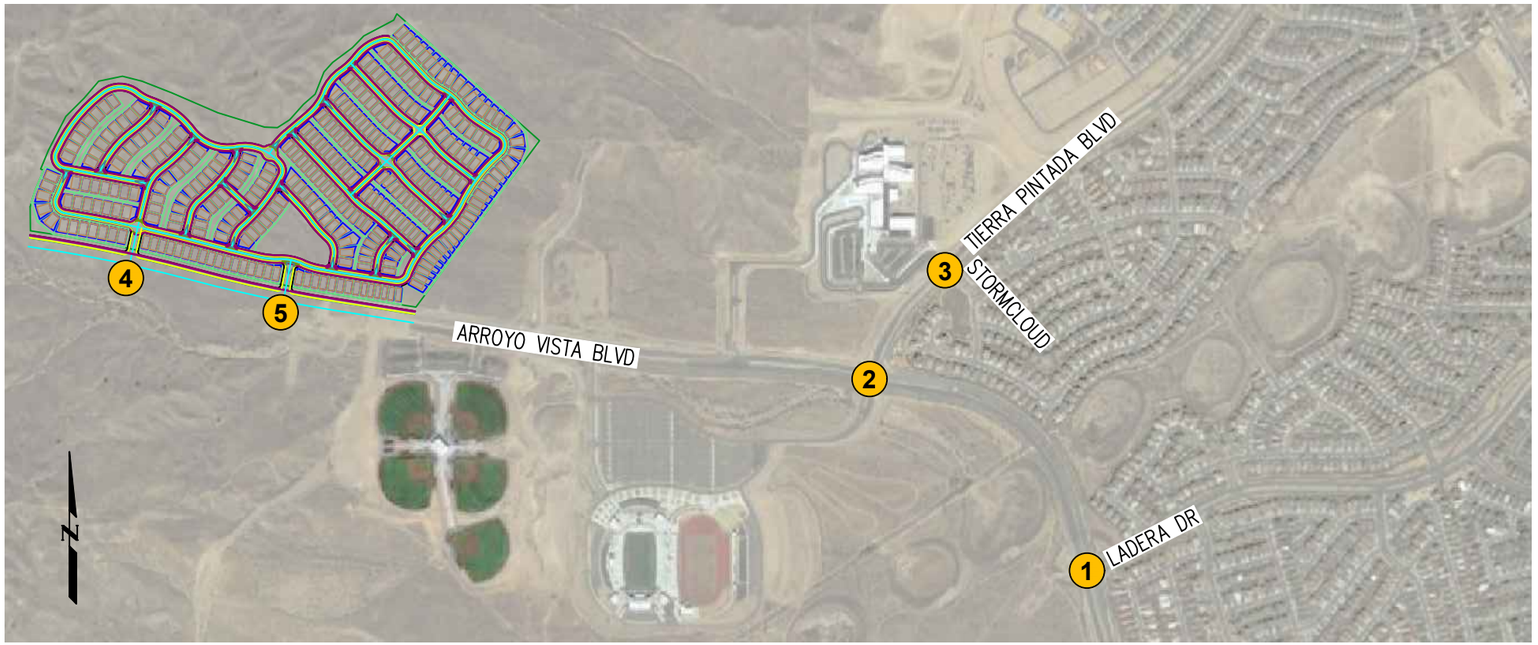
As there will be two driveways to enter or exit the subdivision, trip distribution percentages were estimated between the two driveways based on the layout of the site. It was determined that 30% of trips will enter or exit using Driveway 1 (the westernmost drive) and 70% of trips will enter or exit using Driveway 2.

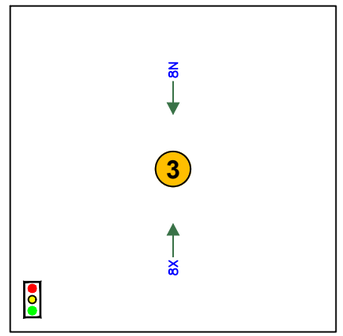
3. NO BUILD TRAFFIC PROJECTIONS

To estimate future traffic growth, 4.0% annual growth was applied to the existing turning movements to provide an estimate of potential future growth of traffic on the roadway network. The annual growth was calculated using traffic counts for the years of 2011-2016 from the MRCOG Average Weekday Traffic Map. The data and calculations are summarized in spreadsheets included in Appendix D.

Figure 6 on page 20 shows the 2019 No Build traffic volumes, number of lanes, and level of service.

The No Build analysis assumes that the proposed project is not completed.





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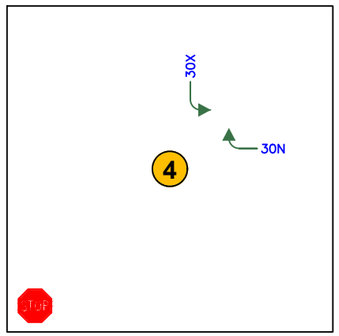
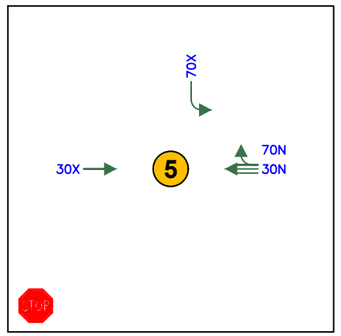


ARROYO VISTA/DRIVEWAY 1



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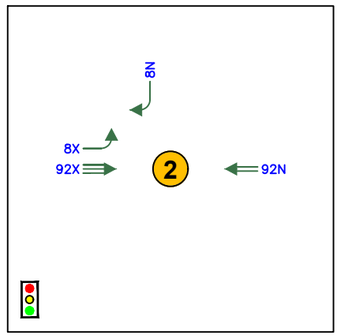

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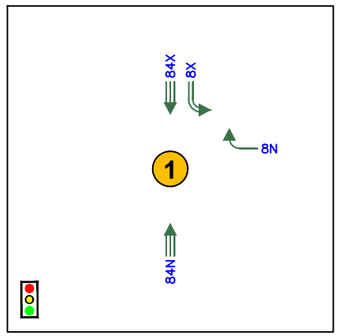

ARROYO VISTA/LADERA

LEGEND

	Thru Lanes (# as indicated)
	Turning Lanes (# as indicated)
1234(1234)	Trip Assignment Percentages
N	Entering
X	Exiting

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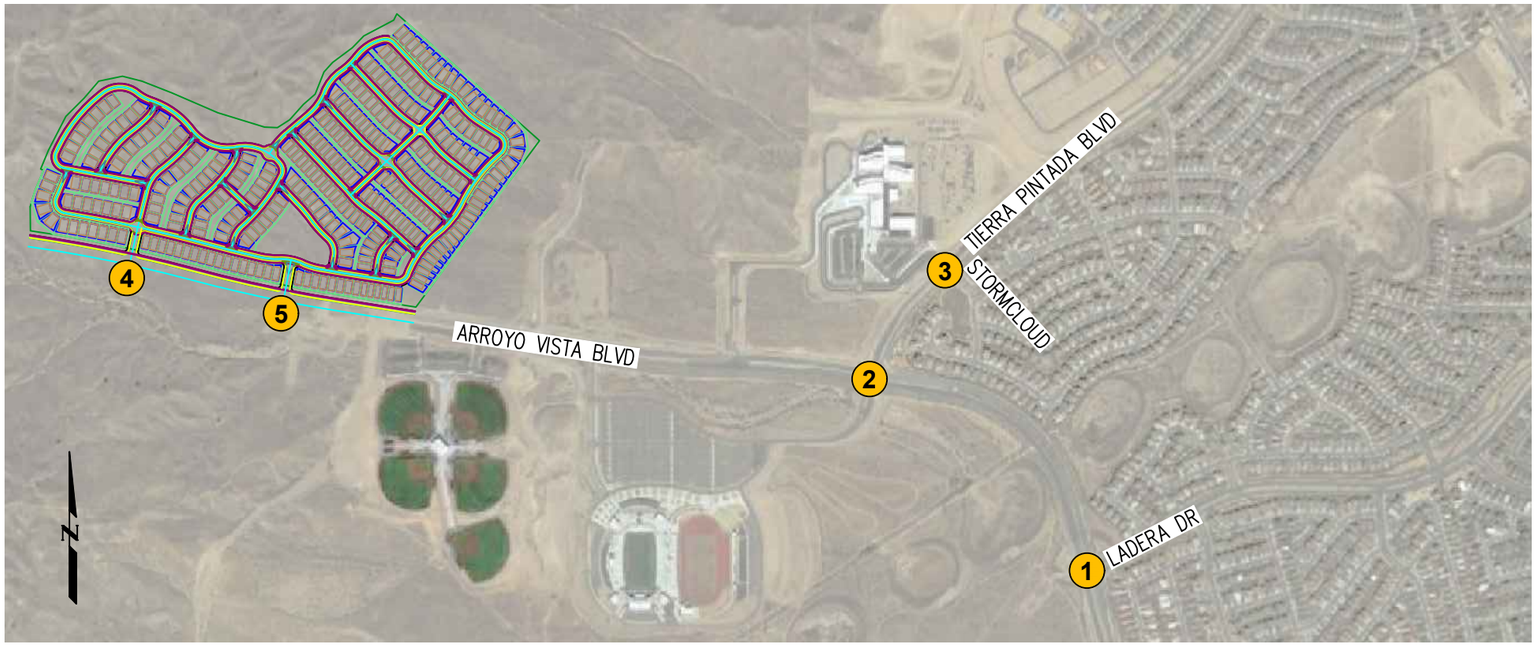
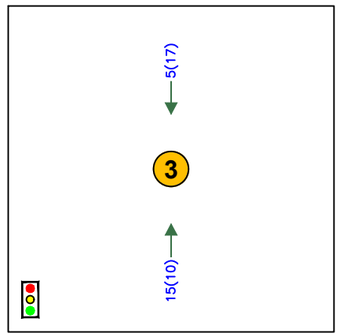
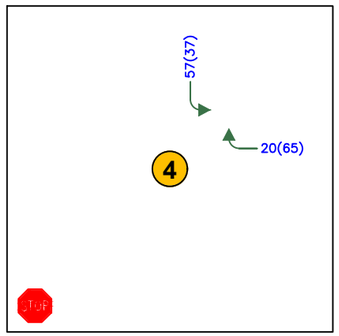
Figure 4
Build Trip Distribution Percentages

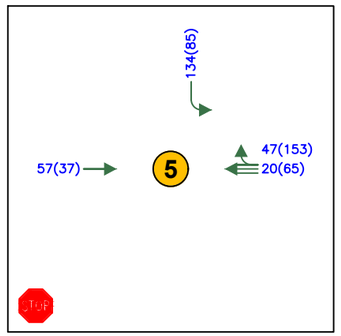




TIERRA PINTADA/STORMCLOUD



ARROYO VISTA/DRIVEWAY 1



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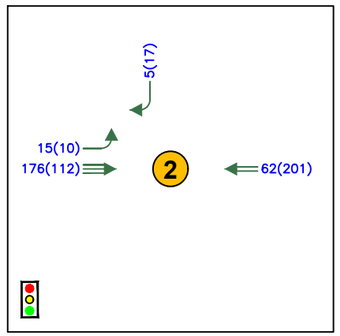
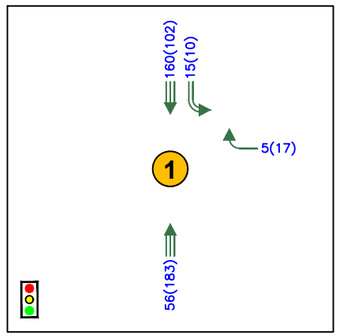


TIERRA PINTADA/ARROYO VISTA



ARROYO VISTA/LADERA

LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts

VI. TRAFFIC AND IMPROVEMENT ANALYSIS

The following section will discuss the results of the future year traffic analysis.

A. LEVEL OF SERVICE ANALYSIS

1. NO BUILD INTERSECTION CAPACITY ANALYSIS

The No Build analysis assumes the development is not constructed.

For the 2019 and 2024 No Build scenarios, the intersections were analyzed using Synchro 10. Table 7 and Table 8 shows the 2019 and 2024 No Build analysis results for signalized intersections. The results are shown graphically in Figure 6 and Figure 7. Synchro output is included in Appendix E.

a) *2019 No Build Scenario*

The analysis indicates all intersections will continue to operate at an overall acceptable level of service in the 2019 No Build scenario. The intersections are not expected to experience degrade in delay or LOS.

The northbound left leaving the Stadium again operates at poor level of service. As mentioned previously, this is due to the assumed protected-only left operation of the northbound left, due to the opposing dual southbound left turn lanes that are protected-only.

Table 7 – 2019 No Build Signalized Intersection Capacity Analysis Results

Signalized Intersections	2019 No Build AM Peak			2019 No Build PM Peak		
	Delay (sec.)	Max V/C	LOS	Delay (sec.)	Max V/C	LOS
Arroyo Vista and Ladera	15.6	0.73	B	14.5	0.70	B
Arroyo Vista and Tierra Pintada	21.3	0.68	C	20.7	0.68	C*
Tierra Pintada and Stormcloud	12.2	0.61	B	12.6	0.60	B
* - some movements LOS E						

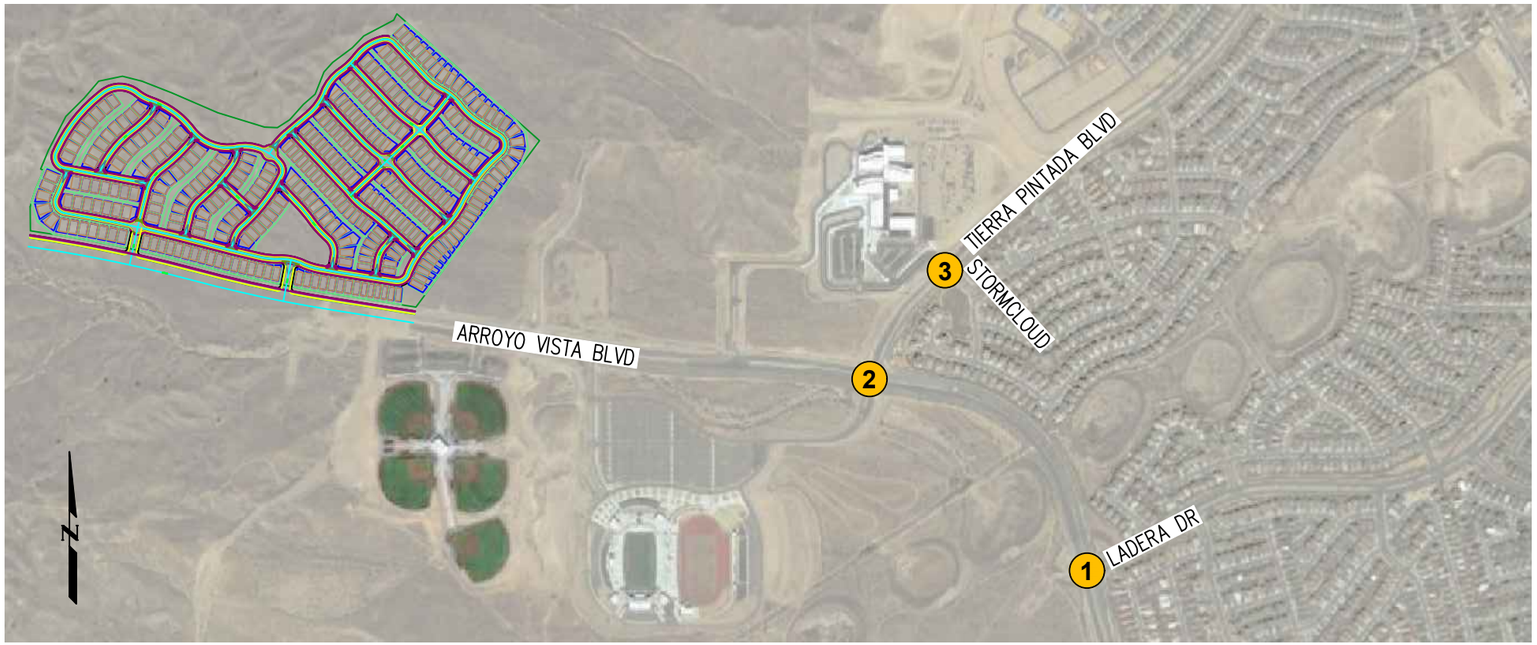
b) *2024 No Build Scenario*

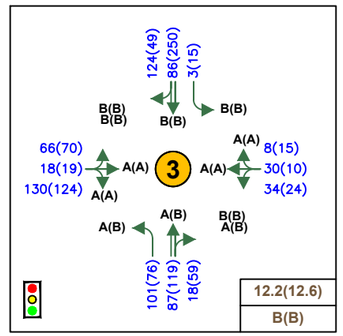
The analysis indicates all intersections will continue to operate at an overall acceptable level of service in the 2024 No Build scenario, although the northbound left leaving the Stadium again operates at poor level of service. As mentioned previously, this is due to the assumed protected-only left operation of the northbound left, due to the opposing

dual southbound left turn lanes that are protected-only. The volume for this movement is very low (1 vehicle).

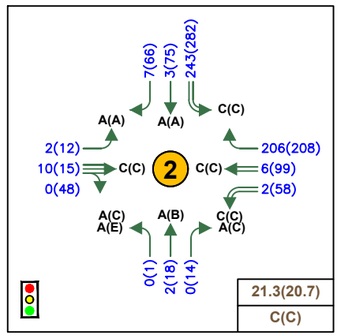
Table 8 – 2024 No Build Signalized Intersection Capacity Analysis Results

Signalized Intersections	2024 No Build AM Peak			2024 No Build PM Peak		
	Delay (sec.)	Max V/C	LOS	Delay (sec.)	Max V/C	LOS
Arroyo Vista and Ladera	16.0	0.76	B	15.0	0.73	B
Arroyo Vista and Tierra Pintada	21.5	0.72	C	21.3	0.71	C*
Tierra Pintada and Stormcloud	14.5	0.69	B	14.7	0.68	B
* - some movements LOS F						

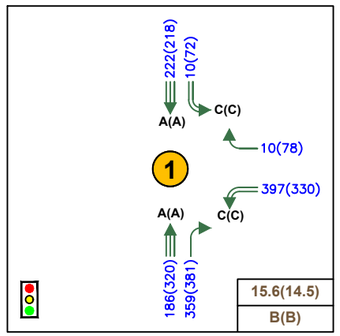




TIERRA PINTADA/STORMCLOUD



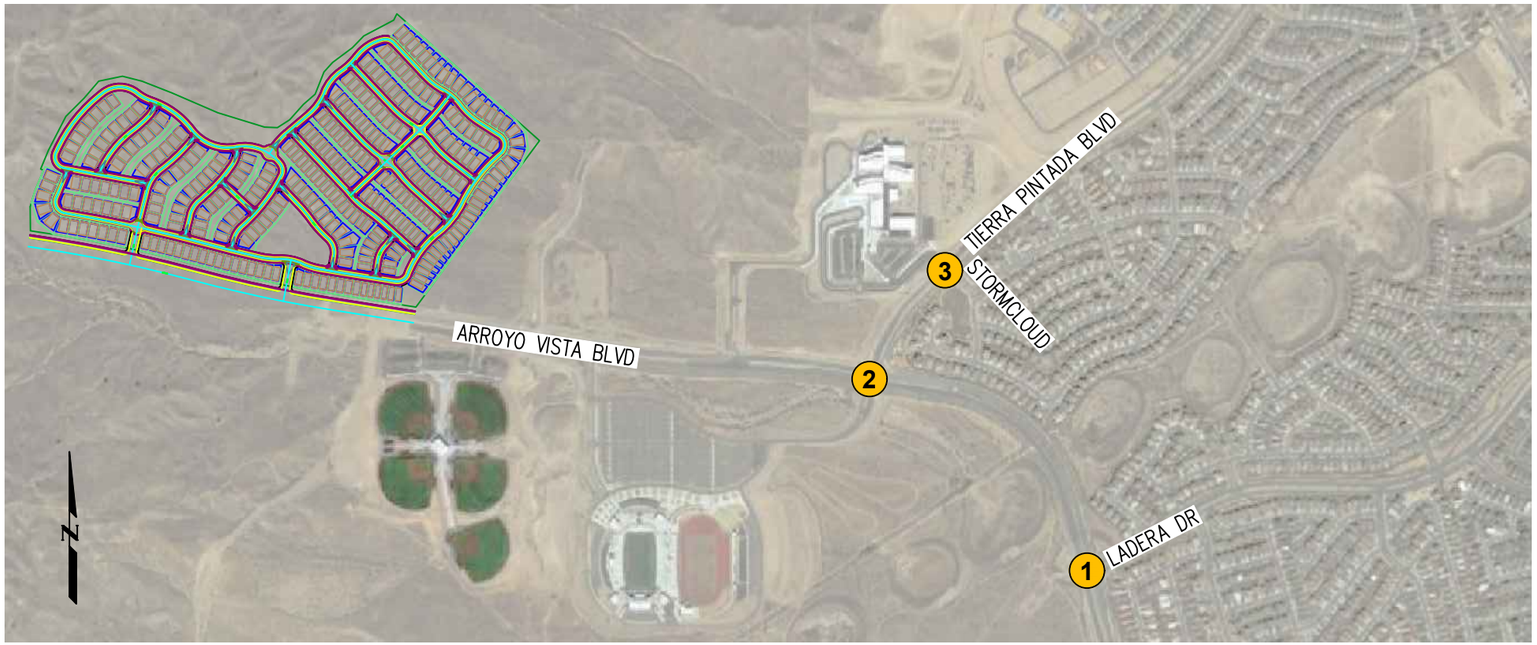
TIERRA PINTADA/ARROYO VISTA

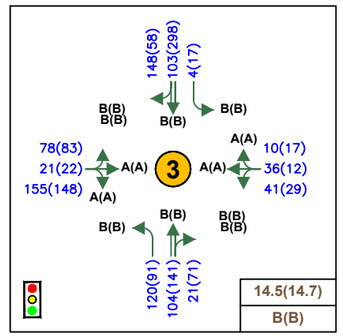


ARROYO VISTA/LADERA

LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)





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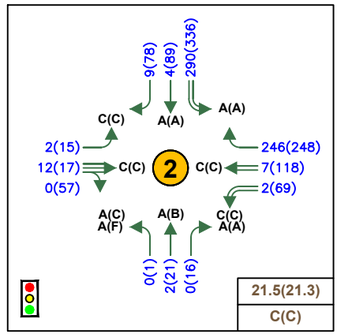
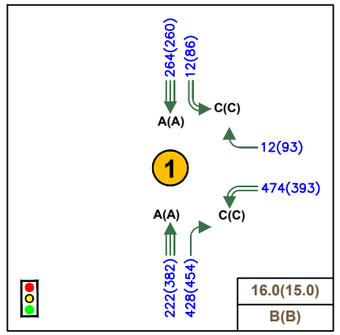


TIERRA PINTADA/ARROYO VISTA



ARROYO VISTA/LADERA

LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)

2. BUILD INTERSECTION CAPACITY ANALYSIS

The trips generated by the site (Table 6) were assigned to the intersections using the trip percentages and volumes assigned at each intersection shown in Figure 4 and Figure 5. These trips were added to the 2019 and 2024 No Build traffic projections in Figure 6.

a) *2019 Scenario*

Figure 8 is a summary of the 2019 Build Peak hour traffic projections, lane geometry, and movement and intersection level of service for the 2019 Build analysis. Table 9 and Table 10 show the 2019 Build analysis results for signalized and unsignalized intersections. Individual intersection output is included in Appendix F.

As with the No Build scenario, the signalized intersections continue to operate at an overall acceptable level of service in the 2019 Build scenario. The low-volume northbound left leaving the Stadium continues to operate with poor LOS.

Table 9 – 2019 Build Signalized Intersection Capacity Analysis Results

Signalized Intersections	2019 Build AM Peak			2019 Build PM Peak		
	Delay (sec.)	Max V/C	LOS	Delay (sec.)	Max V/C	LOS
Arroyo Vista and Ladera	13.7	0.73	B	12.7	0.70	B
Arroyo Vista and Tierra Pintada	24.0	0.71	C	22.9	0.69	C*
Tierra Pintada and Stormcloud	12.2	0.61	B	10.2	0.50	B
* - some movements LOS F						

The unsignalized intersections are expected to operate at an overall acceptable level of service in the 2019 Build scenario. The low-volume northbound left leaving the Stadium continues to operate at poor level of service.

Table 10 – 2019 Build Unsignalized Intersection Results

Intersection/Movement	2019 Build AM Peak				2019 Build PM Peak			
	Delay	v/c	Queue* (ft)	LOS	Delay	v/c	Queue* (ft)	LOS
Arroyo Vista and Driveway 1	6.5			A	3			A
SB Left	8.8	0.07	25	A	8.9	0.05	25	A
Arroyo Vista and Driveway 2	5.2			B	2.6			B
SB Left	10	0.18	25	B	10.3	0.13	25	B
* - HCM 95th percentile queue rounded to next 25-foot increment								

b) *2024 Build Scenario*

Figure 9 is a summary of the 2024 Build Peak hour traffic projections, lane geometry, and movement and intersection level of service for the 2024 Build analysis. Table 11 and Table 12 show the 2024 Build analysis results for signalized and unsignalized intersections. Individual intersection output is included in Appendix F.

As with the No Build scenario, the signalized intersections continue to operate at an overall acceptable level of service in the 2024 Build scenario.

Table 11 – 2024 Build Signalized Intersection Capacity Analysis Results

Signalized Intersections	2024 Build AM Peak			2024 Build PM Peak		
	Delay (sec.)	Max V/C	LOS	Delay (sec.)	Max V/C	LOS
Arroyo Vista and Ladera	14.5	0.76	B	13.5	0.73	B
Arroyo Vista and Tierra Pintada	24.5	0.74	C	23.5	0.73	C*
Tierra Pintada and Stormcloud	14.5	0.69	B	11.1	0.55	B
* - some movements LOS F						

The unsignalized intersections are expected to operate at an overall acceptable level of service in the 2024 Build scenario.

Table 12 – 2024 Build Unsignalized Intersection Results

Intersection/Movement	2024 Build AM Peak				2024 Build PM Peak			
	Delay	v/c	Queue* (ft)	LOS	Delay	v/c	Queue* (ft)	LOS
Arroyo Vista and Driveway 1 SB Left	6.5 8.8	0.07	25	A A	3 8.9	0.05	25	A A
Arroyo Vista and Driveway 2 SB Left	5.2 10	0.18	25	B B	2.6 10.3	0.13	25	B B
* - HCM 95th percentile queue rounded to next 25-foot increment								

a) *2040 Build Scenario*

In the future, Arroyo Vista is planned to extend to the west to Atrisco Vista Boulevard. Once this roadway is extended to the west, traffic from future development in Upper Petroglyphs will pass the site, as well as providing another route for traffic from the Inspiration development.

Forecast 2040 traffic volumes from the latest version of the MRCOG 2040 MTP model were acquired to evaluate future year operations, with Arroyo Vista extended to Atrisco Vista. The 2040 raw model forecast through volumes on Arroyo Vista across the frontage of the site is shown in the table below.

Table 13 – 2040 Traffic Volumes on Arroyo Vista across Site Frontage

Direction	AM Peak Hour	PM Peak Hour
Eastbound	680	360
Westbound	170	930

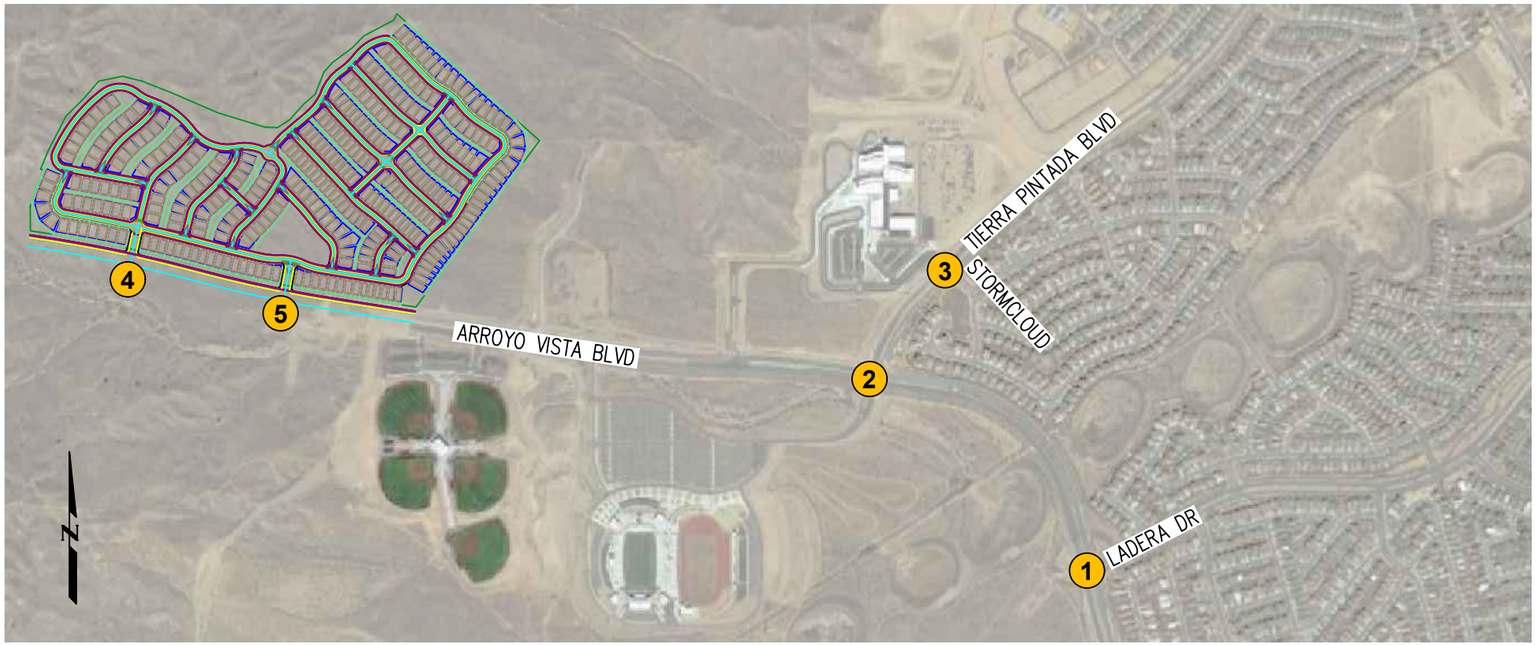
The Florida Department of Transportation has identified generalized tables indicating capacity of urban arterials (http://www.fdot.gov/planning/systems/programs/SM/los/pdfs/FDOT_2012_Generalized_Service_Volume_Tables.pdf). Table 7 in that document finds that the LOS D threshold for a 6-lane divided signalized arterial (3 lanes in each direction) ranges from 2,520 to 3,020 vehicles per hour. This table is also included in Appendix F. This indicates the v/c ratio for the 3 westbound lanes (those passing the entrances) is 0.31 – 0.37.

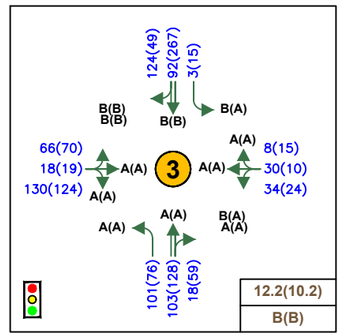
Table 14 show the 2040 Build analysis results for signalized and unsignalized intersections. Individual intersection output is included in Appendix F.

Table 14 – 2040 Build Unsignalized Intersection Results

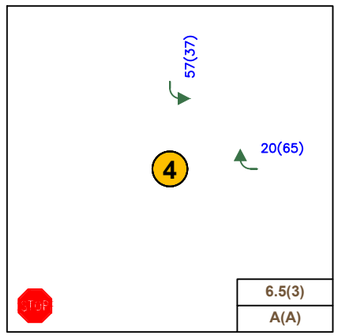
Intersection/Movement	2040 Build AM Peak				2040 Build PM Peak			
	Delay	v/c	Queue* (ft)	LOS	Delay	v/c	Queue* (ft)	LOS
Arroyo Vista and Driveway 1	0.8			B	0.8			D
EB Left	9.0	0.001	0	A	18.4	0.01	0	C
SB Left/Right	12.8	0.13	25	B	30.9	0.24	25	D
Arroyo Vista and Driveway 2	1.9			C	2.7			E
EB Left	9.2	0.01	0	A	19.5	0.03	25	C
SB Left/Right	15.5	0.32	50	C	49.9	0.57	75	E
* - HCM 95th percentile queue rounded to next 25-foot increment								

The analysis finds the entrances will operate at overall acceptable LOS, although the traffic exiting Driveway 2 (the entrance with the highest exiting volume) will operate at LOS E.





TIERRA PINTADA/STORMCLOUD



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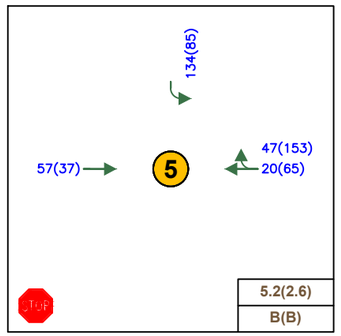

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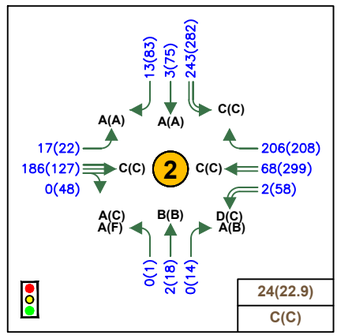

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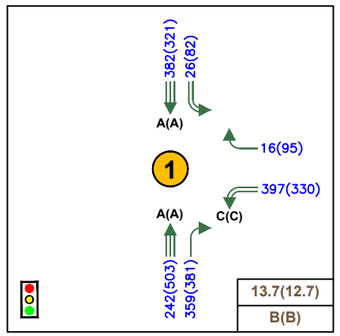
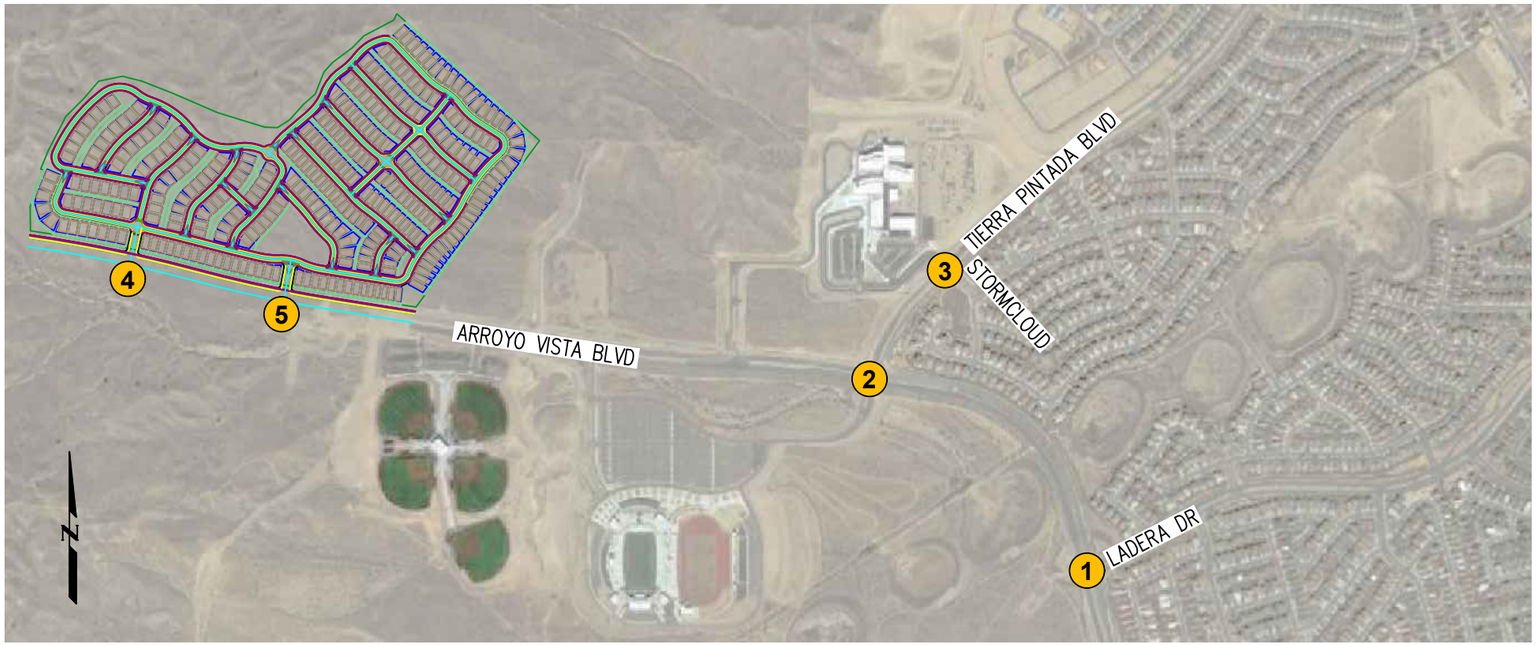
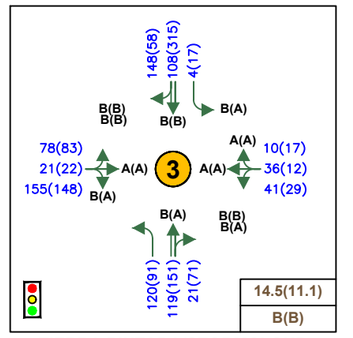


ARROYO VISTA/LADERA

LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)





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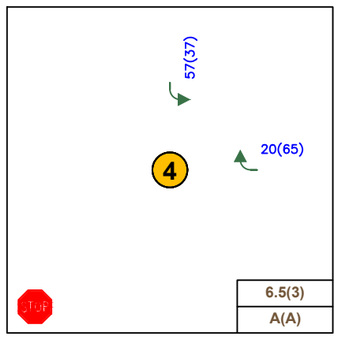
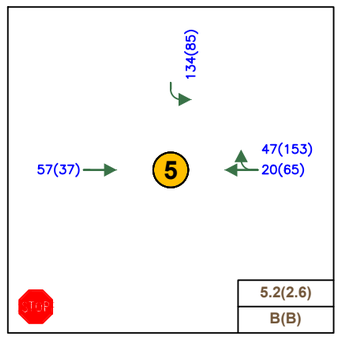


ARROYO VISTA/DRIVEWAY 1



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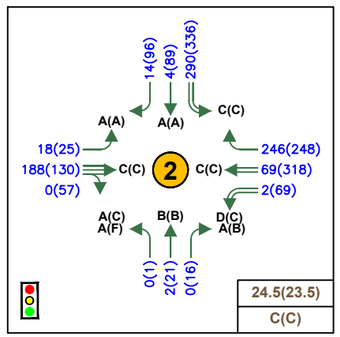

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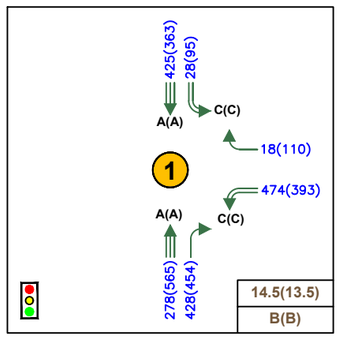

ARROYO VISTA/LADERA

LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)

VII. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The traffic analysis shows that under existing 2018, 2019 and 2024 No Build, and 2019 and 2024 Build, all intersections will operate at an acceptable level of service (LOS). Construction of the Inspiration Subdivision development will not result in dramatic increases in traffic delay or degrade in LOS.

The results also found that the entrances to the development will operate at acceptable LOS in the 2040 horizon year when Arroyo Vista is extended up the escarpment to Atrisco Vista and development occurs in Upper Petroglyphs. The analysis found the 2040 v/c ratio for the 6-lane Arroyo Vista would range from 0.31 – 0.37, indicating low congestion.

The intersection of Arroyo Vista Blvd and Tierra Pintada Blvd experiences a LOS E and F in the PM Peak for the northbound left movement, however this is considered acceptable due to the low volumes utilizing this movement. This movement serves the APS Nusenda Community Stadium, and the traffic during non-events is low. The high delay is due to the left turn operating as a protected-only left turn, due to the opposing dual southbound left turn lanes.

As the v/c ratio on Arroyo Vista is low, a right turn lane into the site is not necessary as drivers proceeding westbound past the site have sufficient capacity in the inside two through lanes. If the forecast through traffic were to utilize only the two inside lanes, the v/c ratio would range from 0.47 – 0.57, indicating substantial remaining capacity. As there is sufficient capacity in the adjacent through lanes, a dedicated right turn lane into the site is not recommended.

APPENDIX A
SCOPING LETTER

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Eric Wrage, PE, PTOE
Bohannan Huston
7500 Jefferson St. NE
Albuquerque, NM 87109

MEETING DATE: August 17, 2018

ATTENDEES: Consultant Team; COA Transportation Development Review

PROJECT: Inspiration, Zone Atlas # J-8

REQUESTED CITY ACTION: ___ Zone Change ___ Site Development Plan

_X_ Subdivision ___ Building Permit ___ Sector Plan ___ Sector Plan Amendment

___ Curb Cut Permit ___ Conditional Use ___ Annexation ___ Site Plan Amendment

ASSOCIATED APPLICATION: 340 lot gated community

SCOPE OF REPORT:
The Traffic Impact Study should follow the standard report format, which is outlined in the DPM. The following supplemental information is provided for the preparation of this specific study.

1. Trip Generation - Use Trip Generation Manual, 10th Edition.
   Local data may be used for certain land use types as determined by staff.
   Consultant to provide.

2. Appropriate study area:
   Signalized Intersections;
   a. Arroyo Vista Blvd. and Tierra Pintada Blvd.
   b. Arroyo Vista Blvd. and Ladera Dr.
   c. Tierra Pintada Blvd. and Storm Cloud Ave.

   Unsignalized Intersections;
   a. None

   Driveway Intersections: all site drives.

3. Intersection turning movement counts
   Study Time – 7-9 a.m. peak hour, 4-6 p.m. peak hour
   Consultant to provide for all intersections listed above.

4. Type of intersection progression and factors to be used.

Type III arrival type (see “2016 Highway Capacity Manual” or equivalent as approved by staff). Unless otherwise justified, peak hour factors and % heavy commercial should be taken directly from the MRCOG turning movement data provided or as calculated from current count data by consultant.

5. Boundaries of area to be used for trip distribution.
   City Wide - residential, office or industrial;

6. Basis for trip distribution.

Residential – Use inverse relationship based upon distance and employment. Use employment data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Office/Industrial - Use inverse relationship based upon distance and population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Commercial - Use relationship based upon population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Residential - $Ts = (Tt) (Se / D) / (Se / D)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Se = Subarea Employment
D = Distance from Development to Subarea

Office/Industrial - $Ts = (Tt) (Sp / D) / (Sp / D)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population
D = Distance from Development to Subarea

Commercial -
$Ts = (Tt) (Sp) / (Sp)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population

7. Traffic Assignment. Logical routing on the major street system.

8. Proposed developments which have been approved but not constructed that are to be Included in the analyses. Projects in the area include:
   a. N/A

9. Method of intersection capacity analysis - planning or operational (see “2016 Highway Capacity Manual” or equivalent [i.e. HCS, Synchro, Teapac, etc.] as approved by staff). Must use latest version of design software and/or current edition of design manual.
   Implementation Year:

10. Traffic conditions for analysis:
    a. Existing analysis __ yes _X_ no - year (xxxx);
    b. Phase implementation year(s) without proposed development – 2019

c. Phase implementation year(s) with proposed development – 2019
d. Project completion year without proposed development – 2024
e. Project completion year with proposed development – 2024
f. Other –

11. Background traffic growth.
    Method: use 10-year historical growth based on standard data from the MRCOG Traffic Flow Maps. Minimum growth rate to be used is 1/2%.

12. Planned (programmed) traffic improvements.
    List planned CIP improvements in study area and projected project implementation year:
    a. Project – Location (Implementation Year)

13. Items to be included in the study:
    a. Intersection analysis.
    b. Signal progression - An analysis is required if the driveway analysis indicates a traffic signal is possibly warranted. Analysis Method:
    c. Arterial LOS analysis;
    d. Recommended street, intersection and signal improvements.
    e. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility.
    f. Transportation system impacts.
    g. Other mitigating measures.
    h. Accident analyses __ yes _X_ no; Location(s):
    i. Weaving analyses __ yes _X_ no; Location(s):

14. Other:

SUBMITTAL REQUIREMENTS:

1. Number of copies of report required
   a. 1 paper copy
   b. 1 digital copy
2. Submittal Fee – $1300 for up to 3 reviews

The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 924-3633.

_____ _____

Ernest Armijo, P.E. Date
Senior Engineer for
Transportation Development Section

via: email

C: TIS Task Force Attendees, file

APPENDIX B
EXISTING TRAFFIC COUNTS

Mike Henderson Consulting, LLC

5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

Collected by: MH

File Name : Arroyo Vista & Ladera
Site Code :
Start Date : 9/25/2018
Page No : 1

Groups Printed- Car - Truck

	Eastbound				Ladera Dr Westbound				Arroyo Vista Blvd Northbound				Arroyo Vista Blvd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30	0	0	0	0	69	0	4	73	0	31	41	72	2	35	0	37	182
06:45	0	0	0	0	105	0	1	106	0	27	44	71	1	39	0	40	217
Total	0	0	0	0	174	0	5	179	0	58	85	143	3	74	0	77	399
07:00	0	0	0	0	129	0	0	129	0	40	71	111	1	59	0	60	300
07:15	0	0	0	0	117	0	6	123	0	47	110	157	4	60	0	64	344
07:30	0	0	0	0	63	0	1	64	0	47	89	136	3	62	0	65	265
07:45	0	0	0	0	73	0	3	76	0	45	75	120	2	32	0	34	230
Total	0	0	0	0	382	0	10	392	0	179	345	524	10	213	0	223	1139
08:00	0	0	0	0	52	0	6	58	0	30	78	108	3	39	0	42	208
08:15	0	0	0	0	65	0	14	79	0	40	61	101	5	38	0	43	223
08:30	0	0	0	0	80	0	30	110	0	59	109	168	29	57	0	86	364
08:45	0	0	0	0	75	0	2	77	0	24	70	94	19	55	0	74	245
Total	0	0	0	0	272	0	52	324	0	153	318	471	56	189	0	245	1040
09:00	0	0	0	0	49	0	3	52	0	22	24	46	4	19	0	23	121
09:15	0	0	0	0	36	0	1	37	0	24	50	74	4	27	0	31	142
*** BREAK ***																	
Total	0	0	0	0	85	0	4	89	0	46	74	120	8	46	0	54	263
*** BREAK ***																	
15:00	0	0	0	0	43	0	8	51	0	31	69	100	2	51	0	53	204
15:15	0	0	0	0	71	0	10	81	0	52	103	155	4	35	0	39	275
15:30	0	0	0	0	58	0	24	82	0	60	126	186	1	33	0	34	302
15:45	0	0	0	0	116	0	29	145	0	95	65	160	25	62	0	87	392
Total	0	0	0	0	288	0	71	359	0	238	363	601	32	181	0	213	1173
16:00	0	0	0	0	72	0	12	84	0	71	96	167	38	69	0	107	358
16:15	0	0	0	0	71	0	10	81	0	82	79	161	5	46	0	51	293
16:30	0	0	0	0	66	0	10	76	0	51	81	132	4	51	0	55	263
16:45	0	0	0	0	78	0	12	90	0	66	101	167	14	48	0	62	319
Total	0	0	0	0	287	0	44	331	0	270	357	627	61	214	0	275	1233
17:00	0	0	0	0	67	0	6	73	0	55	97	152	9	53	0	62	287
17:15	0	0	0	0	67	0	8	75	0	71	95	166	10	28	0	38	279
17:30	0	0	0	0	57	0	9	66	0	49	98	147	11	46	0	57	270
17:45	0	0	0	0	65	0	4	69	0	45	93	138	14	53	0	67	274
Total	0	0	0	0	256	0	27	283	0	220	383	603	44	180	0	224	1110
Grand Total	0	0	0	0	1744	0	213	1957	0	1164	1925	3089	214	1097	0	1311	6357
Apprch %	0	0	0		89.1	0	10.9		0	37.7	62.3		16.3	83.7	0		
Total %	0	0	0	0	27.4	0	3.4	30.8	0	18.3	30.3	48.6	3.4	17.3	0	20.6	
Car	0	0	0	0	1715	0	209	1924	0	1123	1903	3026	209	1058	0	1267	6217
% Car	0	0	0	0	98.3	0	98.1	98.3	0	96.5	98.9	98	97.7	96.4	0	96.6	97.8
Truck	0	0	0	0	29	0	4	33	0	41	22	63	5	39	0	44	140
% Truck	0	0	0	0	1.7	0	1.9	1.7	0	3.5	1.1	2	2.3	3.6	0	3.4	2.2

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	Eastbound				Ladera Dr Westbound				Arroyo Vista Blvd Northbound				Arroyo Vista Blvd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	0	0	0	0	129	0	0	129	0	40	71	111	1	59	0	60	300
07:15	0	0	0	0	117	0	6	123	0	47	110	157	4	60	0	64	344
07:30	0	0	0	0	63	0	1	64	0	47	89	136	3	62	0	65	265
07:45	0	0	0	0	73	0	3	76	0	45	75	120	2	32	0	34	230
Total Volume	0	0	0	0	382	0	10	392	0	179	345	524	10	213	0	223	1139
% App. Total	0	0	0		97.4	0	2.6		0	34.2	65.8		4.5	95.5	0		
PHF	.000	.000	.000	.000	.740	.000	.417	.760	.000	.952	.784	.834	.625	.859	.000	.858	.828
Car	0	0	0	0	377	0	10	387	0	171	341	512	10	209	0	219	1118
% Car	0	0	0	0	98.7	0	100	98.7	0	95.5	98.8	97.7	100	98.1	0	98.2	98.2
Truck	0	0	0	0	5	0	0	5	0	8	4	12	0	4	0	4	21
% Truck	0	0	0	0	1.3	0	0	1.3	0	4.5	1.2	2.3	0	1.9	0	1.8	1.8
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:30																	
15:30	0	0	0	0	58	0	24	82	0	60	126	186	1	33	0	34	302
15:45	0	0	0	0	116	0	29	145	0	95	65	160	25	62	0	87	392
16:00	0	0	0	0	72	0	12	84	0	71	96	167	38	69	0	107	358
16:15	0	0	0	0	71	0	10	81	0	82	79	161	5	46	0	51	293
Total Volume	0	0	0	0	317	0	75	392	0	308	366	674	69	210	0	279	1345
% App. Total	0	0	0		80.9	0	19.1		0	45.7	54.3		24.7	75.3	0		
PHF	.000	.000	.000	.000	.683	.000	.647	.676	.000	.811	.726	.906	.454	.761	.000	.652	.858
Car	0	0	0	0	307	0	72	379	0	304	363	667	67	205	0	272	1318
% Car	0	0	0	0	96.8	0	96.0	96.7	0	98.7	99.2	99.0	97.1	97.6	0	97.5	98.0
Truck	0	0	0	0	10	0	3	13	0	4	3	7	2	5	0	7	27
% Truck	0	0	0	0	3.2	0	4.0	3.3	0	1.3	0.8	1.0	2.9	2.4	0	2.5	2.0

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Groups Printed- Car - Truck

	Arroyo Vista Blvd Eastbound				Arroyo Vista Blvd Westbound				Tierra Pintada Blvd Northbound				Tierra Pintada Blvd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30	0	0	0	0	0	0	33	33	0	0	0	0	36	0	0	36	69
06:45	0	0	0	0	0	0	31	31	0	0	0	0	42	0	0	42	73
Total	0	0	0	0	0	0	64	64	0	0	0	0	78	0	0	78	142
07:00	0	0	0	0	1	0	40	41	0	0	0	0	63	0	0	63	104
07:15	0	0	0	0	0	0	54	54	0	0	0	0	65	0	0	65	119
07:30	0	0	0	0	0	1	49	50	0	0	0	0	60	0	2	62	112
07:45	4	0	0	4	0	2	45	47	0	0	0	0	37	0	1	38	89
Total	4	0	0	4	1	3	188	192	0	0	0	0	225	0	3	228	424
08:00	1	1	0	2	0	1	35	36	0	0	0	0	42	1	0	43	81
08:15	0	0	0	0	0	0	59	59	0	1	0	1	46	1	0	47	107
08:30	0	6	0	6	1	3	83	87	0	0	0	0	82	0	7	89	182
08:45	1	3	0	4	1	2	21	24	0	1	0	1	64	1	0	65	94
Total	2	10	0	12	2	6	198	206	0	2	0	2	234	3	7	244	464
09:00	1	1	0	2	0	3	21	24	0	0	0	0	21	0	1	22	48
09:15	0	1	0	1	0	0	30	30	0	1	0	1	30	1	0	31	63
*** BREAK ***																	
Total	1	2	0	3	0	3	51	54	0	1	0	1	51	1	1	53	111
*** BREAK ***																	
15:00	0	1	0	1	7	0	30	37	0	1	1	2	52	6	1	59	99
15:15	1	0	1	2	5	3	53	61	0	1	1	2	34	4	0	38	103
15:30	1	0	2	3	11	8	63	82	0	0	0	0	33	6	2	41	126
15:45	1	1	10	12	17	21	84	122	0	0	3	3	93	19	9	121	258
Total	3	2	13	18	40	32	230	302	0	2	5	7	212	35	12	259	586
16:00	3	9	13	25	21	28	34	83	0	2	2	4	85	29	13	127	239
16:15	4	2	15	21	10	27	49	86	1	4	3	8	44	17	20	81	196
16:30	4	2	8	14	8	19	33	60	0	11	5	16	49	7	21	77	167
16:45	4	3	4	11	11	17	56	84	0	16	9	25	50	7	13	70	190
Total	15	16	40	71	50	91	172	313	1	33	19	53	228	60	67	355	792
17:00	0	2	2	4	4	14	42	60	1	5	9	15	50	7	4	61	140
17:15	2	2	1	5	9	10	58	77	1	4	5	10	33	4	3	40	132
17:30	0	1	3	4	4	11	45	60	0	2	3	5	52	5	6	63	132
17:45	2	2	2	6	10	8	25	43	0	72	36	108	34	5	6	45	202
Total	4	7	8	19	27	43	170	240	2	83	53	138	169	21	19	209	606
Grand Total	29	37	61	127	120	178	1073	1371	3	121	77	201	1197	120	109	1426	3125
Apprch %	22.8	29.1	48		8.8	13	78.3		1.5	60.2	38.3		83.9	8.4	7.6		
Total %	0.9	1.2	2	4.1	3.8	5.7	34.3	43.9	0.1	3.9	2.5	6.4	38.3	3.8	3.5	45.6	
Car	25	26	61	112	116	167	1036	1319	3	120	77	200	1160	119	100	1379	3010
% Car	86.2	70.3	100	88.2	96.7	93.8	96.6	96.2	100	99.2	100	99.5	96.9	99.2	91.7	96.7	96.3
Truck	4	11	0	15	4	11	37	52	0	1	0	1	37	1	9	47	115
% Truck	13.8	29.7	0	11.8	3.3	6.2	3.4	3.8	0	0.8	0	0.5	3.1	0.8	8.3	3.3	3.7

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	Arroyo Vista Blvd Eastbound				Arroyo Vista Blvd Westbound				Tierra Pintada Blvd Northbound				Tierra Pintada Blvd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	1	1	0	2	0	1	35	36	0	0	0	0	42	1	0	43	81
08:15	0	0	0	0	0	0	59	59	0	1	0	1	46	1	0	47	107
08:30	0	6	0	6	1	3	83	87	0	0	0	0	82	0	7	89	182
08:45	1	3	0	4	1	2	21	24	0	1	0	1	64	1	0	65	94
Total Volume	2	10	0	12	2	6	198	206	0	2	0	2	234	3	7	244	464
% App. Total	16.7	83.3	0		1	2.9	96.1		0	100	0		95.9	1.2	2.9		
PHF	.500	.417	.000	.500	.500	.500	.596	.592	.000	.500	.000	.500	.713	.750	.250	.685	.637
Car	2	3	0	5	1	2	190	193	0	2	0	2	226	3	1	230	430
% Car	100	30.0	0	41.7	50.0	33.3	96.0	93.7	0	100	0	100	96.6	100	14.3	94.3	92.7
Truck	0	7	0	7	1	4	8	13	0	0	0	0	8	0	6	14	34
% Truck	0	70.0	0	58.3	50.0	66.7	4.0	6.3	0	0	0	0	3.4	0	85.7	5.7	7.3
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:45																	
15:45	1	1	10	12	17	21	84	122	0	0	3	3	93	19	9	121	258
16:00	3	9	13	25	21	28	34	83	0	2	2	4	85	29	13	127	239
16:15	4	2	15	21	10	27	49	86	1	4	3	8	44	17	20	81	196
16:30	4	2	8	14	8	19	33	60	0	11	5	16	49	7	21	77	167
Total Volume	12	14	46	72	56	95	200	351	1	17	13	31	271	72	63	406	860
% App. Total	16.7	19.4	63.9		16	27.1	57		3.2	54.8	41.9		66.7	17.7	15.5		
PHF	.750	.389	.767	.720	.667	.848	.595	.719	.250	.386	.650	.484	.728	.621	.750	.799	.833
Car	8	10	46	64	56	92	199	347	1	17	13	31	269	72	61	402	844
% Car	66.7	71.4	100	88.9	100	96.8	99.5	98.9	100	100	100	100	99.3	100	96.8	99.0	98.1
Truck	4	4	0	8	0	3	1	4	0	0	0	0	2	0	2	4	16
% Truck	33.3	28.6	0	11.1	0	3.2	0.5	1.1	0	0	0	0	0.7	0	3.2	1.0	1.9

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File Name : Tierra Pintada & Stormcloud
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Groups Printed- Car - Truck

	School Entrance Eastbound				Stormcloud Ave Westbound				Tierra Pintada Blvd Northbound				Tierra Pintada Blvd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30	0	0	2	2	14	0	3	17	2	24	4	30	0	20	1	21	70
06:45	0	0	0	0	12	1	0	13	4	27	3	34	0	30	1	31	78
Total	0	0	2	2	26	1	3	30	6	51	7	64	0	50	2	52	148
07:00	2	0	2	4	33	0	1	34	2	31	4	37	1	27	2	30	105
07:15	1	2	12	15	20	2	5	27	8	41	5	54	0	33	15	48	144
07:30	8	1	5	14	20	2	8	30	3	43	2	48	0	38	6	44	136
07:45	2	0	2	4	10	1	2	13	9	39	4	52	1	26	5	32	101
Total	13	3	21	37	83	5	16	104	22	154	15	191	2	124	28	154	486
08:00	2	1	6	9	12	0	1	13	10	23	1	34	2	23	14	39	95
08:15	5	0	16	21	8	9	3	20	26	22	7	55	1	27	34	62	158
08:30	32	9	66	107	6	18	3	27	57	26	2	85	0	19	64	83	302
08:45	24	7	37	68	7	2	1	10	4	13	7	24	0	14	7	21	123
Total	63	17	125	205	33	29	8	70	97	84	17	198	3	83	119	205	678
09:00	2	0	3	5	4	0	0	4	2	17	3	22	2	16	2	20	51
09:15	0	0	2	2	7	0	0	7	5	24	2	31	1	20	1	22	62
*** BREAK ***																	
Total	2	0	5	7	11	0	0	11	7	41	5	53	3	36	3	42	113
*** BREAK ***																	
15:00	1	0	1	2	3	0	1	4	8	19	5	32	1	54	6	61	99
15:15	1	0	1	2	6	4	2	12	14	25	13	52	2	32	16	50	116
15:30	0	0	1	1	2	8	1	11	34	22	9	65	5	46	30	81	158
15:45	17	13	60	90	11	2	6	19	33	30	23	86	4	59	14	77	272
Total	19	13	63	95	22	14	10	46	89	96	50	235	12	191	66	269	645
16:00	42	5	47	94	4	0	6	10	4	25	13	42	3	65	3	71	217
16:15	8	0	11	19	6	0	1	7	2	37	12	51	2	70	0	72	149
16:30	4	0	6	10	7	1	2	10	4	38	10	52	0	61	9	70	142
16:45	8	4	9	21	7	5	1	13	3	57	15	75	2	54	15	71	180
Total	62	9	73	144	24	6	10	40	13	157	50	220	7	250	27	284	688
17:00	12	4	11	27	7	1	1	9	6	33	8	47	1	38	5	44	127
17:15	8	1	5	14	8	0	1	9	8	39	17	64	5	32	1	38	125
17:30	3	2	14	19	7	0	2	9	5	23	18	46	6	40	3	49	123
17:45	3	0	4	7	10	0	2	12	0	90	10	100	3	28	0	31	150
Total	26	7	34	67	32	1	6	39	19	185	53	257	15	138	9	162	525
Grand Total	185	49	323	557	231	56	53	340	253	768	197	1218	42	872	254	1168	3283
Apprch %	33.2	8.8	58		67.9	16.5	15.6		20.8	63.1	16.2		3.6	74.7	21.7		
Total %	5.6	1.5	9.8	17	7	1.7	1.6	10.4	7.7	23.4	6	37.1	1.3	26.6	7.7	35.6	
Car	185	49	321	555	231	56	52	339	252	734	196	1182	42	837	253	1132	3208
% Car	100	100	99.4	99.6	100	100	98.1	99.7	99.6	95.6	99.5	97	100	96	99.6	96.9	97.7
Truck	0	0	2	2	0	0	1	1	1	34	1	36	0	35	1	36	75
% Truck	0	0	0.6	0.4	0	0	1.9	0.3	0.4	4.4	0.5	3	0	4	0.4	3.1	2.3

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	School Entrance Eastbound				Stormcloud Ave Westbound				Tierra Pintada Blvd Northbound				Tierra Pintada Blvd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	2	1	6	9	12	0	1	13	10	23	1	34	2	23	14	39	95
08:15	5	0	16	21	8	9	3	20	26	22	7	55	1	27	34	62	158
08:30	32	9	66	107	6	18	3	27	57	26	2	85	0	19	64	83	302
08:45	24	7	37	68	7	2	1	10	4	13	7	24	0	14	7	21	123
Total Volume	63	17	125	205	33	29	8	70	97	84	17	198	3	83	119	205	678
% App. Total	30.7	8.3	61		47.1	41.4	11.4		49	42.4	8.6		1.5	40.5	58		
PHF	.492	.472	.473	.479	.688	.403	.667	.648	.425	.808	.607	.582	.375	.769	.465	.617	.561
Car	63	17	125	205	33	29	8	70	97	76	16	189	3	72	119	194	658
% Car	100	100	100	100	100	100	100	100	100	90.5	94.1	95.5	100	86.7	100	94.6	97.1
Truck	0	0	0	0	0	0	0	0	0	8	1	9	0	11	0	11	20
% Truck	0	0	0	0	0	0	0	0	0	9.5	5.9	4.5	0	13.3	0	5.4	2.9
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:30																	
15:30	0	0	1	1	2	8	1	11	34	22	9	65	5	46	30	81	158
15:45	17	13	60	90	11	2	6	19	33	30	23	86	4	59	14	77	272
16:00	42	5	47	94	4	0	6	10	4	25	13	42	3	65	3	71	217
16:15	8	0	11	19	6	0	1	7	2	37	12	51	2	70	0	72	149
Total Volume	67	18	119	204	23	10	14	47	73	114	57	244	14	240	47	301	796
% App. Total	32.8	8.8	58.3		48.9	21.3	29.8		29.9	46.7	23.4		4.7	79.7	15.6		
PHF	.399	.346	.496	.543	.523	.313	.583	.618	.537	.770	.620	.709	.700	.857	.392	.929	.732
Car	67	18	119	204	23	10	14	47	73	109	57	239	14	236	46	296	786
% Car	100	100	100	100	100	100	100	100	100	95.6	100	98.0	100	98.3	97.9	98.3	98.7
Truck	0	0	0	0	0	0	0	0	0	5	0	5	0	4	1	5	10
% Truck	0	0	0	0	0	0	0	0	0	4.4	0	2.0	0	1.7	2.1	1.7	1.3

APPENDIX C
2018 EXISTING INTERSECTION CAPACITY ANALYSIS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	382	10	179	345	10	213
Future Volume (veh/h)	382	10	179	345	10	213
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1870	1870
Adj Flow Rate, veh/h	460	0	216	0	12	257
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	3	3	2	2
Cap, veh/h	632		2998		52	3457
Arrive On Green	0.18	0.00	0.59	0.00	0.02	0.68
Sat Flow, veh/h	3456	1585	5233	1572	3456	5274
Grp Volume(v), veh/h	460	0	216	0	12	257
Grp Sat Flow(s),veh/h/ln	1728	1585	1689	1572	1728	1702
Q Serve(g_s), s	8.1	0.0	1.2	0.0	0.2	1.1
Cycle Q Clear(g_c), s	8.1	0.0	1.2	0.0	0.2	1.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	632		2998		52	3457
V/C Ratio(X)	0.73		0.07		0.23	0.07
Avail Cap(c_a), veh/h	2017		2998		618	3457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	5.6	0.0	31.3	3.5
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.0	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.3	0.0	0.1	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.4	0.0	5.6	0.0	33.5	3.6
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	460	A	216	A		269
Approach Delay, s/veh	26.4		5.6			4.9
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.5	42.5			48.0	16.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	2.2	3.2			3.1	10.1
Green Ext Time (p_c), s	0.0	1.4			1.9	1.7

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	10	0	2	6	198	0	2	0	234	3	7
Future Volume (veh/h)	2	10	0	2	6	198	0	2	0	234	3	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1811	1811	1811
Adj Flow Rate, veh/h	3	16	0	3	9	0	0	3	0	366	5	11
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	6	6	6
Cap, veh/h	186	158	0	14	110		3	863	738	542	1273	1085
Arrive On Green	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.45	0.00	0.16	0.70	0.70
Sat Flow, veh/h	1725	5107	0	3346	3441	1535	1810	1900	1610	3346	1811	1535
Grp Volume(v), veh/h	3	16	0	3	9	0	0	3	0	366	5	11
Grp Sat Flow(s),veh/h/ln	1725	1648	0	1673	1721	1535	1810	1900	1610	1673	1811	1535
Q Serve(g_s), s	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5.3	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5.3	0.0	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	158	0	14	110		3	863	738	542	1273	1085
V/C Ratio(X)	0.02	0.10	0.00	0.22	0.08		0.00	0.00	0.00	0.68	0.00	0.01
Avail Cap(c_a), veh/h	429	1863	0	550	1363		297	863	738	1326	1273	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	24.3	0.0	25.7	24.3	0.0	0.0	7.7	0.0	20.4	2.3	2.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	7.9	0.3	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	24.6	0.0	33.5	24.6	0.0	0.0	7.7	0.0	21.9	2.3	2.2
LnGrp LOS	C	C	A	C	C		A	A	A	C	A	A
Approach Vol, veh/h		19			12	A		3			382	
Approach Delay, s/veh		24.5			26.8			7.7			21.1	
Approach LOS		C			C			A			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	28.0	4.7	6.2	0.0	40.9	4.7	6.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	7.3	2.0	2.0	2.2	0.0	2.1	2.1	2.1
Green Ext Time (p_c), s	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	17	125	33	29	8	97	84	17	3	83	119
Future Volume (veh/h)	63	17	125	33	29	8	97	84	17	3	83	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1826	1826	1826	1811	1811	1811
Adj Flow Rate, veh/h	111	30	219	58	51	14	170	147	30	5	146	209
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Percent Heavy Veh, %	0	0	0	0	0	0	5	5	5	6	6	6
Cap, veh/h	239	78	303	323	257	57	480	948	189	463	391	349
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.11	0.33	0.33	0.01	0.23	0.23
Sat Flow, veh/h	371	247	960	590	815	180	1739	2882	575	1725	1721	1535
Grp Volume(v), veh/h	360	0	0	123	0	0	170	87	90	5	146	209
Grp Sat Flow(s),veh/h/ln	1579	0	0	1584	0	0	1739	1735	1722	1725	1721	1535
Q Serve(g_s), s	5.0	0.0	0.0	0.0	0.0	0.0	2.6	1.4	1.4	0.1	2.8	4.7
Cycle Q Clear(g_c), s	7.7	0.0	0.0	1.9	0.0	0.0	2.6	1.4	1.4	0.1	2.8	4.7
Prop In Lane	0.31		0.61	0.47		0.11	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	620	0	0	637	0	0	480	570	566	463	391	349
V/C Ratio(X)	0.58	0.00	0.00	0.19	0.00	0.00	0.35	0.15	0.16	0.01	0.37	0.60
Avail Cap(c_a), veh/h	1666	0	0	1607	0	0	808	1366	1356	786	1177	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	0.0	0.0	9.7	0.0	0.0	9.0	9.2	9.2	11.4	12.6	13.4
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	0.4	0.1	0.1	0.0	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.6	0.0	0.0	0.8	0.4	0.4	0.0	0.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.5	0.0	0.0	9.9	0.0	0.0	9.5	9.3	9.3	11.4	13.2	15.0
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	B	B
Approach Vol, veh/h		360			123			347			360	
Approach Delay, s/veh		12.5			9.9			9.4			14.3	
Approach LOS		B			A			A			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	16.7	4.8	17.2	16.7	8.7	13.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	3.9	2.1	3.4	9.7	4.6	6.7
Green Ext Time (p_c), s	0.8	0.0	1.0	2.5	0.2	2.1

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	317	75	308	366	69	210
Future Volume (veh/h)	317	75	308	366	69	210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1856	1856
Adj Flow Rate, veh/h	369	0	358	0	80	244
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	1	1	3	3
Cap, veh/h	531		2916		206	3542
Arrive On Green	0.16	0.00	0.57	0.00	0.06	0.70
Sat Flow, veh/h	3401	1560	5316	1598	3428	5233
Grp Volume(v), veh/h	369	0	358	0	80	244
Grp Sat Flow(s),veh/h/ln	1700	1560	1716	1598	1714	1689
Q Serve(g_s), s	6.4	0.0	2.0	0.0	1.4	0.9
Cycle Q Clear(g_c), s	6.4	0.0	2.0	0.0	1.4	0.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	531		2916		206	3542
V/C Ratio(X)	0.69		0.12		0.39	0.07
Avail Cap(c_a), veh/h	2050		2916		634	3542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	6.3	0.0	28.1	3.0
Incr Delay (d2), s/veh	1.6	0.0	0.1	0.0	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.6	0.0	0.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.5	0.0	6.4	0.0	29.3	3.0
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	369	A	358	A		324
Approach Delay, s/veh	26.5		6.4			9.5
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.2	39.8			48.0	14.2
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	3.4	4.0			2.9	8.4
Green Ext Time (p_c), s	0.1	2.4			1.8	1.3

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	14	46	56	95	200	1	17	13	271	72	63
Future Volume (veh/h)	12	14	46	56	95	200	1	17	13	271	72	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	14	17	55	67	114	0	1	20	16	327	87	76
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	1	1	1
Cap, veh/h	258	274	128	191	423		3	775	748	486	1029	900
Arrive On Green	0.02	0.08	0.08	0.06	0.12	0.00	0.00	0.41	0.41	0.14	0.55	0.55
Sat Flow, veh/h	1725	3296	1535	3346	3441	1535	1810	1900	1610	3483	1885	1598
Grp Volume(v), veh/h	14	17	55	67	114	0	1	20	16	327	87	76
Grp Sat Flow(s),veh/h/ln	1725	1648	1535	1673	1721	1535	1810	1900	1610	1742	1885	1598
Q Serve(g_s), s	0.4	0.3	2.0	1.1	1.7	0.0	0.0	0.4	0.3	5.1	1.3	1.3
Cycle Q Clear(g_c), s	0.4	0.3	2.0	1.1	1.7	0.0	0.0	0.4	0.3	5.1	1.3	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	274	128	191	423		3	775	748	486	1029	900
V/C Ratio(X)	0.05	0.06	0.43	0.35	0.27		0.32	0.03	0.02	0.67	0.08	0.08
Avail Cap(c_a), veh/h	452	1115	519	494	1224		267	775	748	1239	1161	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	24.3	25.1	26.1	22.9	0.0	28.7	10.2	8.3	23.5	6.2	5.8
Incr Delay (d2), s/veh	0.1	0.1	2.3	1.1	0.3	0.0	49.8	0.1	0.1	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.8	0.4	0.7	0.0	0.1	0.1	0.1	2.1	0.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	24.4	27.4	27.2	23.3	0.0	78.5	10.3	8.4	25.2	6.3	5.8
LnGrp LOS	C	C	C	C	C		E	B	A	C	A	A
Approach Vol, veh/h		86			181	A		37			490	
Approach Delay, s/veh		26.2			24.7			11.3			18.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	28.0	7.8	9.3	4.6	36.0	5.5	11.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	7.1	2.4	3.1	4.0	2.0	3.3	2.4	3.7
Green Ext Time (p_c), s	1.0	0.1	0.1	0.3	0.0	0.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	18	119	23	10	14	73	114	57	14	240	47
Future Volume (veh/h)	67	18	119	23	10	14	73	114	57	14	240	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	25	163	32	14	19	100	156	78	19	329	64
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	0	0	0	0	0	0	2	2	2	2	2	2
Cap, veh/h	251	75	251	331	150	131	510	687	327	523	676	130
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.09	0.29	0.29	0.02	0.23	0.23
Sat Flow, veh/h	389	277	927	619	553	484	1781	2335	1112	1781	2973	572
Grp Volume(v), veh/h	280	0	0	65	0	0	100	117	117	19	195	198
Grp Sat Flow(s),veh/h/ln	1593	0	0	1656	0	0	1781	1777	1670	1781	1777	1767
Q Serve(g_s), s	2.9	0.0	0.0	0.0	0.0	0.0	1.3	1.6	1.7	0.3	3.1	3.2
Cycle Q Clear(g_c), s	5.0	0.0	0.0	0.9	0.0	0.0	1.3	1.6	1.7	0.3	3.1	3.2
Prop In Lane	0.33		0.58	0.49		0.29	1.00		0.67	1.00		0.32
Lane Grp Cap(c), veh/h	577	0	0	612	0	0	510	523	491	523	404	402
V/C Ratio(X)	0.49	0.00	0.00	0.11	0.00	0.00	0.20	0.22	0.24	0.04	0.48	0.49
Avail Cap(c_a), veh/h	1977	0	0	1899	0	0	971	1650	1551	886	1434	1426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	0.0	0.0	9.1	0.0	0.0	8.3	8.8	8.8	9.3	11.0	11.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.0	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	0.3	0.0	0.0	0.4	0.5	0.5	0.1	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	0.0	0.0	9.1	0.0	0.0	8.4	9.0	9.0	9.3	11.9	12.0
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	B	B
Approach Vol, veh/h		280			65			334			412	
Approach Delay, s/veh		11.1			9.1			8.8			11.8	
Approach LOS		B			A			A			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	13.4	5.3	14.2	13.4	7.5	12.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	2.9	2.3	3.7	7.0	3.3	5.2
Green Ext Time (p_c), s	0.4	0.0	1.4	1.9	0.1	2.3

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

APPENDIX D
FORECAST TURNING MOVEMENTS AND TRIP DISTRIBUTION

INSPIRATION - 2019 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: ARROYO VISTA AND LADERA

AM Peak Hour

	Southbound ARROYO VISTA			**Westbound** LADERA			**Northbound** ARROYO VISTA			**Eastbound**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**10**	**213**	**0**	**382**	**0**	**10**	**0**	**179**	**345**	**0**	**0**	**0**
Background Growth (2018-2019)	0	9	0	15	0	0	0	7	14	0	0	0
2019 No Build	**10**	**222**	**0**	**397**	**0**	**10**	**0**	**186**	**359**	**0**	**0**	**0**
Entering						5		56				
Exiting	15	160										
2019 Build	**26**	**382**	**0**	**397**	**0**	**16**	**0**	**242**	**359**	**0**	**0**	**0**
PHF	*0.83*			*0.83*			*0.83*			*0.83*		
HV %		*2*			*2*			*3*			*0*	

PM Peak Hour

	Southbound ARROYO VISTA			**Westbound** LADERA			**Northbound** ARROYO VISTA			**Eastbound**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**69**	**210**	**0**	**317**	**0**	**75**	**0**	**308**	**366**	**0**	**0**	**0**
Background Growth (2018-2019)	3	8	0	13	0	3	0	12	15	0	0	0
2019 No Build	**72**	**218**	**0**	**330**	**0**	**78**	**0**	**320**	**381**	**0**	**0**	**0**
Entering						17		183				
Exiting	10	102										
2019 Build	**82**	**321**	**0**	**330**	**0**	**95**	**0**	**503**	**381**	**0**	**0**	**0**
PHF	*0.86*			*0.86*			*0.86*			*0.86*		
HV %		*3*			*4*			*1*			*0*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter						8.0%		84.0%				
Trip Distribution % Exit	8.0%	84.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

INSPIRATION - 2019 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: ARROYO VISTA AND TIERRA PINTADA

AM Peak Hour

	Southbound TIERRA PINTADA			Westbound ARROYO VISTA			Northbound TIERRA PINTADA			Eastbound ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**234**	**3**	**7**	**2**	**6**	**198**	**0**	**2**	**0**	**2**	**10**	**0**
Background Growth (2018-2019)	9	0	0	0	0	8	0	0	0	0	0	0
2019 No Build	**243**	**3**	**7**	**2**	**6**	**206**	**0**	**2**	**0**	**2**	**10**	**0**
Entering			5		62							
Exiting										15	176	
2019 Build	**243**	**3**	**13**	**2**	**68**	**206**	**0**	**2**	**0**	**17**	**186**	**0**
PHF	*0.64*			*0.64*			*0.64*			*0.64*		
HV %		*6*			*6*			*0*			*6*	

PM Peak Hour

	Southbound TIERRA PINTADA			Westbound ARROYO VISTA			Northbound TIERRA PINTADA			Eastbound ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**271**	**72**	**63**	**56**	**95**	**200**	**1**	**17**	**13**	**12**	**14**	**46**
Background Growth (2018-2019)	11	3	3	2	4	8	0	1	1	0	1	2
2019 No Build	**282**	**75**	**66**	**58**	**99**	**208**	**1**	**18**	**14**	**12**	**15**	**48**
Entering			17		201							
Exiting										10	112	
2019 Build	**282**	**75**	**83**	**58**	**299**	**208**	**1**	**18**	**14**	**22**	**127**	**48**
PHF	*0.83*			*0.83*			*0.83*			*0.83*		
HV %		*1*			*6*			*0*			*6*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter			8.0%		92.0%							
Trip Distribution % Exit	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	92.0%	0.0%

INSPIRATION - 2019 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: TIERRA PINTADA AND STORMCLOUD

AM Peak Hour

	Southbound TIERRA PINTADA			**Westbound** STORMCLOUD			**Northbound** TIERRA PINTADA			**Eastbound** SCHOOL ENTRANCE		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**3**	**83**	**119**	**33**	**29**	**8**	**97**	**84**	**17**	**63**	**17**	**125**
Background Growth (2018-2019)	0	3	5	1	1	0	4	3	1	3	1	5
2019 No Build	**3**	**86**	**124**	**34**	**30**	**8**	**101**	**87**	**18**	**66**	**18**	**130**
Entering		5										
Exiting								15				
2019 Build	**3**	**92**	**124**	**34**	**30**	**8**	**101**	**103**	**18**	**66**	**18**	**130**
PHF	*0.57*			*0.57*			*0.57*			*0.57*		
HV %		*6*			*0*			*5*			*0*	

PM Peak Hour

	Southbound TIERRA PINTADA			**Westbound** STORMCLOUD			**Northbound** TIERRA PINTADA			**Eastbound** SCHOOL ENTRANCE		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**14**	**240**	**47**	**23**	**10**	**14**	**73**	**114**	**57**	**67**	**18**	**119**
Background Growth (2018-2019)	1	10	2	1	0	1	3	5	2	3	1	5
2019 No Build	**15**	**250**	**49**	**24**	**10**	**15**	**76**	**119**	**59**	**70**	**19**	**124**
Entering		17										
Exiting								10				
2019 Build	**15**	**267**	**49**	**24**	**10**	**15**	**76**	**128**	**59**	**70**	**19**	**124**
PHF	*0.73*			*0.73*			*0.73*			*0.73*		
HV %		*2*			*0*			*2*			*0*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter		8.0%										
Trip Distribution % Exit	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%

INSPIRATION - 2019 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: DRIVEWAY 1 (WEST)

AM Peak Hour

	Southbound DRIVEWAY 1			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2019)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering						20						
Exiting	57											
2019 Build	**57**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**0**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Southbound DRIVEWAY 1			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2019)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering						65						
Exiting	37											
2019 Build	**37**	**0**	**0**	**0**	**0**	**65**	**0**	**0**	**0**	**0**	**0**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter						30.0%						
Trip Distribution % Exit	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

INSPIRATION - 2019 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: DRIVEWAY 2 (EAST)

AM Peak Hour

	Southbound DRIVEWAY 2			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2019)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering					20	47						
Exiting	134										57	
2019 Build	**134**	**0**	**0**	**0**	**20**	**47**	**0**	**0**	**0**	**0**	**57**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Southbound DRIVEWAY 2			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2019)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering					65	153						
Exiting	85										37	
2019 Build	**85**	**0**	**0**	**0**	**65**	**153**	**0**	**0**	**0**	**0**	**37**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter					30.0%	70.0%						
Trip Distribution % Exit	70.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%

INSPIRATION - 2024 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: ARROYO VISTA AND LADERA

AM Peak Hour

	Southbound ARROYO VISTA			**Westbound** LADERA			**Northbound** ARROYO VISTA			**Eastbound**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**10**	**213**	**0**	**382**	**0**	**10**	**0**	**179**	**345**	**0**	**0**	**0**
Background Growth (2018-2024)	2	51	0	92	0	2	0	43	83	0	0	0
2019 No Build	**12**	**264**	**0**	**474**	**0**	**12**	**0**	**222**	**428**	**0**	**0**	**0**
Entering						5		56				
Exiting	15	160										
2019 Build	**28**	**425**	**0**	**474**	**0**	**18**	**0**	**278**	**428**	**0**	**0**	**0**
PHF	*0.83*			*0.83*			*0.83*			*0.83*		
HV %		*2*			*2*			*3*			*0*	

PM Peak Hour

	Southbound ARROYO VISTA			**Westbound** LADERA			**Northbound** ARROYO VISTA			**Eastbound**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**69**	**210**	**0**	**317**	**0**	**75**	**0**	**308**	**366**	**0**	**0**	**0**
Background Growth (2018-2024)	17	50	0	76	0	18	0	74	88	0	0	0
2019 No Build	**86**	**260**	**0**	**393**	**0**	**93**	**0**	**382**	**454**	**0**	**0**	**0**
Entering						17		183				
Exiting	10	102										
2019 Build	**95**	**363**	**0**	**393**	**0**	**110**	**0**	**565**	**454**	**0**	**0**	**0**
PHF	*0.86*			*0.86*			*0.86*			*0.86*		
HV %		*3*			*4*			*1*			*0*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter						8.0%		84.0%				
Trip Distribution % Exit	8.0%	84.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

INSPIRATION - 2024 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: ARROYO VISTA AND TIERRA PINTADA

AM Peak Hour

	Southbound TIERRA PINTADA			**Westbound** ARROYO VISTA			**Northbound** TIERRA PINTADA			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**234**	**3**	**7**	**2**	**6**	**198**	**0**	**2**	**0**	**2**	**10**	**0**
Background Growth (2018-2024)	56	1	2	0	1	48	0	0	0	0	2	0
2019 No Build	**290**	**4**	**9**	**2**	**7**	**246**	**0**	**2**	**0**	**2**	**12**	**0**
Entering			5		62			0				
Exiting		0								15	176	
2019 Build	**290**	**4**	**14**	**2**	**69**	**246**	**0**	**2**	**0**	**18**	**188**	**0**
PHF	*0.64*			*0.64*			*0.64*			*0.64*		
HV %		*6*			*6*			*0*			*6*	

PM Peak Hour

	Southbound TIERRA PINTADA			**Westbound** ARROYO VISTA			**Northbound** TIERRA PINTADA			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**271**	**72**	**63**	**56**	**95**	**200**	**1**	**17**	**13**	**12**	**14**	**46**
Background Growth (2018-2024)	65	17	15	13	23	48	0	4	3	3	3	11
2019 No Build	**336**	**89**	**78**	**69**	**118**	**248**	**1**	**21**	**16**	**15**	**17**	**57**
Entering			17		201							
Exiting										10	112	
2019 Build	**336**	**89**	**96**	**69**	**318**	**248**	**1**	**21**	**16**	**25**	**130**	**57**
PHF	*0.83*			*0.83*			*0.83*			*0.83*		
HV %		*1*			*6*			*0*			*6*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter			8.0%		92.0%							
Trip Distribution % Exit	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	92.0%	0.0%

INSPIRATION - 2024 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: TIERRA PINTADA AND STORMCLOUD

AM Peak Hour

	Southbound TIERRA PINTADA			**Westbound** STORMCLOUD			**Northbound** TIERRA PINTADA			**Eastbound** SCHOOL ENTRANCE		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**3**	**83**	**119**	**33**	**29**	**8**	**97**	**84**	**17**	**63**	**17**	**125**
Background Growth (2018-2024)	1	20	29	8	7	2	23	20	4	15	4	30
2019 No Build	**4**	**103**	**148**	**41**	**36**	**10**	**120**	**104**	**21**	**78**	**21**	**155**
Entering		5										
Exiting								15				
2019 Build	**4**	**108**	**148**	**41**	**36**	**10**	**120**	**119**	**21**	**78**	**21**	**155**
PHF	*0.57*			*0.57*			*0.57*			*0.57*		
HV %		*6*			*0*			*5*			*0*	

PM Peak Hour

	Southbound TIERRA PINTADA			**Westbound** STORMCLOUD			**Northbound** TIERRA PINTADA			**Eastbound** SCHOOL ENTRANCE		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)	**14**	**240**	**47**	**23**	**10**	**14**	**73**	**114**	**57**	**67**	**18**	**119**
Background Growth (2018-2024)	3	58	11	6	2	3	18	27	14	16	4	29
2019 No Build	**17**	**298**	**58**	**29**	**12**	**17**	**91**	**141**	**71**	**83**	**22**	**148**
Entering		17										
Exiting								10				
2019 Build	**17**	**315**	**58**	**29**	**12**	**17**	**91**	**151**	**71**	**83**	**22**	**148**
PHF	*0.73*			*0.73*			*0.73*			*0.73*		
HV %		*2*			*0*			*2*			*0*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter		8.0%										
Trip Distribution % Exit	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%

INSPIRATION - 2024 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: DRIVEWAY 1 (WEST)

AM Peak Hour

	Southbound DRIVEWAY 1			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2024)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering						20						
Exiting	57											
2019 Build	**57**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**0**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Southbound DRIVEWAY 1			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2024)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering						65						
Exiting	37											
2019 Build	**37**	**0**	**0**	**0**	**0**	**65**	**0**	**0**	**0**	**0**	**0**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter						30.0%						
Trip Distribution % Exit	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

INSPIRATION - 2024 SCENARIO
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: DRIVEWAY 2 (EAST)

AM Peak Hour

	Southbound DRIVEWAY 2			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2024)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering					20	47						
Exiting	134										57	
2019 Build	**134**	**0**	**0**	**0**	**20**	**47**	**0**	**0**	**0**	**0**	**57**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Southbound DRIVEWAY 2			**Westbound** ARROYO VISTA			**Northbound**			**Eastbound** ARROYO VISTA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2018)												
Background Growth (2018-2024)	0	0	0	0	0	0	0	0	0	0	0	0
2019 No Build	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Entering					65	153						
Exiting	85										37	
2019 Build	**85**	**0**	**0**	**0**	**65**	**153**	**0**	**0**	**0**	**0**	**37**	**0**
PHF	*0.85*			*0.85*			*0.85*			*0.85*		
HV %		*2*			*2*			*2*			*2*	

growth rates	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Trip Distribution % Enter					30.0%	70.0%						
Trip Distribution % Exit	70.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%

Inspiration
Growth Rate Determination

AWDT
ALL

Year	AWDT
2011	12,683
2012	12,943
2013	12,839
2014	13,750
2015	15,471
2016	15,733

Linear Growth Rate = {[15,733-12,683)/5]/15,733}x100= 3.88%

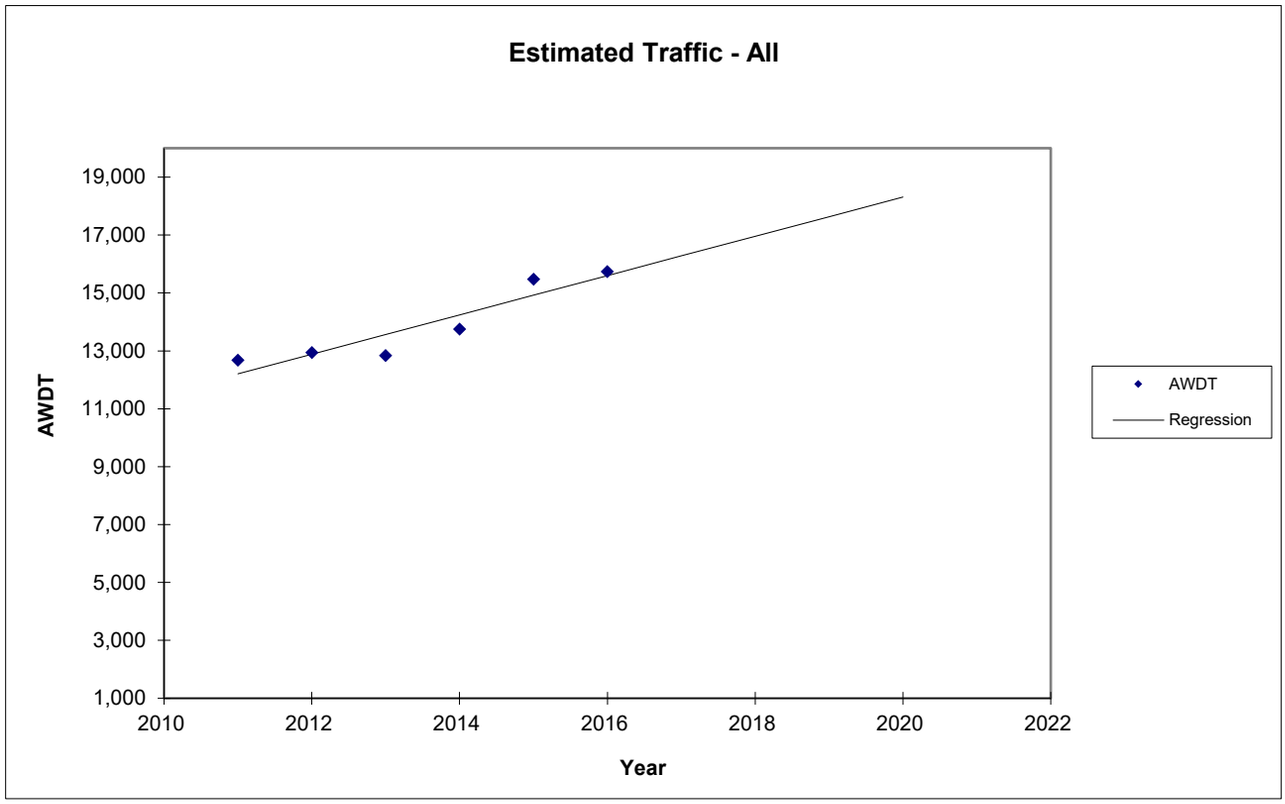
Regression Output	
R Square	0.86
Standard Error	5.74E+02
Observations	6
Intercept	-1,352,113
Std Err of Intercept	276,327
Coefficient	678
Std Err of Coefficient	1.37E+02

Regression Equation
AWDT = 678 x Year - 1,352,113

USE
Roundup to 4.00%

Projected AWDT	
2011	12,207
2012	12,886
2013	13,564
2014	14,242
2015	14,921
2016	15,599
2017	16,278
2018	16,956
2019	17,635
2020	18,313

Estimated Annual Growth Rate
[(74,307-71,502)/71,502) x 100% = 16.40%
16.40%/5 = 3.28%



Inspiration
Growth Rate Determination

AWDT on Arroyo Vista
(Between Ladera & Tierra Pintada)

Year	AWDT
2011	2,228
2012	2,206
2013	2,188
2014	2,197
2015	2,948
2016	2,998

Linear Growth Rate = {[(2,998 - 2,228)/5]/2,998}x100= 5.14%

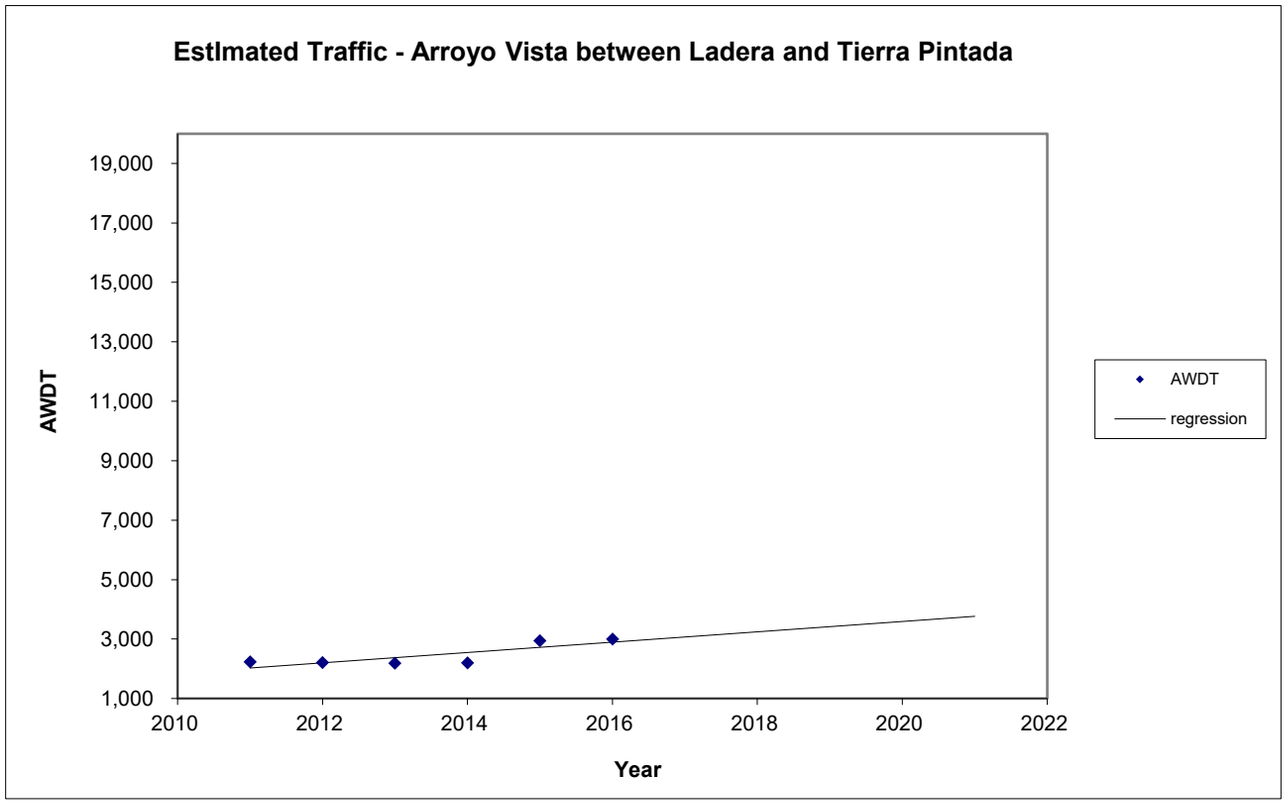
Regression Output	
R Square	0.67
Standard Error	2.55E+02
Observations	6
Intercept	-347,601
Std Err of Intercept	1.E+05
Coefficient	174
Std Err of Coefficient	61

Regression Equation
AWDT = 174 x Year - 347,601

Coefficient Growth Rate 5.80%

Projected AWDT	
2011	2,026
2012	2,200
2013	2,374
2014	2,548
2015	2,722
2016	2,895
2017	3,069
2018	3,243
2019	3,417
2020	3,591
2021	3,765

Estimated Annual Growth Rate
[(3,765 - 2,998)/2,998) x 100% = 25.58%
25.58%/5= 5.12%



Inspiration
Growth Rate Determination

AWDT on Tierra Pintada
(North of Arroyo Vista)

Year	AWDT
2011	4,268
2012	4,225
2013	4,191
2014	4,580
2015	4,653
2016	4,732

Linear Growth Rate = {[(4,732 -4,268)/5]/4,732}x100= 1.96%

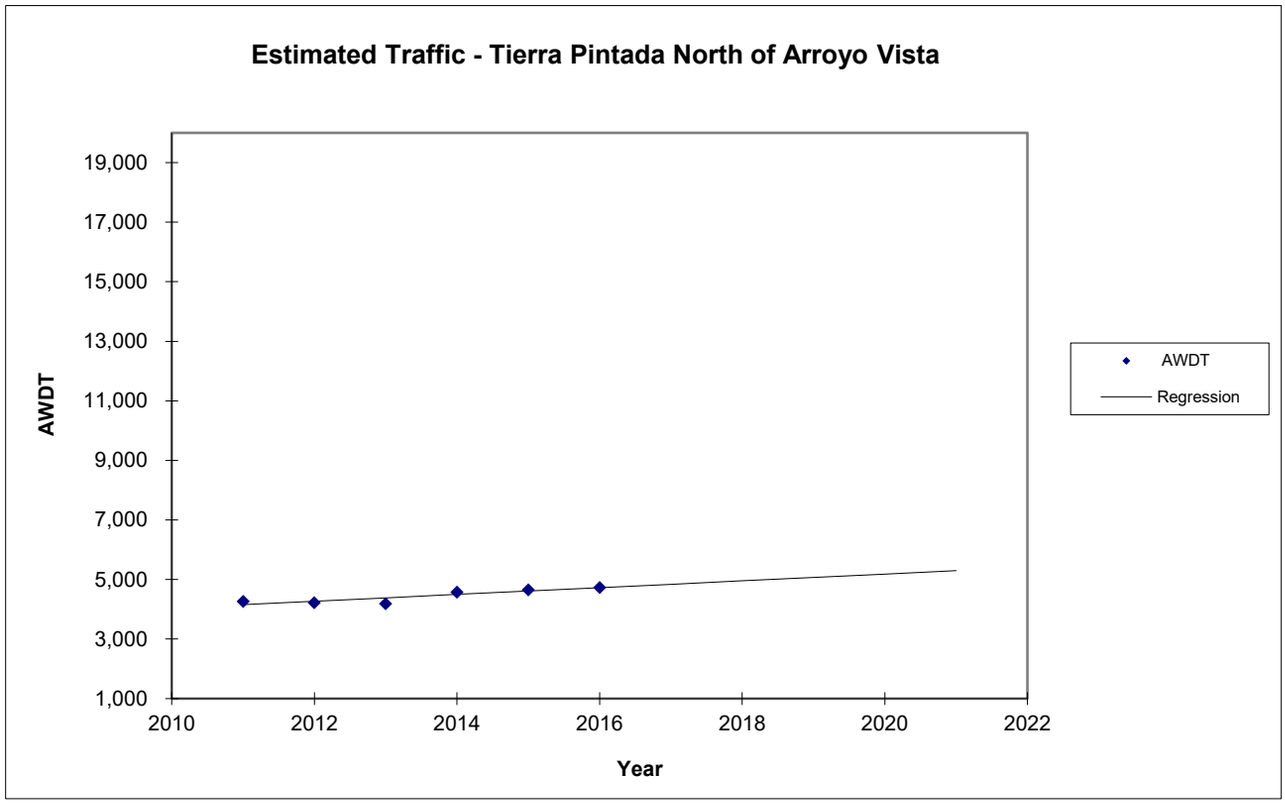
Regression Output	
R Square	0.791
Standard Error	1.23E+02
Observations	6
Intercept	-225,270
Std Err of Intercept	5.91E+04
Coefficient	114
Std Err of Coefficient	29

Regression Equation
AWDT = 114 x Year - 225,270

Coefficient Growth Rate 2.41%

Projected AWDT	
2011	4,156
2012	4,270
2013	4,384
2014	4,499
2015	4,613
2016	4,727
2017	4,841
2018	4,955
2019	5,069
2020	5,183
2021	5,297

Estimated Annual Growth Rate
((5,297 - 4,732))/4,732) x 100% = 11.94%
11.94%/5 = 2.39%



Inspiration
Growth Rate Determination

AWDT on Ladera
(East of Arroyo Vista)

Year	AWDT
2011	6,187
2012	6,512
2013	6,460
2014	6,973
2015	7,870
2016	8,003

Linear Growth Rate = {[(8,003-6,187)/5]/8,003}x100= 5.67%

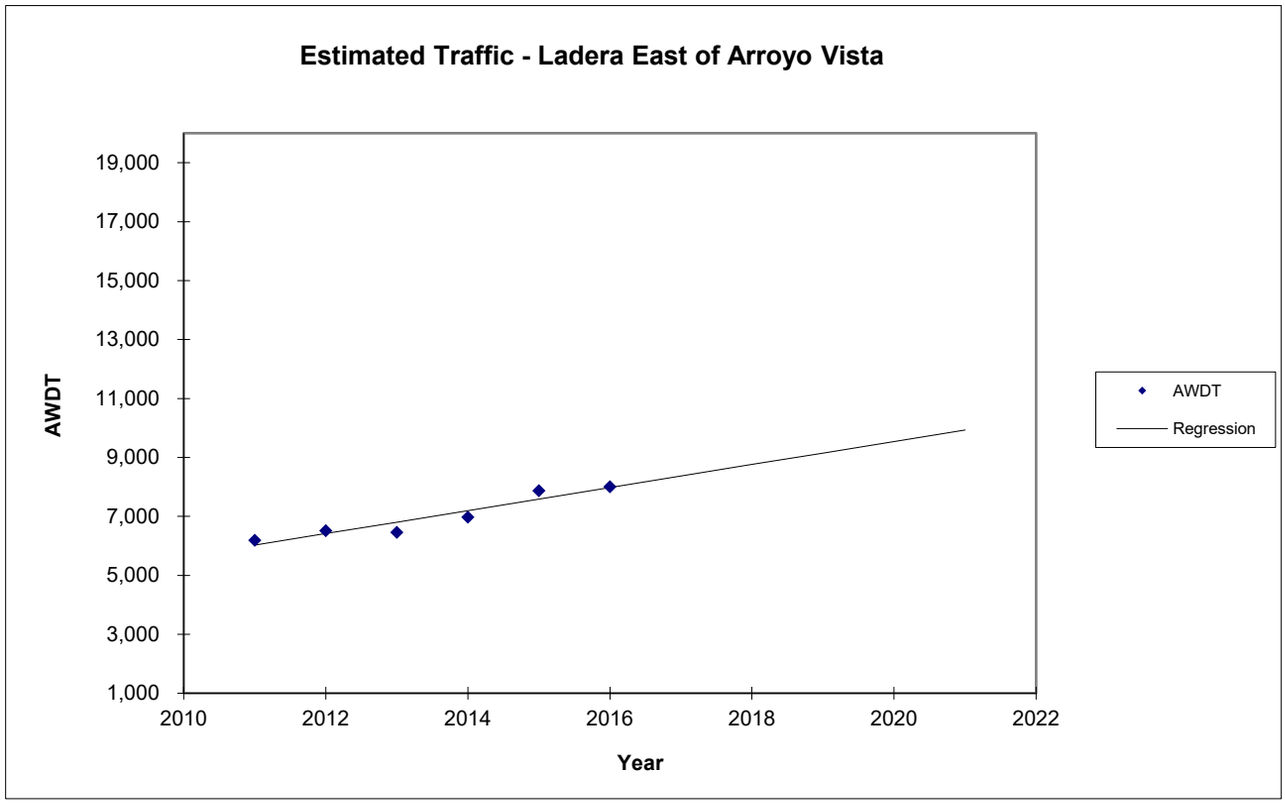
Regression Output	
R Square	0.90
Standard Error	2.67E+02
Observations	6
Intercept	-779,242
Std Err of Intercept	128,694
Coefficient	390
Std Err of Coefficient	6.39E+01

Projected AWDT	
2011	6,025
2012	6,415
2013	6,806
2014	7,196
2015	7,587
2016	7,977
2017	8,368
2018	8,758
2019	9,149
2020	9,539
2021	9,929

Regression Equation
AWDT = 390 x Year - 779,242

Coefficient Growth Rate 4.88%

Estimated Annual Growth Rate
[(9,929 -8,003)/8,003) x 100% = 24.07%
24.07%/5 = 4.81%



Inspiration - Residential Trips
Employees by Subarea

Subarea	Employees* 2016	Distance (mi)	Employees / Distance 2016	% Emp. / Dist	Tierra Pintada to/from north			Arroyo Vista to/from south			Ladera to/from east		
					% Utililizing	% Employees/ Dist. Utilizing	Employees	% Utililizing	% Employees/ Dist. Utilizing	Employees	% Utililizing	% Employees/ Dist. Utilizing	Employees
1	8,373	16.1	520	1.11%	40%	0.44%	3,349	20%	0.22%	1,675	40%	0%	3,349
2	16,177	10.5	1,534	3.27%	40%	1.31%	6,471	20%	0.65%	3,235	40%	1%	6,471
3	1,579	12.8	124	0.26%	20%	0.05%	316	40%	0.11%	632	40%	0%	632
4	3,725	20.8	179	0.38%	10%	0.04%	373	75%	0.29%	2,794	15%	0%	559
5	14,923	8.4	1,787	3.81%	40%	1.52%	5,969	20%	0.76%	2,985	40%	2%	5,969
6	2,051	4.0	517	1.10%	25%	0.28%	513	75%	0.83%	1,538			
7	9,234	2.7	3,428	7.31%	20%	1.46%	1,847	60%	4.38%	5,540	20%	1%	1,847
8	9,101	2.1	4,402	9.38%				100%	9.38%	9,101			
9	671	17.4	38	0.08%				100%	0.08%	671			
10	3,409	6.0	573	1.22%				100%	1.22%	3,409			
11	5,699	7.4	770	1.64%				100%	1.64%	5,699			
12	6,287	9.0	701	1.49%	40%	0.60%	2,515	20%	0.30%	1,257	40%	1%	2,515
13	38,387	10.4	3,698	7.88%	20%	1.58%	7,677	60%	4.73%	23,032	20%	2%	7,677
14	37,516	15.1	2,491	5.31%	20%	1.06%	7,503	60%	3.19%	22,510	20%	1%	7,503
15	17,358	6.5	2,684	5.72%				100%	5.72%	17,358			
16	54,135	11.8	4,585	9.77%				100%	9.77%	54,135			
17	39,647	5.7	6,990	14.90%				100%	14.90%	39,647			
18	47,403	8.6	5,484	11.69%				100%	11.69%	47,403			
19	26,057	14.1	1,852	3.95%				100%	3.95%	26,057			
20	5,978	8.3	725	1.54%				100%	1.54%	5,978			
21	1,755	11.1	158	0.34%				100%	0.34%	1,755			
22	28,349	13.4	2,122	4.52%				100%	4.52%	28,349			
23	2,923	25.4	115	0.25%				100%	0.25%	2,923			
24	1,271	12.7	100	0.21%				100%	0.21%	1,271			
25	112	19.9	6	0.01%				100%	0.01%	112			
26	18,011	18.0	1,002	2.14%				100%	2.14%	18,011			
27	5,846	27.7	211	0.45%	20%	0.09%	1,169	60%	0.27%	3,508	20%	0%	1,169
28	4,322	43.9	98	0.21%				100%	0.21%	4,322			
29	1,784	58.7	30	0.06%				100%	0.06%	1,784			
Total	412,083	44.5	46,924	100.00%		8%	37,702		83%	336,690		8%	

* - Subarea Employment from MRCOG 2040 Socioeconomic Forecasts

APPENDIX E
2019 AND 2024 NO BUILD
INTERSECTION CAPACITY ANALYSIS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	397	10	186	359	10	222
Future Volume (veh/h)	397	10	186	359	10	222
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1870	1870
Adj Flow Rate, veh/h	478	0	224	0	12	267
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	3	3	2	2
Cap, veh/h	652		2978		52	3433
Arrive On Green	0.19	0.00	0.59	0.00	0.01	0.67
Sat Flow, veh/h	3456	1585	5233	1572	3456	5274
Grp Volume(v), veh/h	478	0	224	0	12	267
Grp Sat Flow(s),veh/h/ln	1728	1585	1689	1572	1728	1702
Q Serve(g_s), s	8.4	0.0	1.2	0.0	0.2	1.2
Cycle Q Clear(g_c), s	8.4	0.0	1.2	0.0	0.2	1.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	652		2978		52	3433
V/C Ratio(X)	0.73		0.08		0.23	0.08
Avail Cap(c_a), veh/h	2003		2978		614	3433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	5.8	0.0	31.5	3.7
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.0	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.4	0.0	0.1	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	0.0	5.8	0.0	33.7	3.7
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	478	A	224	A		279
Approach Delay, s/veh	26.3		5.8			5.0
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.5	42.5			48.0	16.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	2.2	3.2			3.2	10.4
Green Ext Time (p_c), s	0.0	1.4			1.9	1.8

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	10	0	2	6	206	0	2	0	243	3	7
Future Volume (veh/h)	2	10	0	2	6	206	0	2	0	243	3	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1811	1811	1811
Adj Flow Rate, veh/h	3	16	0	3	9	0	0	3	0	380	5	11
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	6	6	6
Cap, veh/h	186	158	0	14	110		3	858	734	557	1276	1087
Arrive On Green	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.45	0.00	0.17	0.70	0.70
Sat Flow, veh/h	1725	5107	0	3346	3441	1535	1810	1900	1610	3346	1811	1535
Grp Volume(v), veh/h	3	16	0	3	9	0	0	3	0	380	5	11
Grp Sat Flow(s),veh/h/ln	1725	1648	0	1673	1721	1535	1810	1900	1610	1673	1811	1535
Q Serve(g_s), s	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5.6	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5.6	0.0	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	158	0	14	110		3	858	734	557	1276	1087
V/C Ratio(X)	0.02	0.10	0.00	0.22	0.08		0.00	0.00	0.00	0.68	0.00	0.01
Avail Cap(c_a), veh/h	427	1853	0	547	1356		296	858	734	1318	1276	1087
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	24.5	0.0	25.8	24.4	0.0	0.0	7.8	0.0	20.4	2.3	2.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	7.9	0.3	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	24.7	0.0	33.7	24.8	0.0	0.0	7.8	0.0	21.9	2.3	2.2
LnGrp LOS	C	C	A	C	C		A	A	A	C	A	A
Approach Vol, veh/h		19			12	A		3			396	
Approach Delay, s/veh		24.7			27.0			7.8			21.1	
Approach LOS		C			C			A			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	28.0	4.7	6.2	0.0	41.2	4.7	6.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	7.6	2.0	2.0	2.2	0.0	2.1	2.1	2.1
Green Ext Time (p_c), s	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	18	130	34	30	8	101	87	18	3	86	124
Future Volume (veh/h)	66	18	130	34	30	8	101	87	18	3	86	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1826	1826	1826	1811	1811	1811
Adj Flow Rate, veh/h	116	32	228	60	53	14	177	153	32	5	151	218
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Percent Heavy Veh, %	0	0	0	0	0	0	5	5	5	6	6	6
Cap, veh/h	239	80	310	321	257	55	471	956	195	459	398	355
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.11	0.33	0.33	0.01	0.23	0.23
Sat Flow, veh/h	375	245	956	582	793	170	1739	2869	586	1725	1721	1535
Grp Volume(v), veh/h	376	0	0	127	0	0	177	91	94	5	151	218
Grp Sat Flow(s),veh/h/ln	1577	0	0	1546	0	0	1739	1735	1720	1725	1721	1535
Q Serve(g_s), s	5.6	0.0	0.0	0.0	0.0	0.0	2.8	1.5	1.5	0.1	3.0	5.1
Cycle Q Clear(g_c), s	8.4	0.0	0.0	2.0	0.0	0.0	2.8	1.5	1.5	0.1	3.0	5.1
Prop In Lane	0.31		0.61	0.47		0.11	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	629	0	0	633	0	0	471	578	573	459	398	355
V/C Ratio(X)	0.60	0.00	0.00	0.20	0.00	0.00	0.38	0.16	0.16	0.01	0.38	0.61
Avail Cap(c_a), veh/h	1605	0	0	1533	0	0	779	1316	1305	769	1134	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	0.0	9.8	0.0	0.0	9.3	9.4	9.5	11.7	13.0	13.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.2	0.0	0.0	0.5	0.1	0.1	0.0	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	0.7	0.0	0.0	0.9	0.5	0.5	0.0	1.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	0.0	0.0	10.0	0.0	0.0	9.8	9.6	9.6	11.7	13.6	15.6
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	B	B
Approach Vol, veh/h		376			127			362			374	
Approach Delay, s/veh		12.8			10.0			9.7			14.7	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.5	4.8	17.9	17.5	8.9	13.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	4.0	2.1	3.5	10.4	4.8	7.1
Green Ext Time (p_c), s	0.8	0.0	1.0	2.7	0.2	2.2

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	330	78	320	381	72	218
Future Volume (veh/h)	330	78	320	381	72	218
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1856	1856
Adj Flow Rate, veh/h	384	0	372	0	84	253
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	1	1	3	3
Cap, veh/h	547		2892		210	3522
Arrive On Green	0.16	0.00	0.56	0.00	0.06	0.70
Sat Flow, veh/h	3401	1560	5316	1598	3428	5233
Grp Volume(v), veh/h	384	0	372	0	84	253
Grp Sat Flow(s),veh/h/ln	1700	1560	1716	1598	1714	1689
Q Serve(g_s), s	6.7	0.0	2.1	0.0	1.5	1.0
Cycle Q Clear(g_c), s	6.7	0.0	2.1	0.0	1.5	1.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	547		2892		210	3522
V/C Ratio(X)	0.70		0.13		0.40	0.07
Avail Cap(c_a), veh/h	2038		2892		630	3522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	6.5	0.0	28.3	3.1
Incr Delay (d2), s/veh	1.6	0.0	0.1	0.0	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.7	0.0	0.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.5	0.0	6.6	0.0	29.5	3.1
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	384	A	372	A		337
Approach Delay, s/veh	26.5		6.6			9.7
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.3	39.7			48.0	14.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	3.5	4.1			3.0	8.7
Green Ext Time (p_c), s	0.1	2.5			1.8	1.4

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	15	48	58	99	208	1	18	14	282	75	66
Future Volume (veh/h)	12	15	48	58	99	208	1	18	14	282	75	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	14	18	58	70	119	0	1	22	17	340	90	80
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	1	1	1
Cap, veh/h	257	274	128	195	427		3	769	746	500	1031	902
Arrive On Green	0.02	0.08	0.08	0.06	0.12	0.00	0.00	0.40	0.40	0.14	0.55	0.55
Sat Flow, veh/h	1725	3296	1535	3346	3441	1535	1810	1900	1610	3483	1885	1598
Grp Volume(v), veh/h	14	18	58	70	119	0	1	22	17	340	90	80
Grp Sat Flow(s),veh/h/ln	1725	1648	1535	1673	1721	1535	1810	1900	1610	1742	1885	1598
Q Serve(g_s), s	0.4	0.3	2.1	1.2	1.8	0.0	0.0	0.4	0.3	5.4	1.3	1.3
Cycle Q Clear(g_c), s	0.4	0.3	2.1	1.2	1.8	0.0	0.0	0.4	0.3	5.4	1.3	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	274	128	195	427		3	769	746	500	1031	902
V/C Ratio(X)	0.05	0.07	0.45	0.36	0.28		0.32	0.03	0.02	0.68	0.09	0.09
Avail Cap(c_a), veh/h	449	1107	516	490	1215		265	769	746	1230	1153	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	24.5	25.4	26.3	23.1	0.0	28.9	10.4	8.5	23.6	6.3	5.8
Incr Delay (d2), s/veh	0.1	0.1	2.5	1.1	0.4	0.0	50.5	0.1	0.1	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.8	0.5	0.7	0.0	0.1	0.2	0.1	2.2	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	24.6	27.9	27.4	23.4	0.0	79.5	10.5	8.5	25.2	6.3	5.8
LnGrp LOS	C	C	C	C	C		E	B	A	C	A	A
Approach Vol, veh/h		90			189	A		40			510	
Approach Delay, s/veh		26.6			24.9			11.4			18.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	28.0	7.9	9.3	4.6	36.3	5.5	11.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	7.4	2.4	3.2	4.1	2.0	3.3	2.4	3.8
Green Ext Time (p_c), s	1.0	0.1	0.1	0.3	0.0	0.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	19	124	24	10	15	76	119	59	15	250	49
Future Volume (veh/h)	70	19	124	24	10	15	76	119	59	15	250	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	33	218	42	18	26	133	209	104	26	439	86
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Percent Heavy Veh, %	0	0	0	0	0	0	2	2	2	2	2	2
Cap, veh/h	248	80	295	322	145	146	454	743	356	497	755	147
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.10	0.32	0.32	0.03	0.25	0.25
Sat Flow, veh/h	411	249	922	596	454	455	1781	2330	1116	1781	2966	577
Grp Volume(v), veh/h	374	0	0	86	0	0	133	157	156	26	262	263
Grp Sat Flow(s),veh/h/ln	1581	0	0	1505	0	0	1781	1777	1669	1781	1777	1766
Q Serve(g_s), s	6.0	0.0	0.0	0.0	0.0	0.0	2.1	2.7	2.9	0.4	5.3	5.3
Cycle Q Clear(g_c), s	8.5	0.0	0.0	1.4	0.0	0.0	2.1	2.7	2.9	0.4	5.3	5.3
Prop In Lane	0.33		0.58	0.49		0.30	1.00		0.67	1.00		0.33
Lane Grp Cap(c), veh/h	624	0	0	613	0	0	454	566	532	497	453	450
V/C Ratio(X)	0.60	0.00	0.00	0.14	0.00	0.00	0.29	0.28	0.29	0.05	0.58	0.59
Avail Cap(c_a), veh/h	1582	0	0	1469	0	0	785	1323	1243	767	1150	1143
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	9.9	0.0	0.0	9.7	10.4	10.5	10.6	13.3	13.4
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	0.4	0.3	0.3	0.0	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.5	0.0	0.0	0.7	0.9	0.9	0.1	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	0.0	0.0	10.0	0.0	0.0	10.1	10.7	10.8	10.6	14.5	14.6
LnGrp LOS	B	A	A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		374			86			446			551	
Approach Delay, s/veh		13.2			10.0			10.5			14.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.6	5.8	17.5	17.6	8.4	14.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	3.4	2.4	4.9	10.5	4.1	7.3
Green Ext Time (p_c), s	0.5	0.0	1.9	2.6	0.2	3.1

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	474	12	222	428	12	264
Future Volume (veh/h)	474	12	222	428	12	264
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1870	1870
Adj Flow Rate, veh/h	571	0	267	0	14	318
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	3	3	2	2
Cap, veh/h	750		2860		59	3313
Arrive On Green	0.22	0.00	0.56	0.00	0.02	0.65
Sat Flow, veh/h	3456	1585	5233	1572	3456	5274
Grp Volume(v), veh/h	571	0	267	0	14	318
Grp Sat Flow(s),veh/h/ln	1728	1585	1689	1572	1728	1702
Q Serve(g_s), s	10.4	0.0	1.6	0.0	0.3	1.6
Cycle Q Clear(g_c), s	10.4	0.0	1.6	0.0	0.3	1.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	750		2860		59	3313
V/C Ratio(X)	0.76		0.09		0.24	0.10
Avail Cap(c_a), veh/h	1933		2860		593	3313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	6.7	0.0	32.5	4.4
Incr Delay (d2), s/veh	1.6	0.0	0.1	0.0	2.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.5	0.0	0.1	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	0.0	6.8	0.0	34.5	4.5
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	571	A	267	A		332
Approach Delay, s/veh	26.3		6.8			5.7
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.6	42.4			48.0	19.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	2.3	3.6			3.6	12.4
Green Ext Time (p_c), s	0.0	1.7			2.3	2.2

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	12	0	2	7	246	0	2	0	290	4	9
Future Volume (veh/h)	2	12	0	2	7	246	0	2	0	290	4	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1811	1811	1811
Adj Flow Rate, veh/h	3	19	0	3	11	0	0	3	0	453	6	14
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	6	6	6
Cap, veh/h	186	179	0	14	124		3	830	710	632	1284	1094
Arrive On Green	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.44	0.00	0.19	0.71	0.71
Sat Flow, veh/h	1725	5107	0	3346	3441	1535	1810	1900	1610	3346	1811	1535
Grp Volume(v), veh/h	3	19	0	3	11	0	0	3	0	453	6	14
Grp Sat Flow(s),veh/h/ln	1725	1648	0	1673	1721	1535	1810	1900	1610	1673	1811	1535
Q Serve(g_s), s	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	6.8	0.1	0.1
Cycle Q Clear(g_c), s	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	6.8	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	179	0	14	124		3	830	710	632	1284	1094
V/C Ratio(X)	0.02	0.11	0.00	0.22	0.09		0.00	0.00	0.00	0.72	0.00	0.01
Avail Cap(c_a), veh/h	419	1791	0	528	1311		286	830	710	1274	1284	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	25.1	0.0	26.7	25.1	0.0	0.0	8.6	0.0	20.5	2.3	2.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	7.9	0.3	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	25.4	0.0	34.6	25.4	0.0	0.0	8.6	0.0	22.0	2.3	2.2
LnGrp LOS	C	C	A	C	C		A	A	A	C	A	A
Approach Vol, veh/h		22			14	A		3			473	
Approach Delay, s/veh		25.3			27.4			8.6			21.2	
Approach LOS		C			C			A			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	28.0	4.7	6.4	0.0	42.7	4.7	6.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	8.8	2.0	2.0	2.2	0.0	2.1	2.1	2.2
Green Ext Time (p_c), s	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	21	155	41	36	10	120	104	21	4	103	148
Future Volume (veh/h)	78	21	155	41	36	10	120	104	21	4	103	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1826	1826	1826	1811	1811	1811
Adj Flow Rate, veh/h	137	37	272	72	63	18	211	182	37	7	181	260
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Percent Heavy Veh, %	0	0	0	0	0	0	5	5	5	6	6	6
Cap, veh/h	237	78	342	298	242	58	443	1032	206	440	424	378
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.12	0.36	0.36	0.01	0.25	0.25
Sat Flow, veh/h	394	217	956	533	675	161	1739	2883	574	1725	1721	1535
Grp Volume(v), veh/h	446	0	0	153	0	0	211	108	111	7	181	260
Grp Sat Flow(s),veh/h/ln	1568	0	0	1369	0	0	1739	1735	1723	1725	1721	1535
Q Serve(g_s), s	9.2	0.0	0.0	0.0	0.0	0.0	4.0	2.1	2.2	0.1	4.4	7.5
Cycle Q Clear(g_c), s	12.4	0.0	0.0	3.2	0.0	0.0	4.0	2.1	2.2	0.1	4.4	7.5
Prop In Lane	0.31		0.61	0.47		0.12	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	657	0	0	598	0	0	443	621	617	440	424	378
V/C Ratio(X)	0.68	0.00	0.00	0.26	0.00	0.00	0.48	0.17	0.18	0.02	0.43	0.69
Avail Cap(c_a), veh/h	1310	0	0	1187	0	0	640	1077	1069	687	928	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	0.0	11.1	0.0	0.0	11.0	10.8	10.8	13.7	15.6	16.8
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.2	0.0	0.0	0.8	0.1	0.1	0.0	0.7	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	0.0	1.0	0.0	0.0	1.3	0.7	0.7	0.1	1.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	0.0	0.0	11.3	0.0	0.0	11.8	10.9	11.0	13.7	16.3	19.0
LnGrp LOS	B	A	A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		446			153			430			448	
Approach Delay, s/veh		15.2			11.3			11.4			17.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	22.1	5.0	22.1	22.1	10.4	16.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	5.2	2.1	4.2	14.4	6.0	9.5
Green Ext Time (p_c), s	1.0	0.0	1.2	3.2	0.3	2.6

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	393	93	382	454	86	260
Future Volume (veh/h)	393	93	382	454	86	260
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1856	1856
Adj Flow Rate, veh/h	457	0	444	0	100	302
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	1	1	3	3
Cap, veh/h	626		2787		222	3425
Arrive On Green	0.18	0.00	0.54	0.00	0.06	0.68
Sat Flow, veh/h	3401	1560	5316	1598	3428	5233
Grp Volume(v), veh/h	457	0	444	0	100	302
Grp Sat Flow(s),veh/h/ln	1700	1560	1716	1598	1714	1689
Q Serve(g_s), s	8.1	0.0	2.8	0.0	1.8	1.3
Cycle Q Clear(g_c), s	8.1	0.0	2.8	0.0	1.8	1.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	626		2787		222	3425
V/C Ratio(X)	0.73		0.16		0.45	0.09
Avail Cap(c_a), veh/h	1982		2787		613	3425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	7.4	0.0	29.0	3.6
Incr Delay (d2), s/veh	1.7	0.0	0.1	0.0	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.9	0.0	0.8	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.4	0.0	7.5	0.0	30.4	3.6
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	457	A	444	A		402
Approach Delay, s/veh	26.4		7.5			10.3
Approach LOS	C		A			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.7	39.3			48.0	16.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	3.8	4.8			3.3	10.1
Green Ext Time (p_c), s	0.1	3.0			2.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	17	57	69	118	248	1	21	16	336	89	78
Future Volume (veh/h)	15	17	57	69	118	248	1	21	16	336	89	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	18	20	69	83	142	0	1	25	19	405	107	94
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	1	1	1
Cap, veh/h	257	271	126	209	423		3	745	732	567	1044	919
Arrive On Green	0.02	0.08	0.08	0.06	0.12	0.00	0.00	0.39	0.39	0.16	0.55	0.55
Sat Flow, veh/h	1725	3296	1535	3346	3441	1535	1810	1900	1610	3483	1885	1598
Grp Volume(v), veh/h	18	20	69	83	142	0	1	25	19	405	107	94
Grp Sat Flow(s),veh/h/ln	1725	1648	1535	1673	1721	1535	1810	1900	1610	1742	1885	1598
Q Serve(g_s), s	0.6	0.3	2.6	1.4	2.3	0.0	0.0	0.5	0.4	6.6	1.6	1.6
Cycle Q Clear(g_c), s	0.6	0.3	2.6	1.4	2.3	0.0	0.0	0.5	0.4	6.6	1.6	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	271	126	209	423		3	745	732	567	1044	919
V/C Ratio(X)	0.07	0.07	0.55	0.40	0.34		0.33	0.03	0.03	0.71	0.10	0.10
Avail Cap(c_a), veh/h	435	1073	499	475	1177		257	745	732	1192	1117	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	25.4	26.4	27.0	24.0	0.0	29.9	11.2	9.0	23.8	6.3	5.7
Incr Delay (d2), s/veh	0.1	0.1	3.7	1.2	0.5	0.0	54.1	0.1	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	1.0	0.6	0.9	0.0	0.1	0.2	0.1	2.7	0.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	25.5	30.1	28.2	24.5	0.0	83.9	11.3	9.1	25.5	6.4	5.8
LnGrp LOS	C	C	C	C	C		F	B	A	C	A	A
Approach Vol, veh/h		107			225	A		45			606	
Approach Delay, s/veh		28.3			25.9			12.0			19.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	28.0	8.2	9.4	4.6	37.7	5.8	11.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	8.6	2.5	3.4	4.6	2.0	3.6	2.6	4.3
Green Ext Time (p_c), s	1.2	0.1	0.1	0.3	0.0	0.9	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	22	148	29	12	17	91	141	71	17	298	58
Future Volume (veh/h)	83	22	148	29	12	17	91	141	71	17	298	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	146	39	260	51	21	30	160	247	125	30	523	102
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Percent Heavy Veh, %	0	0	0	0	0	0	2	2	2	2	2	2
Cap, veh/h	251	80	328	312	135	140	408	767	376	460	806	156
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.09	0.33	0.33	0.03	0.27	0.27
Sat Flow, veh/h	430	223	918	563	378	392	1781	2311	1132	1781	2967	576
Grp Volume(v), veh/h	445	0	0	102	0	0	160	188	184	30	312	313
Grp Sat Flow(s),veh/h/ln	1571	0	0	1333	0	0	1781	1777	1667	1781	1777	1767
Q Serve(g_s), s	9.6	0.0	0.0	0.0	0.0	0.0	3.0	3.9	4.0	0.6	7.6	7.6
Cycle Q Clear(g_c), s	12.3	0.0	0.0	1.9	0.0	0.0	3.0	3.9	4.0	0.6	7.6	7.6
Prop In Lane	0.33		0.58	0.50		0.29	1.00		0.68	1.00		0.33
Lane Grp Cap(c), veh/h	659	0	0	587	0	0	408	590	553	460	482	480
V/C Ratio(X)	0.68	0.00	0.00	0.17	0.00	0.00	0.39	0.32	0.33	0.07	0.65	0.65
Avail Cap(c_a), veh/h	1326	0	0	1165	0	0	659	1110	1042	673	965	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	10.7	0.0	0.0	11.3	12.2	12.2	12.0	15.7	15.7
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.1	0.0	0.0	0.6	0.3	0.3	0.1	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	0.0	0.7	0.0	0.0	1.0	1.4	1.3	0.2	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	0.0	10.8	0.0	0.0	11.9	12.5	12.6	12.0	17.2	17.2
LnGrp LOS	B	A	A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		445			102			532			655	
Approach Delay, s/veh		15.1			10.8			12.4			17.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	21.9	6.2	20.7	21.9	9.1	17.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	3.9	2.6	6.0	14.3	5.0	9.6
Green Ext Time (p_c), s	0.7	0.0	2.3	3.2	0.2	3.6

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

APPENDIX F
2019, 2024 AND 2040 BUILD
INTERSECTION CAPACITY ANALYSIS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	397	16	242	359	26	382
Future Volume (veh/h)	397	16	242	359	26	382
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1870	1870
Adj Flow Rate, veh/h	478	0	292	0	31	460
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	3	3	2	2
Cap, veh/h	652		2886		114	3433
Arrive On Green	0.19	0.00	0.57	0.00	0.03	0.67
Sat Flow, veh/h	3456	1585	5233	1572	3456	5274
Grp Volume(v), veh/h	478	0	292	0	31	460
Grp Sat Flow(s),veh/h/ln	1728	1585	1689	1572	1728	1702
Q Serve(g_s), s	8.4	0.0	1.7	0.0	0.6	2.1
Cycle Q Clear(g_c), s	8.4	0.0	1.7	0.0	0.6	2.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	652		2886		114	3433
V/C Ratio(X)	0.73		0.10		0.27	0.13
Avail Cap(c_a), veh/h	2003		2886		614	3433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	6.4	0.0	30.5	3.8
Incr Delay (d2), s/veh	1.6	0.0	0.1	0.0	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.5	0.0	0.2	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	0.0	6.4	0.0	31.8	3.9
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	478	A	292	A		491
Approach Delay, s/veh	26.3		6.4			5.7
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.6	41.4			48.0	16.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	2.6	3.7			4.1	10.4
Green Ext Time (p_c), s	0.0	1.9			3.5	1.8

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	186	0	2	68	206	0	2	0	243	3	13
Future Volume (veh/h)	17	186	0	2	68	206	0	2	0	243	3	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1811	1811	1811
Adj Flow Rate, veh/h	27	291	0	3	106	0	0	3	0	380	5	20
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	6	6	6
Cap, veh/h	254	578	0	14	312		3	773	661	538	1169	1037
Arrive On Green	0.03	0.12	0.00	0.00	0.09	0.00	0.00	0.41	0.00	0.16	0.65	0.65
Sat Flow, veh/h	1725	5107	0	3346	3441	1535	1810	1900	1610	3346	1811	1535
Grp Volume(v), veh/h	27	291	0	3	106	0	0	3	0	380	5	20
Grp Sat Flow(s),veh/h/ln	1725	1648	0	1673	1721	1535	1810	1900	1610	1673	1811	1535
Q Serve(g_s), s	0.8	3.2	0.0	0.1	1.7	0.0	0.0	0.1	0.0	6.2	0.1	0.2
Cycle Q Clear(g_c), s	0.8	3.2	0.0	0.1	1.7	0.0	0.0	0.1	0.0	6.2	0.1	0.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	578	0	14	312		3	773	661	538	1169	1037
V/C Ratio(X)	0.11	0.50	0.00	0.22	0.34		0.00	0.00	0.00	0.71	0.00	0.02
Avail Cap(c_a), veh/h	425	1668	0	492	1221		266	773	661	1187	1169	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	23.9	0.0	28.7	24.7	0.0	0.0	10.2	0.0	23.0	3.6	3.1
Incr Delay (d2), s/veh	0.2	0.7	0.0	7.9	0.6	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	0.0	0.0	0.7	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	24.6	0.0	36.6	25.3	0.0	0.0	10.2	0.0	24.7	3.6	3.1
LnGrp LOS	C	C	A	D	C		A	B	A	C	A	A
Approach Vol, veh/h		318			109	A		3			405	
Approach Delay, s/veh		24.5			25.6			10.2			23.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	28.0	4.7	11.3	0.0	41.8	6.3	9.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	3.2	2.1	2.1	5.2	0.0	2.2	2.8	3.7
Green Ext Time (p_c), s	1.1	0.0	0.0	1.6	0.0	0.1	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	18	130	34	30	8	101	103	18	3	92	124
Future Volume (veh/h)	66	18	130	34	30	8	101	103	18	3	92	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1826	1826	1826	1811	1811	1811
Adj Flow Rate, veh/h	116	32	228	60	53	14	177	181	32	5	161	218
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Percent Heavy Veh, %	0	0	0	0	0	0	5	5	5	6	6	6
Cap, veh/h	239	79	310	320	257	55	471	988	171	453	400	357
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.11	0.33	0.33	0.01	0.23	0.23
Sat Flow, veh/h	376	245	956	581	793	170	1739	2955	513	1725	1721	1535
Grp Volume(v), veh/h	376	0	0	127	0	0	177	105	108	5	161	218
Grp Sat Flow(s),veh/h/ln	1577	0	0	1544	0	0	1739	1735	1734	1725	1721	1535
Q Serve(g_s), s	5.6	0.0	0.0	0.0	0.0	0.0	2.8	1.7	1.8	0.1	3.2	5.1
Cycle Q Clear(g_c), s	8.4	0.0	0.0	2.0	0.0	0.0	2.8	1.7	1.8	0.1	3.2	5.1
Prop In Lane	0.31		0.61	0.47		0.11	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	628	0	0	632	0	0	471	580	579	453	400	357
V/C Ratio(X)	0.60	0.00	0.00	0.20	0.00	0.00	0.38	0.18	0.19	0.01	0.40	0.61
Avail Cap(c_a), veh/h	1600	0	0	1529	0	0	778	1313	1312	763	1131	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	0.0	9.9	0.0	0.0	9.3	9.5	9.5	11.7	13.1	13.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.2	0.0	0.0	0.5	0.1	0.2	0.0	0.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	0.7	0.0	0.0	0.9	0.5	0.6	0.0	1.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	0.0	10.0	0.0	0.0	9.8	9.7	9.7	11.7	13.8	15.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	B	B
Approach Vol, veh/h		376			127			390			384	
Approach Delay, s/veh		12.9			10.0			9.7			14.7	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.6	4.8	18.0	17.6	8.9	13.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	4.0	2.1	3.8	10.4	4.8	7.1
Green Ext Time (p_c), s	0.8	0.0	1.2	2.7	0.2	2.3

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	20	57	0
Future Vol, veh/h	0	0	0	20	57	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	24	67	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	24	0	-	0	12	12
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1591	-	-	-	1008	1069
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1591	-	-	-	1008	1069
Mov Cap-2 Maneuver	-	-	-	-	1008	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1008
HCM Lane V/C Ratio	-	-	-	-	0.067
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	57	20	47	134	0
Future Vol, veh/h	0	57	20	47	134	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	67	24	55	158	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	119	52
Stage 1	-	-	-	-	52	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1519	-	-	-	877	1016
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1519	-	-	-	877	1016
Mov Cap-2 Maneuver	-	-	-	-	877	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1519	-	-	-	877
HCM Lane V/C Ratio	-	-	-	-	0.18
HCM Control Delay (s)	0	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	330	95	503	381	82	321
Future Volume (veh/h)	330	95	503	381	82	321
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1856	1856
Adj Flow Rate, veh/h	384	0	585	0	95	373
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	1	1	3	3
Cap, veh/h	547		2875		221	3522
Arrive On Green	0.16	0.00	0.56	0.00	0.06	0.70
Sat Flow, veh/h	3401	1560	5316	1598	3428	5233
Grp Volume(v), veh/h	384	0	585	0	95	373
Grp Sat Flow(s),veh/h/ln	1700	1560	1716	1598	1714	1689
Q Serve(g_s), s	6.7	0.0	3.5	0.0	1.7	1.5
Cycle Q Clear(g_c), s	6.7	0.0	3.5	0.0	1.7	1.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	547		2875		221	3522
V/C Ratio(X)	0.70		0.20		0.43	0.11
Avail Cap(c_a), veh/h	2038		2875		630	3522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	6.9	0.0	28.2	3.1
Incr Delay (d2), s/veh	1.6	0.0	0.2	0.0	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	1.1	0.0	0.7	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.5	0.0	7.0	0.0	29.5	3.2
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	384	A	585	A		468
Approach Delay, s/veh	26.5		7.0			8.5
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.5	39.5			48.0	14.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	3.7	5.5			3.5	8.7
Green Ext Time (p_c), s	0.1	4.1			2.8	1.4

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	127	48	58	299	208	1	18	14	282	75	83
Future Volume (veh/h)	22	127	48	58	299	208	1	18	14	282	75	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	27	153	58	70	360	0	1	22	17	340	90	100
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	1	1	1
Cap, veh/h	229	483	168	189	550		3	720	701	490	977	876
Arrive On Green	0.03	0.13	0.13	0.06	0.16	0.00	0.00	0.38	0.38	0.14	0.52	0.52
Sat Flow, veh/h	1725	3622	1259	3346	3441	1535	1810	1900	1610	3483	1885	1598
Grp Volume(v), veh/h	27	138	73	70	360	0	1	22	17	340	90	100
Grp Sat Flow(s),veh/h/ln	1725	1648	1585	1673	1721	1535	1810	1900	1610	1742	1885	1598
Q Serve(g_s), s	0.8	2.3	2.6	1.2	6.1	0.0	0.0	0.5	0.4	5.8	1.5	1.9
Cycle Q Clear(g_c), s	0.8	2.3	2.6	1.2	6.1	0.0	0.0	0.5	0.4	5.8	1.5	1.9
Prop In Lane	1.00		0.79	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	440	211	189	550		3	720	701	490	977	876
V/C Ratio(X)	0.12	0.31	0.35	0.37	0.65		0.34	0.03	0.02	0.69	0.09	0.11
Avail Cap(c_a), veh/h	386	1037	499	459	1138		248	720	701	1152	1080	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	24.3	24.4	28.2	24.4	0.0	30.9	12.1	10.0	25.4	7.6	6.7
Incr Delay (d2), s/veh	0.2	0.4	1.0	1.2	1.3	0.0	58.0	0.1	0.1	1.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	1.0	0.5	2.4	0.0	0.1	0.2	0.1	2.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	24.7	25.4	29.4	25.8	0.0	88.9	12.2	10.0	27.1	7.6	6.8
LnGrp LOS	C	C	C	C	C		F	B	B	C	A	A
Approach Vol, veh/h		238			430	A		40			530	
Approach Delay, s/veh		24.6			26.3			13.2			20.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	28.0	8.0	12.8	4.6	36.6	6.4	14.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	7.8	2.5	3.2	4.6	2.0	3.9	2.8	8.1
Green Ext Time (p_c), s	1.0	0.1	0.1	1.0	0.0	0.8	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	19	124	24	10	15	76	128	59	15	267	49
Future Volume (veh/h)	70	19	124	24	10	15	76	128	59	15	267	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	21	138	27	11	17	104	175	81	21	366	67
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	0	0	0	0	0	0	2	2	2	2	2	2
Cap, veh/h	241	67	223	309	132	123	526	751	333	548	740	134
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.09	0.31	0.31	0.03	0.25	0.25
Sat Flow, veh/h	387	280	929	592	550	511	1781	2394	1062	1781	3004	545
Grp Volume(v), veh/h	237	0	0	55	0	0	104	128	128	21	215	218
Grp Sat Flow(s),veh/h/ln	1596	0	0	1653	0	0	1781	1777	1679	1781	1777	1772
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	1.3	1.7	1.8	0.3	3.3	3.4
Cycle Q Clear(g_c), s	4.2	0.0	0.0	0.8	0.0	0.0	1.3	1.7	1.8	0.3	3.3	3.4
Prop In Lane	0.33		0.58	0.49		0.31	1.00		0.63	1.00		0.31
Lane Grp Cap(c), veh/h	532	0	0	564	0	0	526	558	527	548	438	437
V/C Ratio(X)	0.45	0.00	0.00	0.10	0.00	0.00	0.20	0.23	0.24	0.04	0.49	0.50
Avail Cap(c_a), veh/h	2019	0	0	1947	0	0	995	1684	1591	916	1463	1459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.8	0.0	0.0	9.6	0.0	0.0	7.6	8.2	8.2	8.6	10.4	10.4
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.0	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.2	0.0	0.0	0.4	0.5	0.5	0.1	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	0.0	0.0	9.7	0.0	0.0	7.8	8.4	8.4	8.6	11.3	11.3
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	B	B
Approach Vol, veh/h		237			55			360			454	
Approach Delay, s/veh		11.4			9.7			8.2			11.2	
Approach LOS		B			A			A			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	12.2	5.4	14.6	12.2	7.5	12.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	2.8	2.3	3.8	6.2	3.3	5.4
Green Ext Time (p_c), s	0.3	0.0	1.5	1.6	0.1	2.5

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	65	37	0
Future Vol, veh/h	0	0	0	65	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	75	75	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	87	44	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	87	0	-	0	44	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1509	-	-	-	967	1026
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1509	-	-	-	967	1026
Mov Cap-2 Maneuver	-	-	-	-	967	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	967
HCM Lane V/C Ratio	-	-	-	-	0.045
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	37	65	153	85	0
Future Vol, veh/h	0	37	65	153	85	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	41	78	184	100	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	262	0	-	0	211	170
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1302	-	-	-	777	874
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1302	-	-	-	777	874
Mov Cap-2 Maneuver	-	-	-	-	777	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	981	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1302	-	-	-	777
HCM Lane V/C Ratio	-	-	-	-	0.129
HCM Control Delay (s)	0	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	474	18	278	428	28	425
Future Volume (veh/h)	474	18	278	428	28	425
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1870	1870
Adj Flow Rate, veh/h	571	0	335	0	34	512
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	3	3	2	2
Cap, veh/h	750		2770		121	3313
Arrive On Green	0.22	0.00	0.55	0.00	0.03	0.65
Sat Flow, veh/h	3456	1585	5233	1572	3456	5274
Grp Volume(v), veh/h	571	0	335	0	34	512
Grp Sat Flow(s),veh/h/ln	1728	1585	1689	1572	1728	1702
Q Serve(g_s), s	10.4	0.0	2.2	0.0	0.6	2.6
Cycle Q Clear(g_c), s	10.4	0.0	2.2	0.0	0.6	2.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	750		2770		121	3313
V/C Ratio(X)	0.76		0.12		0.28	0.15
Avail Cap(c_a), veh/h	1933		2770		593	3313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	7.4	0.0	31.5	4.6
Incr Delay (d2), s/veh	1.6	0.0	0.1	0.0	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.7	0.0	0.3	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	0.0	7.5	0.0	32.8	4.7
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	571	A	335	A		546
Approach Delay, s/veh	26.3		7.5			6.4
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.8	41.2			48.0	19.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	2.6	4.2			4.6	12.4
Green Ext Time (p_c), s	0.0	2.2			3.9	2.2

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	188	0	2	69	246	0	2	0	290	4	14
Future Volume (veh/h)	18	188	0	2	69	246	0	2	0	290	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1811	1811	1811
Adj Flow Rate, veh/h	28	294	0	3	108	0	0	3	0	453	6	22
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	6	6	6
Cap, veh/h	249	573	0	14	306		3	750	642	613	1183	1050
Arrive On Green	0.03	0.12	0.00	0.00	0.09	0.00	0.00	0.39	0.00	0.18	0.65	0.65
Sat Flow, veh/h	1725	5107	0	3346	3441	1535	1810	1900	1610	3346	1811	1535
Grp Volume(v), veh/h	28	294	0	3	108	0	0	3	0	453	6	22
Grp Sat Flow(s),veh/h/ln	1725	1648	0	1673	1721	1535	1810	1900	1610	1673	1811	1535
Q Serve(g_s), s	0.9	3.3	0.0	0.1	1.8	0.0	0.0	0.1	0.0	7.6	0.1	0.3
Cycle Q Clear(g_c), s	0.9	3.3	0.0	0.1	1.8	0.0	0.0	0.1	0.0	7.6	0.1	0.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	573	0	14	306		3	750	642	613	1183	1050
V/C Ratio(X)	0.11	0.51	0.00	0.22	0.35		0.00	0.00	0.00	0.74	0.01	0.02
Avail Cap(c_a), veh/h	412	1619	0	478	1184		258	750	642	1152	1183	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	24.7	0.0	29.6	25.5	0.0	0.0	10.9	0.0	23.0	3.6	3.0
Incr Delay (d2), s/veh	0.2	0.7	0.0	7.9	0.7	0.0	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	0.0	0.0	0.7	0.0	0.0	0.0	0.0	2.9	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	25.5	0.0	37.5	26.2	0.0	0.0	10.9	0.0	24.8	3.6	3.0
LnGrp LOS	C	C	A	D	C		A	B	A	C	A	A
Approach Vol, veh/h		322			111	A		3			481	
Approach Delay, s/veh		25.3			26.5			10.9			23.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	28.0	4.7	11.4	0.0	43.4	6.4	9.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	9.6	2.1	2.1	5.3	0.0	2.3	2.9	3.8
Green Ext Time (p_c), s	1.3	0.0	0.0	1.6	0.0	0.1	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	21	155	41	36	10	120	119	21	4	108	148
Future Volume (veh/h)	78	21	155	41	36	10	120	119	21	4	108	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1826	1826	1826	1811	1811	1811
Adj Flow Rate, veh/h	137	37	272	72	63	18	211	209	37	7	189	260
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Percent Heavy Veh, %	0	0	0	0	0	0	5	5	5	6	6	6
Cap, veh/h	237	78	342	298	241	58	442	1060	184	434	425	379
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.12	0.36	0.36	0.01	0.25	0.25
Sat Flow, veh/h	395	217	956	532	675	161	1739	2954	514	1725	1721	1535
Grp Volume(v), veh/h	446	0	0	153	0	0	211	121	125	7	189	260
Grp Sat Flow(s),veh/h/ln	1568	0	0	1368	0	0	1739	1735	1733	1725	1721	1535
Q Serve(g_s), s	9.2	0.0	0.0	0.0	0.0	0.0	4.0	2.4	2.4	0.1	4.6	7.6
Cycle Q Clear(g_c), s	12.4	0.0	0.0	3.2	0.0	0.0	4.0	2.4	2.4	0.1	4.6	7.6
Prop In Lane	0.31		0.61	0.47		0.12	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	656	0	0	597	0	0	442	622	622	434	425	379
V/C Ratio(X)	0.68	0.00	0.00	0.26	0.00	0.00	0.48	0.19	0.20	0.02	0.44	0.69
Avail Cap(c_a), veh/h	1308	0	0	1185	0	0	639	1075	1074	681	927	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	0.0	11.1	0.0	0.0	11.0	10.9	10.9	13.7	15.7	16.8
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.2	0.0	0.0	0.8	0.2	0.2	0.0	0.7	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	0.0	1.0	0.0	0.0	1.3	0.8	0.8	0.1	1.7	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	0.0	0.0	11.3	0.0	0.0	11.8	11.0	11.1	13.7	16.4	19.0
LnGrp LOS	B	A	A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		446			153			457			456	
Approach Delay, s/veh		15.3			11.3			11.4			17.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	22.1	5.0	22.2	22.1	10.4	16.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	5.2	2.1	4.4	14.4	6.0	9.6
Green Ext Time (p_c), s	1.0	0.0	1.4	3.2	0.3	2.6

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	20	57	0
Future Vol, veh/h	0	0	0	20	57	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	24	67	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	24	0	-	0	12	12
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1591	-	-	-	1008	1069
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1591	-	-	-	1008	1069
Mov Cap-2 Maneuver	-	-	-	-	1008	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1008
HCM Lane V/C Ratio	-	-	-	-	0.067
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	57	20	47	134	0
Future Vol, veh/h	0	57	20	47	134	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	67	24	55	158	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	119	52
Stage 1	-	-	-	-	52	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1519	-	-	-	877	1016
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1519	-	-	-	877	1016
Mov Cap-2 Maneuver	-	-	-	-	877	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1519	-	-	-	877
HCM Lane V/C Ratio	-	-	-	-	0.18
HCM Control Delay (s)	0	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	393	110	565	454	95	363
Future Volume (veh/h)	393	110	565	454	95	363
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1856	1856
Adj Flow Rate, veh/h	457	0	657	0	110	422
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	1	1	3	3
Cap, veh/h	626		2776		229	3425
Arrive On Green	0.18	0.00	0.54	0.00	0.07	0.68
Sat Flow, veh/h	3401	1560	5316	1598	3428	5233
Grp Volume(v), veh/h	457	0	657	0	110	422
Grp Sat Flow(s),veh/h/ln	1700	1560	1716	1598	1714	1689
Q Serve(g_s), s	8.1	0.0	4.3	0.0	2.0	1.9
Cycle Q Clear(g_c), s	8.1	0.0	4.3	0.0	2.0	1.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	626		2776		229	3425
V/C Ratio(X)	0.73		0.24		0.48	0.12
Avail Cap(c_a), veh/h	1982		2776		613	3425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	7.8	0.0	28.9	3.7
Incr Delay (d2), s/veh	1.7	0.0	0.2	0.0	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.4	0.0	0.8	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.4	0.0	8.0	0.0	30.5	3.8
LnGrp LOS	C		A		C	A
Approach Vol, veh/h	457	A	657	A		532
Approach Delay, s/veh	26.4		8.0			9.3
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.8	39.2			48.0	16.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	11.5	27.5			43.5	37.5
Max Q Clear Time (g_c+I1), s	4.0	6.3			3.9	10.1
Green Ext Time (p_c), s	0.2	4.6			3.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	130	57	69	318	248	1	21	16	336	89	96
Future Volume (veh/h)	25	130	57	69	318	248	1	21	16	336	89	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	30	157	69	83	383	0	1	25	19	405	107	116
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	6	6	0	0	0	1	1	1
Cap, veh/h	226	477	190	201	568		3	692	683	555	984	886
Arrive On Green	0.03	0.14	0.14	0.06	0.17	0.00	0.00	0.36	0.36	0.16	0.52	0.52
Sat Flow, veh/h	1725	3474	1384	3346	3441	1535	1810	1900	1610	3483	1885	1598
Grp Volume(v), veh/h	30	148	78	83	383	0	1	25	19	405	107	116
Grp Sat Flow(s),veh/h/ln	1725	1648	1562	1673	1721	1535	1810	1900	1610	1742	1885	1598
Q Serve(g_s), s	0.9	2.6	2.9	1.5	6.7	0.0	0.0	0.5	0.4	7.1	1.9	2.2
Cycle Q Clear(g_c), s	0.9	2.6	2.9	1.5	6.7	0.0	0.0	0.5	0.4	7.1	1.9	2.2
Prop In Lane	1.00		0.89	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	453	215	201	568		3	692	683	555	984	886
V/C Ratio(X)	0.13	0.33	0.36	0.41	0.67		0.36	0.04	0.03	0.73	0.11	0.13
Avail Cap(c_a), veh/h	371	997	472	441	1094		238	692	683	1107	1038	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	25.1	25.3	29.2	25.3	0.0	32.2	13.2	10.8	25.8	7.8	6.9
Incr Delay (d2), s/veh	0.3	0.4	1.0	1.4	1.4	0.0	63.1	0.1	0.1	1.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	1.1	0.6	2.7	0.0	0.1	0.2	0.2	2.9	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	25.5	26.3	30.6	26.7	0.0	95.2	13.3	10.9	27.7	7.9	7.0
LnGrp LOS	C	C	C	C	C		F	B	B	C	A	A
Approach Vol, veh/h		256			466	A		45			628	
Approach Delay, s/veh		25.5			27.4			14.1			20.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	28.0	8.4	13.4	4.6	38.2	6.6	15.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.5	8.5	19.5	8.5	35.5	7.5	20.5
Max Q Clear Time (g_c+I1), s	9.1	2.5	3.5	4.9	2.0	4.2	2.9	8.7
Green Ext Time (p_c), s	1.1	0.1	0.1	1.1	0.0	1.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	22	148	29	12	17	91	151	71	17	315	58
Future Volume (veh/h)	83	22	148	29	12	17	91	151	71	17	315	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	24	164	32	13	19	125	207	97	23	432	79
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	0	0	0	0	0	0	2	2	2	2	2	2
Cap, veh/h	236	70	245	320	137	130	500	796	359	535	793	144
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	393	267	932	649	522	495	1781	2379	1074	1781	3004	545
Grp Volume(v), veh/h	280	0	0	64	0	0	125	153	151	23	254	257
Grp Sat Flow(s),veh/h/ln	1592	0	0	1666	0	0	1781	1777	1677	1781	1777	1772
Q Serve(g_s), s	3.4	0.0	0.0	0.0	0.0	0.0	1.7	2.3	2.4	0.3	4.4	4.5
Cycle Q Clear(g_c), s	5.6	0.0	0.0	1.0	0.0	0.0	1.7	2.3	2.4	0.3	4.4	4.5
Prop In Lane	0.33		0.59	0.50		0.30	1.00		0.64	1.00		0.31
Lane Grp Cap(c), veh/h	550	0	0	587	0	0	500	595	561	535	469	468
V/C Ratio(X)	0.51	0.00	0.00	0.11	0.00	0.00	0.25	0.26	0.27	0.04	0.54	0.55
Avail Cap(c_a), veh/h	1802	0	0	1733	0	0	892	1503	1419	854	1306	1303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	0.0	10.2	0.0	0.0	8.2	8.7	8.8	9.1	11.4	11.4
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	0.0	0.3	0.2	0.3	0.0	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	0.3	0.0	0.0	0.5	0.7	0.7	0.1	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.5	0.0	0.0	10.2	0.0	0.0	8.4	9.0	9.0	9.2	12.4	12.4
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	B	B
Approach Vol, veh/h		280			64			429			534	
Approach Delay, s/veh		12.5			10.2			8.8			12.3	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.0	5.5	16.6	14.0	8.1	14.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	7.5	30.5	38.5	11.5	26.5
Max Q Clear Time (g_c+I1), s	3.0	2.3	4.4	7.6	3.7	6.5
Green Ext Time (p_c), s	0.4	0.0	1.8	1.9	0.2	3.0

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	65	37	0
Future Vol, veh/h	0	0	0	65	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	75	75	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	87	44	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	87	0	-	0	44	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1509	-	-	-	967	1026
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1509	-	-	-	967	1026
Mov Cap-2 Maneuver	-	-	-	-	967	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	967
HCM Lane V/C Ratio	-	-	-	-	0.045
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	37	65	153	85	0
Future Vol, veh/h	0	37	65	153	85	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	41	78	184	100	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	262	0	-	0	211	170
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1302	-	-	-	777	874
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1302	-	-	-	777	874
Mov Cap-2 Maneuver	-	-	-	-	777	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	981	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1302	-	-	-	777
HCM Lane V/C Ratio	-	-	-	-	0.129
HCM Control Delay (s)	0	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

TABLE 7

Generalized **Peak Hour Directional** Volumes for Florida's **Urbanized Areas**[1]

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	830	880	**
2	Divided	*	1,910	2,000	**
3	Divided	*	2,940	3,020	**
4	Divided	*	3,970	4,040	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	370	750	800
2	Divided	*	730	1,630	1,700
3	Divided	*	1,170	2,520	2,560
4	Divided	*	1,610	3,390	3,420

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
1	Divided	Yes	No	+5%
1	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding directional volumes in this table by 1.2

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
2	2,260	3,020	3,660	3,940
3	3,360	4,580	5,500	6,080
4	4,500	6,080	7,320	8,220
5	5,660	7,680	9,220	10,360
6	7,900	10,320	12,060	12,500

Freeway Adjustments

Auxiliary Lane	Ramp Metering
+ 1,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
1	Undivided	420	840	1,190	1,640
2	Divided	1,810	2,560	3,240	3,590
3	Divided	2,720	3,840	4,860	5,380

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
1	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	150	390	1,000
50-84%	110	340	1,000	>1,000
85-100%	470	1,000	>1,000	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	140	480
50-84%	*	80	440	800
85-100%	200	540	880	>1,000

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

[1] Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	682	177	19	54	3
Future Vol, veh/h	1	682	177	19	54	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	802	208	22	64	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	230	0	-	0	542	115
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	323	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	905	-	-	-	522	778
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	905	-	-	-	521	778
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	647	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	905	-	-	-	530
HCM Lane V/C Ratio	0.001	-	-	-	0.127
HCM Control Delay (s)	9	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	734	189	45	127	7
Future Vol, veh/h	2	734	189	45	127	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	864	222	53	149	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	275	0	-	0	599	138
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	350	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	862	-	-	-	490	752
Stage 1	-	-	-	-	677	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	862	-	-	-	489	752
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	862	-	-	-	498
HCM Lane V/C Ratio	0.003	-	-	-	0.317
HCM Control Delay (s)	9.2	-	-	-	15.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	368	930	62	35	2
Future Vol, veh/h	3	368	930	62	35	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	75	75	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	433	1240	83	41	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1323	0	-	0	1463	662
Stage 1	-	-	-	-	1282	-
Stage 2	-	-	-	-	181	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	272	-	-	-	180	347
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	765	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	272	-	-	-	177	347
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	765	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	30.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	272	-	-	-	182
HCM Lane V/C Ratio	0.013	-	-	-	0.239
HCM Control Delay (s)	18.4	-	-	-	30.9
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.9

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	395	992	145	81	4
Future Vol, veh/h	8	395	992	145	81	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	439	1195	175	95	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1370	0	-	0	1477	685
Stage 1	-	-	-	-	1283	-
Stage 2	-	-	-	-	194	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	258	-	-	-	177	335
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	753	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	258	-	-	-	171	335
Mov Cap-2 Maneuver	-	-	-	-	171	-
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	49.9
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	258	-	-	-	175
HCM Lane V/C Ratio	0.034	-	-	-	0.571
HCM Control Delay (s)	19.5	-	-	-	49.9
HCM Lane LOS	C	-	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	3