Appendix 1 Los Angeles Regional Water Quality Control Board No Further Action Letter

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Appendices

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CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

June 23, 2015

Mr. Sung Song
Pepsi Cola West
4416 Azusa Canyon Road
Irwindale, California 91706-2740

UNDERGROUND STORAGE TANK PROGRAM – CASE REFERRAL RESPONSE
PEPSI COLA COMPANY
4416 AZUSA CANYON ROAD, IRWINDALE, CALIFORNIA
(GLOBAL ID NO.: T0603702929)

Dear Mr. Song:

On February 26, 2015, the County of Los Angeles Department of Public Works (LADPW) transmitted this case to our agency due to concerns regarding soil and groundwater impacts from the subject site (Site). The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within the Los Angeles and Ventura counties. As such, we are the lead regulatory agency for overseeing corrective action (assessment and/or monitoring activities) and cleanup of releases from leaking underground storage tank (UST) systems at the Site.

We have received the following documents for the Site:

- "Underground Storage Tank Closure Report" dated June 13, 2013, by Stantec
- "Closure/Site Assessment Report" review dated February 26, 2015 by LADPW

Based on our review of the submitted documents, we have the following comments:

- On April 24, 2013, one 12,000-gallon UST used to store diesel fuel as well as two associated dispensers and product piping was removed from the Site under observation of a Los Angeles County Fire Department Inspector.

- Following UST, dispenser and piping removal, confirmation soil samples were collected; two from three to four feet beneath the UST invert and four from three to five feet beneath the removed dispensers. No confirmation samples were collected from beneath the removed piping or from the excavated gravel stockpile.

- Soil samples were analyzed for total petroleum hydrocarbons as diesel (TPH_D) by EPA Method 8015B, and volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), and tertiary amyl methyl ether (TAME), by EPA Method 8260B.

- The laboratory reported TPH_D only in the samples collected from beneath the removed UST at concentrations of 26 milligrams per kilogram (mg/kg) and 6.3 mg/kg, respectively. Benzene was the only other analyte reported by the laboratory. The two samples collected from three feet beneath the removed dispenser's detected benzene at concentrations of 1.1 micrograms per kilogram (µg/kg) and 1.3 µg/kg, respectively. Two additional samples were then collected from five feet beneath the removed dispensers. No concentrations of benzene or other VOCs were reported in the samples by the laboratory.

Based on the information available to us, Regional Board staff determined that residual concentrations of fuel constituents pose a low threat to human health, and soil and groundwater quality beneath the Site. Therefore, no further action is required to pursue any further soil and/or groundwater investigation at the Site. No Regional Board case for the Site will be opened at this time.

If you have any questions, please contact Mr. Gregg Kwey at (213) 576-6702 or email him at gregg.kwey@waterboards.ca.gov

Sincerely,

Yue Rong, Ph. D.
Program Manager
Underground Storage Tank Program

cc: Mr. Tim Smith, Los Angeles County, Department of Public Works

Appendices

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Appendix 2 Lozeau Drury, Supporters Alliance for Environmental Responsibility, Letter Dated March 16, 2022 - Exhibit A

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Appendices

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March 14, 2022

Victoria Yundt
Lozeau | Drury LLP
1939 Harrison Street, Suite 150
Oakland, CA 94618

Subject: Comments on the 4416 Azusa Canyon Road Project

Dear Ms. Yundt,

We have reviewed the December 2021 Initial Study/Mitigated Negative Declaration ("IS/MND") for the 4416 Azusa Canyon Road Project ("Project") located in the City of Irwindale ("City"). The Project proposes to demolish all existing buildings and construct a 129,830-square-foot ("SF") building consisting of 17,000-SF of manufacturing space, 103,670-SF of warehouse space, and 9,160-SF of office space, as well as 123 parking spaces, on the 5.89-acre site.

Our review concludes that the IS/MND fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the surrounding environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The IS/MND's air quality analysis relies on criteria air pollutant emissions CalEEMod.2020.4.0 (p. 56).[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input

[1] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide.

project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Air Quality and GHG Background and Modeling ("AQ & GHG Report") as Appendix A to the IS/MND, we found that several model inputs were inconsistent with information disclosed in the IS/MND. As a result, the Project's construction and operational emissions are underestimated. Thus, an EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Failure to Model All Proposed Land Uses

According to the IS/MND:

> "The warehouse and manufacturing businesses (prospective tenants are unknown at this time) would operate out of a proposed building that would encompass a total of 129,830 square feet, with 17,000 square feet of manufacturing space, 103,670 square feet of warehousing space, and 9,160 square feet of ancillary office space to support the industrial and warehousing tenant(s)." (IS/MND, p. 1).

As demonstrated above, the model should have included 9,160-SF of office space. However, review of the CalEEMod output files demonstrates that the "Construction," "Operation - Main," and "Operation - Trucks" models include all 112,830-SF as "Unrefrigerated Warehouse-No Rail" (see excerpt below) (Appendices Vol I, Appendix A, pp. 107, 131, 156, 301, 314, 326, 336, 349, 359).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	112,830.00
General Light Industry	17.00	1000sqft	0.39	17,000.00
Parking Lot	123.00	Space	0.46	20,193.00
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00

As you can see in the excerpt above, the model fails to distinguish between the warehouse and office land uses. This inconsistency presents an issue, as CalEEMod includes 63 different land use types that are each assigned a distinctive set of energy usage emission factors.[2] Furthermore, each land use type includes a specific trip rate that CalEEMod uses to calculate mobile-source emissions.[3] Thus, by failing to

[2] "Appendix D – Default Data Tables" California Air Pollution Control Officers Association (CAPCOA), June 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide.

[3] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 29.

include all proposed land use types, the model may underestimate the Project's construction-related and operational emissions and should not be relied upon to determine Project significance.

Incorrect Land Use Type

According to the IS/MND:

> "The warehouse and manufacturing businesses (prospective tenants are unknown at this time) would operate out of a proposed building that would encompass a total of 129,830 square feet, with 17,000 square feet of manufacturing space, 103,670 square feet of warehousing space, and 9,160 square feet of ancillary office space to support the industrial and warehousing tenant(s)." (IS/MND, p. 1).

As demonstrated above, the model should have included 17,000-SF of manufacturing space. However, review of the CalEEMod output files demonstrates that the "Construction," model includes the proposed manufacturing space as "General Light Industry" (see excerpt below) (Appendices Vol I, Appendix A, pp. 107, 131, 156).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	112,830.00
General Light Industry	17.00	1000sqft	0.39	17,000.00
Parking Lot	123.00	Space	0.46	20,193.00
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00

As you can see in the excerpt above, the model incorrectly includes the proposed manufacturing space as "General Light Industry" instead of the "Manufacturing" land use type. This inconsistency presents an issue, as CalEEMod includes 63 different land use types that are each assigned a distinctive set of energy usage emission factors.[4] Furthermore, each land use type includes a specific trip rate that CalEEMod uses to calculate mobile-source emissions.[5] Thus, by included an incorrect land use type, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

Unsubstantiated Reduction to Parking Land Use Size

According to the IS/MND, the Project proposes to include 123 parking stalls (p. 25). Review of the CalEEMod output files demonstrates that the "Construction," "Operation - Main," and "Operation - Trucks" models include the correct number of parking spaces (see excerpt below) (Appendices Vol I, Appendix A, pp. 107, 131, 156, 301, 314, 326, 336, 349, 359).

[4] "Appendix D – Default Data Tables" California Air Pollution Control Officers Association (CAPCOA), June 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide.

[5] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 29.

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	112,830.00
General Light Industry	17.00	1000sqft	0.39	17,000.00
Parking Lot	123.00	Space	0.46	20,193.00
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00

However, further review demonstrates that the parking lot square footage was reduced from the default value of 49,200- to 20,193-SF (see excerpt below) (Appendices Vol I, Appendix A, pp. 108, 132, 157, 302, 315, 327, 337, 350, 360).

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	49,200.00	20,193.00

As you can see in the excerpt above, the parking lot land use size was manually reduced by 29,007-SF.[6] As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[7] According to the "User Entered Comments & Non-Default Data" table, the justification provided for this change is:

> "Based on information provided. See assumptions file in the AQ/GHG appendix" (Appendices Vol I, Appendix A, pp. 107, 131, 156, 301, 314, 326, 336, 349, 359).

However, both the IS/MND and AQ & GHG Report fail to mention the square footage of the proposed parking stalls or justify this reduction whatsoever. As such, we cannot verify the revised parking land use size.

This unsubstantiated reduction presents an issue, as the square footage of parking land uses is used for certain calculations such as determining the area to be painted and stripped (i.e., VOC emissions from architectural coatings) and volume to be ventilated (i.e., energy impacts).[8] Thus, by including an unsubstantiated reduction to the proposed parking land use size, the models may underestimate the Project's construction-related and operational emissions and should not be relied upon to determine Project significance.

Incorrect Application of Construction-Related Mitigation

Review of the CalEEMod output files demonstrates that the "Construction" model includes the following construction-related mitigation measures (see excerpt below) (Appendices Vol I, Appendix A, pp. 113, 138, 163):

[6] Calculated: (49,200-SF default land use size) – (20,193-SF revised land use size) = 29,007-SF reduction.
[7] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* http://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.
[8] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 29.

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

As a result, the model includes a clean paved road reduction of 9% and an unpaved road vehicle speed of 15 miles per hour ("MPH") (see excerpt below) (Appendices Vol I, Appendix A, pp. 109, 133, 158).

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[9] According to the "User Entered Comments & Non-Default Data" table, the justification provided for the inclusion of the construction-related mitigation measures is:

> "Based on South Coast Rules 403 and 1186" (Appendix A, pp. 3, 36, 63).

Furthermore, regarding the Project's fugitive dust control measures, the IS/MND states:

> "Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers" (p. 59).

However, the inclusion of the above-mentioned construction-related mitigation measures remain unsupported for three reasons.

First, the inclusion of the construction-related mitigation measures, based on the Project's compliance with SCAQMD Rules 403 and 1186, is unsupported. According to the Association of Environmental Professionals ("AEP") *CEQA Portal Topic Paper* on mitigation measures:

> "By definition, mitigation measures are not part of the original project design. Rather, mitigation measures are actions taken by the lead agency to reduce impacts to the environment resulting from the original project design. Mitigation measures are identified by the lead agency after the project has undergone environmental review and are above-and-beyond existing laws, regulations, and requirements that would reduce environmental impacts."[10]

[9] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9

[10] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 5.

As demonstrated above, mitigation measures are not part of the original project design and are intended to go above-and-beyond existing regulatory requirements. As such, the inclusion of these measures, based solely on SCAQMD Rules 403 and 1186, is unsubstantiated.

Second, according to the above-mentioned AEP report:

> "While not 'mitigation', a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact."[11]

As demonstrated above, design features that are not formally included as mitigation measures may be eliminated from the Project's design altogether. Thus, as the above-mentioned construction-related measures are not formally included as mitigation measures, we cannot guarantee that they would be implemented, monitored, and enforced on the Project site.

Third, simply because the IS/MND references SCAQMD Rules 403 and 1186 does not justify the inclusion of the above-mentioned construction-related mitigation measures in the model. Specifically, according to SCAQMD Rule 403, Projects can either water unpaved roads 3 times per day, water unpaved roads 1 time per day and limit vehicle speeds to 15 mph or apply a chemical stabilizer (see excerpt below).[12]

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.

Furthermore, according to SCAQMD Rule 1186, Projects can either pave at least 1 mile of road, apply chemical stabilizers, or limit vehicle speeds to 15 mph (see excerpt below).[13]

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[11] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.

[12] "RULE 403. FUGITIVE DUST." SCAQMD, June 2005, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf, p. 403-21, Table 2.

[13] "Rule 1186. PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations." SCAQMD, July 2008, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1186.pdf, p. 5.

Unpaved Roads

(5) Any owner or operator of an unpaved public road in the South Coast Air Basin shall annually treat unpaved roads that have greater than the average ADT of all unpaved roads in its jurisdiction (as determined by the owner/operator) beginning January 1, 1998 and each of the 8 calendar years thereafter by either:

- (A) Paving at least 1 mile of such roads using typical roadway materials; or
- (B) Applying chemical stabilization to 2 miles of such roads in sufficient quantities to maintain a stabilized surface; or
- (C) Taking one or more of the following actions on 3 miles of such roads:
  - (i) Installing signage at 1/4 mile intervals that prohibits vehicular speeds in excess of 15 miles per hour (mph) as authorized by California Vehicle Code section 22365 and/or
  - (ii) Installing speed control devices (e.g., speed bumps) every 500 feet and/or
  - (iii) Maintaining the roadway in such a manner that inhibits vehicular speeds in excess of 15 mph.

As such, the "Replace Ground Cover," "Water Exposed Area," and "Reduce Vehicle Speed on Unpaved Roads" measures are not all *explicitly* required by SCAQMD Rule 403 or 1186 and should therefore not be included in the model. By incorrectly including several construction-related mitigation measures without properly committing to their implementation, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The IS/MND estimates that the maximum cancer risk posed to nearby, existing residential sensitive receptors as a result of Project operation would be 1.4 in one million, which would not exceed the SCAQMD significance threshold of 10 in one million (see excerpt below) (p. 62, Table 8).

Table 8 Operational HRA Results

Receptor	Cancer Risk[1] (per million)	Chronic Hazard Index
Maximum Exposed Receptor – Resident[1]	1.4	<0.001
Maximum Exposed Receptor – Student[2]	0.04	<0.001
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	**No**	**No**

Source: HARP2, Risk Assessment Standalone Tool.
Note: Cancer risk calculated using 2015 OEHHA Guidance Manual.
[1] Calculated for the 30-yr residential scenario.
[2] Manzanita Elementary School cancer risk calculated for 7-year student scenario (ages 4 to 10).

Regarding the Project's health risk impacts associated with Project construction, the IS/MND states:

> "The South Coast AQMD currently does not require health risk assessments to be conducted for short-term emissions from construction equipment. Emissions from construction equipment primarily consist of diesel particulate matter (DPM). The Office of Environmental Health Hazard

> Assessment (OEHHA) adopted new guidance for the preparation of health risk assessments in March 2015 (OEHHA 2015). It has also developed a cancer risk factor and noncancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No shot-term acute exposure levels have been developed for DPM. The South Coast AQMD currently does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. The proposed project would be developed over approximately eight months. The relatively short duration when compared to a 30-year time frame would limit exposures of on-site and off-site receptors. In addition, exhaust emissions from off-road vehicles associated with overall project-related construction activities would not exceed the screening-level LSTs. For these reasons, it is anticipated that construction emissions would not pose a threat to off-site receptors near the proposed project, and project-related construction health impacts would be less than significant" (p. 60).

As demonstrated above, the IS/MND concludes the Project would have a less-than-significant construction-related health impact because the Project's short term construction duration would limit exposure to diesel particulate matter ("DPM"), and exhaust emissions from off-road construction vehicles would not exceed the screening-level localized significance thresholds ("LSTs"). However, the IS/MND's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for four reasons.

First, the use of an LST analysis to determine the health risk impacts posed to nearby, existing sensitive receptors as a result of the Project's construction-related toxic air contaminant ("TAC") emissions is incorrect. While the LST method assesses the impact of pollutants at a local level, it only evaluates impacts from criteria air pollutants. According to the *Final Localized Significance Threshold Methodology* document prepared by the SCAQMD, the LST analysis is only applicable to NO_x, CO, PM_{10}, and $PM_{2.5}$ emissions, which are collectively referred to as criteria air pollutants.[14] Because the LST method can only be applied to criteria air pollutants, this method cannot be used to determine whether emissions from TACs, specifically DPM, a known human carcinogen, would result in a significant health risk impact to nearby sensitive receptors. As a result, health impacts from exposure to TACs, such as DPM, were not analyzed, thus leaving a gap in the IS/MND's analysis.

Second, by failing to prepare a quantified construction HRA, the Project is inconsistent with CEQA's requirement to correlate the increase in emissions that the Project would generate to the adverse impacts on human health caused by those emissions.[15] This is incorrect, as construction of the proposed Project will produce emissions of diesel particulate matter ("DPM") through the exhaust stacks of construction equipment over the course of the 8-month construction duration (p. 29). However, the IS/MND fails to discuss the potential TACs associated with Project construction or evaluate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a

[14] "Final Localized Significance Threshold Methodology." SCAQMD, Revised July 2008, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

[15] "Sierra Club v. County of Fresno." Supreme Court of California, December 2018, a*vailable at:* https://ceqaportal.org/decisions/1907/Sierra%20Club%20v.%20County%20of%20Fresno.pdf.

reasonable effort to connect the Project's construction-related TAC emissions to the potential health risks posed to nearby receptors, the Project is inconsistent with CEQA's requirement to correlate the increase in TAC emissions with potential adverse impacts on human health.

Third, the State of California Department of Justice recommends the preparation of a quantitative HRA pursuant to the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, as well as local air district guidelines.[16] OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015, as referenced by the IS/MND (p. 60).[17] This guidance document describes the types of projects that warrant the preparation of an HRA. The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors. As the Project's proposed construction duration vastly exceeds the 2-month requirement set forth by OEHHA, it is clear that the Project meets the threshold warranting a quantified construction-related HRA under OEHHA guidance. These recommendations reflect the most recent state health risk policies, and as such, we recommend that an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated construction DPM emissions be included in an EIR for the Project.

Fourth, while the IS/MND includes a HRA evaluating the health risk impacts to nearby, existing receptors as a result of Project operation, the HRA fails to evaluate the combined lifetime cancer risk to nearby, existing receptors as a result of Project construction and operation together. According to OEHHA guidance, as referenced by the IS/MND, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location" (p. 60).[18] However, the Project's HRA fails to sum each age bin to evaluate the total cancer risk over the course of the Project's total construction and operation. This is incorrect and thus, an updated analysis should quantify the entirety of the Project's construction and operational health risks together and sum them to compare to the SCAQMD threshold of 10 in one million, as referenced by the IS/MND (p. 62).

Screening-Level Analysis Indicates Significant Health Risk Impact

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening level air quality dispersion model.[19] The model replaced SCREEN3, and AERSCREEN is included in the

[16] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, *available at*: https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf, p. 6.
[17] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/hotspots2015.html.
[18] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4
[19] U.S. EPA (April 2011) AERSCREEN Released as the EPA Recommended Screening Model, http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

OEHHA[20] and the California Air Pollution Control Officers Associated ("CAPCOA")[21] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction-related health risk impact to residential sensitive receptors using the annual PM_{10} exhaust estimates from the IS/MND's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. The IS/MND's CalEEMod model indicates that construction activities will generate approximately 67 pounds of DPM over the 245-day construction period.[22] The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{67.4\ lbs}{245\ days} \times \frac{453.6\ grams}{1\ lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00144\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.00144 grams per second ("g/s"). Construction was simulated as a 5.89-acre rectangular area source in AERSCREEN, with approximate dimensions of 218- by 109-meters. A release height of three meters was selected to represent the height of stacks of operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. The population of Irwindale was obtained from U.S. 2020 Census data.[23]

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project Site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant to be estimated by multiplying the single-hour concentration by 10%.[24] According to the IS/MND, the nearest sensitive receptor is located 168 meters away from the Project site (p. 59). Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.458 µg/m^3 DPM at approximately 175 meters downwind. Multiplying this single-hour

[20] OEHHA (February 2015) Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[21] CAPCOA (July 2009) Health Risk Assessments for Proposed Land Use Projects, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.
[22] See Attachment A for calculations.
[23] "Irwindale." U.S. Census Bureau, 2020, *available at:* https://datacommons.org/place/geoId/0636826.
[24] U.S. EPA (October 1992) Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised, http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf.

concentration by 10%, we get an annualized average concentration of 0.1458 µg/m^3 for Project construction at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA, as recommended by SCAQMD.[25] Consistent with the 245-day construction schedule, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years) and first 0.42 years of the infantile stage of life (0 – 2 years).

Consistent with OEHHA guidance, as recommended by SCAQMD and referenced by the IS/MND, we used Age Sensitivity Factors ("ASF(s)") to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution (Appendix B, p. B-24).[26, 27] According to this guidance, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant). Furthermore, in accordance with guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants.[28] Finally, consistent with OEHHA and SCAQMD guidance, we used a Fraction of Time At Home ("FAH") Value of 1 for the 3rd trimester and infant.[29] We used a cancer potency factor of 1.1 (mg/kg-day)$^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown in the tables below.

[25] "Supplemental Guidelines for Submission of Rule 1200 Health Risk Assessments (HRAs)." SDAPCD, July 2019, *available at:* https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Toxics_Program/APCD_1200_Supplemental_Guidelines.pdf.

[26] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[27] "Supplemental Guidelines for Submission of Rule 1200 Health Risk Assessments (HRAs)." SDAPCD, July 2019, *available at:* https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Toxics_Program/APCD_1200_Supplemental_Guidelines.pdf.

[28] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act." SCAQMD, June 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6, p. 19; *see also:* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[29] "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, *available at*: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

The Maximally Exposed Individual at an Existing Residential Receptor							
Age Group	**Emissions Source**	**Duration** (years)	**Concentration** (ug/m3)	**Breathing Rate** (L/kg-day)	**Cancer Risk** (without ASFs*)	**ASF**	**Cancer Risk** (with ASFs*)
3rd Trimester	Construction	0.25	0.1458	361	1.98E-07	10	**1.98E-06**
Infant (Age 0 - 2)	*Construction*	*0.42*	*0.1458*	*1090*	*1.01E-06*		
	Operation	*1.58*	*	*1090*	*		
	Total	2			1.01E-06	10	**1.01E-05**
Child (Age 2 - 16)	Operation	14	*	572	*	3	*
Adult (Age 16 - 30)	Operation	14	*	261	*	1	*
Lifetime		**30**			**1.21E-06**		**1.21E-05**

* Operational cancer risk calculated separately in the IS/MND.

As demonstrated in the table above, the excess cancer risks for the 3rd trimester of pregnancy and infants at the MEIR located approximately 175 meters away, over the course of Project construction, utilizing ASFs, are approximately 1.98 and 10.1 in one million, respectively. The excess cancer risk associated with Project construction over the course of 245 days, utilizing ASFs, is approximately 12.1 in one million. When summing the Project's construction-related cancer risk, as estimated by SWAPE, with the IS/MND's operational cancer risk of 1.4 in one million, we estimate an excess cancer risk of approximately 13.5 in one million over the course of a residential lifetime (p. 62, Table 8).[30] As such, the infant and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Thus, an EIR should be prepared, including a quantified air pollution model as well as an updated, quantified refined health risk assessment which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

[30] Calculated: 12.1 in one million + 1.4 in one million = 13.5 in one million.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The IS/MND estimates that the Project would generate net annual greenhouse gas ("GHG") emissions of 2,223 metric tons of carbon dioxide equivalents per year ("MT CO_2e/year"), which would not exceed the SCAQMD bright-line threshold of 3,000 MT CO_2e/year (see excerpt below) (p. 84-85, Table 13).

Table 13 Net Project-Related Operation GHG Emissions

Source	GHG ($MTCO_2e$/Year)	Percentage of Total Emissions
Water	2	<1%
Amortized Construction Emissions[9,10]	15	1%
Total	**2,954**	**100%**
Net Change		
Former Pepsi Bottling Plant Total	731	N/A
Proposed Project Total	2,954	N/A
Net Change	**2,223**	**N/A**
South Coast AQMD Bright-Line Threshold	3,000 $MTCO_2e$/Yr	
Exceeds Bright-Line Threshold?	**No**	

Source: CalEEMod, Version 2020.4.0. Summation of the individual sources may not equal the total shown due to rounding.
Notes: MTons: metric tons; $MTCO_2e$: equivalent to a metric ton of carbon dioxide
[1] For purposes of this analysis, the default CalEEMod historical energy rates, which are based on the 2005 Building Energy Standards, are utilized.
[2] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2021 emissions data and trip lengths.
[3] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2021 emission rates. Utilizes an average trip length of 39.9 miles per trip, which is derived from the SCAG's Heavy-Duty Truck Regional Travel Demand model and represents the average class 8 truck trip distance within the SoCAB (South Coast AQMD 2021).
[4] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2022 emissions data and trip lengths.
[5] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2022 emission rates. Utilizes an average trip length of 39.9 miles per trip, which is derived from the SCAG's Heavy-Duty Truck Regional Travel Demand model and represents the average class 8 truck trip distance within the SoCAB (South Coast AQMD 2021).
[6] Based on operation of 5 diesel-powered forklifts and 10 diesel-powered yard trucks at 7 hours per unit per day. Utilizes OFFROAD2017 v 1.0.1 calendar year 2022 emissions data for a 100-horsepower forklift and 175-horsepower yard tractor.
[7] Based on operation of 5 electric-powered forklifts and 10 electric-powered yard trucks at 7 hours per unit per day.
[8] Based on a power consumption rate of 8.70 kWh per hour per unit (kWh/yr/unit) for an electric forklift with a lift capacity of 6,000 pounds (EPRI 2021). Electricity consumption for electric-powered yard truck based on a consumption rate of 8.75 kWh/hr/unit (Transpower 2015).
[9] Total construction emission are amortized over a 30-year project lifetime according to recommended South Coast AQMD methodology (South Coast AQMD 2009).
[10] The proposed project may start construction in April 2022. While the emissions modeling is based on a February 2022 start date, a later start date in April 2022 would result in either the same emissions results or slightly lower emissions than what is shown in this table. In general, on-road and off-road emissions data utilized in CalEEMod decrease with each passing calendar year to account for stricter emissions standards and/or replacement of older vehicles and equipment with newer and cleaner units.

Furthermore, the IS/MND's analysis relies upon the Project's consistency with the CARB *Scoping Plan* and SCAG 2020-2045 *RTP/SCS* to conclude that the Project would result in a less-than-significant GHG impact (p. 85-87). However, the IS/MND's analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect for seven reasons.

(1) The IS/MND's quantitative GHG analysis relies upon an incorrect and unsubstantiated air model;
(2) The IS/MND's incorrectly evaluates the Project's GHG emissions;
(3) The IS/MND's quantitative GHG analysis relies upon an outdated threshold;
(4) The IS/MND's unsubstantiated air model indicates a potentially significant impact;
(5) SWAPE's updated analysis indicates a potentially significant GHG impact;
(6) The IS/MND fails to consider the performance-based standards under CARB's *Scoping Plan*; and
(7) The IS/MND fails to consider the performance-based standards under SCAG's *RTP/SCS.*

1) Incorrect and Unsubstantiated Quantitative Analysis of Emissions

As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,223 MT CO_2e/year (p. 84-85, Table 13). However, the IS/MND's quantitative GHG analysis is unsubstantiated. As previously discussed, when we reviewed the Project's CalEEMod output files, provided in the AQ & GHG Report as Appendix A to the IS/MND, we found that several of the values inputted into the model are not consistent with information disclosed in the IS/MND. As a result, the model underestimates the Project's emissions, and the IS/MND's quantitative GHG analysis should not be relied upon to determine Project significance. An EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the surrounding environment.

2) Incorrect Analysis of GHG Emissions

The IS/MND estimates that the Project would generate net annual GHG emissions of 2,223 MT CO_2e/year by subtracting the emissions associated with the existing bottling plant from the emissions associated with the proposed land uses (see excerpt below) (p. 84-85, Table 13).

Table 13 Net Project-Related Operation GHG Emissions

Source	GHG ($MTCO_2e$/Year)	Percentage of Total Emissions
Water	2	<1%
Amortized Construction Emissions[9,10]	15	1%
Total	**2,954**	**100%**
Net Change		
Former Pepsi Bottling Plant Total	731	N/A
Proposed Project Total	2,954	N/A
Net Change	**2,223**	**N/A**
South Coast AQMD Bright-Line Threshold	3,000 $MTCO_2e$/Yr	
Exceeds Bright-Line Threshold?	**No**	

Source: CalEEMod, Version 2020.4.0. Summation of the individual sources may not equal the total shown due to rounding.
Notes: MTons: metric tons; $MTCO_2e$: equivalent to a metric ton of carbon dioxide
[1] For purposes of this analysis, the default CalEEMod historical energy rates, which are based on the 2005 Building Energy Standards, are utilized.
[2] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2021 emissions data and trip lengths.
[3] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2021 emission rates. Utilizes an average trip length of 39.9 miles per trip, which is derived from the SCAG's Heavy-Duty Truck Regional Travel Demand model and represents the average class 8 truck trip distance within the SoCAB (South Coast AQMD 2021).
[4] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2022 emissions data and trip lengths.
[5] Based on trip generation data provided by Urban Crossroads (Appendix I) and CalEEMod default calendar year 2022 emission rates. Utilizes an average trip length of 39.9 miles per trip, which is derived from the SCAG's Heavy-Duty Truck Regional Travel Demand model and represents the average class 8 truck trip distance within the SoCAB (South Coast AQMD 2021).
[6] Based on operation of 5 diesel-powered forklifts and 10 diesel-powered yard trucks at 7 hours per unit per day. Utilizes OFFROAD2017 v 1.0.1 calendar year 2022 emissions data for a 100-horsepower forklift and 175-horsepower yard tractor.
[7] Based on operation of 5 electric-powered forklifts and 10 electric-powered yard trucks at 7 hours per unit per day.
[8] Based on a power consumption rate of 8.70 kWh per hour per unit (kWh/yr/unit) for an electric forklift with a lift capacity of 6,000 pounds (EPRI 2021). Electricity consumption for electric-powered yard truck based on a consumption rate of 8.75 kWh/hr/unit (Transpower 2015).
[9] Total construction emission are amortized over a 30-year project lifetime according to recommended South Coast AQMD methodology (South Coast AQMD 2009).
[10] The proposed project may start construction in April 2022. While the emissions modeling is based on a February 2022 start date, a later start date in April 2022 would result in either the same emissions results or slightly lower emissions than what is shown in this table. In general, on-road and off-road emissions data utilized in CalEEMod decrease with each passing calendar year to account for stricter emissions standards and/or replacement of older vehicles and equipment with newer and cleaner units.

However, this is incorrect. According to State CEQA Guidelines § 15125:

> "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local

and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant."[31]

As demonstrated above, the existing environmental conditions at the time of the notice of preparation ("NOP") will constitute the baseline physical conditions used to determine the significance of the Project's impacts. As the Project has not yet prepared a NOP, the Project should rely on the time that the environmental analysis was commenced. Regarding the existing land uses at the Project site, the IS/MND states:

> "[T]he site is presently developed with one building of approximately 62,713 square feet in the western half of the site, a large metal shed north of the building, and a loading dock and large truck yard on the eastern portion of the site (LACOA 2021) [...] The building was occupied by Pepsi Bottling Group. The bottling plant ceased operation in December 2020 and the site has remained vacant. The building is surrounded by concrete pavement in the parking and drive areas. The site includes 116 vehicle parking spots and 25 parking spots for trucks" (p. 7).

Thus, the Project site was vacant as of December 2020. As the IS/MND and Notice of Intent ("NOI") for the proposed Project were both issued in December 2021, the IS/MND should have used a vacant environmental setting as the baseline physical condition. As such, the IS/MND incorrectly subtracts the existing emissions from the emissions associated with the proposed land uses, and the GHG emissions purported by the IS/MND are underestimated. As a result, the IS/MND fails to identify a potentially significant GHG impact and the Project's GHG analysis should not be relied upon.

3) Incorrect Reliance on an Outdated Quantitative GHG Threshold

As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,223 MT CO_2e/year, which would not exceed the SCAQMD threshold of 3,000 MT CO_2e/year (p. 84-85, Table 13). However, the guidance that provided the 3,000 MT CO_2e/year threshold, the SCAQMD's 2008 *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans* report, was developed when the Global Warming Solutions Act of 2006, commonly known as "AB 32", was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020.[32] Furthermore, AEP guidance states:

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[31] "Title 14. Natural Resources Division 6. Resources Agency Chapter 3. Guidelines for Implementation of the California Environmental Quality Act Article 5. Preliminary Review of Projects and Conduct of Initial Study." CEQA Guidelines, *available at:* https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/FINAL_Text_of_Proposed_Amendemts.pdf, pp. 14.

[32] HEALTH & SAFETY CODE 38550, *available at:* https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=38550.

> "[F]or evaluating projects with a post 2020 horizon, the threshold will need to be revised based on a new gap analysis that would examine 17 development and reduction potentials out to the next GHG reduction milestone."[33]

As it is currently March 2022, thresholds for 2020 are not applicable to the proposed Project and should be revised to reflect the current GHG reduction target. As such, the SCAQMD bright-line threshold of 3,000 MT CO_2e/year is outdated and inapplicable to the proposed Project, and the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. Instead, we recommend that the Project apply the SCAQMD 2035 efficiency target of 3.0 MT CO_2e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets.[34]

4) Failure to Identify a Potentially Significant GHG Impact

In an effort to quantitatively evaluate the Project's GHG emissions, we compared the Project's GHG emissions, as estimated by the IS/MND, to the SCAQMD 2035 service population efficiency target of 3.0 MT CO_2e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets.[35] When applying this threshold, the Project's incorrect and unsubstantiated air model indicates a potentially significant GHG impact. As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,223 MT CO_2e/year (p. 84-85, Table 13). According to CAPCOA's *CEQA & Climate Change* report, a service population ("SP") is defined as "the sum of the number of residents and the number of jobs supported by the project."[36] As the Project does not include any residential land uses, the SP would include the number of jobs supported by the Project. According to the IS/MND, the Project will employ 72 people during operation (p. 25). As such, we estimate a SP of 72 people. When dividing the Project's net annual GHG emissions, as estimated by the IS/MND, by a SP of 72 people, we find that the Project would emit approximately 30.9 MT CO_2e/SP/year (see table below).[37]

IS/MND Greenhouse Gas Emissions	
Total Annual Emissions (MT CO_2e/year)	2,223
Service Population	72
Service Population Efficiency (MT CO_2e/SP/year)	**30.9**
SCAQMD 2035 Target	3.0
Exceeds?	***Yes***

[33] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, *available at:* https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 39.

[34] "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf, p. 2.

[35] "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf, p. 2.

[36] CAPCOA (Jan. 2008) CEQA & Climate Change, p. 71-72, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf.

[37] Calculated: (2,223 MT CO_2e/year) / (72 service population) = (30.875 MT CO_2e/SP/year).

As demonstrated above, the Project's service population efficiency value, as estimated by the IS/MND's provided net annual GHG emission estimates and SP, exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO_2e/SP/year, indicating a potentially significant impact not previously identified or addressed by the IS/MND. Furthermore, it is important to note that when existing emissions are not subtracted from the IS/MND's annual GHG emissions estimate, the Project's service population efficiency value is even higher. As a result, the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. An EIR should be prepared, including an updated GHG analysis and incorporating additional mitigation measures to reduce the Project's GHG emissions to less-than-significant levels.

5) Updated Analysis Indicates a Potentially Significant GHG Impact

In an effort to more accurately estimate the Project's construction-related and operational emissions, we prepared updated CalEEMod models, using the Project-specific information provided by the IS/MND. In our updated models, we included the correct land use types and sizes as well as excluded the incorrect construction-related mitigation measures.[38]

SWAPE's updated air model indicates a potentially significant GHG impact, when applying the outdated SCAQMD bright-line threshold of 3,000 MT CO_2e/year. The updated CalEEMod output files disclose the Project's mitigated emissions, which include approximately 598 MT CO_2e of total construction emissions and approximately 1,988 MT CO_2e/year of annual operational emissions (sum of area-, energy-, mobile-, waste-, and water-related emissions). When amortizing the Project's construction-related GHG emissions over a period of 30 years and summing them with the Project's operational GHG emissions, we estimate net annual GHG emissions of approximately 3,030 MT CO_2e/year (see table below).

[38] See Attachment C for updated air modeling.

SWAPE Greenhouse Gas Emissions	
Project Phase	**Proposed Project** (MT CO_2e/year)
Construction (amortized over 30 years)	19.90
Area	*0.01*
Energy	*218.13*
Mobile	*279.84*
Trucks	*1,310.13*
Waste	*166.60*
Water	*12.80*
Diesel Off-Road Equipment (from IS/MND)	*945.00*
Electric Off-Road Equipment (from IS/MND)	*78.00*
Total Annual Operational	3,010.51
Net Annual GHG Emissions	**3,030.41**
SCAQMD Bright-Line Threshold	3,000
Exceeds?	***Yes***

As demonstrated above, the Project's estimated annual GHG emissions, as estimated by SWAPE, exceed the outdated SCAQMD bright-line threshold of 3,000 MT CO_2e/year, thus resulting in a significant impact not previously addressed or mitigated in the IS/MND. As a result, the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. An EIR should be prepared, including an updated GHG analysis and incorporating additional mitigation measures to reduce the Project's GHG emissions to less-than-significant levels.

6) Failure to Consider Performance-based Standards Under CARB's 2017 Scoping Plan

As previously discussed, the IS/MND concludes that the Project would be consistent with CARB's 2017 Climate Change Scoping Plan (p. 85-87). However, this is incorrect, as the IS/MND fails to consider performance-based measures proposed by CARB.

i. Passenger & Light Duty VMT Per Capita Benchmarks per SB 375

In reaching the State's long-term GHG emission reduction goals, CARB's 2017 *Scoping Plan* explicitly cites to SB 375 and the VMT reductions anticipated under the implementation of Sustainable Community Strategies.[39] CARB has identified the population and daily VMT from passenger autos and light-duty vehicles at the state and county level for each year between 2010 to 2050 under a "baseline scenario" that includes "current projections of VMT included in the existing Regional Transportation Plans/Sustainable Communities Strategies (RTP/SCSs) adopted by the State's 18 Metropolitan Planning

[39] "California's 2017 Climate Change Scoping Plan." CARB, November 2017, *available at*: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, p. 25, 98, 101-103.

Organizations (MPOs) pursuant to SB 375 as of 2015."[40] By dividing the projected daily VMT by the population, we calculated the daily VMT per capita for each year at the state and county level for 2010 (baseline year), 2022 (Project operational year), and 2030 (target years under SB 32) (see table below).

2017 Scoping Plan Daily VMT Per Capita

	Los Angeles County			State		
Year	Population	LDV VMT Baseline	VMT Per Capita	Population	LDV VMT Baseline	VMT Per Capita
2010	9,838,771	216,979,221.64	22.05	37,335,085	836,463,980.46	22.40
2022	10,534,881	220,487,425.77	20.93	41,321,565	916,010,145.57	22.17
2030	10,868,614	215,539,586.12	19.83	43,939,250	957,178,153.19	21.78

As the IS/MND fails to evaluate the Project's consistency with the CARB 2017 *Scoping Plan* performance-based daily VMT per capita projections, the IS/MND's claim that the proposed Project would not conflict with the CARB 2017 *Scoping Plan* is unsupported. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

7) Failure to Consider Performance-based Standards under SCAG's RTP/SCS

As previously discussed, the IS/MND concludes that the Project would be consistent with SCAG's *RTP/SCS* (p. 85-87). However, the IS/MND fails to consider whether or not the Project meets any of the specific performance-based goals underlying SCAG's *RTP/SCS* and SB 375, such as: i) per capita GHG emission targets, or ii) daily vehicles miles traveled ("VMT") per capita benchmarks.

i. SB 375 Per Capita GHG Emission Goals

SB 375 was signed into law in September 2008 to enhance the state's ability to reach AB 32 goals by directing CARB to develop regional 2020 and 2035 GHG emission reduction targets for passenger vehicles (autos and light-duty trucks). In March 2018, CARB adopted updated regional targets requiring a 19 percent decrease in VMT for the SCAG region by 2035. This goal is reflected in SCAG's 2020 RTP/SCS Program Environmental Impact Report ("PEIR"), in which the 2020 RTP/SCS PEIR updates the per capita emissions to 18.8 lbs/day in 2035 (*see* excerpt below). [41]

[40] "Supporting Calculations for 2017 Scoping Plan-Identified VMT Reductions," Excel Sheet "Readme." CARB, January 2019, *available at*: https://ww2.arb.ca.gov/sites/default/files/2019-01/sp_mss_vmt_calculations_jan19_0.xlsx.

[41] "Connect SoCal Certified Final Program Environmental Impact Report." SCAG, May 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_complete.pdf?1607981618, p. 3.8-74.

Table 3.8-10
SB 375 Analysis

	2005 (Baseline)	2020 (Plan)	2035 (Plan)
Resident population (per 1,000)	17,161	19,194	21,110
CO2 emissions (per 1,000 tons)	204.0/a/	204.5/b/	198.6/b/
Per capita emissions (pounds/day)	23.8	21.3	18.8
% difference from Plan (2020) to Baseline (2005)			–8%
% difference from Plan (2035) to Baseline (2005)			–19%/c/

Note:
/a/ Based on EMFAC2007
/b/Based on EMFAC2014 and SCAG modeling, 2019.
/c/ Includes off-model adjustments for 2035 and 2045
Source: SCAG modeling, 2019.
http://www.scag.ca.gov/committees/CommitteeDocLibrary/jointRCPC110515fullagn.pdf

As the IS/MND fails to evaluate the Project's consistency with the SCAG's per capita emissions, the IS/MND's claim that the proposed Project would not conflict with SCAG's *RTP/SCS* is unsupported. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

ii. SB 375 RTP/SCS Daily VMT Per Capita Target

Under the SCAG's 2020 *RTP/SCS*, daily VMT per capita in the SCAG region should decrease from 23.2 VMT in 2016 to 20.7 VMT by 2045.[42] Daily VMT per capita in Los Angeles County should decrease from 22.2 to 19.2 VMT during that same period.[43] Here, however, the IS/MND fails to consider any of the above-mentioned performance-based VMT targets. As the IS/MND fails to evaluate the Project's consistency with the SCAG's performance-based daily VMT per capita projections, the IS/MND's claim that the proposed Project would not conflict with SCAG's *RTP/SCS* is unsupported. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant health risk and GHG impacts that should be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in the Department of Justice Warehouse Project Best Practices document.[44] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

[42] "Connect SoCal." SCAG, September 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176, pp. 138.
[43] "Connect SoCal." SCAG, September 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176, pp. 138.
[44] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice.

- Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.
- Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
- Limiting the amount of daily grading disturbance area.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
- Forbidding idling of heavy equipment for more than two minutes.
- Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
- Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.
- Using paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L.
- Providing information on transit and ridesharing programs and services to construction employees.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.
- Requiring that all facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on-site demonstrating compliance with this requirement and shall make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.
- Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging stations provided.
- Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.

- Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Constructing electric truck charging stations proportional to the number of dock doors at the project.
- Constructing electric plugs for electric transport refrigeration units at every dock door, if the warehouse use could include refrigeration.
- Constructing electric light-duty vehicle charging stations proportional to the number of parking spaces at the project.
- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity, such as equal to the building's projected energy needs.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Achieving certification of compliance with LEED green building standards.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants to use carriers that are SmartWay carriers.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An EIR should be prepared to include all feasible mitigation measures, as well as include updated health risk and GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Attachment A: Health Risk Calculations
Attachment B: AERSCREEN Output Files
Attachment C: CalEEMod Output Files
Attachment D: Matt Hagemann CV
Attachment E: Paul E. Rosenfeld CV

Construction				
2022			**Total**	
Annual Emissions (tons/year)	0.0502		Total DPM (lbs)	67.39178082
Daily Emissions (lbs/day)	0.275068493		Total DPM (g)	30568.91178
Construction Duration (days)	245		Emission Rate (g/s)	0.00144411
Total DPM (lbs)	67.39178082		Release Height (meters)	3
Total DPM (g)	30568.91178		Total Acreage	5.89
Start Date	2/1/2022		Max Horizontal (meters)	218.34
End Date	10/4/2022		Min Horizontal (meters)	109.17
Construction Days	245		Initial Vertical Dimension (meters)	1.5
			Setting	Urban
			Population	1,472
			Start Date	2/1/2022
			End Date	10/4/2022
			Total Construction Days	245
			Total Years of Construction	0.67
			Total Years of Operation	29.33

Start date and time 03/09/22 11:08:37

AERSCREEN 21112

Construction

Construction

---------- DATA ENTRY VALIDATION ----------

	METRIC	ENGLISH
** AREADATA **	---	---
Emission Rate:	0.144E-02 g/s	0.115E-01 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	218.34 meters	716.34 feet
Area Source Width:	109.17 meters	358.17 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	1472	
Dist to Ambient Air:	1.0 meters	3. feet

** BUILDING DATA **

No Building Downwash Parameters

** TERRAIN DATA **

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

** FUMIGATION DATA **

No fumigation requested

** METEOROLOGY DATA **

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

```
 Anemometer Height:   10.000 meters

 Dominant Surface Profile: Urban
 Dominant Climate Type:    Average Moisture

 Surface friction velocity (u*): not adjusted

DEBUG OPTION ON




 AERSCREEN output file:
 2022.03.09_AzusaCanyonRoad_AERSCREEN_Construction.out



 *** AERSCREEN Run is Ready to Begin




 No terrain used, AERMAP will not be run
**************************************************

SURFACE CHARACTERISTICS & MAKEMET
Obtaining surface characteristics...
```

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 03/09/22 11:10:41

****

Running AERMOD

Processing Winter

Processing surface roughness sector 1

```
**************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP
```

```
**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************
```

```
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30


    ********   WARNING MESSAGES    ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP
 *******************************************


  Running AERMOD

 Processing Spring


Processing surface roughness sector  1


**************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0


    ********   WARNING MESSAGES    ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


*****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP
 ****************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
```

```
**************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************
```

```
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP
 *******************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


**************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

**************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30


    ********   WARNING MESSAGES   ********

 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP

FLOWSECTOR   ended 03/09/22 11:10:59


REFINE       started 03/09/22 11:10:59


 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0


    ********   WARNING MESSAGES   ********
```

```
 CO W320      36       URBOPT: Input Parameter May Be Out-of-Range for Parameter
   URB-POP


REFINE       ended 03/09/22 11:11:02


 *********************************************

 AERSCREEN Finished Successfully

 But with Warnings

 Check log file for details

 *********************************************


 Ending date and time  03/09/22 11:11:05
```

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.19392E+01         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21383E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23138E+01        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24633E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25956E+01       100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.26441E+01       110.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25026E+01       125.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18057E+01       150.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14583E+01       175.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12528E+01       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10929E+01       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.96496E+00       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.86077E+00       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.77389E+00       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70140E+00       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63925E+00       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
 310.0    2.0
   0.58607E+00       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54056E+00       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50003E+00       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46491E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43365E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.40598E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38121E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35869E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33849E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32030E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30384E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28851E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27446E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26162E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24982E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23897E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22885E+00       775.00      0.00   0.0        Winter       0-360   10011001
```

```
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21940E+00       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21064E+00       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20247E+00       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19480E+00       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18763E+00       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18092E+00       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17463E+00       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16871E+00       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16308E+00      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15777E+00      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15277E+00      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14804E+00      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14356E+00      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13932E+00      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13530E+00      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13148E+00      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.12783E+00      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12434E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12102E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11785E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11482E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11191E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10912E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10644E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10388E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10142E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99069E-01      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.96815E-01      1475.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.94648E-01      1500.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.92560E-01      1525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.90550E-01      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.88612E-01      1575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.86748E-01      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.84955E-01      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.83226E-01      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.81558E-01      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79948E-01      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.78393E-01      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76891E-01      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.75438E-01      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74034E-01      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.72672E-01      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71348E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70066E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68824E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67620E-01      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66450E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65309E-01      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64202E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63922E-01      2025.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62858E-01      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61824E-01      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60819E-01      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59841E-01      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58891E-01      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57967E-01      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57067E-01      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56192E-01      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55339E-01      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54509E-01      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53700E-01      2300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52911E-01      2325.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52143E-01      2350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51393E-01      2375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50662E-01      2400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49949E-01      2425.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.49253E-01      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48574E-01      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47910E-01      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47263E-01      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46630E-01      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46012E-01      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45408E-01      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45075E-01      2625.00      0.00  20.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.44776E-01      2650.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.44482E-01      2675.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.44193E-01      2700.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.43908E-01      2725.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.43628E-01      2750.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.43352E-01      2775.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.43080E-01      2800.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.42812E-01      2825.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.42548E-01      2850.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
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280.0    2.0
   0.42288E-01      2875.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.42032E-01      2900.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.41780E-01      2925.00      0.00  10.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.41531E-01      2950.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.41286E-01      2975.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.41044E-01      3000.00      0.00   5.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.40806E-01      3025.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.40571E-01      3050.00      0.00   5.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.40340E-01      3075.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.40111E-01      3100.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.39886E-01      3125.00      0.00  10.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.39664E-01      3150.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.39444E-01      3175.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.39228E-01      3200.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.39014E-01      3225.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.38804E-01      3250.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.38596E-01      3275.00      0.00   0.0        Spring       0-360   10010212
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3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.38390E-01      3300.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.38188E-01      3325.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.37988E-01      3350.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.37790E-01      3375.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.37595E-01      3400.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.37402E-01      3425.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.37212E-01      3450.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.37024E-01      3475.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.36839E-01      3500.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.36655E-01      3525.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.36474E-01      3550.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.36295E-01      3575.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.36118E-01      3600.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.35943E-01      3625.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.35770E-01      3650.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.35600E-01      3675.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
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   0.35431E-01      3700.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.35264E-01      3725.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.35099E-01      3750.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.34936E-01      3775.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.34775E-01      3800.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.34615E-01      3825.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.34457E-01      3849.99      0.00  15.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.34301E-01      3875.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.34147E-01      3900.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.33994E-01      3925.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.33843E-01      3950.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.33694E-01      3975.00      0.00   5.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.33546E-01      4000.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.33400E-01      4025.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.33255E-01      4050.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.33112E-01      4075.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.32970E-01      4100.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
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280.0    2.0
   0.32830E-01      4125.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.32692E-01      4150.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.32554E-01      4175.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.32418E-01      4200.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.32284E-01      4225.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.32150E-01      4250.00      0.00  10.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.32018E-01      4275.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31888E-01      4300.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31758E-01      4325.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31631E-01      4350.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31504E-01      4375.00      0.00   5.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31378E-01      4400.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31254E-01      4425.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31131E-01      4450.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.31009E-01      4475.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30888E-01      4500.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30768E-01      4525.00      0.00   0.0        Spring       0-360   10010212
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3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30649E-01      4550.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30532E-01      4575.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30415E-01      4600.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30300E-01      4625.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30186E-01      4650.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.30073E-01      4675.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29960E-01      4700.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29849E-01      4725.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29739E-01      4750.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29630E-01      4775.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29522E-01      4800.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29414E-01      4825.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29308E-01      4850.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29203E-01      4875.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.29098E-01      4900.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.28994E-01      4925.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
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   0.28892E-01      4950.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.28790E-01      4975.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
   0.28689E-01      5000.00      0.00   0.0        Spring       0-360   10010212
3.42  0.110  0.100  0.020   10.   84.    -33.7 1.000   1.00   0.14    0.50   10.0
280.0    2.0
```

Attachment C

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	103.67	1000sqft	2.38	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types," "Incorrect Land Use Type," and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Construction - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Trips and VMT - Consistent with IS/MND's model.

Demolition - Consistent with IS/MND's model.

Grading - Consistent with IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	31.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	230.00	132.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	12.00
tblConstructionPhase	NumDays	20.00	21.00
tblGrading	MaterialImported	0.00	14,933.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	1.11	0.46
tblOffRoadEquipment	HorsePower	158.00	311.00
tblOffRoadEquipment	HorsePower	158.00	311.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	89.00	173.00
tblOffRoadEquipment	HorsePower	187.00	179.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	HorsePower	63.00	74.00
tblOffRoadEquipment	HorsePower	63.00	74.00
tblOffRoadEquipment	HorsePower	212.00	130.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	367.00	365.00
tblOffRoadEquipment	HorsePower	367.00	478.00
tblOffRoadEquipment	HorsePower	65.00	74.30
tblOffRoadEquipment	HorsePower	65.00	74.30
tblOffRoadEquipment	HorsePower	97.00	70.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	28.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	32.00	34.00
tblTripsAndVMT	HaulingTripNumber	112.00	114.00
tblTripsAndVMT	HaulingTripNumber	1,867.00	2,987.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.7690	1.6368	1.6424	4.8800e-003	0.1865	0.0504	0.2369	0.0436	0.0466	0.0902	0.0000	450.8024	450.8024	0.0752	0.0292	461.3675
Maximum	**0.7690**	**1.6368**	**1.6424**	**4.8800e-003**	**0.1865**	**0.0504**	**0.2369**	**0.0436**	**0.0466**	**0.0902**	**0.0000**	**450.8024**	**450.8024**	**0.0752**	**0.0292**	**461.3675**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.7690	1.6368	1.6424	4.8800e-003	0.1865	0.0504	0.2369	0.0436	0.0466	0.0902	0.0000	450.8022	450.8022	0.0752	0.0292	461.3672
Maximum	**0.7690**	**1.6368**	**1.6424**	**4.8800e-003**	**0.1865**	**0.0504**	**0.2369**	**0.0436**	**0.0466**	**0.0902**	**0.0000**	**450.8022**	**450.8022**	**0.0752**	**0.0292**	**461.3672**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2022	4-30-2022	1.1345	1.1345
2	5-1-2022	7-31-2022	0.6334	0.6334
3	8-1-2022	9-30-2022	0.5892	0.5892
		Highest	1.1345	1.1345

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5405	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0200e-003	7.0200e-003	2.0000e-005	0.0000	7.4800e-003
Energy	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455
Mobile	0.2048	0.2789	2.2975	4.9800e-003	0.4981	4.2000e-003	0.5023	0.1329	3.9200e-003	0.1368	0.0000	460.0881	460.0881	0.0304	0.0199	466.7868
Waste						0.0000	0.0000		0.0000	0.0000	25.7900	0.0000	25.7900	1.5242	0.0000	63.8936
Water						0.0000	0.0000		0.0000	0.0000	9.3695	0.0000	9.3695	0.9623	0.0227	40.1992
Total	**0.7479**	**0.3029**	**2.3212**	**5.1200e-003**	**0.4981**	**6.0300e-003**	**0.5041**	**0.1329**	**5.7500e-003**	**0.1386**	**35.1595**	**486.1855**	**521.3450**	**2.5174**	**0.0431**	**597.1325**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5405	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0200e-003	7.0200e-003	2.0000e-005	0.0000	7.4800e-003
Energy	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455
Mobile	0.2048	0.2789	2.2975	4.9800e-003	0.4981	4.2000e-003	0.5023	0.1329	3.9200e-003	0.1368	0.0000	460.0881	460.0881	0.0304	0.0199	466.7868
Waste						0.0000	0.0000		0.0000	0.0000	25.7900	0.0000	25.7900	1.5242	0.0000	63.8936
Water						0.0000	0.0000		0.0000	0.0000	9.3695	0.0000	9.3695	0.9623	0.0227	40.1992
Total	**0.7479**	**0.3029**	**2.3212**	**5.1200e-003**	**0.4981**	**6.0300e-003**	**0.5041**	**0.1329**	**5.7500e-003**	**0.1386**	**35.1595**	**486.1855**	**521.3450**	**2.5174**	**0.0431**	**597.1325**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Demolition	Demolition	2/1/2022	3/15/2022	5	31	
2	Asphalt Demolition	Demolition	2/18/2022	3/1/2022	5	8	
3	Site Preparation	Site Preparation	3/18/2022	3/24/2022	5	5	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	3/19/2022	9/20/2022	5	132	
5	Rough Grading	Grading	3/22/2022	4/20/2022	5	22	
6	Utility Trenching	Trenching	4/18/2022	5/16/2022	5	21	
7	Fine Grading	Grading	7/2/2022	7/19/2022	5	12	
8	Architectural Coating	Architectural Coating	7/20/2022	8/17/2022	5	21	
9	Finishing/Landscaping	Trenching	8/18/2022	10/4/2022	5	34	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 55

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 194,745; Non-Residential Outdoor: 64,915; Striped Parking Area: 8,266 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Demolition	Excavators	1	8.00	311	0.38
Building Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Skid Steer Loaders	1	8.00	74.3	0.37
Asphalt Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition	Excavators	1	8.00	311	0.38
Asphalt Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition	Skid Steer Loaders	1	8.00	74.3	0.37
Site Preparation	Crawler Tractors	1	8.00	130	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	74	0.31
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	3	8.00	173	0.20

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Rough Grading	Excavators	0	8.00	158	0.38
Rough Grading	Graders	1	8.00	179	0.41
Rough Grading	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading	Scrapers	2	8.00	365	0.48
Rough Grading	Scrapers	2	8.00	478	0.48
Rough Grading	Tractors/Loaders/Backhoes	1	8.00	79	0.37
Utility Trenching	Tractors/Loaders/Backhoes	2	8.00	70	0.37
Fine Grading	Excavators	0	8.00	158	0.38
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Rollers	1	8.00	36	0.38
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	79	0.37
Architectural Coating	Aerial Lifts	3	8.00	74	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48
Finishing/Landscaping	Tractors/Loaders/Backhoes	1	8.00	79	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Demolition	2	5.00	2.00	34.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition	2	5.00	2.00	114.00	14.70	6.90	28.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	3.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	6	15.00	2.00	2,987.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fine Grading	2	5.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	22.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4600e-003	0.0000	3.4600e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3600e-003	0.0500	0.0588	1.9000e-004		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	16.9745	16.9745	5.4900e-003	0.0000	17.1118
Total	**5.3600e-003**	**0.0500**	**0.0588**	**1.9000e-004**	**3.4600e-003**	**1.7400e-003**	**5.2000e-003**	**5.2000e-004**	**1.6000e-003**	**2.1200e-003**	**0.0000**	**16.9745**	**16.9745**	**5.4900e-003**	**0.0000**	**17.1118**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.2700e-003	3.9000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3970	0.3970	2.0000e-005	6.0000e-005	0.4163
Vendor	6.0000e-005	1.5900e-003	5.3000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.5920	0.5920	2.0000e-005	9.0000e-005	0.6179
Worker	2.7000e-004	2.2000e-004	2.8700e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.3000e-004	0.0000	0.6985	0.6985	2.0000e-005	2.0000e-005	0.7047
Total	**3.7000e-004**	**3.0800e-003**	**3.7900e-003**	**2.0000e-005**	**1.1500e-003**	**3.0000e-005**	**1.1700e-003**	**3.2000e-004**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.6874**	**1.6874**	**6.0000e-005**	**1.7000e-004**	**1.7388**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4600e-003	0.0000	3.4600e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3600e-003	0.0500	0.0588	1.9000e-004		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	16.9745	16.9745	5.4900e-003	0.0000	17.1117
Total	**5.3600e-003**	**0.0500**	**0.0588**	**1.9000e-004**	**3.4600e-003**	**1.7400e-003**	**5.2000e-003**	**5.2000e-004**	**1.6000e-003**	**2.1200e-003**	**0.0000**	**16.9745**	**16.9745**	**5.4900e-003**	**0.0000**	**17.1117**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.2700e-003	3.9000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3970	0.3970	2.0000e-005	6.0000e-005	0.4163
Vendor	6.0000e-005	1.5900e-003	5.3000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.5920	0.5920	2.0000e-005	9.0000e-005	0.6179
Worker	2.7000e-004	2.2000e-004	2.8700e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.3000e-004	0.0000	0.6985	0.6985	2.0000e-005	2.0000e-005	0.7047
Total	**3.7000e-004**	**3.0800e-003**	**3.7900e-003**	**2.0000e-005**	**1.1500e-003**	**3.0000e-005**	**1.1700e-003**	**3.2000e-004**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.6874**	**1.6874**	**6.0000e-005**	**1.7000e-004**	**1.7388**

3.3 Asphalt Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0121	0.0000	0.0121	1.8300e-003	0.0000	1.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3800e-003	0.0129	0.0152	5.0000e-005		4.5000e-004	4.5000e-004		4.1000e-004	4.1000e-004	0.0000	4.3805	4.3805	1.4200e-003	0.0000	4.4159
Total	**1.3800e-003**	**0.0129**	**0.0152**	**5.0000e-005**	**0.0121**	**4.5000e-004**	**0.0125**	**1.8300e-003**	**4.1000e-004**	**2.2400e-003**	**0.0000**	**4.3805**	**4.3805**	**1.4200e-003**	**0.0000**	**4.4159**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4000e-004	0.0137	2.8300e-003	5.0000e-005	1.3700e-003	1.0000e-004	1.4700e-003	3.8000e-004	1.0000e-004	4.7000e-004	0.0000	4.8681	4.8681	2.6000e-004	7.7000e-004	5.1048
Vendor	2.0000e-005	4.1000e-004	1.4000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1528	0.1528	1.0000e-005	2.0000e-005	0.1595
Worker	7.0000e-005	6.0000e-005	7.4000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1803	0.1803	1.0000e-005	0.0000	0.1819
Total	**4.3000e-004**	**0.0141**	**3.7100e-003**	**5.0000e-005**	**1.6400e-003**	**1.0000e-004**	**1.7400e-003**	**4.5000e-004**	**1.0000e-004**	**5.5000e-004**	**0.0000**	**5.2011**	**5.2011**	**2.8000e-004**	**7.9000e-004**	**5.4461**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0121	0.0000	0.0121	1.8300e-003	0.0000	1.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3800e-003	0.0129	0.0152	5.0000e-005		4.5000e-004	4.5000e-004		4.1000e-004	4.1000e-004	0.0000	4.3805	4.3805	1.4200e-003	0.0000	4.4159
Total	**1.3800e-003**	**0.0129**	**0.0152**	**5.0000e-005**	**0.0121**	**4.5000e-004**	**0.0125**	**1.8300e-003**	**4.1000e-004**	**2.2400e-003**	**0.0000**	**4.3805**	**4.3805**	**1.4200e-003**	**0.0000**	**4.4159**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4000e-004	0.0137	2.8300e-003	5.0000e-005	1.3700e-003	1.0000e-004	1.4700e-003	3.8000e-004	1.0000e-004	4.7000e-004	0.0000	4.8681	4.8681	2.6000e-004	7.7000e-004	5.1048
Vendor	2.0000e-005	4.1000e-004	1.4000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1528	0.1528	1.0000e-005	2.0000e-005	0.1595
Worker	7.0000e-005	6.0000e-005	7.4000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1803	0.1803	1.0000e-005	0.0000	0.1819
Total	**4.3000e-004**	**0.0141**	**3.7100e-003**	**5.0000e-005**	**1.6400e-003**	**1.0000e-004**	**1.7400e-003**	**4.5000e-004**	**1.0000e-004**	**5.5000e-004**	**0.0000**	**5.2011**	**5.2011**	**2.8000e-004**	**7.9000e-004**	**5.4461**

3.4 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3300e-003	0.0000	1.3300e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	9.4300e-003	8.0400e-003	1.0000e-005		5.3000e-004	5.3000e-004		4.8000e-004	4.8000e-004	0.0000	1.0544	1.0544	3.4000e-004	0.0000	1.0630
Total	**9.6000e-004**	**9.4300e-003**	**8.0400e-003**	**1.0000e-005**	**1.3300e-003**	**5.3000e-004**	**1.8600e-003**	**1.4000e-004**	**4.8000e-004**	**6.2000e-004**	**0.0000**	**1.0544**	**1.0544**	**3.4000e-004**	**0.0000**	**1.0630**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.6000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0955	0.0955	0.0000	1.0000e-005	0.0997
Worker	3.0000e-005	2.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0676	0.0676	0.0000	0.0000	0.0682
Total	**4.0000e-005**	**2.8000e-004**	**3.7000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1631**	**0.1631**	**0.0000**	**1.0000e-005**	**0.1679**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3300e-003	0.0000	1.3300e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	9.4300e-003	8.0400e-003	1.0000e-005		5.3000e-004	5.3000e-004		4.8000e-004	4.8000e-004	0.0000	1.0544	1.0544	3.4000e-004	0.0000	1.0630
Total	**9.6000e-004**	**9.4300e-003**	**8.0400e-003**	**1.0000e-005**	**1.3300e-003**	**5.3000e-004**	**1.8600e-003**	**1.4000e-004**	**4.8000e-004**	**6.2000e-004**	**0.0000**	**1.0544**	**1.0544**	**3.4000e-004**	**0.0000**	**1.0630**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.6000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0955	0.0955	0.0000	1.0000e-005	0.0997
Worker	3.0000e-005	2.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0676	0.0676	0.0000	0.0000	0.0682
Total	**4.0000e-005**	**2.8000e-004**	**3.7000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1631**	**0.1631**	**0.0000**	**1.0000e-005**	**0.1679**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0413	0.4299	0.6408	9.8000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	86.0593	86.0593	0.0278	0.0000	86.7551
Total	**0.0413**	**0.4299**	**0.6408**	**9.8000e-004**		**0.0184**	**0.0184**		**0.0169**	**0.0169**	**0.0000**	**86.0593**	**86.0593**	**0.0278**	**0.0000**	**86.7551**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6700e-003	0.1493	0.0495	5.7000e-004	0.0183	1.3600e-003	0.0197	5.2800e-003	1.3000e-003	6.5800e-003	0.0000	55.4542	55.4542	1.8500e-003	8.0000e-003	57.8842
Worker	0.0251	0.0209	0.2716	7.2000e-004	0.0803	5.2000e-004	0.0808	0.0213	4.8000e-004	0.0218	0.0000	66.0249	66.0249	1.9000e-003	1.8000e-003	66.6100
Total	**0.0308**	**0.1702**	**0.3211**	**1.2900e-003**	**0.0986**	**1.8800e-003**	**0.1005**	**0.0266**	**1.7800e-003**	**0.0284**	**0.0000**	**121.4791**	**121.4791**	**3.7500e-003**	**9.8000e-003**	**124.4942**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0413	0.4299	0.6408	9.8000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	86.0592	86.0592	0.0278	0.0000	86.7550
Total	**0.0413**	**0.4299**	**0.6408**	**9.8000e-004**		**0.0184**	**0.0184**		**0.0169**	**0.0169**	**0.0000**	**86.0592**	**86.0592**	**0.0278**	**0.0000**	**86.7550**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6700e-003	0.1493	0.0495	5.7000e-004	0.0183	1.3600e-003	0.0197	5.2800e-003	1.3000e-003	6.5800e-003	0.0000	55.4542	55.4542	1.8500e-003	8.0000e-003	57.8842
Worker	0.0251	0.0209	0.2716	7.2000e-004	0.0803	5.2000e-004	0.0808	0.0213	4.8000e-004	0.0218	0.0000	66.0249	66.0249	1.9000e-003	1.8000e-003	66.6100
Total	**0.0308**	**0.1702**	**0.3211**	**1.2900e-003**	**0.0986**	**1.8800e-003**	**0.1005**	**0.0266**	**1.7800e-003**	**0.0284**	**0.0000**	**121.4791**	**121.4791**	**3.7500e-003**	**9.8000e-003**	**124.4942**

3.6 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	3.2800e-003	0.0000	3.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0472	0.5223	0.3604	8.6000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	75.9776	75.9776	0.0246	0.0000	76.5919
Total	**0.0472**	**0.5223**	**0.3604**	**8.6000e-004**	**0.0300**	**0.0202**	**0.0502**	**3.2800e-003**	**0.0186**	**0.0219**	**0.0000**	**75.9776**	**75.9776**	**0.0246**	**0.0000**	**76.5919**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.2200e-003	0.3230	0.0684	1.1500e-003	0.0321	2.3300e-003	0.0344	8.8200e-003	2.2300e-003	0.0110	0.0000	114.3138	114.3138	6.0900e-003	0.0181	119.8715
Vendor	4.0000e-005	1.1300e-003	3.8000e-004	0.0000	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.4201	0.4201	1.0000e-005	6.0000e-005	0.4385
Worker	5.7000e-004	4.7000e-004	6.1200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4871	1.4871	4.0000e-005	4.0000e-005	1.5002
Total	**8.8300e-003**	**0.3246**	**0.0749**	**1.1700e-003**	**0.0341**	**2.3500e-003**	**0.0364**	**9.3400e-003**	**2.2500e-003**	**0.0116**	**0.0000**	**116.2209**	**116.2209**	**6.1400e-003**	**0.0182**	**121.8102**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	3.2800e-003	0.0000	3.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0472	0.5223	0.3604	8.6000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	75.9775	75.9775	0.0246	0.0000	76.5918
Total	**0.0472**	**0.5223**	**0.3604**	**8.6000e-004**	**0.0300**	**0.0202**	**0.0502**	**3.2800e-003**	**0.0186**	**0.0219**	**0.0000**	**75.9775**	**75.9775**	**0.0246**	**0.0000**	**76.5918**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.2200e-003	0.3230	0.0684	1.1500e-003	0.0321	2.3300e-003	0.0344	8.8200e-003	2.2300e-003	0.0110	0.0000	114.3138	114.3138	6.0900e-003	0.0181	119.8715
Vendor	4.0000e-005	1.1300e-003	3.8000e-004	0.0000	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.4201	0.4201	1.0000e-005	6.0000e-005	0.4385
Worker	5.7000e-004	4.7000e-004	6.1200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4871	1.4871	4.0000e-005	4.0000e-005	1.5002
Total	**8.8300e-003**	**0.3246**	**0.0749**	**1.1700e-003**	**0.0341**	**2.3500e-003**	**0.0364**	**9.3400e-003**	**2.2500e-003**	**0.0116**	**0.0000**	**116.2209**	**116.2209**	**6.1400e-003**	**0.0182**	**121.8102**

3.7 Utility Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5000e-003	0.0254	0.0339	5.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	4.1415	4.1415	1.3400e-003	0.0000	4.1749
Total	**2.5000e-003**	**0.0254**	**0.0339**	**5.0000e-005**		**1.3700e-003**	**1.3700e-003**		**1.2600e-003**	**1.2600e-003**	**0.0000**	**4.1415**	**4.1415**	**1.3400e-003**	**0.0000**	**4.1749**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.5000e-004	1.9500e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4732	0.4732	1.0000e-005	1.0000e-005	0.4773
Total	**1.8000e-004**	**1.5000e-004**	**1.9500e-003**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4732**	**0.4732**	**1.0000e-005**	**1.0000e-005**	**0.4773**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5000e-003	0.0254	0.0339	5.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	4.1415	4.1415	1.3400e-003	0.0000	4.1749
Total	**2.5000e-003**	**0.0254**	**0.0339**	**5.0000e-005**		**1.3700e-003**	**1.3700e-003**		**1.2600e-003**	**1.2600e-003**	**0.0000**	**4.1415**	**4.1415**	**1.3400e-003**	**0.0000**	**4.1749**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.5000e-004	1.9500e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4732	0.4732	1.0000e-005	1.0000e-005	0.4773
Total	**1.8000e-004**	**1.5000e-004**	**1.9500e-003**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4732**	**0.4732**	**1.0000e-005**	**1.0000e-005**	**0.4773**

3.8 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8700e-003	0.0142	0.0173	2.0000e-005		8.0000e-004	8.0000e-004		7.4000e-004	7.4000e-004	0.0000	2.0258	2.0258	6.6000e-004	0.0000	2.0422
Total	**1.8700e-003**	**0.0142**	**0.0173**	**2.0000e-005**	**0.0000**	**8.0000e-004**	**8.0000e-004**	**0.0000**	**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.0258**	**2.0258**	**6.6000e-004**	**0.0000**	**2.0422**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	6.2000e-004	2.0000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2292	0.2292	1.0000e-005	3.0000e-005	0.2392
Worker	1.0000e-004	9.0000e-005	1.1100e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2704	0.2704	1.0000e-005	1.0000e-005	0.2728
Total	**1.2000e-004**	**7.1000e-004**	**1.3100e-003**	**0.0000**	**4.1000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**0.4995**	**0.4995**	**2.0000e-005**	**4.0000e-005**	**0.5120**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8700e-003	0.0142	0.0173	2.0000e-005		8.0000e-004	8.0000e-004		7.4000e-004	7.4000e-004	0.0000	2.0258	2.0258	6.6000e-004	0.0000	2.0422
Total	**1.8700e-003**	**0.0142**	**0.0173**	**2.0000e-005**	**0.0000**	**8.0000e-004**	**8.0000e-004**	**0.0000**	**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.0258**	**2.0258**	**6.6000e-004**	**0.0000**	**2.0422**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	6.2000e-004	2.0000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2292	0.2292	1.0000e-005	3.0000e-005	0.2392
Worker	1.0000e-004	9.0000e-005	1.1100e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2704	0.2704	1.0000e-005	1.0000e-005	0.2728
Total	**1.2000e-004**	**7.1000e-004**	**1.3100e-003**	**0.0000**	**4.1000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**0.4995**	**0.4995**	**2.0000e-005**	**4.0000e-005**	**0.5120**

3.9 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0355	0.0595	9.0000e-005		1.2400e-003	1.2400e-003		1.2100e-003	1.2100e-003	0.0000	8.1394	8.1394	1.9400e-003	0.0000	8.1879
Total	**0.6244**	**0.0355**	**0.0595**	**9.0000e-005**		**1.2400e-003**	**1.2400e-003**		**1.2100e-003**	**1.2100e-003**	**0.0000**	**8.1394**	**8.1394**	**1.9400e-003**	**0.0000**	**8.1879**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	6.6000e-004	8.5600e-003	2.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.0819	2.0819	6.0000e-005	6.0000e-005	2.1003
Total	**7.9000e-004**	**6.6000e-004**	**8.5600e-003**	**2.0000e-005**	**2.5300e-003**	**2.0000e-005**	**2.5500e-003**	**6.7000e-004**	**2.0000e-005**	**6.9000e-004**	**0.0000**	**2.0819**	**2.0819**	**6.0000e-005**	**6.0000e-005**	**2.1003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0355	0.0595	9.0000e-005		1.2400e-003	1.2400e-003		1.2100e-003	1.2100e-003	0.0000	8.1394	8.1394	1.9400e-003	0.0000	8.1879
Total	**0.6244**	**0.0355**	**0.0595**	**9.0000e-005**		**1.2400e-003**	**1.2400e-003**		**1.2100e-003**	**1.2100e-003**	**0.0000**	**8.1394**	**8.1394**	**1.9400e-003**	**0.0000**	**8.1879**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	6.6000e-004	8.5600e-003	2.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.0819	2.0819	6.0000e-005	6.0000e-005	2.1003
Total	**7.9000e-004**	**6.6000e-004**	**8.5600e-003**	**2.0000e-005**	**2.5300e-003**	**2.0000e-005**	**2.5500e-003**	**6.7000e-004**	**2.0000e-005**	**6.9000e-004**	**0.0000**	**2.0819**	**2.0819**	**6.0000e-005**	**6.0000e-005**	**2.1003**

3.10 Finishing/Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2800e-003	0.0232	0.0310	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.7837	3.7837	1.2200e-003	0.0000	3.8142
Total	**2.2800e-003**	**0.0232**	**0.0310**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.1500e-003**	**1.1500e-003**	**0.0000**	**3.7837**	**3.7837**	**1.2200e-003**	**0.0000**	**3.8142**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 Finishing/Landscaping - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.5000e-004	1.8900e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	1.0000e-005	0.4637
Total	**1.7000e-004**	**1.5000e-004**	**1.8900e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4596**	**0.4596**	**1.0000e-005**	**1.0000e-005**	**0.4637**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2800e-003	0.0232	0.0310	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.7837	3.7837	1.2200e-003	0.0000	3.8142
Total	**2.2800e-003**	**0.0232**	**0.0310**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.1500e-003**	**1.1500e-003**	**0.0000**	**3.7837**	**3.7837**	**1.2200e-003**	**0.0000**	**3.8142**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 Finishing/Landscaping - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.5000e-004	1.8900e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	1.0000e-005	0.4637
Total	**1.7000e-004**	**1.5000e-004**	**1.8900e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4596**	**0.4596**	**1.0000e-005**	**1.0000e-005**	**0.4637**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2048	0.2789	2.2975	4.9800e-003	0.4981	4.2000e-003	0.5023	0.1329	3.9200e-003	0.1368	0.0000	460.0881	460.0881	0.0304	0.0199	466.7868
Unmitigated	0.2048	0.2789	2.2975	4.9800e-003	0.4981	4.2000e-003	0.5023	0.1329	3.9200e-003	0.1368	0.0000	460.0881	460.0881	0.0304	0.0199	466.7868

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	89.22	20.24	6.41	217,563	217,563
Manufacturing	66.81	109.14	86.53	335,107	335,107
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	180.39	180.39	180.39	773,082	773,082
Total	336.41	309.77	273.33	1,325,752	1,325,752

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455
NaturalGas Unmitigated	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	94439.6	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0397	5.0397	1.0000e-004	9.0000e-005	5.0696
Manufacturing	305320	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2930	16.2930	3.1000e-004	3.0000e-004	16.3899
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	89156.2	4.8000e-004	4.3700e-003	3.6700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	4.7577	4.7577	9.0000e-005	9.0000e-005	4.7860
Total		**2.6400e-003**	**0.0240**	**0.0201**	**1.5000e-004**		**1.8200e-003**	**1.8200e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**26.0904**	**26.0904**	**5.0000e-004**	**4.8000e-004**	**26.2455**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	94439.6	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0397	5.0397	1.0000e-004	9.0000e-005	5.0696
Manufacturing	305320	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2930	16.2930	3.1000e-004	3.0000e-004	16.3899
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	89156.2	4.8000e-004	4.3700e-003	3.6700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	4.7577	4.7577	9.0000e-005	9.0000e-005	4.7860
Total		**2.6400e-003**	**0.0240**	**0.0201**	**1.5000e-004**		**1.8200e-003**	**1.8200e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**26.0904**	**26.0904**	**5.0000e-004**	**4.8000e-004**	**26.2455**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	114500	0.0000	0.0000	0.0000	0.0000
Manufacturing	184620	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	17220	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	397056	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	114500	0.0000	0.0000	0.0000	0.0000
Manufacturing	184620	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	17220	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	397056	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Construction - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5405	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0200e-003	7.0200e-003	2.0000e-005	0.0000	7.4800e-003
Unmitigated	0.5405	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0200e-003	7.0200e-003	2.0000e-005	0.0000	7.4800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.4000e-004	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0200e-003	7.0200e-003	2.0000e-005	0.0000	7.4800e-003
Total	**0.5405**	**3.0000e-005**	**3.6200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.0200e-003**	**7.0200e-003**	**2.0000e-005**	**0.0000**	**7.4800e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.4000e-004	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0200e-003	7.0200e-003	2.0000e-005	0.0000	7.4800e-003
Total	**0.5405**	**3.0000e-005**	**3.6200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.0200e-003**	**7.0200e-003**	**2.0000e-005**	**0.0000**	**7.4800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Construction - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.3695	0.9623	0.0227	40.1992
Unmitigated	9.3695	0.9623	0.0227	40.1992

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.62804 / 0.997832	0.5165	0.0531	1.2500e-003	2.2160
Manufacturing	3.93125 / 0	1.2472	0.1281	3.0200e-003	5.3511
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	23.9737 / 0	7.6058	0.7812	0.0185	32.6321
Total		**9.3695**	**0.9623**	**0.0227**	**40.1992**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.62804 / 0.997832	0.5165	0.0531	1.2500e-003	2.2160
Manufacturing	3.93125 / 0	1.2472	0.1281	3.0200e-003	5.3511
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	23.9737 / 0	7.6058	0.7812	0.0185	32.6321
Total		**9.3695**	**0.9623**	**0.0227**	**40.1992**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Construction - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	25.7900	1.5242	0.0000	63.8936
Unmitigated	25.7900	1.5242	0.0000	63.8936

Construction - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.52	1.7295	0.1022	0.0000	4.2847
Manufacturing	21.08	4.2791	0.2529	0.0000	10.6012
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	97.45	19.7815	1.1691	0.0000	49.0078
Total		**25.7900**	**1.5241**	**0.0000**	**63.8936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.52	1.7295	0.1022	0.0000	4.2847
Manufacturing	21.08	4.2791	0.2529	0.0000	10.6012
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	97.45	19.7815	1.1691	0.0000	49.0078
Total		**25.7900**	**1.5241**	**0.0000**	**63.8936**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	103.67	1000sqft	2.38	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types," "Incorrect Land Use Type," and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Trips and VMT - Consistent with IS/MND's model.

Demolition - Consistent with IS/MND's model.

Grading - Consistent with IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	31.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	230.00	132.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	12.00
tblConstructionPhase	NumDays	20.00	21.00
tblGrading	MaterialImported	0.00	14,933.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	1.11	0.46
tblOffRoadEquipment	HorsePower	158.00	311.00
tblOffRoadEquipment	HorsePower	158.00	311.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	89.00	173.00
tblOffRoadEquipment	HorsePower	187.00	179.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	HorsePower	63.00	74.00
tblOffRoadEquipment	HorsePower	63.00	74.00
tblOffRoadEquipment	HorsePower	212.00	130.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	367.00	365.00
tblOffRoadEquipment	HorsePower	367.00	478.00
tblOffRoadEquipment	HorsePower	65.00	74.30
tblOffRoadEquipment	HorsePower	65.00	74.30
tblOffRoadEquipment	HorsePower	97.00	70.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	28.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	32.00	34.00
tblTripsAndVMT	HaulingTripNumber	112.00	114.00
tblTripsAndVMT	HaulingTripNumber	1,867.00	2,987.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	60.6394	88.3081	57.8067	0.2254	7.9776	2.5699	10.5474	1.6403	2.3729	4.0132	0.0000	23,313.5981	23,313.5981	3.7587	1.9953	24,002.1609
Maximum	**60.6394**	**88.3081**	**57.8067**	**0.2254**	**7.9776**	**2.5699**	**10.5474**	**1.6403**	**2.3729**	**4.0132**	**0.0000**	**23,313.5981**	**23,313.5981**	**3.7587**	**1.9953**	**24,002.1609**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	60.6394	88.3081	57.8067	0.2254	7.9776	2.5699	10.5474	1.6403	2.3729	4.0132	0.0000	23,313.5981	23,313.5981	3.7587	1.9953	24,002.1609
Maximum	**60.6394**	**88.3081**	**57.8067**	**0.2254**	**7.9776**	**2.5699**	**10.5474**	**1.6403**	**2.3729**	**4.0132**	**0.0000**	**23,313.5981**	**23,313.5981**	**3.7587**	**1.9953**	**24,002.1609**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	1.3535	1.6305	15.0311	0.0329	3.2501	0.0269	3.2770	0.8657	0.0251	0.8908		3,354.8570	3,354.8570	0.2105	0.1336	3,399.9371
Total	**4.3303**	**1.7620**	**15.1703**	**0.0337**	**3.2501**	**0.0370**	**3.2871**	**0.8657**	**0.0352**	**0.9009**		**3,512.5066**	**3,512.5066**	**0.2137**	**0.1365**	**3,558.5272**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	1.3535	1.6305	15.0311	0.0329	3.2501	0.0269	3.2770	0.8657	0.0251	0.8908		3,354.8570	3,354.8570	0.2105	0.1336	3,399.9371
Total	**4.3303**	**1.7620**	**15.1703**	**0.0337**	**3.2501**	**0.0370**	**3.2871**	**0.8657**	**0.0352**	**0.9009**		**3,512.5066**	**3,512.5066**	**0.2137**	**0.1365**	**3,558.5272**

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Demolition	Demolition	2/1/2022	3/15/2022	5	31	
2	Asphalt Demolition	Demolition	2/18/2022	3/1/2022	5	8	
3	Site Preparation	Site Preparation	3/18/2022	3/24/2022	5	5	
4	Building Construction	Building Construction	3/19/2022	9/20/2022	5	132	
5	Rough Grading	Grading	3/22/2022	4/20/2022	5	22	
6	Utility Trenching	Trenching	4/18/2022	5/16/2022	5	21	
7	Fine Grading	Grading	7/2/2022	7/19/2022	5	12	
8	Architectural Coating	Architectural Coating	7/20/2022	8/17/2022	5	21	
9	Finishing/Landscaping	Trenching	8/18/2022	10/4/2022	5	34	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 55

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 194,745; Non-Residential Outdoor: 64,915; Striped Parking Area: 8,266 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Demolition	Excavators	1	8.00	311	0.38

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Skid Steer Loaders	1	8.00	74.3	0.37
Asphalt Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition	Excavators	1	8.00	311	0.38
Asphalt Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition	Skid Steer Loaders	1	8.00	74.3	0.37
Site Preparation	Crawler Tractors	1	8.00	130	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	74	0.31
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	3	8.00	173	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Rough Grading	Excavators	0	8.00	158	0.38
Rough Grading	Graders	1	8.00	179	0.41
Rough Grading	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading	Scrapers	2	8.00	365	0.48
Rough Grading	Scrapers	2	8.00	478	0.48
Rough Grading	Tractors/Loaders/Backhoes	1	8.00	79	0.37
Utility Trenching	Tractors/Loaders/Backhoes	2	8.00	70	0.37
Fine Grading	Excavators	0	8.00	158	0.38
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Rollers	1	8.00	36	0.38
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	79	0.37
Architectural Coating	Aerial Lifts	3	8.00	74	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Finishing/Landscaping	Tractors/Loaders/Backhoes	1	8.00	79	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Demolition	2	5.00	2.00	34.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition	2	5.00	2.00	114.00	14.70	6.90	28.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	3.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	6	15.00	2.00	2,987.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	2	5.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	22.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2230	0.0000	0.2230	0.0338	0.0000	0.0338			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031		1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**0.2230**	**0.1121**	**0.3350**	**0.0338**	**0.1031**	**0.1369**		**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5600e-003	0.0780	0.0249	2.6000e-004	6.7300e-003	4.9000e-004	7.2200e-003	1.8500e-003	4.7000e-004	2.3200e-003		28.2245	28.2245	1.4400e-003	4.4800e-003	29.5947
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.0238**	**0.1886**	**0.2552**	**1.1600e-003**	**0.0754**	**1.7800e-003**	**0.0772**	**0.0204**	**1.6900e-003**	**0.0221**		**121.9889**	**121.9889**	**4.2600e-003**	**0.0118**	**125.6099**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2230	0.0000	0.2230	0.0338	0.0000	0.0338			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031	0.0000	1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**0.2230**	**0.1121**	**0.3350**	**0.0338**	**0.1031**	**0.1369**	**0.0000**	**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5600e-003	0.0780	0.0249	2.6000e-004	6.7300e-003	4.9000e-004	7.2200e-003	1.8500e-003	4.7000e-004	2.3200e-003		28.2245	28.2245	1.4400e-003	4.4800e-003	29.5947
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.0238**	**0.1886**	**0.2552**	**1.1600e-003**	**0.0754**	**1.7800e-003**	**0.0772**	**0.0204**	**1.6900e-003**	**0.0221**		**121.9889**	**121.9889**	**4.2600e-003**	**0.0118**	**125.6099**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0226	0.0000	3.0226	0.4577	0.0000	0.4577			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031		1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**3.0226**	**0.1121**	**3.1347**	**0.4577**	**0.1031**	**0.5608**		**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0868	3.2426	0.7027	0.0122	0.3491	0.0248	0.3739	0.0957	0.0237	0.1194		1,341.4249	1,341.4249	0.0717	0.2129	1,406.6449
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.1080**	**3.3532**	**0.9331**	**0.0131**	**0.4178**	**0.0261**	**0.4439**	**0.1142**	**0.0250**	**0.1392**		**1,435.1893**	**1,435.1893**	**0.0745**	**0.2202**	**1,502.6600**

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0226	0.0000	3.0226	0.4577	0.0000	0.4577			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031	0.0000	1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**3.0226**	**0.1121**	**3.1347**	**0.4577**	**0.1031**	**0.5608**	**0.0000**	**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0868	3.2426	0.7027	0.0122	0.3491	0.0248	0.3739	0.0957	0.0237	0.1194		1,341.4249	1,341.4249	0.0717	0.2129	1,406.6449
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.1080**	**3.3532**	**0.9331**	**0.0131**	**0.4178**	**0.0261**	**0.4439**	**0.1142**	**0.0250**	**0.1392**		**1,435.1893**	**1,435.1893**	**0.0745**	**0.2202**	**1,502.6600**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.3836	3.7727	3.2178	4.8000e-003		0.2106	0.2106		0.1938	0.1938		464.9218	464.9218	0.1504		468.6809
Total	**0.3836**	**3.7727**	**3.2178**	**4.8000e-003**	**0.5303**	**0.2106**	**0.7409**	**0.0573**	**0.1938**	**0.2510**		**464.9218**	**464.9218**	**0.1504**		**468.6809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0104	7.5800e-003	0.1181	3.1000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		31.0033	31.0033	8.4000e-004	7.5000e-004	31.2481
Total	**0.0143**	**0.1056**	**0.1517**	**7.0000e-004**	**0.0463**	**1.1400e-003**	**0.0475**	**0.0126**	**1.0900e-003**	**0.0137**		**73.0956**	**73.0956**	**2.2500e-003**	**6.8200e-003**	**75.1831**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.3836	3.7727	3.2178	4.8000e-003		0.2106	0.2106		0.1938	0.1938	0.0000	464.9218	464.9218	0.1504		468.6809
Total	**0.3836**	**3.7727**	**3.2178**	**4.8000e-003**	**0.5303**	**0.2106**	**0.7409**	**0.0573**	**0.1938**	**0.2510**	**0.0000**	**464.9218**	**464.9218**	**0.1504**		**468.6809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0104	7.5800e-003	0.1181	3.1000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		31.0033	31.0033	8.4000e-004	7.5000e-004	31.2481
Total	**0.0143**	**0.1056**	**0.1517**	**7.0000e-004**	**0.0463**	**1.1400e-003**	**0.0475**	**0.0126**	**1.0900e-003**	**0.0137**		**73.0956**	**73.0956**	**2.2500e-003**	**6.8200e-003**	**75.1831**

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6259	6.5142	9.7087	0.0149		0.2790	0.2790		0.2567	0.2567		1,437.3350	1,437.3350	0.4649		1,448.9566
Total	**0.6259**	**6.5142**	**9.7087**	**0.0149**		**0.2790**	**0.2790**		**0.2567**	**0.2567**		**1,437.3350**	**1,437.3350**	**0.4649**		**1,448.9566**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	2.1553	0.7390	8.6200e-003	0.2818	0.0205	0.3024	0.0812	0.0196	0.1008		926.0310	926.0310	0.0310	0.1334	966.5706
Worker	0.3840	0.2804	4.3688	0.0114	1.2407	7.9400e-003	1.2487	0.3290	7.3100e-003	0.3364		1,147.1205	1,147.1205	0.0313	0.0278	1,156.1789
Total	**0.4706**	**2.4357**	**5.1077**	**0.0200**	**1.5226**	**0.0285**	**1.5510**	**0.4102**	**0.0270**	**0.4371**		**2,073.1516**	**2,073.1516**	**0.0622**	**0.1612**	**2,122.7496**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6259	6.5142	9.7087	0.0149		0.2790	0.2790		0.2567	0.2567	0.0000	1,437.3350	1,437.3350	0.4649		1,448.9566
Total	**0.6259**	**6.5142**	**9.7087**	**0.0149**		**0.2790**	**0.2790**		**0.2567**	**0.2567**	**0.0000**	**1,437.3350**	**1,437.3350**	**0.4649**		**1,448.9566**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	2.1553	0.7390	8.6200e-003	0.2818	0.0205	0.3024	0.0812	0.0196	0.1008		926.0310	926.0310	0.0310	0.1334	966.5706
Worker	0.3840	0.2804	4.3688	0.0114	1.2407	7.9400e-003	1.2487	0.3290	7.3100e-003	0.3364		1,147.1205	1,147.1205	0.0313	0.0278	1,156.1789
Total	**0.4706**	**2.4357**	**5.1077**	**0.0200**	**1.5226**	**0.0285**	**1.5510**	**0.4102**	**0.0270**	**0.4371**		**2,073.1516**	**2,073.1516**	**0.0622**	**0.1612**	**2,122.7496**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7280	0.0000	2.7280	0.2979	0.0000	0.2979			0.0000			0.0000
Off-Road	4.2950	47.4838	32.7612	0.0786		1.8373	1.8373		1.6903	1.6903		7,613.7217	7,613.7217	2.4624		7,675.2825
Total	**4.2950**	**47.4838**	**32.7612**	**0.0786**	**2.7280**	**1.8373**	**4.5653**	**0.2979**	**1.6903**	**1.9882**		**7,613.7217**	**7,613.7217**	**2.4624**		**7,675.2825**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7540	27.8603	6.1783	0.1046	2.9699	0.2113	3.1812	0.8142	0.2022	1.0164		11,454.2639	11,454.2639	0.6110	1.8174	12,011.1328
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.8099**	**27.9962**	**6.8023**	**0.1065**	**3.1504**	**0.2133**	**3.3637**	**0.8624**	**0.2040**	**1.0664**		**11,651.3725**	**11,651.3725**	**0.6166**	**1.8273**	**12,211.3083**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7280	0.0000	2.7280	0.2979	0.0000	0.2979			0.0000			0.0000
Off-Road	4.2950	47.4838	32.7612	0.0786		1.8373	1.8373		1.6903	1.6903	0.0000	7,613.7217	7,613.7217	2.4624		7,675.2825
Total	**4.2950**	**47.4838**	**32.7612**	**0.0786**	**2.7280**	**1.8373**	**4.5653**	**0.2979**	**1.6903**	**1.9882**	**0.0000**	**7,613.7217**	**7,613.7217**	**2.4624**		**7,675.2825**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7540	27.8603	6.1783	0.1046	2.9699	0.2113	3.1812	0.8142	0.2022	1.0164		11,454.2639	11,454.2639	0.6110	1.8174	12,011.1328
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.8099**	**27.9962**	**6.8023**	**0.1065**	**3.1504**	**0.2133**	**3.3637**	**0.8624**	**0.2040**	**1.0664**		**11,651.3725**	**11,651.3725**	**0.6166**	**1.8273**	**12,211.3083**

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2377	2.4185	3.2300	4.4900e-003		0.1301	0.1301		0.1197	0.1197		434.7779	434.7779	0.1406		438.2933
Total	**0.2377**	**2.4185**	**3.2300**	**4.4900e-003**		**0.1301**	**0.1301**		**0.1197**	**0.1197**		**434.7779**	**434.7779**	**0.1406**		**438.2933**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.0173**	**0.0126**	**0.1968**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**51.6721**	**51.6721**	**1.4100e-003**	**1.2500e-003**	**52.0801**

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2377	2.4185	3.2300	4.4900e-003		0.1301	0.1301		0.1197	0.1197	0.0000	434.7779	434.7779	0.1406		438.2933
Total	**0.2377**	**2.4185**	**3.2300**	**4.4900e-003**		**0.1301**	**0.1301**		**0.1197**	**0.1197**	**0.0000**	**434.7779**	**434.7779**	**0.1406**		**438.2933**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.0173**	**0.0126**	**0.1968**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**51.6721**	**51.6721**	**1.4100e-003**	**1.2500e-003**	**52.0801**

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3123	2.3606	2.8848	3.8400e-003		0.1337	0.1337		0.1230	0.1230		372.1744	372.1744	0.1204		375.1837
Total	**0.3123**	**2.3606**	**2.8848**	**3.8400e-003**	**0.0000**	**0.1337**	**0.1337**	**0.0000**	**0.1230**	**0.1230**		**372.1744**	**372.1744**	**0.1204**		**375.1837**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.0212**	**0.1106**	**0.2304**	**9.0000e-004**	**0.0687**	**1.2900e-003**	**0.0700**	**0.0185**	**1.2200e-003**	**0.0197**		**93.7644**	**93.7644**	**2.8200e-003**	**7.3200e-003**	**96.0152**

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3123	2.3606	2.8848	3.8400e-003		0.1337	0.1337		0.1230	0.1230	0.0000	372.1744	372.1744	0.1204		375.1837
Total	**0.3123**	**2.3606**	**2.8848**	**3.8400e-003**	**0.0000**	**0.1337**	**0.1337**	**0.0000**	**0.1230**	**0.1230**	**0.0000**	**372.1744**	**372.1744**	**0.1204**		**375.1837**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0173	0.0126	0.1968	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		51.6721	51.6721	1.4100e-003	1.2500e-003	52.0801
Total	**0.0212**	**0.1106**	**0.2304**	**9.0000e-004**	**0.0687**	**1.2900e-003**	**0.0700**	**0.0185**	**1.2200e-003**	**0.0197**		**93.7644**	**93.7644**	**2.8200e-003**	**7.3200e-003**	**96.0152**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	59.1351					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3316	3.3828	5.6686	8.8900e-003		0.1184	0.1184		0.1154	0.1154		854.4894	854.4894	0.2037		859.5809
Total	**59.4667**	**3.3828**	**5.6686**	**8.8900e-003**		**0.1184**	**0.1184**		**0.1154**	**0.1154**		**854.4894**	**854.4894**	**0.2037**		**859.5809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0761	0.0556	0.8659	2.2500e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		227.3572	227.3572	6.1900e-003	5.5100e-003	229.1526
Total	**0.0761**	**0.0556**	**0.8659**	**2.2500e-003**	**0.2459**	**1.5700e-003**	**0.2475**	**0.0652**	**1.4500e-003**	**0.0667**		**227.3572**	**227.3572**	**6.1900e-003**	**5.5100e-003**	**229.1526**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	59.1351					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3316	3.3828	5.6686	8.8900e-003		0.1184	0.1184		0.1154	0.1154	0.0000	854.4894	854.4894	0.2037		859.5809
Total	**59.4667**	**3.3828**	**5.6686**	**8.8900e-003**		**0.1184**	**0.1184**		**0.1154**	**0.1154**	**0.0000**	**854.4894**	**854.4894**	**0.2037**		**859.5809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0761	0.0556	0.8659	2.2500e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		227.3572	227.3572	6.1900e-003	5.5100e-003	229.1526
Total	**0.0761**	**0.0556**	**0.8659**	**2.2500e-003**	**0.2459**	**1.5700e-003**	**0.2475**	**0.0652**	**1.4500e-003**	**0.0667**		**227.3572**	**227.3572**	**6.1900e-003**	**5.5100e-003**	**229.1526**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 Finishing/Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1341	1.3647	1.8227	2.5300e-003		0.0734	0.0734		0.0675	0.0675		245.3389	245.3389	0.0794		247.3226
Total	**0.1341**	**1.3647**	**1.8227**	**2.5300e-003**		**0.0734**	**0.0734**		**0.0675**	**0.0675**		**245.3389**	**245.3389**	**0.0794**		**247.3226**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0104	7.5800e-003	0.1181	3.1000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		31.0033	31.0033	8.4000e-004	7.5000e-004	31.2481
Total	**0.0104**	**7.5800e-003**	**0.1181**	**3.1000e-004**	**0.0335**	**2.1000e-004**	**0.0338**	**8.8900e-003**	**2.0000e-004**	**9.0900e-003**		**31.0033**	**31.0033**	**8.4000e-004**	**7.5000e-004**	**31.2481**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 Finishing/Landscaping - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1341	1.3647	1.8227	2.5300e-003		0.0734	0.0734		0.0675	0.0675	0.0000	245.3389	245.3389	0.0794		247.3226
Total	**0.1341**	**1.3647**	**1.8227**	**2.5300e-003**		**0.0734**	**0.0734**		**0.0675**	**0.0675**	**0.0000**	**245.3389**	**245.3389**	**0.0794**		**247.3226**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0104	7.5800e-003	0.1181	3.1000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		31.0033	31.0033	8.4000e-004	7.5000e-004	31.2481
Total	**0.0104**	**7.5800e-003**	**0.1181**	**3.1000e-004**	**0.0335**	**2.1000e-004**	**0.0338**	**8.8900e-003**	**2.0000e-004**	**9.0900e-003**		**31.0033**	**31.0033**	**8.4000e-004**	**7.5000e-004**	**31.2481**

4.0 Operational Detail - Mobile

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3535	1.6305	15.0311	0.0329	3.2501	0.0269	3.2770	0.8657	0.0251	0.8908		3,354.8570	3,354.8570	0.2105	0.1336	3,399.9371
Unmitigated	1.3535	1.6305	15.0311	0.0329	3.2501	0.0269	3.2770	0.8657	0.0251	0.8908		3,354.8570	3,354.8570	0.2105	0.1336	3,399.9371

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	89.22	20.24	6.41	217,563	217,563
Manufacturing	66.81	109.14	86.53	335,107	335,107
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	180.39	180.39	180.39	773,082	773,082
Total	336.41	309.77	273.33	1,325,752	1,325,752

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
NaturalGas Unmitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	258.739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	836.493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	244.264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.258739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	0.836493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.244264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

6.0 Area Detail

6.1 Mitigation Measures Area

Construction - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Unmitigated	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Total	**2.9624**	**2.6000e-004**	**0.0289**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0619**	**0.0619**	**1.6000e-004**		**0.0660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Total	**2.9624**	**2.6000e-004**	**0.0289**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0619**	**0.0619**	**1.6000e-004**		**0.0660**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	103.67	1000sqft	2.38	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types," "Incorrect Land Use Type," and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment - Consistent with IS/MND's model.

Trips and VMT - Consistent with IS/MND's model.

Demolition - Consistent with IS/MND's model.

Grading - Consistent with IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	31.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	230.00	132.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	12.00
tblConstructionPhase	NumDays	20.00	21.00
tblGrading	MaterialImported	0.00	14,933.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	1.11	0.46
tblOffRoadEquipment	HorsePower	158.00	311.00
tblOffRoadEquipment	HorsePower	158.00	311.00

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	89.00	173.00
tblOffRoadEquipment	HorsePower	187.00	179.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	HorsePower	63.00	74.00
tblOffRoadEquipment	HorsePower	63.00	74.00
tblOffRoadEquipment	HorsePower	212.00	130.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	367.00	365.00
tblOffRoadEquipment	HorsePower	367.00	478.00
tblOffRoadEquipment	HorsePower	65.00	74.30
tblOffRoadEquipment	HorsePower	65.00	74.30
tblOffRoadEquipment	HorsePower	97.00	70.00
tblOffRoadEquipment	HorsePower	97.00	79.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	28.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	32.00	34.00
tblTripsAndVMT	HaulingTripNumber	112.00	114.00
tblTripsAndVMT	HaulingTripNumber	1,867.00	2,987.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	60.6708	89.5611	57.5037	0.2247	7.9776	2.5703	10.5479	1.6403	2.3733	4.0136	0.0000	23,246.2011	23,246.2011	3.7582	1.9982	23,935.6135
Maximum	**60.6708**	**89.5611**	**57.5037**	**0.2247**	**7.9776**	**2.5703**	**10.5479**	**1.6403**	**2.3733**	**4.0136**	**0.0000**	**23,246.2011**	**23,246.2011**	**3.7582**	**1.9982**	**23,935.6135**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	60.6708	89.5611	57.5037	0.2247	7.9776	2.5703	10.5479	1.6403	2.3733	4.0136	0.0000	23,246.2011	23,246.2011	3.7582	1.9982	23,935.6134
Maximum	**60.6708**	**89.5611**	**57.5037**	**0.2247**	**7.9776**	**2.5703**	**10.5479**	**1.6403**	**2.3733**	**4.0136**	**0.0000**	**23,246.2011**	**23,246.2011**	**3.7582**	**1.9982**	**23,935.6134**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	1.3332	1.7568	14.5417	0.0315	3.2501	0.0270	3.2771	0.8657	0.0251	0.8908		3,210.2700	3,210.2700	0.2155	0.1396	3,257.2619
Total	**4.3100**	**1.8884**	**14.6809**	**0.0323**	**3.2501**	**0.0370**	**3.2871**	**0.8657**	**0.0352**	**0.9009**		**3,367.9196**	**3,367.9196**	**0.2187**	**0.1425**	**3,415.8520**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	1.3332	1.7568	14.5417	0.0315	3.2501	0.0270	3.2771	0.8657	0.0251	0.8908		3,210.2700	3,210.2700	0.2155	0.1396	3,257.2619
Total	**4.3100**	**1.8884**	**14.6809**	**0.0323**	**3.2501**	**0.0370**	**3.2871**	**0.8657**	**0.0352**	**0.9009**		**3,367.9196**	**3,367.9196**	**0.2187**	**0.1425**	**3,415.8520**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Demolition	Demolition	2/1/2022	3/15/2022	5	31	
2	Asphalt Demolition	Demolition	2/18/2022	3/1/2022	5	8	
3	Site Preparation	Site Preparation	3/18/2022	3/24/2022	5	5	
4	Building Construction	Building Construction	3/19/2022	9/20/2022	5	132	
5	Rough Grading	Grading	3/22/2022	4/20/2022	5	22	
6	Utility Trenching	Trenching	4/18/2022	5/16/2022	5	21	
7	Fine Grading	Grading	7/2/2022	7/19/2022	5	12	
8	Architectural Coating	Architectural Coating	7/20/2022	8/17/2022	5	21	
9	Finishing/Landscaping	Trenching	8/18/2022	10/4/2022	5	34	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 55

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 194,745; Non-Residential Outdoor: 64,915; Striped Parking Area: 8,266 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Demolition	Excavators	1	8.00	311	0.38

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Skid Steer Loaders	1	8.00	74.3	0.37
Asphalt Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition	Excavators	1	8.00	311	0.38
Asphalt Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition	Skid Steer Loaders	1	8.00	74.3	0.37
Site Preparation	Crawler Tractors	1	8.00	130	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	74	0.31
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	3	8.00	173	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Rough Grading	Excavators	0	8.00	158	0.38
Rough Grading	Graders	1	8.00	179	0.41
Rough Grading	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading	Scrapers	2	8.00	365	0.48
Rough Grading	Scrapers	2	8.00	478	0.48
Rough Grading	Tractors/Loaders/Backhoes	1	8.00	79	0.37
Utility Trenching	Tractors/Loaders/Backhoes	2	8.00	70	0.37
Fine Grading	Excavators	0	8.00	158	0.38
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Rollers	1	8.00	36	0.38
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	79	0.37
Architectural Coating	Aerial Lifts	3	8.00	74	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Finishing/Landscaping	Tractors/Loaders/Backhoes	1	8.00	79	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Demolition	2	5.00	2.00	34.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition	2	5.00	2.00	114.00	14.70	6.90	28.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	3.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	6	15.00	2.00	2,987.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	2	5.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	22.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2230	0.0000	0.2230	0.0338	0.0000	0.0338			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031		1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**0.2230**	**0.1121**	**0.3350**	**0.0338**	**0.1031**	**0.1369**		**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4400e-003	0.0813	0.0256	2.6000e-004	6.7300e-003	4.9000e-004	7.2300e-003	1.8500e-003	4.7000e-004	2.3200e-003		28.2464	28.2464	1.4400e-003	4.4800e-003	29.6175
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.0249**	**0.1973**	**0.2411**	**1.1300e-003**	**0.0754**	**1.7900e-003**	**0.0772**	**0.0204**	**1.7000e-003**	**0.0221**		**119.2947**	**119.2947**	**4.2600e-003**	**0.0119**	**122.9448**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2230	0.0000	0.2230	0.0338	0.0000	0.0338			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031	0.0000	1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**0.2230**	**0.1121**	**0.3350**	**0.0338**	**0.1031**	**0.1369**	**0.0000**	**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4400e-003	0.0813	0.0256	2.6000e-004	6.7300e-003	4.9000e-004	7.2300e-003	1.8500e-003	4.7000e-004	2.3200e-003		28.2464	28.2464	1.4400e-003	4.4800e-003	29.6175
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.0249**	**0.1973**	**0.2411**	**1.1300e-003**	**0.0754**	**1.7900e-003**	**0.0772**	**0.0204**	**1.7000e-003**	**0.0221**		**119.2947**	**119.2947**	**4.2600e-003**	**0.0119**	**122.9448**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0226	0.0000	3.0226	0.4577	0.0000	0.4577			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031		1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**3.0226**	**0.1121**	**3.1347**	**0.4577**	**0.1031**	**0.5608**		**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0852	3.3727	0.7123	0.0123	0.3491	0.0249	0.3739	0.0957	0.0238	0.1195		1,341.7089	1,341.7089	0.0716	0.2129	1,406.9424
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.1076**	**3.4887**	**0.9277**	**0.0131**	**0.4178**	**0.0262**	**0.4439**	**0.1142**	**0.0250**	**0.1392**		**1,432.7572**	**1,432.7572**	**0.0744**	**0.2203**	**1,500.2696**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0226	0.0000	3.0226	0.4577	0.0000	0.4577			0.0000			0.0000
Off-Road	0.3459	3.2247	3.7913	0.0125		0.1121	0.1121		0.1031	0.1031	0.0000	1,207.1734	1,207.1734	0.3904		1,216.9340
Total	**0.3459**	**3.2247**	**3.7913**	**0.0125**	**3.0226**	**0.1121**	**3.1347**	**0.4577**	**0.1031**	**0.5608**	**0.0000**	**1,207.1734**	**1,207.1734**	**0.3904**		**1,216.9340**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0852	3.3727	0.7123	0.0123	0.3491	0.0249	0.3739	0.0957	0.0238	0.1195		1,341.7089	1,341.7089	0.0716	0.2129	1,406.9424
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.1076**	**3.4887**	**0.9277**	**0.0131**	**0.4178**	**0.0262**	**0.4439**	**0.1142**	**0.0250**	**0.1392**		**1,432.7572**	**1,432.7572**	**0.0744**	**0.2203**	**1,500.2696**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.3836	3.7727	3.2178	4.8000e-003		0.2106	0.2106		0.1938	0.1938		464.9218	464.9218	0.1504		468.6809
Total	**0.3836**	**3.7727**	**3.2178**	**4.8000e-003**	**0.5303**	**0.2106**	**0.7409**	**0.0573**	**0.1938**	**0.2510**		**464.9218**	**464.9218**	**0.1504**		**468.6809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0111	8.3700e-003	0.1084	2.9000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		29.3641	29.3641	8.5000e-004	8.0000e-004	29.6245
Total	**0.0150**	**0.1104**	**0.1432**	**6.8000e-004**	**0.0463**	**1.1500e-003**	**0.0475**	**0.0126**	**1.1000e-003**	**0.0137**		**71.4722**	**71.4722**	**2.2500e-003**	**6.8700e-003**	**73.5776**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.3836	3.7727	3.2178	4.8000e-003		0.2106	0.2106		0.1938	0.1938	0.0000	464.9218	464.9218	0.1504		468.6809
Total	**0.3836**	**3.7727**	**3.2178**	**4.8000e-003**	**0.5303**	**0.2106**	**0.7409**	**0.0573**	**0.1938**	**0.2510**	**0.0000**	**464.9218**	**464.9218**	**0.1504**		**468.6809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0111	8.3700e-003	0.1084	2.9000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		29.3641	29.3641	8.5000e-004	8.0000e-004	29.6245
Total	**0.0150**	**0.1104**	**0.1432**	**6.8000e-004**	**0.0463**	**1.1500e-003**	**0.0475**	**0.0126**	**1.1000e-003**	**0.0137**		**71.4722**	**71.4722**	**2.2500e-003**	**6.8700e-003**	**73.5776**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6259	6.5142	9.7087	0.0149		0.2790	0.2790		0.2567	0.2567		1,437.3350	1,437.3350	0.4649		1,448.9566
Total	**0.6259**	**6.5142**	**9.7087**	**0.0149**		**0.2790**	**0.2790**		**0.2567**	**0.2567**		**1,437.3350**	**1,437.3350**	**0.4649**		**1,448.9566**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.2442	0.7645	8.6200e-003	0.2818	0.0206	0.3024	0.0812	0.0197	0.1009		926.3789	926.3789	0.0309	0.1336	966.9673
Worker	0.4111	0.3098	4.0112	0.0108	1.2407	7.9400e-003	1.2487	0.3290	7.3100e-003	0.3364		1,086.4715	1,086.4715	0.0316	0.0297	1,096.1066
Total	**0.4967**	**2.5540**	**4.7757**	**0.0194**	**1.5226**	**0.0286**	**1.5511**	**0.4102**	**0.0270**	**0.4372**		**2,012.8505**	**2,012.8505**	**0.0625**	**0.1633**	**2,063.0739**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6259	6.5142	9.7087	0.0149		0.2790	0.2790		0.2567	0.2567	0.0000	1,437.3350	1,437.3350	0.4649		1,448.9566
Total	**0.6259**	**6.5142**	**9.7087**	**0.0149**		**0.2790**	**0.2790**		**0.2567**	**0.2567**	**0.0000**	**1,437.3350**	**1,437.3350**	**0.4649**		**1,448.9566**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.2442	0.7645	8.6200e-003	0.2818	0.0206	0.3024	0.0812	0.0197	0.1009		926.3789	926.3789	0.0309	0.1336	966.9673
Worker	0.4111	0.3098	4.0112	0.0108	1.2407	7.9400e-003	1.2487	0.3290	7.3100e-003	0.3364		1,086.4715	1,086.4715	0.0316	0.0297	1,096.1066
Total	**0.4967**	**2.5540**	**4.7757**	**0.0194**	**1.5226**	**0.0286**	**1.5511**	**0.4102**	**0.0270**	**0.4372**		**2,012.8505**	**2,012.8505**	**0.0625**	**0.1633**	**2,063.0739**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7280	0.0000	2.7280	0.2979	0.0000	0.2979			0.0000			0.0000
Off-Road	4.2950	47.4838	32.7612	0.0786		1.8373	1.8373		1.6903	1.6903		7,613.7217	7,613.7217	2.4624		7,675.2825
Total	**4.2950**	**47.4838**	**32.7612**	**0.0786**	**2.7280**	**1.8373**	**4.5653**	**0.2979**	**1.6903**	**1.9882**		**7,613.7217**	**7,613.7217**	**2.4624**		**7,675.2825**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7388	28.9822	6.2707	0.1046	2.9699	0.2117	3.1816	0.8142	0.2025	1.0167		11,456.9713	11,456.9713	0.6101	1.8179	12,013.9664
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.7983**	**29.1261**	**6.8475**	**0.1064**	**3.1504**	**0.2137**	**3.3641**	**0.8624**	**0.2044**	**1.0667**		**11,645.8999**	**11,645.8999**	**0.6158**	**1.8280**	**12,206.0420**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7280	0.0000	2.7280	0.2979	0.0000	0.2979			0.0000			0.0000
Off-Road	4.2950	47.4838	32.7612	0.0786		1.8373	1.8373		1.6903	1.6903	0.0000	7,613.7217	7,613.7217	2.4624		7,675.2825
Total	**4.2950**	**47.4838**	**32.7612**	**0.0786**	**2.7280**	**1.8373**	**4.5653**	**0.2979**	**1.6903**	**1.9882**	**0.0000**	**7,613.7217**	**7,613.7217**	**2.4624**		**7,675.2825**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7388	28.9822	6.2707	0.1046	2.9699	0.2117	3.1816	0.8142	0.2025	1.0167		11,456.9713	11,456.9713	0.6101	1.8179	12,013.9664
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.7983**	**29.1261**	**6.8475**	**0.1064**	**3.1504**	**0.2137**	**3.3641**	**0.8624**	**0.2044**	**1.0667**		**11,645.8999**	**11,645.8999**	**0.6158**	**1.8280**	**12,206.0420**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2377	2.4185	3.2300	4.4900e-003		0.1301	0.1301		0.1197	0.1197		434.7779	434.7779	0.1406		438.2933
Total	**0.2377**	**2.4185**	**3.2300**	**4.4900e-003**		**0.1301**	**0.1301**		**0.1197**	**0.1197**		**434.7779**	**434.7779**	**0.1406**		**438.2933**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.0185**	**0.0140**	**0.1807**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**48.9402**	**48.9402**	**1.4200e-003**	**1.3400e-003**	**49.3742**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2377	2.4185	3.2300	4.4900e-003		0.1301	0.1301		0.1197	0.1197	0.0000	434.7779	434.7779	0.1406		438.2933
Total	**0.2377**	**2.4185**	**3.2300**	**4.4900e-003**		**0.1301**	**0.1301**		**0.1197**	**0.1197**	**0.0000**	**434.7779**	**434.7779**	**0.1406**		**438.2933**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.0185**	**0.0140**	**0.1807**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**48.9402**	**48.9402**	**1.4200e-003**	**1.3400e-003**	**49.3742**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3123	2.3606	2.8848	3.8400e-003		0.1337	0.1337		0.1230	0.1230		372.1744	372.1744	0.1204		375.1837
Total	**0.3123**	**2.3606**	**2.8848**	**3.8400e-003**	**0.0000**	**0.1337**	**0.1337**	**0.0000**	**0.1230**	**0.1230**		**372.1744**	**372.1744**	**0.1204**		**375.1837**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.0224**	**0.1160**	**0.2154**	**8.7000e-004**	**0.0687**	**1.3000e-003**	**0.0700**	**0.0185**	**1.2300e-003**	**0.0197**		**91.0483**	**91.0483**	**2.8200e-003**	**7.4100e-003**	**93.3272**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3123	2.3606	2.8848	3.8400e-003		0.1337	0.1337		0.1230	0.1230	0.0000	372.1744	372.1744	0.1204		375.1837
Total	**0.3123**	**2.3606**	**2.8848**	**3.8400e-003**	**0.0000**	**0.1337**	**0.1337**	**0.0000**	**0.1230**	**0.1230**	**0.0000**	**372.1744**	**372.1744**	**0.1204**		**375.1837**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0185	0.0140	0.1807	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		48.9402	48.9402	1.4200e-003	1.3400e-003	49.3742
Total	**0.0224**	**0.1160**	**0.2154**	**8.7000e-004**	**0.0687**	**1.3000e-003**	**0.0700**	**0.0185**	**1.2300e-003**	**0.0197**		**91.0483**	**91.0483**	**2.8200e-003**	**7.4100e-003**	**93.3272**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	59.1351					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3316	3.3828	5.6686	8.8900e-003		0.1184	0.1184		0.1154	0.1154		854.4894	854.4894	0.2037		859.5809
Total	**59.4667**	**3.3828**	**5.6686**	**8.8900e-003**		**0.1184**	**0.1184**		**0.1154**	**0.1154**		**854.4894**	**854.4894**	**0.2037**		**859.5809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0815	0.0614	0.7950	2.1300e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		215.3367	215.3367	6.2700e-003	5.8800e-003	217.2464
Total	**0.0815**	**0.0614**	**0.7950**	**2.1300e-003**	**0.2459**	**1.5700e-003**	**0.2475**	**0.0652**	**1.4500e-003**	**0.0667**		**215.3367**	**215.3367**	**6.2700e-003**	**5.8800e-003**	**217.2464**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	59.1351					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3316	3.3828	5.6686	8.8900e-003		0.1184	0.1184		0.1154	0.1154	0.0000	854.4894	854.4894	0.2037		859.5809
Total	**59.4667**	**3.3828**	**5.6686**	**8.8900e-003**		**0.1184**	**0.1184**		**0.1154**	**0.1154**	**0.0000**	**854.4894**	**854.4894**	**0.2037**		**859.5809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0815	0.0614	0.7950	2.1300e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		215.3367	215.3367	6.2700e-003	5.8800e-003	217.2464
Total	**0.0815**	**0.0614**	**0.7950**	**2.1300e-003**	**0.2459**	**1.5700e-003**	**0.2475**	**0.0652**	**1.4500e-003**	**0.0667**		**215.3367**	**215.3367**	**6.2700e-003**	**5.8800e-003**	**217.2464**

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 Finishing/Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1341	1.3647	1.8227	2.5300e-003		0.0734	0.0734		0.0675	0.0675		245.3389	245.3389	0.0794		247.3226
Total	**0.1341**	**1.3647**	**1.8227**	**2.5300e-003**		**0.0734**	**0.0734**		**0.0675**	**0.0675**		**245.3389**	**245.3389**	**0.0794**		**247.3226**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0111	8.3700e-003	0.1084	2.9000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		29.3641	29.3641	8.5000e-004	8.0000e-004	29.6245
Total	**0.0111**	**8.3700e-003**	**0.1084**	**2.9000e-004**	**0.0335**	**2.1000e-004**	**0.0338**	**8.8900e-003**	**2.0000e-004**	**9.0900e-003**		**29.3641**	**29.3641**	**8.5000e-004**	**8.0000e-004**	**29.6245**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 Finishing/Landscaping - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1341	1.3647	1.8227	2.5300e-003		0.0734	0.0734		0.0675	0.0675	0.0000	245.3389	245.3389	0.0794		247.3226
Total	**0.1341**	**1.3647**	**1.8227**	**2.5300e-003**		**0.0734**	**0.0734**		**0.0675**	**0.0675**	**0.0000**	**245.3389**	**245.3389**	**0.0794**		**247.3226**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0111	8.3700e-003	0.1084	2.9000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		29.3641	29.3641	8.5000e-004	8.0000e-004	29.6245
Total	**0.0111**	**8.3700e-003**	**0.1084**	**2.9000e-004**	**0.0335**	**2.1000e-004**	**0.0338**	**8.8900e-003**	**2.0000e-004**	**9.0900e-003**		**29.3641**	**29.3641**	**8.5000e-004**	**8.0000e-004**	**29.6245**

4.0 Operational Detail - Mobile

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3332	1.7568	14.5417	0.0315	3.2501	0.0270	3.2771	0.8657	0.0251	0.8908		3,210.2700	3,210.2700	0.2155	0.1396	3,257.2619
Unmitigated	1.3332	1.7568	14.5417	0.0315	3.2501	0.0270	3.2771	0.8657	0.0251	0.8908		3,210.2700	3,210.2700	0.2155	0.1396	3,257.2619

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	89.22	20.24	6.41	217,563	217,563
Manufacturing	66.81	109.14	86.53	335,107	335,107
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	180.39	180.39	180.39	773,082	773,082
Total	336.41	309.77	273.33	1,325,752	1,325,752

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Construction - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
NaturalGas Unmitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	258.739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	836.493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	244.264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.258739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	0.836493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.244264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Unmitigated	2.9624	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Total	**2.9624**	**2.6000e-004**	**0.0289**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0619**	**0.0619**	**1.6000e-004**		**0.0660**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0289	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0619	0.0619	1.6000e-004		0.0660
Total	**2.9624**	**2.6000e-004**	**0.0289**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0619**	**0.0619**	**1.6000e-004**		**0.0660**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Operation - Main

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	590.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the IS/MND's model.

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types" and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model - Operational run only

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment -

Trips and VMT -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Grading -

Vehicle Trips - Consistent with the IS/MND's model.

Water And Wastewater - Consistent with the IS/MND's model.

Solid Waste - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	8.0320e-003	0.00
tblFleetMix	HHD	8.0320e-003	0.00
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.9120e-003	6.0600e-003
tblFleetMix	LHD2	5.9120e-003	6.0600e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.13	0.13
tblFleetMix	MDV	0.13	0.13
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MHD	0.01	0.00

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tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblLandUse	LandUseSquareFeet	112,830.00	103,670.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	2.59	2.49
tblLandUse	LotAcreage	1.11	0.46
tblProjectCharacteristics	CO2IntensityFactor	390.98	590.98
tblSolidWaste	SolidWasteGenerationRate	21.08	44.06
tblSolidWaste	SolidWasteGenerationRate	106.06	278.69
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	6.42	2.93
tblVehicleTrips	ST_TR	1.74	1.31
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	5.09	2.93
tblVehicleTrips	SU_TR	1.74	1.31
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	3.93	2.93
tblVehicleTrips	WD_TR	1.74	1.31
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	3,931,250.00	155,855.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	IndoorWaterUseRate	26,091,937.50	155,855.00
tblWater	OutdoorWaterUseRate	0.00	103,113.00
tblWater	OutdoorWaterUseRate	0.00	103,113.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2498	2.0924	2.4420	5.3400e-003	0.1718	0.0963	0.2681	0.0464	0.0906	0.1370	0.0000	478.8962	478.8962	0.0704	0.0171	485.7459
Maximum	**0.2498**	**2.0924**	**2.4420**	**5.3400e-003**	**0.1718**	**0.0963**	**0.2681**	**0.0464**	**0.0906**	**0.1370**	**0.0000**	**478.8962**	**478.8962**	**0.0704**	**0.0171**	**485.7459**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2498	2.0924	2.4420	5.3400e-003	0.1718	0.0963	0.2681	0.0464	0.0906	0.1370	0.0000	478.8959	478.8959	0.0704	0.0171	485.7456
Maximum	**0.2498**	**2.0924**	**2.4420**	**5.3400e-003**	**0.1718**	**0.0963**	**0.2681**	**0.0464**	**0.0906**	**0.1370**	**0.0000**	**478.8959**	**478.8959**	**0.0704**	**0.0171**	**485.7456**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2022	4-30-2022	0.6460	0.6460
2	5-1-2022	7-31-2022	0.6646	0.6646
3	8-1-2022	9-30-2022	0.4407	0.4407
		Highest	0.6646	0.6646

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Energy	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	217.3262	217.3262	0.0112	1.7700e-003	218.1340
Mobile	0.1298	0.1222	1.4592	3.0000e-003	0.3186	2.1200e-003	0.3207	0.0847	1.9600e-003	0.0866	0.0000	276.6135	276.6135	0.0160	9.5000e-003	279.8449
Waste						0.0000	0.0000		0.0000	0.0000	67.2448	0.0000	67.2448	3.9741	0.0000	166.5962
Water						0.0000	0.0000		0.0000	0.0000	0.6268	10.3565	10.9833	0.0540	1.5600e-003	12.7992
Total	**0.6730**	**0.1462**	**1.4831**	**3.1400e-003**	**0.3186**	**3.9500e-003**	**0.3225**	**0.0847**	**3.7900e-003**	**0.0885**	**67.8716**	**504.3035**	**572.1751**	**4.0553**	**0.0128**	**677.3819**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Energy	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	217.3262	217.3262	0.0112	1.7700e-003	218.1340
Mobile	0.1298	0.1222	1.4592	3.0000e-003	0.3186	2.1200e-003	0.3207	0.0847	1.9600e-003	0.0866	0.0000	276.6135	276.6135	0.0160	9.5000e-003	279.8449
Waste						0.0000	0.0000		0.0000	0.0000	67.2448	0.0000	67.2448	3.9741	0.0000	166.5962
Water						0.0000	0.0000		0.0000	0.0000	0.6268	10.3565	10.9833	0.0540	1.5600e-003	12.7992
Total	**0.6730**	**0.1462**	**1.4831**	**3.1400e-003**	**0.3186**	**3.9500e-003**	**0.3225**	**0.0847**	**3.7900e-003**	**0.0885**	**67.8716**	**504.3035**	**572.1751**	**4.0553**	**0.0128**	**677.3819**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	2/1/2022	12/19/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4840	266.4840	0.0638	0.0000	268.0801
Total	**0.1962**	**1.7958**	**1.8818**	**3.1000e-003**		**0.0930**	**0.0930**		**0.0875**	**0.0875**	**0.0000**	**266.4840**	**266.4840**	**0.0638**	**0.0000**	**268.0801**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8800e-003	0.2602	0.0863	9.9000e-004	0.0319	2.3600e-003	0.0343	9.2000e-003	2.2600e-003	0.0115	0.0000	96.6247	96.6247	3.2200e-003	0.0139	100.8588
Worker	0.0437	0.0365	0.4739	1.2500e-003	0.1399	9.1000e-004	0.1408	0.0372	8.4000e-004	0.0380	0.0000	115.7875	115.7875	3.3000e-003	3.1400e-003	116.8070
Total	**0.0536**	**0.2967**	**0.5602**	**2.2400e-003**	**0.1718**	**3.2700e-003**	**0.1750**	**0.0464**	**3.1000e-003**	**0.0495**	**0.0000**	**212.4122**	**212.4122**	**6.5200e-003**	**0.0171**	**217.6658**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4837	266.4837	0.0638	0.0000	268.0798
Total	**0.1962**	**1.7958**	**1.8818**	**3.1000e-003**		**0.0930**	**0.0930**		**0.0875**	**0.0875**	**0.0000**	**266.4837**	**266.4837**	**0.0638**	**0.0000**	**268.0798**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8800e-003	0.2602	0.0863	9.9000e-004	0.0319	2.3600e-003	0.0343	9.2000e-003	2.2600e-003	0.0115	0.0000	96.6247	96.6247	3.2200e-003	0.0139	100.8588
Worker	0.0437	0.0365	0.4739	1.2500e-003	0.1399	9.1000e-004	0.1408	0.0372	8.4000e-004	0.0380	0.0000	115.7875	115.7875	3.3000e-003	3.1400e-003	116.8070
Total	**0.0536**	**0.2967**	**0.5602**	**2.2400e-003**	**0.1718**	**3.2700e-003**	**0.1750**	**0.0464**	**3.1000e-003**	**0.0495**	**0.0000**	**212.4122**	**212.4122**	**6.5200e-003**	**0.0171**	**217.6658**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1298	0.1222	1.4592	3.0000e-003	0.3186	2.1200e-003	0.3207	0.0847	1.9600e-003	0.0866	0.0000	276.6135	276.6135	0.0160	9.5000e-003	279.8449
Unmitigated	0.1298	0.1222	1.4592	3.0000e-003	0.3186	2.1200e-003	0.3207	0.0847	1.9600e-003	0.0866	0.0000	276.6135	276.6135	0.0160	9.5000e-003	279.8449

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	49.81	49.81	49.81	220,573	220,573
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	147.81	147.81	147.81	633,460	633,460
Total	197.62	197.62	197.62	854,033	854,033

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.560437	0.063426	0.191369	0.130691	0.023481	0.006060	0.000000	0.000000	0.000000	0.000000	0.024535	0.000000	0.000000
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.560437	0.063426	0.191369	0.130691	0.023481	0.006060	0.000000	0.000000	0.000000	0.000000	0.024535	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.2358	191.2358	0.0107	1.2900e-003	191.8885
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.2358	191.2358	0.0107	1.2900e-003	191.8885
NaturalGas Mitigated	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455
NaturalGas Unmitigated	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	94439.6	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0397	5.0397	1.0000e-004	9.0000e-005	5.0696
Manufacturing	305320	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2930	16.2930	3.1000e-004	3.0000e-004	16.3899
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	89156.2	4.8000e-004	4.3700e-003	3.6700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	4.7577	4.7577	9.0000e-005	9.0000e-005	4.7860
Total		**2.6400e-003**	**0.0240**	**0.0201**	**1.5000e-004**		**1.8200e-003**	**1.8200e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**26.0904**	**26.0904**	**5.0000e-004**	**4.8000e-004**	**26.2455**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	94439.6	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0397	5.0397	1.0000e-004	9.0000e-005	5.0696
Manufacturing	305320	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2930	16.2930	3.1000e-004	3.0000e-004	16.3899
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	89156.2	4.8000e-004	4.3700e-003	3.6700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	4.7577	4.7577	9.0000e-005	9.0000e-005	4.7860
Total		**2.6400e-003**	**0.0240**	**0.0201**	**1.5000e-004**		**1.8200e-003**	**1.8200e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**26.0904**	**26.0904**	**5.0000e-004**	**4.8000e-004**	**26.2455**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	114500	30.6933	1.7100e-003	2.1000e-004	30.7981
Manufacturing	184620	49.4900	2.7600e-003	3.3000e-004	49.6589
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	17220	4.6161	2.6000e-004	3.0000e-005	4.6318
Unrefrigerated Warehouse-No Rail	397056	106.4365	5.9400e-003	7.2000e-004	106.7997
Total		**191.2358**	**0.0107**	**1.2900e-003**	**191.8885**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	114500	30.6933	1.7100e-003	2.1000e-004	30.7981
Manufacturing	184620	49.4900	2.7600e-003	3.3000e-004	49.6589
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	17220	4.6161	2.6000e-004	3.0000e-005	4.6318
Unrefrigerated Warehouse-No Rail	397056	106.4365	5.9400e-003	7.2000e-004	106.7997
Total		**191.2358**	**0.0107**	**1.2900e-003**	**191.8885**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Unmitigated	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Total	**0.5405**	**3.0000e-005**	**3.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.2500e-003**	**7.2500e-003**	**2.0000e-005**	**0.0000**	**7.7200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Total	**0.5405**	**3.0000e-005**	**3.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.2500e-003**	**7.2500e-003**	**2.0000e-005**	**0.0000**	**7.7200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Operation - Main - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.9833	0.0540	1.5600e-003	12.7992
Unmitigated	10.9833	0.0540	1.5600e-003	12.7992

Operation - Main - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.62804 / 0.997832	9.1709	0.0535	1.3100e-003	10.8999
Manufacturing	0.155855 / 0.103113	0.9062	2.4000e-004	1.3000e-004	0.9496
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.155855 / 0.103113	0.9062	2.4000e-004	1.3000e-004	0.9496
Total		**10.9833**	**0.0540**	**1.5700e-003**	**12.7992**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.62804 / 0.997832	9.1709	0.0535	1.3100e-003	10.8999
Manufacturing	0.155855 / 0.103113	0.9062	2.4000e-004	1.3000e-004	0.9496
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.155855 / 0.103113	0.9062	2.4000e-004	1.3000e-004	0.9496
Total		**10.9833**	**0.0540**	**1.5700e-003**	**12.7992**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Operation - Main - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	67.2448	3.9741	0.0000	166.5962
Unmitigated	67.2448	3.9741	0.0000	166.5962

Operation - Main - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.52	1.7295	0.1022	0.0000	4.2847
Manufacturing	44.06	8.9438	0.5286	0.0000	22.1578
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	278.69	56.5716	3.3433	0.0000	140.1536
Total		**67.2448**	**3.9741**	**0.0000**	**166.5962**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.52	1.7295	0.1022	0.0000	4.2847
Manufacturing	44.06	8.9438	0.5286	0.0000	22.1578
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	278.69	56.5716	3.3433	0.0000	140.1536
Total		**67.2448**	**3.9741**	**0.0000**	**166.5962**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Operation - Main

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	590.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the IS/MND's model.

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types" and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model - Operational run only

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment -

Trips and VMT -

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Grading -

Vehicle Trips - Consistent with the IS/MND's model.

Water And Wastewater - Consistent with the IS/MND's model.

Solid Waste - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	8.0320e-003	0.00
tblFleetMix	HHD	8.0320e-003	0.00
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.9120e-003	6.0600e-003
tblFleetMix	LHD2	5.9120e-003	6.0600e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.13	0.13
tblFleetMix	MDV	0.13	0.13
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MHD	0.01	0.00

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblLandUse	LandUseSquareFeet	112,830.00	103,670.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	2.59	2.49
tblLandUse	LotAcreage	1.11	0.46
tblProjectCharacteristics	CO2IntensityFactor	390.98	590.98
tblSolidWaste	SolidWasteGenerationRate	21.08	44.06
tblSolidWaste	SolidWasteGenerationRate	106.06	278.69
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	6.42	2.93
tblVehicleTrips	ST_TR	1.74	1.31
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	5.09	2.93
tblVehicleTrips	SU_TR	1.74	1.31
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	3.93	2.93
tblVehicleTrips	WD_TR	1.74	1.31
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	3,931,250.00	155,855.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	IndoorWaterUseRate	26,091,937.50	155,855.00
tblWater	OutdoorWaterUseRate	0.00	103,113.00
tblWater	OutdoorWaterUseRate	0.00	103,113.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1770	18.0514	21.4772	0.0469	1.5226	0.8375	2.3600	0.4102	0.7881	1.1983	0.0000	4,634.9056	4,634.9056	0.6742	0.1612	4,699.8023
Maximum	**2.1770**	**18.0514**	**21.4772**	**0.0469**	**1.5226**	**0.8375**	**2.3600**	**0.4102**	**0.7881**	**1.1983**	**0.0000**	**4,634.9056**	**4,634.9056**	**0.6742**	**0.1612**	**4,699.8023**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1770	18.0514	21.4772	0.0469	1.5226	0.8375	2.3600	0.4102	0.7881	1.1983	0.0000	4,634.9056	4,634.9056	0.6742	0.1612	4,699.8023
Maximum	**2.1770**	**18.0514**	**21.4772**	**0.0469**	**1.5226**	**0.8375**	**2.3600**	**0.4102**	**0.7881**	**1.1983**	**0.0000**	**4,634.9056**	**4,634.9056**	**0.6742**	**0.1612**	**4,699.8023**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.7339	0.6008	8.2096	0.0171	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,737.7504	1,737.7504	0.0948	0.0536	1,756.0924
Total	**3.7108**	**0.7324**	**8.3498**	**0.0179**	**1.7855**	**0.0218**	**1.8073**	**0.4739**	**0.0209**	**0.4947**		**1,895.4020**	**1,895.4020**	**0.0979**	**0.0565**	**1,914.6847**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.7339	0.6008	8.2096	0.0171	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,737.7504	1,737.7504	0.0948	0.0536	1,756.0924
Total	**3.7108**	**0.7324**	**8.3498**	**0.0179**	**1.7855**	**0.0218**	**1.8073**	**0.4739**	**0.0209**	**0.4947**		**1,895.4020**	**1,895.4020**	**0.0979**	**0.0565**	**1,914.6847**

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	2/1/2022	12/19/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	2.1553	0.7390	8.6200e-003	0.2818	0.0205	0.3024	0.0812	0.0196	0.1008		926.0310	926.0310	0.0310	0.1334	966.5706
Worker	0.3842	0.2805	4.3749	0.0114	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,154.5410	1,154.5410	0.0313	0.0278	1,163.5995
Total	**0.4708**	**2.4358**	**5.1138**	**0.0200**	**1.5226**	**0.0285**	**1.5510**	**0.4102**	**0.0270**	**0.4372**		**2,080.5721**	**2,080.5721**	**0.0622**	**0.1612**	**2,130.1701**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	2.1553	0.7390	8.6200e-003	0.2818	0.0205	0.3024	0.0812	0.0196	0.1008		926.0310	926.0310	0.0310	0.1334	966.5706
Worker	0.3842	0.2805	4.3749	0.0114	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,154.5410	1,154.5410	0.0313	0.0278	1,163.5995
Total	**0.4708**	**2.4358**	**5.1138**	**0.0200**	**1.5226**	**0.0285**	**1.5510**	**0.4102**	**0.0270**	**0.4372**		**2,080.5721**	**2,080.5721**	**0.0622**	**0.1612**	**2,130.1701**

4.0 Operational Detail - Mobile

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7339	0.6008	8.2096	0.0171	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,737.7504	1,737.7504	0.0948	0.0536	1,756.0924
Unmitigated	0.7339	0.6008	8.2096	0.0171	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,737.7504	1,737.7504	0.0948	0.0536	1,756.0924

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	49.81	49.81	49.81	220,573	220,573
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	147.81	147.81	147.81	633,460	633,460
Total	197.62	197.62	197.62	854,033	854,033

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.560437	0.063426	0.191369	0.130691	0.023481	0.006060	0.000000	0.000000	0.000000	0.000000	0.024535	0.000000	0.000000
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.560437	0.063426	0.191369	0.130691	0.023481	0.006060	0.000000	0.000000	0.000000	0.000000	0.024535	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
NaturalGas Unmitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	258.739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	836.493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	244.264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.258739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	0.836493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.244264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

6.0 Area Detail

6.1 Mitigation Measures Area

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Unmitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

7.0 Water Detail

7.1 Mitigation Measures Water

Operation - Main - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Operation - Main

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	590.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the IS/MND's model.

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types" and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model - Operational run only

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment -

Trips and VMT -

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Grading -

Vehicle Trips - Consistent with the IS/MND's model.

Water And Wastewater - Consistent with the IS/MND's model.

Solid Waste - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	8.0320e-003	0.00
tblFleetMix	HHD	8.0320e-003	0.00
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDA	0.55	0.56
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.9120e-003	6.0600e-003
tblFleetMix	LHD2	5.9120e-003	6.0600e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.13	0.13
tblFleetMix	MDV	0.13	0.13
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MHD	0.01	0.00

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblLandUse	LandUseSquareFeet	112,830.00	103,670.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	2.59	2.49
tblLandUse	LotAcreage	1.11	0.46
tblProjectCharacteristics	CO2IntensityFactor	390.98	590.98
tblSolidWaste	SolidWasteGenerationRate	21.08	44.06
tblSolidWaste	SolidWasteGenerationRate	106.06	278.69
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	6.42	2.93
tblVehicleTrips	ST_TR	1.74	1.31
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	5.09	2.93
tblVehicleTrips	SU_TR	1.74	1.31
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	3.93	2.93
tblVehicleTrips	WD_TR	1.74	1.31
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	3,931,250.00	155,855.00

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	IndoorWaterUseRate	26,091,937.50	155,855.00
tblWater	OutdoorWaterUseRate	0.00	103,113.00
tblWater	OutdoorWaterUseRate	0.00	103,113.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.2031	18.1697	21.1447	0.0463	1.5226	0.8376	2.3601	0.4102	0.7882	1.1984	0.0000	4,574.2103	4,574.2103	0.6744	0.1633	4,639.7324
Maximum	**2.2031**	**18.1697**	**21.1447**	**0.0463**	**1.5226**	**0.8376**	**2.3601**	**0.4102**	**0.7882**	**1.1984**	**0.0000**	**4,574.2103**	**4,574.2103**	**0.6744**	**0.1633**	**4,639.7324**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.2031	18.1697	21.1447	0.0463	1.5226	0.8376	2.3601	0.4102	0.7882	1.1984	0.0000	4,574.2103	4,574.2103	0.6744	0.1633	4,639.7324
Maximum	**2.2031**	**18.1697**	**21.1447**	**0.0463**	**1.5226**	**0.8376**	**2.3601**	**0.4102**	**0.7882**	**1.1984**	**0.0000**	**4,574.2103**	**4,574.2103**	**0.6744**	**0.1633**	**4,639.7324**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.7240	0.6588	7.9186	0.0163	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,655.1923	1,655.1923	0.0974	0.0569	1,674.5851
Total	**3.7009**	**0.7904**	**8.0587**	**0.0171**	**1.7855**	**0.0218**	**1.8073**	**0.4739**	**0.0209**	**0.4947**		**1,812.8439**	**1,812.8439**	**0.1005**	**0.0598**	**1,833.1773**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.7240	0.6588	7.9186	0.0163	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,655.1923	1,655.1923	0.0974	0.0569	1,674.5851
Total	**3.7009**	**0.7904**	**8.0587**	**0.0171**	**1.7855**	**0.0218**	**1.8073**	**0.4739**	**0.0209**	**0.4947**		**1,812.8439**	**1,812.8439**	**0.1005**	**0.0598**	**1,833.1773**

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	2/1/2022	12/19/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.2442	0.7645	8.6200e-003	0.2818	0.0206	0.3024	0.0812	0.0197	0.1009		926.3789	926.3789	0.0309	0.1336	966.9673
Worker	0.4113	0.3099	4.0168	0.0108	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,093.4978	1,093.4978	0.0316	0.0297	1,103.1329
Total	**0.4968**	**2.5541**	**4.7813**	**0.0194**	**1.5226**	**0.0286**	**1.5511**	**0.4102**	**0.0270**	**0.4372**		**2,019.8767**	**2,019.8767**	**0.0625**	**0.1633**	**2,070.1002**

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.2442	0.7645	8.6200e-003	0.2818	0.0206	0.3024	0.0812	0.0197	0.1009		926.3789	926.3789	0.0309	0.1336	966.9673
Worker	0.4113	0.3099	4.0168	0.0108	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,093.4978	1,093.4978	0.0316	0.0297	1,103.1329
Total	**0.4968**	**2.5541**	**4.7813**	**0.0194**	**1.5226**	**0.0286**	**1.5511**	**0.4102**	**0.0270**	**0.4372**		**2,019.8767**	**2,019.8767**	**0.0625**	**0.1633**	**2,070.1002**

4.0 Operational Detail - Mobile

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7240	0.6588	7.9186	0.0163	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,655.1923	1,655.1923	0.0974	0.0569	1,674.5851
Unmitigated	0.7240	0.6588	7.9186	0.0163	1.7855	0.0117	1.7972	0.4739	0.0108	0.4847		1,655.1923	1,655.1923	0.0974	0.0569	1,674.5851

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	49.81	49.81	49.81	220,573	220,573
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	147.81	147.81	147.81	633,460	633,460
Total	197.62	197.62	197.62	854,033	854,033

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.560437	0.063426	0.191369	0.130691	0.023481	0.006060	0.000000	0.000000	0.000000	0.000000	0.024535	0.000000	0.000000
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.560437	0.063426	0.191369	0.130691	0.023481	0.006060	0.000000	0.000000	0.000000	0.000000	0.024535	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
NaturalGas Unmitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	258.739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	836.493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	244.264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.258739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	0.836493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.244264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

6.0 Area Detail

6.1 Mitigation Measures Area

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Unmitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

7.0 Water Detail

7.1 Mitigation Measures Water

Operation - Main - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Operation - Trucks

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	590.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the IS/MND's model.

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types" and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model - Operational run only

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment -

Trips and VMT -

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Grading -

Vehicle Trips - Consistent with the IS/MND's model.

Water And Wastewater - Consistent with the IS/MND's model.

Solid Waste - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	8.0320e-003	0.57
tblFleetMix	HHD	8.0320e-003	0.57
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.9120e-003	0.00
tblFleetMix	LHD2	5.9120e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MHD	0.01	0.43

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MHD	0.01	0.43
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblLandUse	LandUseSquareFeet	112,830.00	103,670.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	2.59	2.49
tblLandUse	LotAcreage	1.11	0.46
tblProjectCharacteristics	CO2IntensityFactor	390.98	590.98
tblSolidWaste	SolidWasteGenerationRate	21.08	0.00
tblSolidWaste	SolidWasteGenerationRate	106.06	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.01
tblVehicleTrips	CW_TL	16.60	40.01
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	6.42	1.92
tblVehicleTrips	ST_TR	1.74	0.29
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	5.09	1.92
tblVehicleTrips	SU_TR	1.74	0.29
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	3.93	1.92
tblVehicleTrips	WD_TR	1.74	0.29
tblWater	IndoorWaterUseRate	3,931,250.00	0.00
tblWater	IndoorWaterUseRate	26,091,937.50	0.00

2.0 Emissions Summary

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2498	2.0924	2.4420	5.3400e-003	0.1718	0.0963	0.2681	0.0464	0.0906	0.1370	0.0000	478.8962	478.8962	0.0704	0.0171	485.7459
Maximum	**0.2498**	**2.0924**	**2.4420**	**5.3400e-003**	**0.1718**	**0.0963**	**0.2681**	**0.0464**	**0.0906**	**0.1370**	**0.0000**	**478.8962**	**478.8962**	**0.0704**	**0.0171**	**485.7459**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2498	2.0924	2.4420	5.3400e-003	0.1718	0.0963	0.2681	0.0464	0.0906	0.1370	0.0000	478.8959	478.8959	0.0704	0.0171	485.7456
Maximum	**0.2498**	**2.0924**	**2.4420**	**5.3400e-003**	**0.1718**	**0.0963**	**0.2681**	**0.0464**	**0.0906**	**0.1370**	**0.0000**	**478.8959**	**478.8959**	**0.0704**	**0.0171**	**485.7456**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2022	4-30-2022	0.6460	0.6460
2	5-1-2022	7-31-2022	0.6646	0.6646
3	8-1-2022	9-30-2022	0.4407	0.4407
		Highest	0.6646	0.6646

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Energy	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	217.3262	217.3262	0.0112	1.7700e-003	218.1340
Mobile	0.0852	3.0140	0.6708	0.0128	0.4296	0.0311	0.4607	0.1230	0.0298	0.1528	0.0000	1,254.5363	1,254.5363	0.0458	0.1827	1,310.1294
Waste						0.0000	0.0000		0.0000	0.0000	1.7295	0.0000	1.7295	0.1022	0.0000	4.2847
Water						0.0000	0.0000		0.0000	0.0000	0.5165	8.6544	9.1709	0.0535	1.3100e-003	10.8999
Total	**0.6283**	**3.0380**	**0.6947**	**0.0130**	**0.4296**	**0.0330**	**0.4626**	**0.1230**	**0.0316**	**0.1547**	**2.2460**	**1,480.5242**	**1,482.7701**	**0.2128**	**0.1858**	**1,543.4557**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Energy	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	217.3262	217.3262	0.0112	1.7700e-003	218.1340
Mobile	0.0852	3.0140	0.6708	0.0128	0.4296	0.0311	0.4607	0.1230	0.0298	0.1528	0.0000	1,254.5363	1,254.5363	0.0458	0.1827	1,310.1294
Waste						0.0000	0.0000		0.0000	0.0000	1.7295	0.0000	1.7295	0.1022	0.0000	4.2847
Water						0.0000	0.0000		0.0000	0.0000	0.5165	8.6544	9.1709	0.0535	1.3100e-003	10.8999
Total	**0.6283**	**3.0380**	**0.6947**	**0.0130**	**0.4296**	**0.0330**	**0.4626**	**0.1230**	**0.0316**	**0.1547**	**2.2460**	**1,480.5242**	**1,482.7701**	**0.2128**	**0.1858**	**1,543.4557**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	2/1/2022	12/19/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4840	266.4840	0.0638	0.0000	268.0801
Total	**0.1962**	**1.7958**	**1.8818**	**3.1000e-003**		**0.0930**	**0.0930**		**0.0875**	**0.0875**	**0.0000**	**266.4840**	**266.4840**	**0.0638**	**0.0000**	**268.0801**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8800e-003	0.2602	0.0863	9.9000e-004	0.0319	2.3600e-003	0.0343	9.2000e-003	2.2600e-003	0.0115	0.0000	96.6247	96.6247	3.2200e-003	0.0139	100.8588
Worker	0.0437	0.0365	0.4739	1.2500e-003	0.1399	9.1000e-004	0.1408	0.0372	8.4000e-004	0.0380	0.0000	115.7875	115.7875	3.3000e-003	3.1400e-003	116.8070
Total	**0.0536**	**0.2967**	**0.5602**	**2.2400e-003**	**0.1718**	**3.2700e-003**	**0.1750**	**0.0464**	**3.1000e-003**	**0.0495**	**0.0000**	**212.4122**	**212.4122**	**6.5200e-003**	**0.0171**	**217.6658**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4837	266.4837	0.0638	0.0000	268.0798
Total	**0.1962**	**1.7958**	**1.8818**	**3.1000e-003**		**0.0930**	**0.0930**		**0.0875**	**0.0875**	**0.0000**	**266.4837**	**266.4837**	**0.0638**	**0.0000**	**268.0798**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8800e-003	0.2602	0.0863	9.9000e-004	0.0319	2.3600e-003	0.0343	9.2000e-003	2.2600e-003	0.0115	0.0000	96.6247	96.6247	3.2200e-003	0.0139	100.8588
Worker	0.0437	0.0365	0.4739	1.2500e-003	0.1399	9.1000e-004	0.1408	0.0372	8.4000e-004	0.0380	0.0000	115.7875	115.7875	3.3000e-003	3.1400e-003	116.8070
Total	**0.0536**	**0.2967**	**0.5602**	**2.2400e-003**	**0.1718**	**3.2700e-003**	**0.1750**	**0.0464**	**3.1000e-003**	**0.0495**	**0.0000**	**212.4122**	**212.4122**	**6.5200e-003**	**0.0171**	**217.6658**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0852	3.0140	0.6708	0.0128	0.4296	0.0311	0.4607	0.1230	0.0298	0.1528	0.0000	1,254.5363	1,254.5363	0.0458	0.1827	1,310.1294
Unmitigated	0.0852	3.0140	0.6708	0.0128	0.4296	0.0311	0.4607	0.1230	0.0298	0.1528	0.0000	1,254.5363	1,254.5363	0.0458	0.1827	1,310.1294

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	32.64	32.64	32.64	475,357	475,357
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	32.72	32.72	32.72	476,532	476,532
Total	65.36	65.36	65.36	951,890	951,890

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	40.01	8.40	6.90	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.01	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.430769	0.569231	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.430769	0.569231	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.2358	191.2358	0.0107	1.2900e-003	191.8885
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.2358	191.2358	0.0107	1.2900e-003	191.8885
NaturalGas Mitigated	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455
NaturalGas Unmitigated	2.6400e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	26.0904	26.0904	5.0000e-004	4.8000e-004	26.2455

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	94439.6	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0397	5.0397	1.0000e-004	9.0000e-005	5.0696
Manufacturing	305320	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2930	16.2930	3.1000e-004	3.0000e-004	16.3899
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	89156.2	4.8000e-004	4.3700e-003	3.6700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	4.7577	4.7577	9.0000e-005	9.0000e-005	4.7860
Total		**2.6400e-003**	**0.0240**	**0.0201**	**1.5000e-004**		**1.8200e-003**	**1.8200e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**26.0904**	**26.0904**	**5.0000e-004**	**4.8000e-004**	**26.2455**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	94439.6	5.1000e-004	4.6300e-003	3.8900e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0397	5.0397	1.0000e-004	9.0000e-005	5.0696
Manufacturing	305320	1.6500e-003	0.0150	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2930	16.2930	3.1000e-004	3.0000e-004	16.3899
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	89156.2	4.8000e-004	4.3700e-003	3.6700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	4.7577	4.7577	9.0000e-005	9.0000e-005	4.7860
Total		**2.6400e-003**	**0.0240**	**0.0201**	**1.5000e-004**		**1.8200e-003**	**1.8200e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**26.0904**	**26.0904**	**5.0000e-004**	**4.8000e-004**	**26.2455**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	114500	30.6933	1.7100e-003	2.1000e-004	30.7981
Manufacturing	184620	49.4900	2.7600e-003	3.3000e-004	49.6589
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	17220	4.6161	2.6000e-004	3.0000e-005	4.6318
Unrefrigerated Warehouse-No Rail	397056	106.4365	5.9400e-003	7.2000e-004	106.7997
Total		**191.2358**	**0.0107**	**1.2900e-003**	**191.8885**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	114500	30.6933	1.7100e-003	2.1000e-004	30.7981
Manufacturing	184620	49.4900	2.7600e-003	3.3000e-004	49.6589
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	17220	4.6161	2.6000e-004	3.0000e-005	4.6318
Unrefrigerated Warehouse-No Rail	397056	106.4365	5.9400e-003	7.2000e-004	106.7997
Total		**191.2358**	**0.0107**	**1.2900e-003**	**191.8885**

6.0 Area Detail

6.1 Mitigation Measures Area

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Unmitigated	0.5405	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Total	**0.5405**	**3.0000e-005**	**3.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.2500e-003**	**7.2500e-003**	**2.0000e-005**	**0.0000**	**7.7200e-003**

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2500e-003	7.2500e-003	2.0000e-005	0.0000	7.7200e-003
Total	**0.5405**	**3.0000e-005**	**3.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.2500e-003**	**7.2500e-003**	**2.0000e-005**	**0.0000**	**7.7200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.1709	0.0535	1.3100e-003	10.8999
Unmitigated	9.1709	0.0535	1.3100e-003	10.8999

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.62804 / 0.997832	9.1709	0.0535	1.3100e-003	10.8999
Manufacturing	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.1709**	**0.0535**	**1.3100e-003**	**10.8999**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.62804 / 0.997832	9.1709	0.0535	1.3100e-003	10.8999
Manufacturing	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.1709**	**0.0535**	**1.3100e-003**	**10.8999**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.7295	0.1022	0.0000	4.2847
Unmitigated	1.7295	0.1022	0.0000	4.2847

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.52	1.7295	0.1022	0.0000	4.2847
Manufacturing	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**1.7295**	**0.1022**	**0.0000**	**4.2847**

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.52	1.7295	0.1022	0.0000	4.2847
Manufacturing	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**1.7295**	**0.1022**	**0.0000**	**4.2847**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Operation - Trucks - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Operation - Trucks

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	590.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the IS/MND's model.

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types" and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model - Operational run only

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment -

Trips and VMT -

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Grading -

Vehicle Trips - Consistent with the IS/MND's model.

Water And Wastewater - Consistent with the IS/MND's model.

Solid Waste - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	8.0320e-003	0.57
tblFleetMix	HHD	8.0320e-003	0.57
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.9120e-003	0.00
tblFleetMix	LHD2	5.9120e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MHD	0.01	0.43

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MHD	0.01	0.43
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblLandUse	LandUseSquareFeet	112,830.00	103,670.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	2.59	2.49
tblLandUse	LotAcreage	1.11	0.46
tblProjectCharacteristics	CO2IntensityFactor	390.98	590.98
tblSolidWaste	SolidWasteGenerationRate	21.08	0.00
tblSolidWaste	SolidWasteGenerationRate	106.06	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.01
tblVehicleTrips	CW_TL	16.60	40.01
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	6.42	1.92
tblVehicleTrips	ST_TR	1.74	0.29
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	5.09	1.92
tblVehicleTrips	SU_TR	1.74	0.29
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	3.93	1.92
tblVehicleTrips	WD_TR	1.74	0.29
tblWater	IndoorWaterUseRate	3,931,250.00	0.00
tblWater	IndoorWaterUseRate	26,091,937.50	0.00

2.0 Emissions Summary

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1770	18.0514	21.4772	0.0469	1.5226	0.8375	2.3600	0.4102	0.7881	1.1983	0.0000	4,634.9056	4,634.9056	0.6742	0.1612	4,699.8023
Maximum	**2.1770**	**18.0514**	**21.4772**	**0.0469**	**1.5226**	**0.8375**	**2.3600**	**0.4102**	**0.7881**	**1.1983**	**0.0000**	**4,634.9056**	**4,634.9056**	**0.6742**	**0.1612**	**4,699.8023**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1770	18.0514	21.4772	0.0469	1.5226	0.8375	2.3600	0.4102	0.7881	1.1983	0.0000	4,634.9056	4,634.9056	0.6742	0.1612	4,699.8023
Maximum	**2.1770**	**18.0514**	**21.4772**	**0.0469**	**1.5226**	**0.8375**	**2.3600**	**0.4102**	**0.7881**	**1.1983**	**0.0000**	**4,634.9056**	**4,634.9056**	**0.6742**	**0.1612**	**4,699.8023**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.4698	15.6949	3.6869	0.0706	2.3994	0.1713	2.5707	0.6856	0.1638	0.8494		7,607.1040	7,607.1040	0.2780	1.1070	7,943.9270
Total	**3.4466**	**15.8265**	**3.8270**	**0.0714**	**2.3994**	**0.1814**	**2.5807**	**0.6856**	**0.1739**	**0.8595**		**7,764.7556**	**7,764.7556**	**0.2812**	**1.1098**	**8,102.5193**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.4698	15.6949	3.6869	0.0706	2.3994	0.1713	2.5707	0.6856	0.1638	0.8494		7,607.1040	7,607.1040	0.2780	1.1070	7,943.9270
Total	**3.4466**	**15.8265**	**3.8270**	**0.0714**	**2.3994**	**0.1814**	**2.5807**	**0.6856**	**0.1739**	**0.8595**		**7,764.7556**	**7,764.7556**	**0.2812**	**1.1098**	**8,102.5193**

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	2/1/2022	12/19/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	2.1553	0.7390	8.6200e-003	0.2818	0.0205	0.3024	0.0812	0.0196	0.1008		926.0310	926.0310	0.0310	0.1334	966.5706
Worker	0.3842	0.2805	4.3749	0.0114	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,154.5410	1,154.5410	0.0313	0.0278	1,163.5995
Total	**0.4708**	**2.4358**	**5.1138**	**0.0200**	**1.5226**	**0.0285**	**1.5510**	**0.4102**	**0.0270**	**0.4372**		**2,080.5721**	**2,080.5721**	**0.0622**	**0.1612**	**2,130.1701**

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	2.1553	0.7390	8.6200e-003	0.2818	0.0205	0.3024	0.0812	0.0196	0.1008		926.0310	926.0310	0.0310	0.1334	966.5706
Worker	0.3842	0.2805	4.3749	0.0114	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,154.5410	1,154.5410	0.0313	0.0278	1,163.5995
Total	**0.4708**	**2.4358**	**5.1138**	**0.0200**	**1.5226**	**0.0285**	**1.5510**	**0.4102**	**0.0270**	**0.4372**		**2,080.5721**	**2,080.5721**	**0.0622**	**0.1612**	**2,130.1701**

4.0 Operational Detail - Mobile

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4698	15.6949	3.6869	0.0706	2.3994	0.1713	2.5707	0.6856	0.1638	0.8494		7,607.1040	7,607.1040	0.2780	1.1070	7,943.9270
Unmitigated	0.4698	15.6949	3.6869	0.0706	2.3994	0.1713	2.5707	0.6856	0.1638	0.8494		7,607.1040	7,607.1040	0.2780	1.1070	7,943.9270

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	32.64	32.64	32.64	475,357	475,357
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	32.72	32.72	32.72	476,532	476,532
Total	65.36	65.36	65.36	951,890	951,890

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	40.01	8.40	6.90	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.01	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.430769	0.569231	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.430769	0.569231	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
NaturalGas Unmitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	258.739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	836.493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	244.264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.258739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	0.836493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.244264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

6.0 Area Detail

6.1 Mitigation Measures Area

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Unmitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

7.0 Water Detail

7.1 Mitigation Measures Water

Operation - Trucks - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Operation - Trucks

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.16	1000sqft	0.21	9,160.00	0
Manufacturing	17.00	1000sqft	0.39	17,000.00	0
Unrefrigerated Warehouse-No Rail	112.83	1000sqft	2.49	103,670.00	0
Other Asphalt Surfaces	2.03	Acre	2.03	88,559.00	0
Other Non-Asphalt Surfaces	27.98	1000sqft	0.64	0.00	0
Parking Lot	123.00	Space	0.46	49,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	590.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the IS/MND's model.

Land Use - See SWAPE comments on "Failure to Model All Proposed Land Use Types" and "Unsubstantiated Reduction to Parking Land Use Size"

Construction Phase - Consistent with IS/MND's model - Operational run only

Off-road Equipment - Consistent with IS/MND's model.

Off-road Equipment -

Trips and VMT -

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Grading -

Vehicle Trips - Consistent with the IS/MND's model.

Water And Wastewater - Consistent with the IS/MND's model.

Solid Waste - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	8.0320e-003	0.57
tblFleetMix	HHD	8.0320e-003	0.57
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.9120e-003	0.00
tblFleetMix	LHD2	5.9120e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MH	3.3970e-003	0.00
tblFleetMix	MHD	0.01	0.43

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MHD	0.01	0.43
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	OBUS	9.4000e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	SBUS	6.9200e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblFleetMix	UBUS	6.1700e-004	0.00
tblLandUse	LandUseSquareFeet	112,830.00	103,670.00
tblLandUse	LandUseSquareFeet	88,426.80	88,559.00
tblLandUse	LandUseSquareFeet	27,980.00	0.00
tblLandUse	LotAcreage	2.59	2.49
tblLandUse	LotAcreage	1.11	0.46
tblProjectCharacteristics	CO2IntensityFactor	390.98	590.98
tblSolidWaste	SolidWasteGenerationRate	21.08	0.00
tblSolidWaste	SolidWasteGenerationRate	106.06	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.01
tblVehicleTrips	CW_TL	16.60	40.01
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	6.42	1.92
tblVehicleTrips	ST_TR	1.74	0.29
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	5.09	1.92
tblVehicleTrips	SU_TR	1.74	0.29
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	3.93	1.92
tblVehicleTrips	WD_TR	1.74	0.29
tblWater	IndoorWaterUseRate	3,931,250.00	0.00
tblWater	IndoorWaterUseRate	26,091,937.50	0.00

2.0 Emissions Summary

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.2031	18.1697	21.1447	0.0463	1.5226	0.8376	2.3601	0.4102	0.7882	1.1984	0.0000	4,574.2103	4,574.2103	0.6744	0.1633	4,639.7324
Maximum	**2.2031**	**18.1697**	**21.1447**	**0.0463**	**1.5226**	**0.8376**	**2.3601**	**0.4102**	**0.7882**	**1.1984**	**0.0000**	**4,574.2103**	**4,574.2103**	**0.6744**	**0.1633**	**4,639.7324**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.2031	18.1697	21.1447	0.0463	1.5226	0.8376	2.3601	0.4102	0.7882	1.1984	0.0000	4,574.2103	4,574.2103	0.6744	0.1633	4,639.7324
Maximum	**2.2031**	**18.1697**	**21.1447**	**0.0463**	**1.5226**	**0.8376**	**2.3601**	**0.4102**	**0.7882**	**1.1984**	**0.0000**	**4,574.2103**	**4,574.2103**	**0.6744**	**0.1633**	**4,639.7324**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.4654	16.3249	3.7083	0.0706	2.3994	0.1714	2.5708	0.6856	0.1640	0.8495		7,607.6991	7,607.6991	0.2777	1.1078	7,944.7683
Total	**3.4422**	**16.4565**	**3.8484**	**0.0714**	**2.3994**	**0.1815**	**2.5809**	**0.6856**	**0.1741**	**0.8596**		**7,765.3506**	**7,765.3506**	**0.2809**	**1.1107**	**8,103.3605**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Energy	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
Mobile	0.4654	16.3249	3.7083	0.0706	2.3994	0.1714	2.5708	0.6856	0.1640	0.8495		7,607.6991	7,607.6991	0.2777	1.1078	7,944.7683
Total	**3.4422**	**16.4565**	**3.8484**	**0.0714**	**2.3994**	**0.1815**	**2.5809**	**0.6856**	**0.1741**	**0.8596**		**7,765.3506**	**7,765.3506**	**0.2809**	**1.1107**	**8,103.3605**

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	2/1/2022	12/19/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	111.00	44.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.2442	0.7645	8.6200e-003	0.2818	0.0206	0.3024	0.0812	0.0197	0.1009		926.3789	926.3789	0.0309	0.1336	966.9673
Worker	0.4113	0.3099	4.0168	0.0108	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,093.4978	1,093.4978	0.0316	0.0297	1,103.1329
Total	**0.4968**	**2.5541**	**4.7813**	**0.0194**	**1.5226**	**0.0286**	**1.5511**	**0.4102**	**0.0270**	**0.4372**		**2,019.8767**	**2,019.8767**	**0.0625**	**0.1633**	**2,070.1002**

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.2442	0.7645	8.6200e-003	0.2818	0.0206	0.3024	0.0812	0.0197	0.1009		926.3789	926.3789	0.0309	0.1336	966.9673
Worker	0.4113	0.3099	4.0168	0.0108	1.2407	7.9500e-003	1.2487	0.3290	7.3200e-003	0.3364		1,093.4978	1,093.4978	0.0316	0.0297	1,103.1329
Total	**0.4968**	**2.5541**	**4.7813**	**0.0194**	**1.5226**	**0.0286**	**1.5511**	**0.4102**	**0.0270**	**0.4372**		**2,019.8767**	**2,019.8767**	**0.0625**	**0.1633**	**2,070.1002**

4.0 Operational Detail - Mobile

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4654	16.3249	3.7083	0.0706	2.3994	0.1714	2.5708	0.6856	0.1640	0.8495		7,607.6991	7,607.6991	0.2777	1.1078	7,944.7683
Unmitigated	0.4654	16.3249	3.7083	0.0706	2.3994	0.1714	2.5708	0.6856	0.1640	0.8495		7,607.6991	7,607.6991	0.2777	1.1078	7,944.7683

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	32.64	32.64	32.64	475,357	475,357
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	32.72	32.72	32.72	476,532	476,532
Total	65.36	65.36	65.36	951,890	951,890

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	40.01	8.40	6.90	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.01	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Manufacturing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.430769	0.569231	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Other Non-Asphalt Surfaces	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Parking Lot	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.430769	0.569231	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242
NaturalGas Unmitigated	0.0145	0.1313	0.1103	7.9000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003		157.5877	157.5877	3.0200e-003	2.8900e-003	158.5242

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	258.739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	836.493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	244.264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.258739	2.7900e-003	0.0254	0.0213	1.5000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003		30.4398	30.4398	5.8000e-004	5.6000e-004	30.6207
Manufacturing	0.836493	9.0200e-003	0.0820	0.0689	4.9000e-004		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003		98.4110	98.4110	1.8900e-003	1.8000e-003	98.9958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.244264	2.6300e-003	0.0240	0.0201	1.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003		28.7369	28.7369	5.5000e-004	5.3000e-004	28.9077
Total		**0.0144**	**0.1313**	**0.1103**	**7.8000e-004**		**9.9800e-003**	**9.9800e-003**		**9.9800e-003**	**9.9800e-003**		**157.5877**	**157.5877**	**3.0200e-003**	**2.8900e-003**	**158.5242**

6.0 Area Detail

6.1 Mitigation Measures Area

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Unmitigated	2.9624	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0299	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0639	0.0639	1.7000e-004		0.0681
Total	**2.9624**	**2.7000e-004**	**0.0299**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0639**	**0.0639**	**1.7000e-004**		**0.0681**

7.0 Water Detail

7.1 Mitigation Measures Water

Operation - Trucks - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.
- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:
- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:
- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:
- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, industrial, military and agricultural sources, unconventional oil drilling operations, and locomotive and construction engines. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities. Dr. Rosenfeld has also successfully modeled exposure to contaminants distributed by water systems and via vapor intrusion.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, creosote, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at sites and has testified as an expert witness on numerous cases involving exposure to soil, water and air contaminants from industrial, railroad, agricultural, and military sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P**., (2015) Modeling the Effect of Refinery Emission On Residential Property Value. Journal of Real Estate Research. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.,** Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution,* 123 (17), 319-327.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities.* Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004.* New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS–6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality.* 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld. (**1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., "The science for Perfluorinated Chemicals (PFAS): What makes remediation so hard?" Law Seminars International, (May 9-10, 2018) 800 Fifth Avenue, Suite 101 Seattle, WA.

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society.* Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution.* Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International*

Conferences on Soils Sediment and Water. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting.* Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference.* Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference.* Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference.* Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference.* Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conferenc*e. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 5-14-2021
Trial, October 8-4-2021

In the Circuit Court of Cook County Illinois
Joseph Rafferty, Plaintiff vs. Consolidated Rail Corporation and National Railroad Passenger Corporation d/b/a AMTRAK,
Case No.: No. 18-L-6845
Rosenfeld Deposition, 6-28-2021

In the United States District Court For the Northern District of Illinois
Theresa Romcoe, Plaintiff vs. Northeast Illinois Regional Commuter Railroad Corporation d/b/a METRA Rail, Defendants
Case No.: No. 17-cv-8517
Rosenfeld Deposition, 5-25-2021

In the Superior Court of the State of Arizona In and For the Cunty of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case Number CV20127-094749
Rosenfeld Deposition: 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 1:17-cv-000508
Rosenfeld Deposition: 3-25-2021

In the Superior Court of the State of California, County of San Bernardino
Gary Garner, Personal Representative for the Estate of Melvin Garner vs. BNSF Railway Company.
Case No. 1720288
Rosenfeld Deposition 2-23-2021

In the Superior Court of the State of California, County of Los Angeles, Spring Street Courthouse
Benny M Rodriguez vs. Union Pacific Railroad, A Corporation, et al.
Case No. 18STCV01162
Rosenfeld Deposition 12-23-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, *Plaintiff,* vs. Marathon Petroleum, LP, *Defendant.*
Case No.: 1716-CV10006
Rosenfeld Deposition. 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs,* vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case No.: 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No.: 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case: No 1:19-cv-00315-RHW
Rosenfeld Deposition, 4-22-2020

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.
Civil Action Number 2:09-cv-232-WHA-TFM
Rosenfeld Deposition: July 2010, June 2011

In the Circuit Court of Jefferson County Alabama
Jaeanette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*
Civil Action No. CV 2008-2076
Rosenfeld Deposition: September 2010

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 2:07CV1052
Rosenfeld Deposition: July 2009

Appendices

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Appendix 3 Construction HRA - Emission Calculations

Appendix 3 Construction HRA - Emission Calculations

Appendices

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Average Daily Emission Rates: Unmitigated Scenario

On-site Exhaust Emissions[1]	DPM					Construction Duration per Year		
Year	Annual PM10 Exhaust Emissions (tons/yr)	(lbs/yr)	Average Daily Emissions (lbs/day)	Average Emission Rate (lbs/hr)	Average Emission Rate (g/s)	Planned Work Days day/yr	Total Work Days days/yr	Scalar[2]
2022	0.0460	91.92	0.52	6.53E-02	8.23E-03	176	260	0.68

Offsite Exhaust Emissions[1]	DPM					
Year	Annual PM10 Exhaust Emissions (tons/yr)	Hauling Emissions w/in 1,000 ft (tons/yr)	Annual PM10 Exhaust Emissions (lbs/yr)	Average Daily Emissions (lbs/day)	Average Emission Rate (lbs/hr)	Average Emission Rate (g/s)
2022	0.0042	7.24E-05	1.45E-01	8.23E-04	1.03E-04	1.30E-05

Note: Emissions evenly distributed over 35 modeled volume sources.

Hauling Length (miles) [3]	23.5	Weighted Average (mi)
Haul Length within 1,000 ft of Site (mile) [4]	0.41	mi
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [5]	8	hours

	Haul Lengths	Trips
Bldg Demo	7	34
Asphalt Demo	28	114
Soil	25	2,987
Wt Avg	24.9	

[1] DPM emissions taken as PM_{10} exhaust emissions (CalEEMod average annual emissions).

[2] Construction duration scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each modeled construction year (used in risk calculation in App C).

[3] Weighted Average haul length for demolition and soil haul.

[4] Emissions from CalEEMod offsite average annual emissions, which is based on total haul truck trip distances, are adjusted to evaluate local emissions from the 0.41-mile route within 1,000 of the project site.

[5] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output Files).

Annual Construction Emissions

Building Demo

		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
	Fugtive Dust	0	
	Off-Road	0.00173	
	Total	**0.00173**	
Offsite			
	Hauling	0.00001	
	Vendor	0.00001	
	Worker	0.00001	
	Total	**0.00003**	

Asphalt Demo

		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
	Off-Road	0.00045	
	Total	**0.00045**	
Offsite			
	Hauling	0.0001	
	Vendor	0	
	Worker	0	
	Total	**0.0001**	

Site Prep

		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
	Off-Road	0.00053	
	Total	**0.00053**	
Offsite			
	Hauling	0	
	Vendor	0	
	Worker	0	
	Total	**0**	

Building Construction			
		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
	Fugtive Dust	0	
	Off-Road	0.0184	
	Total	**0.0184**	
Offsite			
	Hauling	0	
	Vendor	0.0012	
	Worker	0.00047	
	Total	**0.00167**	

Rough Grading			
		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
	Fugtive Dust	0	
	Off-Road	0.0202	
	Total	**0.0202**	
Offsite			
	Hauling	0.00233	
	Vendor	0.00001	
	Worker	0.00001	
	Total	**0.00235**	

Util Trenching			
		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
	Off-Road	0.00136	
	Total	**0.00136**	
Offsite			
	Hauling	0	
	Vendor	0	
	Worker	0	
	Total	**0**	

Fine Grading

		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
Off-Road		0.0008	
Total		**0.0008**	
Offsite			
Hauling		0	
Vendor		0.00001	
Worker		0	
Total		**0.00001**	

Architectural Coatings

		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
Archit. Coating		0	
Off-Road		0.00124	
Total		**0.00124**	
Offsite			
Hauling		0	
Vendor		0	
Worker		0.00002	
Total		**0.00002**	

Finishing/Landscaping

		Exhaust PM10	Exhaust PM2.5
Onsite	**2022**		
Off-Road		0.00125	
Total		**0.00125**	
Offsite			
Hauling		0	
Vendor		0	
Worker		0	
Total		**0**	

Control Pathway

Dispersion Options

Titles

Construction HRA for 4416 Azusa Canyon Road
Irwindale, CA

Dispersion Options

☑ Regulatory Default ☐ Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

☑ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

Averaging Time Options

Hours ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 6 ☐ 8 ☐ 12 ☐ 24

☐ Month ☑ Period ☐ Annual

Exponential Decay

Half-life of 4 hours will be used

Terrain Height Options

☐ Flat ☑ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☐ Yes ☑ No

Default Height = 0.00 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: CHRA.err

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: AZUS_V9_ADJU\AZUS_v9.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: AZUS_V9_ADJU\AZUS_v9.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 182.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2012			Azusa
Upper Air		2012			
On-Site		2012			

Data Period

Data Period to Process

Start Date: 1/1/2012 Start Hour: 1 End Date: 12/31/2016 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Source Pathway - Source Inputs

Polygon Area Sources

Source Type: AREA POLY

Source: ONSITE (onsite)

Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Initial Vertical Dim. [m]	Number of Vertices (or sides)	X Coordinate for Vertices [m]	Y Coordinate for Vertices [m]
127.52	4.15	0.00004	1.93	9	413021.20	3772838.38
		0.00004			413116.04	3772834.41
		0.00004			413161.92	3772863.52
		0.00004			413190.15	3772905.43
		0.00004			413207.36	3772948.22
		0.00004			413210.44	3772971.60
		0.00004			413210.44	3773024.54
		0.00004			413016.78	3772923.51
		0.00004			413017.23	3772845.87

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1 (haul)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
18.29	1.00000		413012.31	3773217.07	129.23	4.15
			413007.21	3772835.27	127.47	4.15
			412999.54	3772562.00	124.50	4.15

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000001	413012.19	3773207.93	129.25	4.15	0.02778	18.29		8.51	3.26
	L0000002	413011.95	3773189.64	129.04	4.15	0.02778	18.29		8.51	3.26
	L0000003	413011.70	3773171.35	128.87	4.15	0.02778	18.29		8.51	3.26
	L0000004	413011.46	3773153.07	128.71	4.15	0.02778	18.29		8.51	3.26
	L0000005	413011.21	3773134.78	128.55	4.15	0.02778	18.29		8.51	3.26
	L0000006	413010.97	3773116.49	128.34	4.15	0.02778	18.29		8.51	3.26
	L0000007	413010.72	3773098.21	128.21	4.15	0.02778	18.29		8.51	3.26
	L0000008	413010.48	3773079.92	128.19	4.15	0.02778	18.29		8.51	3.26
	L0000009	413010.23	3773061.63	128.23	4.15	0.02778	18.29		8.51	3.26
	L0000010	413009.99	3773043.35	128.28	4.15	0.02778	18.29		8.51	3.26
	L0000011	413009.74	3773025.06	128.31	4.15	0.02778	18.29		8.51	3.26
	L0000012	413009.50	3773006.78	128.35	4.15	0.02778	18.29		8.51	3.26
	L0000013	413009.25	3772988.49	128.40	4.15	0.02778	18.29		8.51	3.26
	L0000014	413009.01	3772970.20	126.85	4.15	0.02778	18.29		8.51	3.26
	L0000015	413008.77	3772951.92	124.69	4.15	0.02778	18.29		8.51	3.26
	L0000016	413008.52	3772933.63	126.20	4.15	0.02778	18.29		8.51	3.26
	L0000017	413008.28	3772915.34	127.31	4.15	0.02778	18.29		8.51	3.26
	L0000018	413008.03	3772897.06	127.67	4.15	0.02778	18.29		8.51	3.26
	L0000019	413007.79	3772878.77	127.69	4.15	0.02778	18.29		8.51	3.26
	L0000020	413007.54	3772860.48	127.52	4.15	0.02778	18.29		8.51	3.26
	L0000021	413007.30	3772842.20	127.48	4.15	0.02778	18.29		8.51	3.26
	L0000022	413006.89	3772823.91	127.34	4.15	0.02778	18.29		8.51	3.26
	L0000023	413006.37	3772805.63	126.96	4.15	0.02778	18.29		8.51	3.26
	L0000024	413005.86	3772787.35	126.48	4.15	0.02778	18.29		8.51	3.26

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000025	413005.35	3772769.07	125.95	4.15	0.02778	18.29		8.51	3.26
	L0000026	413004.84	3772750.79	125.73	4.15	0.02778	18.29		8.51	3.26
	L0000027	413004.32	3772732.51	125.55	4.15	0.02778	18.29		8.51	3.26
	L0000028	413003.81	3772714.23	125.40	4.15	0.02778	18.29		8.51	3.26
	L0000029	413003.30	3772695.95	125.29	4.15	0.02778	18.29		8.51	3.26
	L0000030	413002.79	3772677.67	125.20	4.15	0.02778	18.29		8.51	3.26
	L0000031	413002.27	3772659.39	125.12	4.15	0.02778	18.29		8.51	3.26
	L0000032	413001.76	3772641.11	125.03	4.15	0.02778	18.29		8.51	3.26
	L0000033	413001.25	3772622.83	124.91	4.15	0.02778	18.29		8.51	3.26
	L0000034	413000.74	3772604.55	124.81	4.15	0.02778	18.29		8.51	3.26
	L0000035	413000.22	3772586.26	124.73	4.15	0.02778	18.29		8.51	3.26
	L0000036	412999.71	3772567.98	124.61	4.15	0.02778	18.29		8.51	3.26

Source Pathway

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Source Groups

Source Group ID: ONSITE	List of Sources in Group (Source Range or Single Sources)
	ONSITE

Source Group ID: Haul	List of Sources in Group (Source Range or Single Sources)
	SLINE1

Variable Emissions

Hour-of-Day / Day-of-Week Emission Rate Variation

Scenario: work

Source ID:		**ONSITE**						
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	0.50
	Day	13 - 18	0.50	1.00	1.00	1.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:		**SLINE1**						
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	0.50
	Day	13 - 18	0.50	1.00	1.00	1.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	413385.84	3773220.44	Res	131.05	
2	413397.29	3773220.44	Res	130.99	
3	413408.74	3773220.44	Res	130.95	
4	413420.19	3773220.44	Res	130.94	
5	413431.64	3773220.44	Res	130.94	
6	413385.84	3773230.51	Res	131.14	
7	413397.29	3773230.51	Res	131.08	
8	413408.74	3773230.51	Res	131.02	
9	413420.19	3773230.51	Res	131.00	
10	413431.64	3773230.51	Res	130.99	
11	413385.84	3773240.58	Res	131.17	
12	413397.29	3773240.58	Res	131.10	
13	413408.74	3773240.58	Res	131.05	
14	413420.19	3773240.58	Res	131.04	
15	413431.64	3773240.58	Res	131.03	
16	413385.84	3773250.65	Res	131.19	
17	413397.29	3773250.65	Res	131.13	
18	413408.74	3773250.65	Res	131.08	
19	413420.19	3773250.65	Res	131.08	
20	413431.64	3773250.65	Res	131.08	
21	413385.84	3773260.72	Res	131.22	
22	413397.29	3773260.72	Res	131.16	
23	413408.74	3773260.72	Res	131.12	
24	413420.19	3773260.72	Res	131.13	
25	413431.64	3773260.72	Res	131.14	
26	413385.84	3773270.79	Res	131.26	
27	413397.29	3773270.79	Res	131.20	
28	413408.74	3773270.79	Res	131.16	
29	413420.19	3773270.79	Res	131.20	
30	413431.64	3773270.79	Res	131.23	

31	413385.84	3773280.86	Res	131.30
32	413397.29	3773280.86	Res	131.24
33	413408.74	3773280.86	Res	131.21
34	413420.19	3773280.86	Res	131.27
35	413431.64	3773280.86	Res	131.33
36	413385.84	3773290.93	Res	131.33
37	413397.29	3773290.93	Res	131.28
38	413408.74	3773290.93	Res	131.26
39	413420.19	3773290.93	Res	131.33
40	413431.64	3773290.93	Res	131.40
41	413385.84	3773301.00	Res	131.35
42	413397.29	3773301.00	Res	131.32
43	413408.74	3773301.00	Res	131.32
44	413420.19	3773301.00	Res	131.39
45	413431.64	3773301.00	Res	131.45
46	413385.84	3773311.07	Res	131.38
47	413397.29	3773311.07	Res	131.37
48	413408.74	3773311.07	Res	131.38
49	413420.19	3773311.07	Res	131.44
50	413431.64	3773311.07	Res	131.50
51	413385.84	3773321.14	Res	131.43
52	413397.29	3773321.14	Res	131.44
53	413408.74	3773321.14	Res	131.46
54	413420.19	3773321.14	Res	131.50
55	413431.64	3773321.14	Res	131.54
56	413385.84	3773331.21	Res	131.56
57	413397.29	3773331.21	Res	131.57
58	413408.74	3773331.21	Res	131.57
59	413420.19	3773331.21	Res	131.57
60	413431.64	3773331.21	Res	131.58
61	413385.84	3773341.28	Res	131.69
62	413397.29	3773341.28	Res	131.69
63	413408.74	3773341.28	Res	131.69
64	413420.19	3773341.28	Res	131.65
65	413431.64	3773341.28	Res	131.61
66	413385.84	3773351.35	Res	131.81
67	413397.29	3773351.35	Res	131.81
68	413408.74	3773351.35	Res	131.79

69	413420.19	3773351.35	Res	131.72
70	413431.64	3773351.35	Res	131.65
71	413385.84	3773361.42	Res	131.86
72	413397.29	3773361.42	Res	131.87
73	413408.74	3773361.42	Res	131.87
74	413420.19	3773361.42	Res	131.79
75	413431.64	3773361.42	Res	131.71
76	413385.84	3773371.49	Res	131.91
77	413397.29	3773371.49	Res	131.94
78	413408.74	3773371.49	Res	131.94
79	413420.19	3773371.49	Res	131.86
80	413431.64	3773371.49	Res	131.77
81	413385.84	3773381.56	Res	132.02
82	413397.29	3773381.56	Res	132.06
83	413408.74	3773381.56	Res	132.09
84	413420.19	3773381.56	Res	132.00
85	413431.64	3773381.56	Res	131.92
86	413385.84	3773391.63	Res	132.47
87	413397.29	3773391.63	Res	132.50
88	413408.74	3773391.63	Res	132.52
89	413420.19	3773391.63	Res	132.49
90	413431.64	3773391.63	Res	132.47
91	413385.84	3773401.70	Res	132.92
92	413397.29	3773401.70	Res	132.93
93	413408.74	3773401.70	Res	132.95
94	413420.19	3773401.70	Res	132.98
95	413431.64	3773401.70	Res	133.01
96	413416.45	3772548.02	Res	126.28
97	413435.76	3772548.02	Res	126.20
98	413416.45	3772557.84	Res	126.35
99	413435.76	3772557.84	Res	126.38
100	413416.45	3772567.66	Res	126.42
101	413435.76	3772567.66	Res	126.55
102	413416.45	3772577.48	Res	126.49
103	413435.76	3772577.48	Res	126.72
104	413416.45	3772587.30	Res	126.58
105	413435.76	3772587.30	Res	126.77
106	413416.45	3772597.12	Res	126.68

107	413435.76	3772597.12	Res	126.81
108	413416.45	3772606.94	Res	126.77
109	413435.76	3772606.94	Res	126.84
110	413416.45	3772616.76	Res	126.86
111	413435.76	3772616.76	Res	126.95
112	413416.45	3772626.58	Res	126.94
113	413435.76	3772626.58	Res	127.07
114	413416.45	3772636.40	Res	127.02
115	413435.76	3772636.40	Res	127.20
116	413416.45	3772646.22	Res	127.13
117	413435.76	3772646.22	Res	127.31
118	413416.45	3772656.04	Res	127.27
119	413435.76	3772656.04	Res	127.41
120	413416.45	3772665.86	Res	127.39
121	413435.76	3772665.86	Res	127.52
122	413416.45	3772675.68	Res	127.47
123	413435.76	3772675.68	Res	127.60
124	413416.45	3772685.50	Res	127.47
125	413435.76	3772685.50	Res	127.66
126	413416.45	3772695.32	Res	127.47
127	413435.76	3772695.32	Res	127.71
128	413416.45	3772705.14	Res	127.48
129	413435.76	3772705.14	Res	127.72
130	413416.45	3772714.96	Res	127.50
131	413435.76	3772714.96	Res	127.64
132	413416.45	3772724.78	Res	127.52
133	413435.76	3772724.78	Res	127.56
134	413416.45	3772734.60	Res	127.57
135	413435.76	3772734.60	Res	127.55
136	413416.45	3772744.42	Res	127.77
137	413435.76	3772744.42	Res	127.80
138	412985.25	3772512.70	Res	123.73
139	413000.04	3772512.70	Res	123.77
140	413014.83	3772512.70	Res	123.82
141	413029.62	3772512.70	Res	124.01
142	413044.41	3772512.70	Res	124.17
143	413059.20	3772512.70	Res	124.28
144	413073.99	3772512.70	Res	124.40

145	413088.78	3772512.70	Res	124.52
146	413103.57	3772512.70	Res	124.68
147	413118.36	3772512.70	Res	124.82
148	412985.25	3772521.02	Res	123.89
149	413000.04	3772521.02	Res	123.92
150	413014.83	3772521.02	Res	123.96
151	413029.62	3772521.02	Res	124.18
152	413044.41	3772521.02	Res	124.35
153	413059.20	3772521.02	Res	124.44
154	413073.99	3772521.02	Res	124.54
155	413088.78	3772521.02	Res	124.64
156	413103.57	3772521.02	Res	124.78
157	413118.36	3772521.02	Res	124.91
158	412985.25	3772529.34	Res	124.03
159	413000.04	3772529.34	Res	124.08
160	413014.83	3772529.34	Res	124.12
161	413029.62	3772529.34	Res	124.29
162	413044.41	3772529.34	Res	124.43
163	413059.20	3772529.34	Res	124.51
164	413073.99	3772529.34	Res	124.60
165	413088.78	3772529.34	Res	124.68
166	413103.57	3772529.34	Res	124.78
167	413118.36	3772529.34	Res	124.88
168	412723.75	3772703.89	Res	125.52
169	412733.75	3772703.89	Res	125.47
170	412743.75	3772703.89	Res	124.24
171	412723.75	3772713.89	Res	125.73
172	412733.75	3772713.89	Res	125.73
173	412743.75	3772713.89	Res	124.79
174	412753.75	3772713.89	Res	123.83
175	412723.75	3772723.89	Res	125.83
176	412733.75	3772723.89	Res	125.83
177	412743.75	3772723.89	Res	125.26
178	412753.75	3772723.89	Res	124.68
179	412763.75	3772723.89	Res	124.08
180	412723.75	3772733.89	Res	125.93
181	412733.75	3772733.89	Res	125.93
182	412743.75	3772733.89	Res	125.73

183	412753.75	3772733.89	Res	125.53
184	412763.75	3772733.89	Res	125.21
185	412773.75	3772733.89	Res	124.72
186	412723.75	3772743.89	Res	126.13
187	412733.75	3772743.89	Res	126.13
188	412743.75	3772743.89	Res	126.09
189	412753.75	3772743.89	Res	126.05
190	412763.75	3772743.89	Res	125.88
191	412773.75	3772743.89	Res	125.53
192	412783.75	3772743.89	Res	125.17
193	412723.75	3772753.89	Res	126.45
194	412733.75	3772753.89	Res	126.43
195	412743.75	3772753.89	Res	126.34
196	412753.75	3772753.89	Res	126.25
197	412763.75	3772753.89	Res	126.10
198	412773.75	3772753.89	Res	125.88
199	412783.75	3772753.89	Res	125.65
200	412793.75	3772753.89	Res	124.81
201	412723.75	3772763.89	Res	126.77
202	412733.75	3772763.89	Res	126.73
203	412743.75	3772763.89	Res	126.59
204	412753.75	3772763.89	Res	126.45
205	412763.75	3772763.89	Res	126.32
206	412773.75	3772763.89	Res	126.22
207	412783.75	3772763.89	Res	126.12
208	412793.75	3772763.89	Res	125.68
209	412723.75	3772773.89	Res	126.97
210	412733.75	3772773.89	Res	126.93
211	412743.75	3772773.89	Res	126.77
212	412753.75	3772773.89	Res	126.61
213	412763.75	3772773.89	Res	126.49
214	412773.75	3772773.89	Res	126.46
215	412783.75	3772773.89	Res	126.43
216	412793.75	3772773.89	Res	126.24
217	412803.75	3772773.89	Res	126.01
218	412813.75	3772773.89	Res	125.44
219	412723.75	3772783.89	Res	126.99
220	412733.75	3772783.89	Res	126.97

221	412743.75	3772783.89	Res	126.84
222	412753.75	3772783.89	Res	126.69
223	412763.75	3772783.89	Res	126.59
224	412773.75	3772783.89	Res	126.56
225	412783.75	3772783.89	Res	126.53
226	412793.75	3772783.89	Res	126.44
227	412803.75	3772783.89	Res	126.33
228	412813.75	3772783.89	Res	125.96
229	412723.75	3772793.89	Res	127.02
230	412733.75	3772793.89	Res	127.01
231	412743.75	3772793.89	Res	126.90
232	412753.75	3772793.89	Res	126.78
233	412763.75	3772793.89	Res	126.70
234	412773.75	3772793.89	Res	126.66
235	412783.75	3772793.89	Res	126.63
236	412793.75	3772793.89	Res	126.63
237	412803.75	3772793.89	Res	126.64
238	412813.75	3772793.89	Res	126.47
239	412713.75	3772803.89	Res	126.88
240	412723.75	3772803.89	Res	126.89
241	412733.75	3772803.89	Res	126.90
242	412743.75	3772803.89	Res	126.82
243	412753.75	3772803.89	Res	126.73
244	412763.75	3772803.89	Res	126.66
245	412773.75	3772803.89	Res	126.64
246	412783.75	3772803.89	Res	126.61
247	412793.75	3772803.89	Res	126.67
248	412803.75	3772803.89	Res	126.75
249	412813.75	3772803.89	Res	126.72
250	412713.75	3772813.89	Res	126.43
251	412723.75	3772813.89	Res	126.45
252	412733.75	3772813.89	Res	126.47
253	412743.75	3772813.89	Res	126.44
254	412753.75	3772813.89	Res	126.40
255	412763.75	3772813.89	Res	126.37
256	412773.75	3772813.89	Res	126.38
257	412783.75	3772813.89	Res	126.38
258	412793.75	3772813.89	Res	126.45

259	412803.75	3772813.89	Res	126.54
260	412813.75	3772813.89	Res	126.56
261	413337.74	3772505.92	Res	125.60
262	413366.05	3772505.76	ES	125.75
263	413390.43	3772506.36	ES	125.94
264	413426.03	3772501.18	ES	126.16
265	413255.11	3773190.00	Res	130.13
266	412845.65	3772517.02	Res	123.62
267	412860.44	3772517.02	Res	123.51
268	412875.23	3772517.02	Res	123.59
269	412890.02	3772517.02	Res	123.63
270	412904.81	3772517.02	Res	123.59
271	412919.60	3772517.02	Res	123.62
272	412934.39	3772517.02	Res	123.72
273	412949.18	3772517.02	Res	123.73
274	412963.97	3772517.02	Res	123.72
275	412978.76	3772517.02	Res	123.79
276	412845.65	3772525.34	Res	123.71
277	412860.44	3772525.34	Res	123.63
278	412875.23	3772525.34	Res	123.71
279	412890.02	3772525.34	Res	123.75
280	412904.81	3772525.34	Res	123.71
281	412919.60	3772525.34	Res	123.75
282	412934.39	3772525.34	Res	123.85
283	412949.18	3772525.34	Res	123.87
284	412963.97	3772525.34	Res	123.88
285	412978.76	3772525.34	Res	123.94
286	412845.65	3772533.66	Res	123.76
287	412860.44	3772533.66	Res	123.71
288	412875.23	3772533.66	Res	123.77
289	412890.02	3772533.66	Res	123.82
290	412904.81	3772533.66	Res	123.81
291	412919.60	3772533.66	Res	123.86
292	412934.39	3772533.66	Res	123.96
293	412949.18	3772533.66	Res	123.99
294	412963.97	3772533.66	Res	124.02
295	412978.76	3772533.66	Res	124.08
296	413242.12	3772517.03	Res	125.35

297	413259.93	3772516.53	ES	125.43	
298	413279.23	3772515.44	ES	125.52	
299	413310.78	3772511.61	ES	125.59	
300	413297.64	3772512.87	ES	125.56	
301	413227.57	3772517.61	ES	125.33	

Plant Boundary Receptors

Receptor Groups

Record Number	Group ID	Group Description
1	ES	Discrete Cartesian Receptors for EVALFILE Output
2	Res	Receptors generated from Uniform Cartesian Grid

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): ONSITE ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
413385.84	3773220.44	0.62393	413397.29	3773220.44	0.61516
413408.74	3773220.44	0.60533	413420.19	3773220.44	0.59454
413431.64	3773220.44	0.58307	413385.84	3773230.51	0.58140
413397.29	3773230.51	0.57455	413408.74	3773230.51	0.56677
413420.19	3773230.51	0.55799	413431.64	3773230.51	0.54851
413385.84	3773240.58	0.54246	413397.29	3773240.58	0.53722
413408.74	3773240.58	0.53101	413420.19	3773240.58	0.52385
413431.64	3773240.58	0.51602	413385.84	3773250.65	0.50655
413397.29	3773250.65	0.50256	413408.74	3773250.65	0.49771
413420.19	3773250.65	0.49190	413431.64	3773250.65	0.48546
413385.84	3773260.72	0.47337	413397.29	3773260.72	0.47045
413408.74	3773260.72	0.46669	413420.19	3773260.72	0.46203
413431.64	3773260.72	0.45676	413385.84	3773270.79	0.44274
413397.29	3773270.79	0.44068	413408.74	3773270.79	0.43786
413420.19	3773270.79	0.43408	413431.64	3773270.79	0.42979
413385.84	3773280.86	0.41449	413397.29	3773280.86	0.41314
413408.74	3773280.86	0.41106	413420.19	3773280.86	0.40805
413431.64	3773280.86	0.40454	413385.84	3773290.93	0.38850
413397.29	3773290.93	0.38768	413408.74	3773290.93	0.38619
413420.19	3773290.93	0.38387	413431.64	3773290.93	0.38106
413385.84	3773301.00	0.36457	413397.29	3773301.00	0.36413
413408.74	3773301.00	0.36310	413420.19	3773301.00	0.36136
413431.64	3773301.00	0.35923	413385.84	3773311.07	0.34247
413397.29	3773311.07	0.34232	413408.74	3773311.07	0.34169
413420.19	3773311.07	0.34047	413431.64	3773311.07	0.33887
413385.84	3773321.14	0.32201	413397.29	3773321.14	0.32210
413408.74	3773321.14	0.32178	413420.19	3773321.14	0.32102
413431.64	3773321.14	0.31991	413385.84	3773331.21	0.30290
413397.29	3773331.21	0.30322	413408.74	3773331.21	0.30324
413420.19	3773331.21	0.30292	413431.64	3773331.21	0.30224
413385.84	3773341.28	0.28527	413397.29	3773341.28	0.28579
413408.74	3773341.28	0.28603	413420.19	3773341.28	0.28606
413431.64	3773341.28	0.28580	413385.84	3773351.35	0.26901
413397.29	3773351.35	0.26967	413408.74	3773351.35	0.27012
413420.19	3773351.35	0.27042	413431.64	3773351.35	0.27045
413385.84	3773361.42	0.25414	413397.29	3773361.42	0.25487
413408.74	3773361.42	0.25540	413420.19	3773361.42	0.25587

413431.64	3773361.42	0.25610	413385.84	3773371.49	0.24038
413397.29	3773371.49	0.24114	413408.74	3773371.49	0.24175
413420.19	3773371.49	0.24234	413431.64	3773371.49	0.24273

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): ONSITE ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
413385.84	3773381.56	0.22751	413397.29	3773381.56	0.22829
413408.74	3773381.56	0.22892	413420.19	3773381.56	0.22961
413431.64	3773381.56	0.23009	413385.84	3773391.63	0.21496
413397.29	3773391.63	0.21579	413408.74	3773391.63	0.21683
413420.19	3773391.63	0.21714	413431.64	3773391.63	0.21760
413385.84	3773401.70	0.20369	413397.29	3773401.70	0.20459
413408.74	3773401.70	0.20534	413420.19	3773401.70	0.20593
413431.64	3773401.70	0.20638	413416.45	3772548.02	0.08258
413435.76	3772548.02	0.08140	413416.45	3772557.84	0.08801
413435.76	3772557.84	0.08672	413416.45	3772567.66	0.09397
413435.76	3772567.66	0.09253	413416.45	3772577.48	0.10052
413435.76	3772577.48	0.09891	413416.45	3772587.30	0.10773
413435.76	3772587.30	0.10591	413416.45	3772597.12	0.11567
413435.76	3772597.12	0.11360	413416.45	3772606.94	0.12442
413435.76	3772606.94	0.12205	413416.45	3772616.76	0.13408
413435.76	3772616.76	0.13132	413416.45	3772626.58	0.14476
413435.76	3772626.58	0.14153	413416.45	3772636.40	0.15655
413435.76	3772636.40	0.15275	413416.45	3772646.22	0.16959
413435.76	3772646.22	0.16510	413416.45	3772656.04	0.18400
413435.76	3772656.04	0.17869	413416.45	3772665.86	0.19994
413435.76	3772665.86	0.19364	413416.45	3772675.68	0.21757
413435.76	3772675.68	0.21010	413416.45	3772685.50	0.23708
413435.76	3772685.50	0.22819	413416.45	3772695.32	0.25862
413435.76	3772695.32	0.24803	413416.45	3772705.14	0.28236
413435.76	3772705.14	0.26977	413416.45	3772714.96	0.30849
413435.76	3772714.96	0.29355	413416.45	3772724.78	0.33719
413435.76	3772724.78	0.31951	413416.45	3772734.60	0.36865
413435.76	3772734.60	0.34776	413416.45	3772744.42	0.40302
413435.76	3772744.42	0.37842	412985.25	3772512.70	0.25490
413000.04	3772512.70	0.25039	413014.83	3772512.70	0.24466
413029.62	3772512.70	0.23785	413044.41	3772512.70	0.22996
413059.20	3772512.70	0.22111	413073.99	3772512.70	0.21148
413088.78	3772512.70	0.20124	413103.57	3772512.70	0.19059
413118.36	3772512.70	0.17969	412985.25	3772521.02	0.26573

413000.04	3772521.02	0.26124	413014.83	3772521.02	0.25544
413029.62	3772521.02	0.24848	413044.41	3772521.02	0.24034
413059.20	3772521.02	0.23113	413073.99	3772521.02	0.22108
413088.78	3772521.02	0.21035	413103.57	3772521.02	0.19916
413118.36	3772521.02	0.18771	412985.25	3772529.34	0.27723
413000.04	3772529.34	0.27280	413014.83	3772529.34	0.26694

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): ONSITE ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
413029.62	3772529.34	0.25980	413044.41	3772529.34	0.25138
413059.20	3772529.34	0.24181	413073.99	3772529.34	0.23131
413088.78	3772529.34	0.22006	413103.57	3772529.34	0.20830
413118.36	3772529.34	0.19625	412723.75	3772703.89	0.26576
412733.75	3772703.89	0.27800	412743.75	3772703.89	0.29042
412723.75	3772713.89	0.26901	412733.75	3772713.89	0.28169
412743.75	3772713.89	0.29478	412753.75	3772713.89	0.30859
412723.75	3772723.89	0.27201	412733.75	3772723.89	0.28513
412743.75	3772723.89	0.29889	412753.75	3772723.89	0.31353
412763.75	3772723.89	0.32910	412723.75	3772733.89	0.27484
412733.75	3772733.89	0.28834	412743.75	3772733.89	0.30274
412753.75	3772733.89	0.31816	412763.75	3772733.89	0.33462
412773.75	3772733.89	0.35213	412723.75	3772743.89	0.27748
412733.75	3772743.89	0.29138	412743.75	3772743.89	0.30629
412753.75	3772743.89	0.32231	412763.75	3772743.89	0.33949
412773.75	3772743.89	0.35787	412783.75	3772743.89	0.37762
412723.75	3772753.89	0.27995	412733.75	3772753.89	0.29421
412743.75	3772753.89	0.30952	412753.75	3772753.89	0.32603
412763.75	3772753.89	0.34381	412773.75	3772753.89	0.36296
412783.75	3772753.89	0.38363	412793.75	3772753.89	0.40549
412723.75	3772763.89	0.28218	412733.75	3772763.89	0.29678
412743.75	3772763.89	0.31249	412753.75	3772763.89	0.32945
412763.75	3772763.89	0.34779	412773.75	3772763.89	0.36766
412783.75	3772763.89	0.38920	412793.75	3772763.89	0.41235
412723.75	3772773.89	0.28416	412733.75	3772773.89	0.29907
412743.75	3772773.89	0.31514	412753.75	3772773.89	0.33254
412763.75	3772773.89	0.35140	412773.75	3772773.89	0.37191
412783.75	3772773.89	0.39422	412793.75	3772773.89	0.41844
412803.75	3772773.89	0.44481	412813.75	3772773.89	0.47328
412723.75	3772783.89	0.28586	412733.75	3772783.89	0.30105
412743.75	3772783.89	0.31748	412753.75	3772783.89	0.33527

412763.75	3772783.89	0.35462	412773.75	3772783.89	0.37570
412783.75	3772783.89	0.39869	412793.75	3772783.89	0.42377
412803.75	3772783.89	0.45121	412813.75	3772783.89	0.48110
412723.75	3772793.89	0.28733	412733.75	3772793.89	0.30278
412743.75	3772793.89	0.31951	412753.75	3772793.89	0.33768
412763.75	3772793.89	0.35746	412773.75	3772793.89	0.37905
412783.75	3772793.89	0.40266	412793.75	3772793.89	0.42855
412803.75	3772793.89	0.45698	412813.75	3772793.89	0.48815
412713.75	3772803.89	0.27407	412723.75	3772803.89	0.28854

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): ONSITE ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
412733.75	3772803.89	0.30421	412743.75	3772803.89	0.32121
412753.75	3772803.89	0.33970	412763.75	3772803.89	0.35986
412773.75	3772803.89	0.38192	412783.75	3772803.89	0.40609
412793.75	3772803.89	0.43267	412803.75	3772803.89	0.46196
412813.75	3772803.89	0.49425	412713.75	3772813.89	0.27481
412723.75	3772813.89	0.28943	412733.75	3772813.89	0.30528
412743.75	3772813.89	0.32251	412753.75	3772813.89	0.34127
412763.75	3772813.89	0.36177	412773.75	3772813.89	0.38423
412783.75	3772813.89	0.40889	412793.75	3772813.89	0.43606
412803.75	3772813.89	0.46608	412813.75	3772813.89	0.49928
413337.74	3772505.92	0.07169	413366.05	3772505.76	0.06796
413390.43	3772506.36	0.06596	413426.03	3772501.18	0.06196
413255.11	3773190.00	0.84387 MEIR	412845.65	3772517.02	0.24569
412860.44	3772517.02	0.25102	412875.23	3772517.02	0.25580
412890.02	3772517.02	0.25981	412904.81	3772517.02	0.26289
412919.60	3772517.02	0.26504	412934.39	3772517.02	0.26613
412949.18	3772517.02	0.26600	412963.97	3772517.02	0.26463
412978.76	3772517.02	0.26201	412845.65	3772525.34	0.25297
412860.44	3772525.34	0.25887	412875.23	3772525.34	0.26420
412890.02	3772525.34	0.26874	412904.81	3772525.34	0.27233
412919.60	3772525.34	0.27494	412934.39	3772525.34	0.27645
412949.18	3772525.34	0.27667	412963.97	3772525.34	0.27558
412978.76	3772525.34	0.27313	412845.65	3772533.66	0.26050
412860.44	3772533.66	0.26701	412875.23	3772533.66	0.27292
412890.02	3772533.66	0.27805	412904.81	3772533.66	0.28221
412919.60	3772533.66	0.28534	412934.39	3772533.66	0.28732
412949.18	3772533.66	0.28794	412963.97	3772533.66	0.28716
412978.76	3772533.66	0.28493	413242.12	3772517.03	0.10385

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
413259.93	3772516.53	0.09619	413279.23	3772515.44	0.08895
413310.78	3772511.61	0.07894	413297.64	3772512.87	0.08258
413227.57	3772517.61	0.11110			
413385.84	3773220.44	0.36364	413397.29	3773220.44	0.34978
413408.74	3773220.44	0.33673	413420.19	3773220.44	0.32455
413431.64	3773220.44	0.31296	413385.84	3773230.51	0.35577
413397.29	3773230.51	0.34246	413408.74	3773230.51	0.32994
413420.19	3773230.51	0.31811	413431.64	3773230.51	0.30695
413385.84	3773240.58	0.34769	413397.29	3773240.58	0.33495
413408.74	3773240.58	0.32294	413420.19	3773240.58	0.31159
413431.64	3773240.58	0.30086	413385.84	3773250.65	0.33940
413397.29	3773250.65	0.32724	413408.74	3773250.65	0.31576
413420.19	3773250.65	0.30489	413431.64	3773250.65	0.29460
413385.84	3773260.72	0.33076	413397.29	3773260.72	0.31935
413408.74	3773260.72	0.30840	413420.19	3773260.72	0.29802
413431.64	3773260.72	0.28818	413385.84	3773270.79	0.32214
413397.29	3773270.79	0.31132	413408.74	3773270.79	0.30091
413420.19	3773270.79	0.29101	413431.64	3773270.79	0.28147
413385.84	3773280.86	0.31340	413397.29	3773280.86	0.30302
413408.74	3773280.86	0.29316	413420.19	3773280.86	0.28375
413431.64	3773280.86	0.27479	413385.84	3773290.93	0.30459
413397.29	3773290.93	0.29479	413408.74	3773290.93	0.28546
413420.19	3773290.93	0.27654	413431.64	3773290.93	0.26804
413385.84	3773301.00	0.29573	413397.29	3773301.00	0.28651
413408.74	3773301.00	0.27770	413420.19	3773301.00	0.26927
413431.64	3773301.00	0.26123	413385.84	3773311.07	0.28686
413397.29	3773311.07	0.27820	413408.74	3773311.07	0.26991
413420.19	3773311.07	0.26197	413431.64	3773311.07	0.25428
413385.84	3773321.14	0.27799	413397.29	3773321.14	0.26988
413408.74	3773321.14	0.26211	413420.19	3773321.14	0.25456
413431.64	3773321.14	0.24741	413385.84	3773331.21	0.26903
413397.29	3773331.21	0.26147	413408.74	3773331.21	0.25421
413420.19	3773331.21	0.24724	413431.64	3773331.21	0.24054
413385.84	3773341.28	0.26024	413397.29	3773341.28	0.25321

413408.74	3773341.28	0.24645	413420.19	3773341.28	0.23995
413431.64	3773341.28	0.23370	413385.84	3773351.35	0.25156
413397.29	3773351.35	0.24504	413408.74	3773351.35	0.23876
413420.19	3773351.35	0.23272	413431.64	3773351.35	0.22689
413385.84	3773361.42	0.24292	413397.29	3773361.42	0.23688
413408.74	3773361.42	0.23104	413420.19	3773361.42	0.22557
413431.64	3773361.42	0.22014	413385.84	3773371.49	0.23458
413397.29	3773371.49	0.22898	413408.74	3773371.49	0.22358
413420.19	3773371.49	0.21838	413431.64	3773371.49	0.21346

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
413385.84	3773381.56	0.22627	413397.29	3773381.56	0.22111
413408.74	3773381.56	0.21610	413420.19	3773381.56	0.21130
413431.64	3773381.56	0.20670	413385.84	3773391.63	0.21777
413397.29	3773391.63	0.21295	413408.74	3773391.63	0.20825
413420.19	3773391.63	0.20389	413431.64	3773391.63	0.19962
413385.84	3773401.70	0.20923	413397.29	3773401.70	0.20492
413408.74	3773401.70	0.20070	413420.19	3773401.70	0.19655
413431.64	3773401.70	0.19250	413416.45	3772548.02	0.19417
413435.76	3772548.02	0.18213	413416.45	3772557.84	0.20052
413435.76	3772557.84	0.18780	413416.45	3772567.66	0.20703
413435.76	3772567.66	0.19359	413416.45	3772577.48	0.21367
413435.76	3772577.48	0.19951	413416.45	3772587.30	0.22042
413435.76	3772587.30	0.20562	413416.45	3772597.12	0.22726
413435.76	3772597.12	0.21181	413416.45	3772606.94	0.23420
413435.76	3772606.94	0.21810	413416.45	3772616.76	0.24120
413435.76	3772616.76	0.22440	413416.45	3772626.58	0.24826
413435.76	3772626.58	0.23073	413416.45	3772636.40	0.25534
413435.76	3772636.40	0.23710	413416.45	3772646.22	0.26241
413435.76	3772646.22	0.24348	413416.45	3772656.04	0.26946
413435.76	3772656.04	0.24986	413416.45	3772665.86	0.27647
413435.76	3772665.86	0.25621	413416.45	3772675.68	0.28344
413435.76	3772675.68	0.26252	413416.45	3772685.50	0.29037
413435.76	3772685.50	0.26878	413416.45	3772695.32	0.29718
413435.76	3772695.32	0.27497	413416.45	3772705.14	0.30387
413435.76	3772705.14	0.28106	413416.45	3772714.96	0.31041

413435.76	3772714.96	0.28707	413416.45	3772724.78	0.31679
413435.76	3772724.78	0.29294	413416.45	3772734.60	0.32299
413435.76	3772734.60	0.29864	413416.45	3772744.42	0.32898
413435.76	3772744.42	0.30413	412985.25	3772512.70	1.76288
413000.04	3772512.70	1.82985	413014.83	3772512.70	1.75297
413029.62	3772512.70	1.57557	413044.41	3772512.70	1.37104
413059.20	3772512.70	1.18413	413073.99	3772512.70	1.02711
413088.78	3772512.70	0.89827	413103.57	3772512.70	0.79267
413118.36	3772512.70	0.70562	412985.25	3772521.02	2.20215
413000.04	3772521.02	2.32118	413014.83	3772521.02	2.19033
413029.62	3772521.02	1.90528	413044.41	3772521.02	1.60515
413059.20	3772521.02	1.35147	413073.99	3772521.02	1.15004
413088.78	3772521.02	0.99139	413103.57	3772521.02	0.86521
413118.36	3772521.02	0.76347	412985.25	3772529.34	2.84893
413000.04	3772529.34	3.07944	413014.83	3772529.34	2.83357

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
413029.62	3772529.34	2.34778	413044.41	3772529.34	1.89627
413059.20	3772529.34	1.54886	413073.99	3772529.34	1.29008
413088.78	3772529.34	1.09504	413103.57	3772529.34	0.94463
413118.36	3772529.34	0.82607	412723.75	3772703.89	0.38730
412733.75	3772703.89	0.41216	412743.75	3772703.89	0.43987
412723.75	3772713.89	0.39170	412733.75	3772713.89	0.41685
412743.75	3772713.89	0.44519	412753.75	3772713.89	0.47599
412723.75	3772723.89	0.39590	412733.75	3772723.89	0.42137
412743.75	3772723.89	0.45012	412753.75	3772723.89	0.48128
412763.75	3772723.89	0.51577	412723.75	3772733.89	0.39979
412733.75	3772733.89	0.42555	412743.75	3772733.89	0.45427
412753.75	3772733.89	0.48589	412763.75	3772733.89	0.52091
412773.75	3772733.89	0.55965	412723.75	3772743.89	0.40317
412733.75	3772743.89	0.42917	412743.75	3772743.89	0.45785
412753.75	3772743.89	0.48949	412763.75	3772743.89	0.52486
412773.75	3772743.89	0.56447	412783.75	3772743.89	0.60830
412723.75	3772753.89	0.40597	412733.75	3772753.89	0.43220
412743.75	3772753.89	0.46121	412753.75	3772753.89	0.49322
412763.75	3772753.89	0.52882	412773.75	3772753.89	0.56858

412783.75	3772753.89	0.61284	412793.75	3772753.89	0.66264
412723.75	3772763.89	0.40843	412733.75	3772763.89	0.43486
412743.75	3772763.89	0.46418	412753.75	3772763.89	0.49654
412763.75	3772763.89	0.53231	412773.75	3772763.89	0.57195
412783.75	3772763.89	0.61614	412793.75	3772763.89	0.66671
412723.75	3772773.89	0.41087	412733.75	3772773.89	0.43745
412743.75	3772773.89	0.46699	412753.75	3772773.89	0.49958
412763.75	3772773.89	0.53551	412773.75	3772773.89	0.57510
412783.75	3772773.89	0.61920	412793.75	3772773.89	0.66923
412803.75	3772773.89	0.72564	412813.75	3772773.89	0.79014
412723.75	3772783.89	0.41343	412733.75	3772783.89	0.44014
412743.75	3772783.89	0.46977	412753.75	3772783.89	0.50250
412763.75	3772783.89	0.53854	412773.75	3772783.89	0.57829
412783.75	3772783.89	0.62257	412793.75	3772783.89	0.67236
412803.75	3772783.89	0.72839	412813.75	3772783.89	0.79290
412723.75	3772793.89	0.41569	412733.75	3772793.89	0.44251
412743.75	3772793.89	0.47224	412753.75	3772793.89	0.50502
412763.75	3772793.89	0.54115	412773.75	3772793.89	0.58108
412783.75	3772793.89	0.62549	412793.75	3772793.89	0.67501
412803.75	3772793.89	0.73055	412813.75	3772793.89	0.79422
412713.75	3772803.89	0.39340	412723.75	3772803.89	0.41801

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: HAUL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
412733.75	3772803.89	0.44495	412743.75	3772803.89	0.47475
412753.75	3772803.89	0.50760	412763.75	3772803.89	0.54385
412773.75	3772803.89	0.58387	412783.75	3772803.89	0.62844
412793.75	3772803.89	0.67787	412803.75	3772803.89	0.73319
412813.75	3772803.89	0.79614	412713.75	3772813.89	0.39591
412723.75	3772813.89	0.42068	412733.75	3772813.89	0.44779
412743.75	3772813.89	0.47766	412753.75	3772813.89	0.51057
412763.75	3772813.89	0.54689	412773.75	3772813.89	0.58702
412783.75	3772813.89	0.63170	412793.75	3772813.89	0.68133
412803.75	3772813.89	0.73686	412813.75	3772813.89	0.79977
413337.74	3772505.92	0.22014	413366.05	3772505.76	0.19898
413390.43	3772506.36	0.18368	413426.03	3772501.18	0.16128
413255.11	3773190.00	0.67684 MEIR	412845.65	3772517.02	0.52827
412860.44	3772517.02	0.59008	412875.23	3772517.02	0.66425
412890.02	3772517.02	0.75440	412904.81	3772517.02	0.86531
412919.60	3772517.02	1.00326	412934.39	3772517.02	1.17553
412949.18	3772517.02	1.38788	412963.97	3772517.02	1.63569
412978.76	3772517.02	1.88333	412845.65	3772525.34	0.55340
412860.44	3772525.34	0.62151	412875.23	3772525.34	0.70433
412890.02	3772525.34	0.80673	412904.81	3772525.34	0.93563
412919.60	3772525.34	1.10091	412934.39	3772525.34	1.31615
412949.18	3772525.34	1.59773	412963.97	3772525.34	1.95481
412978.76	3772525.34	2.35173	412845.65	3772533.66	0.57913
412860.44	3772533.66	0.65383	412875.23	3772533.66	0.74585
412890.02	3772533.66	0.86149	412904.81	3772533.66	1.01025
412919.60	3772533.66	1.20676	412934.39	3772533.66	1.47362
412949.18	3772533.66	1.84524	412963.97	3772533.66	2.36324
412978.76	3772533.66	3.02430	413242.12	3772517.03	0.34566
413259.93	3772516.53	0.31702	413279.23	3772515.44	0.28936
413310.78	3772511.61	0.24965	413297.64	3772512.87	0.26465
413227.57	3772517.61	0.37266			

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)				OF TYPE	NETWORK GRID-ID
			MEIR					
ONSITE	1ST HIGHEST VALUE IS	0.84387 AT	413255.11,	3773190.00,	130.13,	130.13,	0.00) DC	
	2ND HIGHEST VALUE IS	0.62393 AT	413385.84,	3773220.44,	131.05,	131.05,	0.00) DC	
	3RD HIGHEST VALUE IS	0.61516 AT	413397.29,	3773220.44,	130.99,	130.99,	0.00) DC	
	4TH HIGHEST VALUE IS	0.60533 AT	413408.74,	3773220.44,	130.95,	130.95,	0.00) DC	
	5TH HIGHEST VALUE IS	0.59454 AT	413420.19,	3773220.44,	130.94,	130.94,	0.00) DC	
	6TH HIGHEST VALUE IS	0.58307 AT	413431.64,	3773220.44,	130.94,	130.94,	0.00) DC	
	7TH HIGHEST VALUE IS	0.58140 AT	413385.84,	3773230.51,	131.14,	131.14,	0.00) DC	
	8TH HIGHEST VALUE IS	0.57455 AT	413397.29,	3773230.51,	131.08,	131.08,	0.00) DC	
	9TH HIGHEST VALUE IS	0.56677 AT	413408.74,	3773230.51,	131.02,	131.02,	0.00) DC	
	10TH HIGHEST VALUE IS	0.55799 AT	413420.19,	3773230.51,	131.00,	131.00,	0.00) DC	
HAUL	1ST HIGHEST VALUE IS	3.07944 AT	413000.04,	3772529.34,	124.08,	124.08,	0.00) DC	
	2ND HIGHEST VALUE IS	3.02430 AT	412978.76,	3772533.66,	124.08,	124.08,	0.00) DC	
	3RD HIGHEST VALUE IS	2.84893 AT	412985.25,	3772529.34,	124.03,	124.03,	0.00) DC	
	4TH HIGHEST VALUE IS	2.83357 AT	413014.83,	3772529.34,	124.12,	124.12,	0.00) DC	
	5TH HIGHEST VALUE IS	2.36324 AT	412963.97,	3772533.66,	124.02,	124.02,	0.00) DC	
	6TH HIGHEST VALUE IS	2.35173 AT	412978.76,	3772525.34,	123.94,	123.94,	0.00) DC	
	7TH HIGHEST VALUE IS	2.34778 AT	413029.62,	3772529.34,	124.29,	124.29,	0.00) DC	
	8TH HIGHEST VALUE IS	2.32118 AT	413000.04,	3772521.02,	123.92,	123.92,	0.00) DC	
	9TH HIGHEST VALUE IS	2.20215 AT	412985.25,	3772521.02,	123.89,	123.89,	0.00) DC	
	10TH HIGHEST VALUE IS	2.19033 AT	413014.83,	3772521.02,	123.96,	123.96,	0.00) DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 1684 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 75 Calm Hours Identified

A Total of 1609 Missing Hours Identified (3.67 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 620 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 620 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

****
*** AERMOD Finishes Successfully ***
****

Table C1
Concentrations for Risk Calculations

Contaminant	Source		Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	MEIR Conc. ($\mu g/m^3$)	Total MEIR Conc. Annual Average ($\mu g/m^3$)
(a)	(b)		(c)	(d)	(e)	(f)
Residential Receptors			**Unmitigated**			
DPM	2022	On-Site Emissions	0.8439	8.23E-03	6.94E-03	6.95E-03
		Truck Route	0.6768	1.30E-05	8.77E-06	

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 413255.11 E, 3773190.00 N[(3)]

Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations

[1] Model Output at the MEIR based on unit emission rates for sources (1 g/s).

[2] From Emission Rate Calculations (Appendix A - Construction Emissions).

[3] In general, the MEIR location is the receptor location associated with the maximum predicted AERMOD concentrations from off-road equipment operating at the construction site (i.e., on-site emissions). The calculated emission rates from the off-road equipment (on-site emissions) are approximately 2 orders of magnitude higher than the calculated emission rates for off-site truck hauling (see column d). Therefore, the maximum pollutant concentrations associated with the off-road equipment produce the highest overall pollutant concentrations at the MEIR and, consequently, highest calculated health risks.

Table C2
Residential Health Risk Calculations

Source		MEIR Conc. ($\mu g/m^3$)	Weight Fraction	Contaminant	URF $(\mu g/m^3)^{-1}$	CPF $(mg/kg/day)^{-1}$	Dose (by age bin) 3rd Trimester (mg/kg-day)	Dose (by age bin) 0 < 2 years (mg/kg-day)	Carcinogenic Risks (by age bin) 3rd Trimester per million	Carcinogenic Risks (by age bin) 0 < 2 years per million	**Total Cancer Risk** per million	**Chronic Hazards** [3] REL ($\mu g/m^3$)	**Chronic Hazards** [3] RESP
(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Residential Receptors - Unmitigated													
2022	On & Off-Site Emissions	6.95E-03	1.0E+00	DPM	3.0E-04	1.1E+00	2.41E-06	7.26E-06	7.67E-02	3.95E-01	0.5	5.0E+00	0.001

		3rd Trimester	0 < 2 years
	OEHHA age bin	3rd Trimester	0 < 2 years
	exposure year(s)	2022	2022
Dose Exposure Factors:	exposure frequency (days/year)	350	350
	inhalation rate (L/kg-day) [1]	361	1090
	inhalation absorption factor	1	1
	conversion factor (mg/µg; m^3/L)	1.0E-06	1.0E-06
Risk Calculation Factors:	age sensitivity factor	10	10
	averaging time (years)	70	70
	per million	1.0E+06	1.0E+06
	fraction of time at home	0.85	0.85

[1] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

[3] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

exposure durations per age bin		exposure durations (year)	
Construction Year	Const Duration [2]	3rd Trimester	0 < 2 years
2022	0.68	0.25	0.43
Total	0.68	0.25	0.43

Appendices

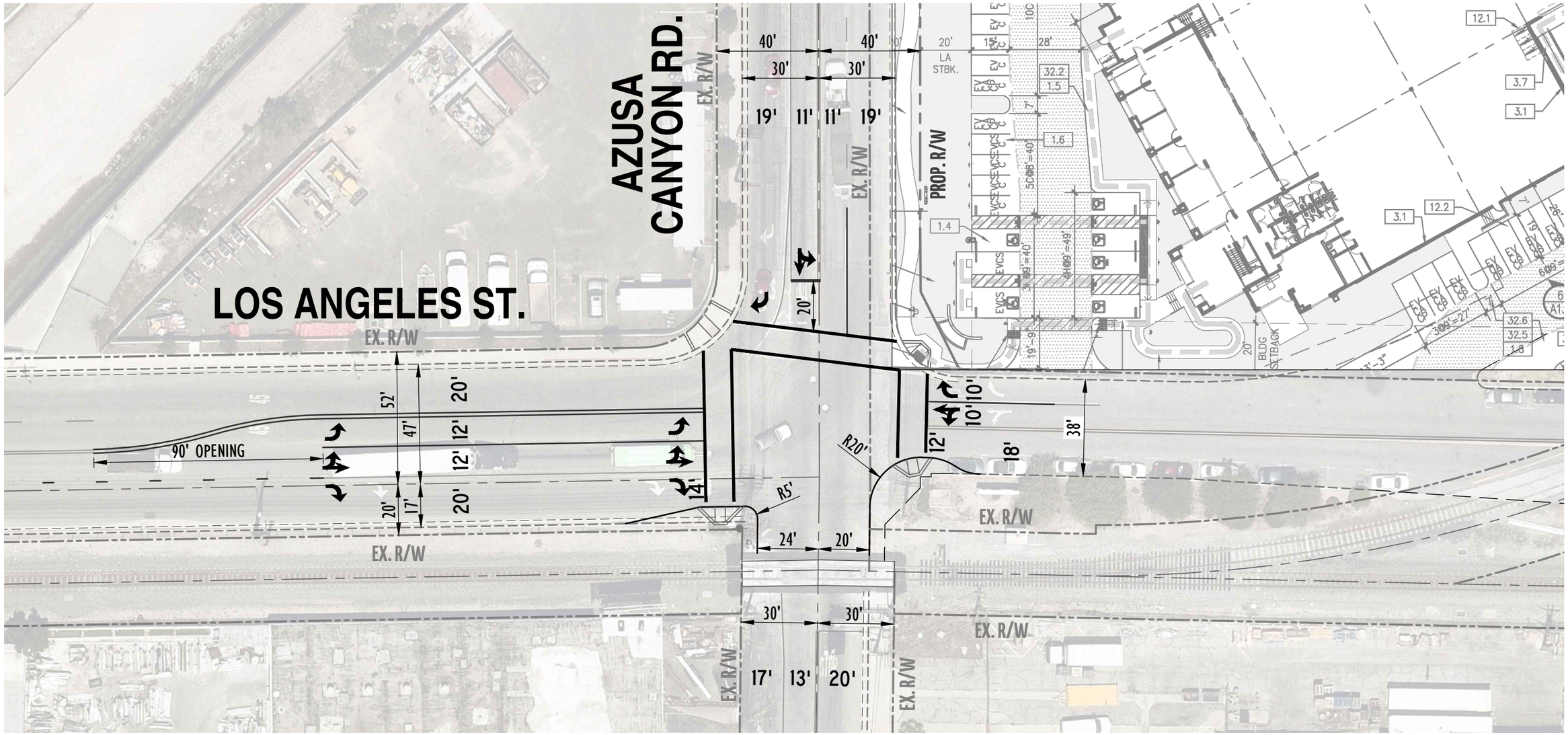
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Appendix 4 Concept Striping Plans

Appendix 4 Concept Striping Plans

Appendices

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N

SCALE: 1" = 40' (ON 11" x 17" SHEET)

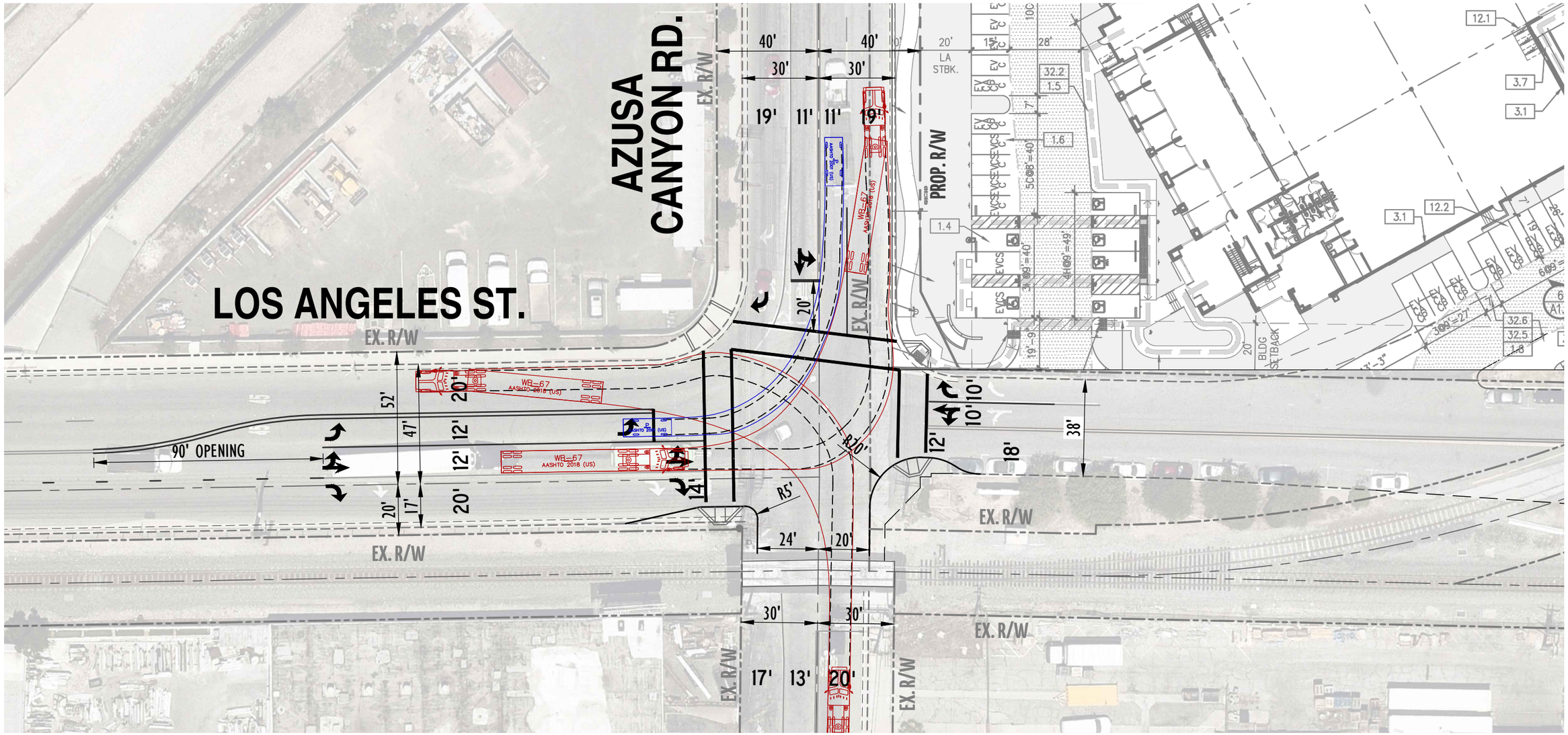
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AZUSA CANYON RD. AT LOS ANGELES ST.
CONCEPT STRIPING PLAN - ALTERNATIVE 1

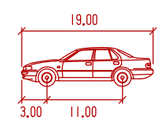
URBAN CROSSROADS
www.urbanXroads.com
TELEPHONE: 949-660-1994

13837 – ACAD\Azusa Canyon @ Los Angeles Concept_A.dwg – 8/18/22 – EL

13837 – ACAD\Azusa Canyon @ Los Angeles Concept_A.dwg – 8/18/22 – EL

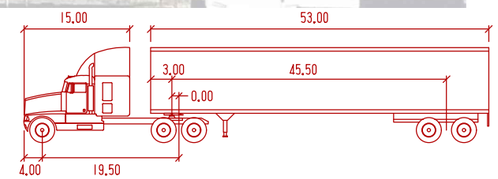






P

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



WB-67

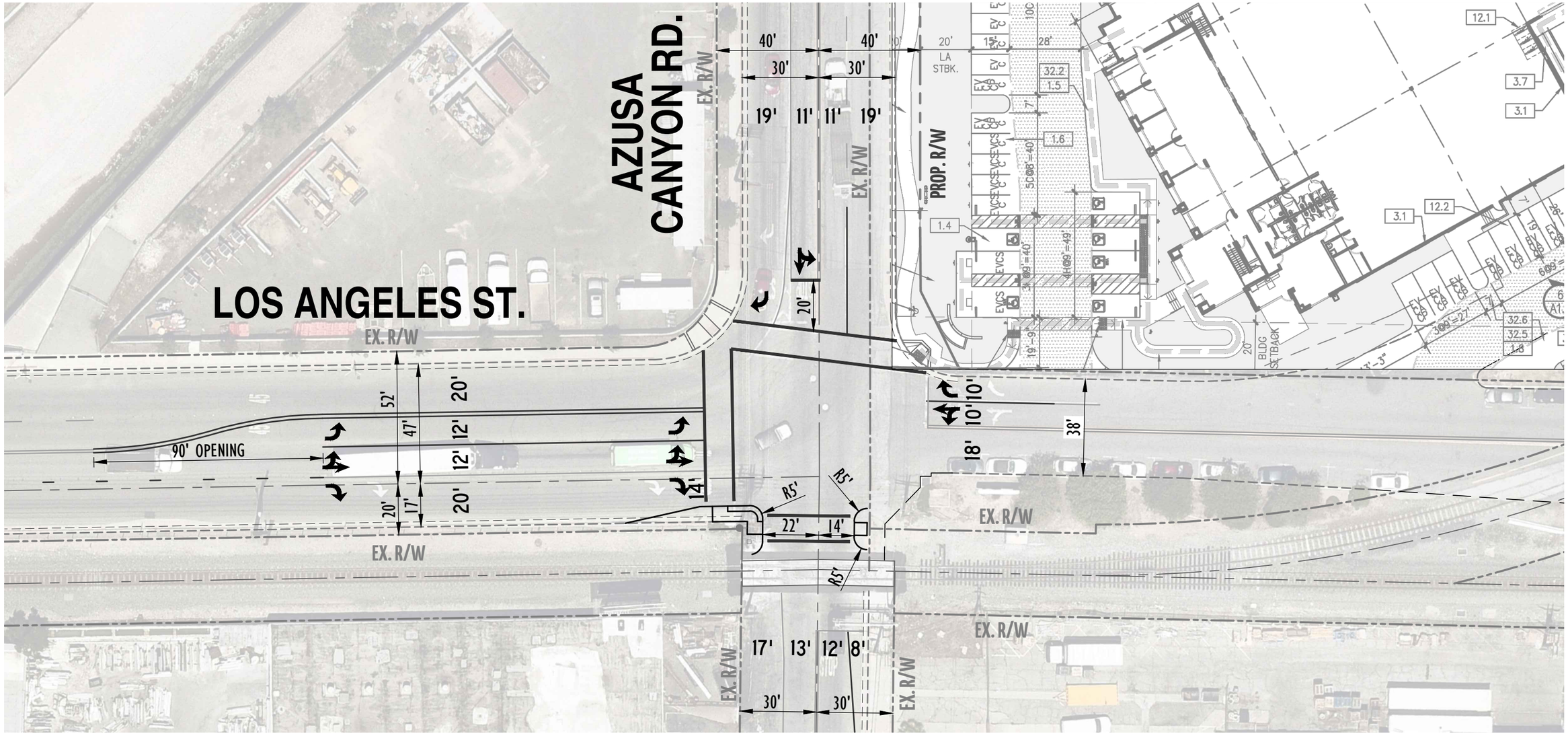
	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

SCALE: 1" = 40' (ON 11" x 17" SHEET)

0 20 40 80 120

AZUSA CANYON RD. AT LOS ANGELES ST.
CONCEPT STRIPING PLAN - ALTERNATIVE 1 (WITH TRUCK TURNS)

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TELEPHONE: 949-660-1994



SCALE: 1" = 40' (ON 11" x 17" SHEET)

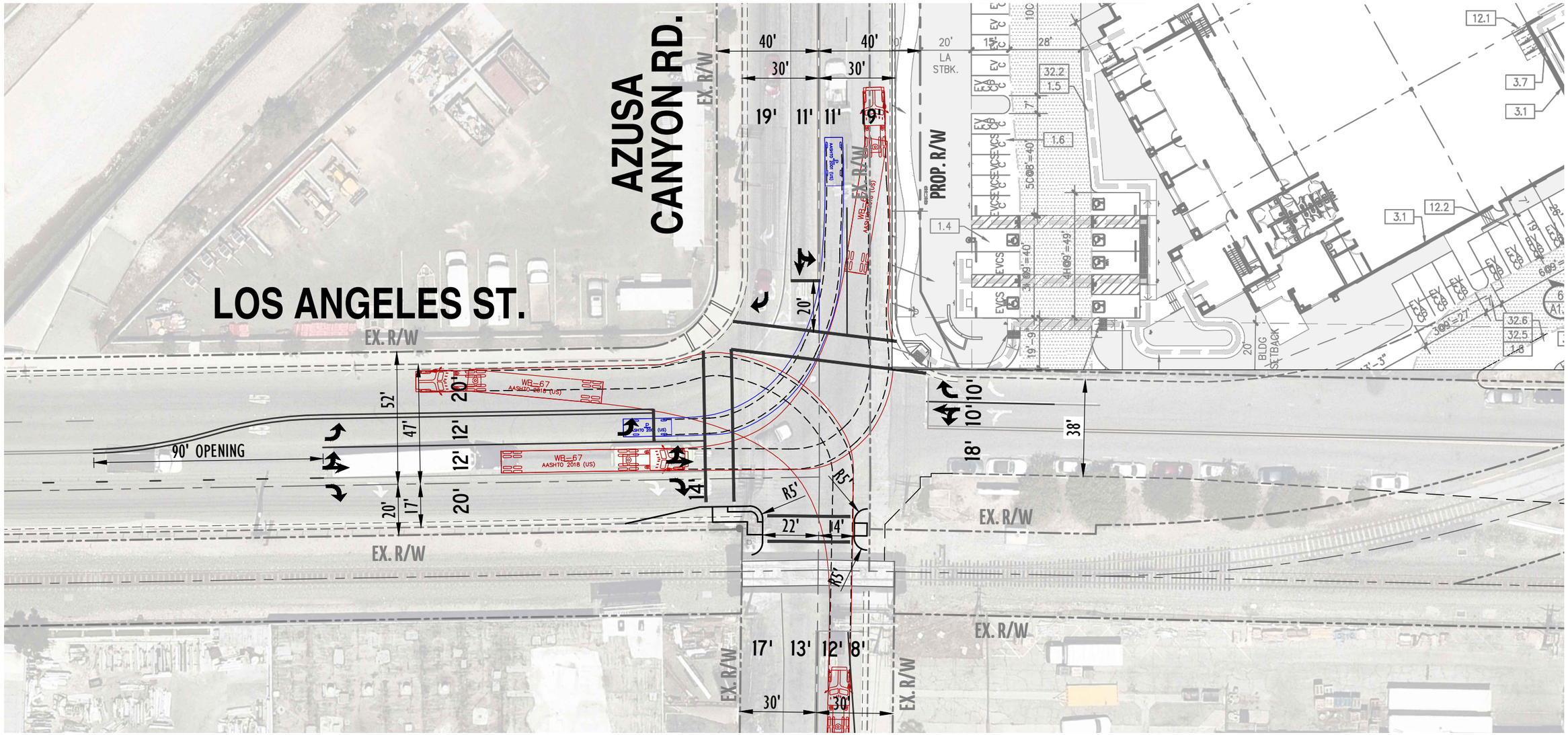
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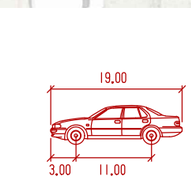
AZUSA CANYON RD. AT LOS ANGELES ST.
CONCEPT STRIPING PLAN - ALTERNATIVE 2

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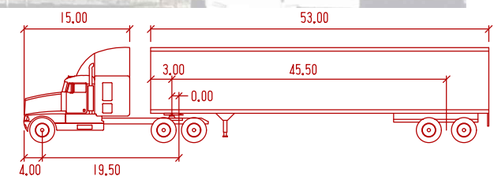
13837 – ACAD\Azusa Canyon @ Los Angeles Concept_A.dwg – 8/18/22 – EL





P

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



WB-67

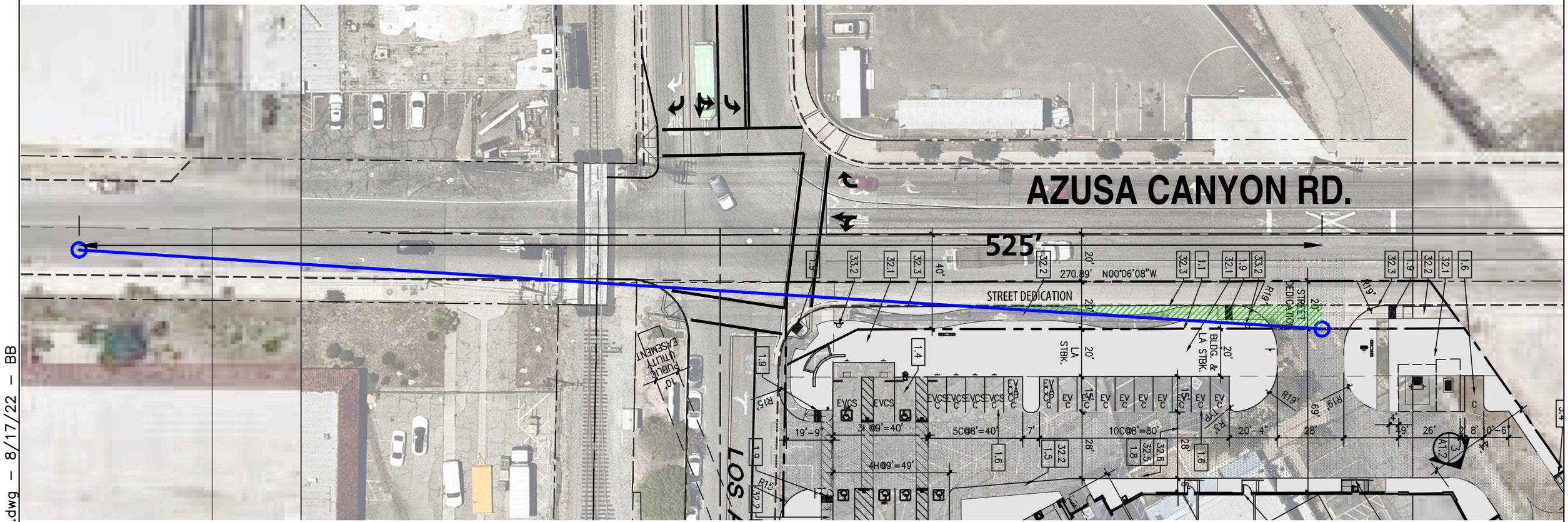
	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

SCALE: 1" = 40' (ON 11" x 17" SHEET)

0 20 40 80 120

AZUSA CANYON RD. AT LOS ANGELES ST.
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LEGEND:

= Sight Line

= Limited Use Area, Highway Design Manual Intersection Sight Distance Standard No. 405.1

SCALE: 1" = 40' (ON 11" x 17" SHEET)

0 20 40 80 120

EXHIBIT B: AZUSA CANYON INTERSECTION SIGHT DISTANCE

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XXXXX – ACAD\13837–Azusa Canyon–SightDistance.dwg – 8/17/22 – BB

Appendices

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Appendix 5 Mitigation Monitoring and Reporting Program

September 2022 | Mitigation Monitoring and Reporting Program

4416 AZUSA CANYON ROAD

City of Irwindale

Prepared for:

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PLACEWORKS

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Mitigation Monitoring and Reporting Program

1. PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program has been developed to provide a vehicle by which to monitor mitigation measures and conditions of approval outlined in the 4416 Azusa Canyon Road Initial Study/Mitigated Negative Declaration (IS/MND), State Clearinghouse No. 2021120500. The Mitigation Monitoring and Reporting Program (MMRP) has been prepared in conformance with Section 21081.6:

> (a) When making findings required by paragraph (1) of subdivision (a) of Section 21081 or when adopting a mitigated negative declaration pursuant to paragraph (2) of subdivision (c) of Section 21080, the following requirements shall apply:
>
> (1) The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.
>
> (2) The lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.

The State CEQA Guidelines Section 15097 provides clarification of mitigation monitoring and reporting requirements and guidance to local lead agencies on implementing strategies. The reporting or monitoring program must be designed to ensure compliance during project implementation. The City of Irwindale is the lead agency for the 4416 Azusa Canyon Road project and is therefore responsible for implementing the MMRP. The MMRP has been drafted to meet the requirements of Public Resources Code Section 21081.6 as a fully enforceable monitoring program.

The MMRP consists of the mitigation program and the measures to implement and monitor the mitigation program. The MMRP defines the following for the mitigation measure outlined in Table 1, *Mitigation Monitoring Requirements*:

- **Definition of Mitigation.** The mitigation measure contains the criteria for mitigation, either in the form of adherence to certain adopted regulations or identification of the steps to be taken in mitigation.

- **Responsible Party or Designated Representative.** Unless otherwise indicated, the project applicant is the responsible party for implementing the mitigation, and the City of Irwindale or a designated

representative is responsible for monitoring the performance and implementation of the mitigation measures. To guarantee that the mitigation measure will not be inadvertently overlooked, a supervising public official acting as the Designated Representative is the official who grants the permit or authorization called for in the performance. Where more than one official is identified, permits or authorization from all officials shall be required.

- **Time Frame.** In each case, a time frame is provided for performance of the mitigation measure or review of evidence that mitigation has taken place. The performance points selected are designed to ensure that impact-related components of project implementation do not proceed without establishing that the mitigation is implemented or ensured. All activities are subject to the approval of all required permits from local, state, and federal agencies with permitting authority over the specific activity.

The numbering system in Table 1 corresponds with the numbering system used in the IS/MND. The last column of the MMRP table will be used by the parties responsible for documenting when implementation of the mitigation measure has been completed. The ongoing documentation and monitoring of mitigation compliance will be completed by the City of Irwindale. The completed MMRP and supplemental documents will be kept on file at the City of Irwindale Community Development Department.

2. PROJECT LOCATION

The approximately 5.89-acre project site is in the southeastern portion of Irwindale in Los Angeles County. The city is approximately 20 miles east of downtown Los Angeles, with neighboring cities of West Covina, Baldwin Park, the unincorporated area of Vincent, Azusa, Duarte, El Monte, North El Monte, and Monrovia. The project site is at the northeastern corner of the Azusa Canyon Road/Los Angeles Street intersection. It is bound by Big Dalton Wash to the north, Los Angeles County Metro (LA Metro) railroad and Los Angeles Street to the south, a railroad spur to the east, and Azusa Canyon Road to the west. The project site's Assessor's Parcel Number is 8417-004-006.

Regional access to the project site is from Interstate 10 (I-10), approximately 1.4 miles to the south via North Orange Avenue, West San Bernardino Road, and Azusa Canyon Road, and from I-605 approximately 2.5 miles to the northwest via Live Oak Avenue, Arrow Highway, and Azusa Canyon Road. State Route 39 (SR-39) also provides regional access to the project site and is approximately 2 miles east of the site. Local access to the project site is via Azusa Canyon Road and Los Angeles Street.

3. PROJECT SUMMARY

The project applicant proposes to develop the 5.89-acre project site with a stand-alone concrete tilt-up warehouse, office, and manufacturing facility at the project site. The warehouse and manufacturing businesses would operate out of a proposed building that would encompass a total of 129,830 square feet, with 17,000 square feet of manufacturing space, 103,670 square feet of warehousing space, and 9,160 square feet of ancillary office space to support the industrial and warehousing tenant(s). The proposed project would also include 18 dock door positions within a secured truck court area on the southeastern side of the site. Other project components include vehicular and pedestrian access and circulation improvements, asphalt parking areas, utility and infrastructure improvements, and various hardscape and landscape improvements.

4. MITIGATION MONITORING

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
3.3 Air Quality					
AQ-1	Prior to issuance of a business license, if a prospective business tenant has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared by the prospective business tenant, subject to review and approval by the City of Irwindale Community Development Department or Planning Commission. Types of uses that have the potential to generate nuisance odors include, but are not limited to: • Wastewater treatment plants • Composting, green waste, or recycling facilities • Fiberglass manufacturing facilities • Painting/coating operations • Large-capacity coffee roasters • Food-processing facilities The odor management plan shall show compliance with the SCAQMD's Rule 402 for nuisance odors. The odor management plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potentially odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility.	Prospective Business Tenant	Prior to the issuance of a business license	City of Irwindale Community Development Department	
3.5 Cultural Resources					
CUL-1	If construction personnel, including the Native American monitor, identify cultural resources during ground-breaking activities, they shall inform the site construction superintendent who shall notify the City and project applicant. The project applicant shall then contact a qualified archaeologist and all work must halt within 50 feet of the find until the archaeologist can determine the	Project Applicant, Qualified Archaeologist	During ground-breaking activities	City of Irwindale Community Development Department	

Mitigation Monitoring and Reporting Program

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	significance. No soil shall be exported from within the 50-foot buffer around the find until a determination of significance is made. The qualified archaeologist will also determine if archaeological monitoring is warranted. If the qualified archaeologist determines that the find qualifies as a significant cultural resource, the archeologist shall make recommendations on the treatment and disposition of the deposits, which shall be developed in accordance with all applicable provisions of California Public Resource Code Section 21083.2 and State CEQA Guidelines Sections 15064.5 and 15126.4. If significant cultural resources are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan. The archaeologist shall prepare a final report describing monitoring methods and results that includes a catalog of all cultural resources identified for submission to the City. The City shall determine disposition of collected cultural resources, which may include return to landowner/applicant, transfer to a consulting Native American group, donation to school or museum, or long-term curation at an approved curation facility. The applicant shall be financially responsible for costs associated with cultural resources monitoring, including artifact curation, up to the limits imposed by Public Resources Code Section 21083.2.				
3.7 Geology and Soils					
GEO-1	If construction personnel, including the Native American monitor, identify paleontological resources during ground-disturbing activities, they shall inform the site construction superintendent who will notify the City and project applicant. The project applicant shall then contact a qualified paleontologist and all ground-disturbing activity shall cease in the immediate area of the find (within a 50-foot buffer) until the paleontologist can evaluate the find. If the discoveries are determined to be significant, full-time paleontological monitoring will be recommended for the remainder	Project Applicant, Qualified Paleontological	During ground-disturbing activities	City of Irwindale Community Development Department	

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	of ground disturbance for the project. Paleontological monitoring shall entail the visual inspection of excavated or graded areas and trench sidewalls. If a paleontological resource is discovered, the monitor shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and collected. Monitoring efforts can be reduced or eliminated at the discretion of the project paleontologist. Upon completion of fieldwork, all significant fossils collected shall be prepared in a properly equipped paleontology laboratory to a point ready for curation. Preparation shall include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossil specimens shall be identified to the most specific taxonomic level possible, cataloged, analyzed, and delivered by the Natural History Museum of Los Angeles County for permanent curation and storage. The cost of curation is assessed by the repository and shall be the responsibility of the project applicant. At the conclusion of laboratory work and museum curation, a final Paleontological Monitoring Report shall be prepared describing the results of the paleontological mitigation monitoring efforts associated with the project. The report shall include a summary of the field and laboratory methods, an overview of the project area geology and paleontology, a list of taxa recovered, an analysis of fossils recovered and their scientific significance, and recommendations. A copy of the report shall be submitted to the Natural History Museum of Los Angeles County.				
3.9 Hazards and Hazardous Materials					
HAZ-1	Any subsurface materials exposed during construction activities that appear suspect for contamination, either from visual staining or odors, shall require immediate cessation of excavation activities. Soils suspected of contamination shall be tested for potential contamination. If contamination is found to be present per the	Project Applicant, Construction Contractor	During construction activities	City of Irwindale Community Development Department	

Mitigation Monitoring and Reporting Program

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	Department of Toxic Substances Control Screening Levels for industrial/commercial land use (DTSC-SLi) and the EPA Regional Screening Levels for industrial/commercial land use (EPA-RSLi), contaminated soils shall be transported and disposed of per state regulations to an appropriately permitted landfill.				
3.17 Transportation					
T-1	Prior to the issuance of occupancy permits, the project applicant shall submit final improvement plans for the Azusa Canyon Road/Los Angeles Street intersection, including the new traffic signal and crosswalk striping. The plans shall be submitted to and approved by the City's Public Works Department. The plans shall: • Include new crosswalks (as shown in the two alternatives in Appendix 1 [final alternative pending selection]) as follows: – Alternative 1 – north, west and east legs of the intersection – Alternative 2 – north, west, and south legs of the intersection • Include on-street parking restriction on the east side of Azusa Canyon Road, north of Los Angeles Street, within 150 feet of the intersection. • Demonstrated compliance with required sight distance and other safety considerations.	Project Applicant	Prior to issuance of occupancy permits	City of Irwindale Community Development Department	
3.18 Tribal Cultural Resources					
TCR-1	The City of Irwindale shall notify the Gabrielino Tongva Indians of California Tribal Council if prehistoric materials, including Native American burial remains, are found. Any notification by the City of Irwindale to the Tribe of the discovery of burial remains shall be separate from the Native American Heritage Commission (NAHC) process and shall occur regardless of whether the NAHC designates the Tribe as Most Likely Descendant. If Native	City of Irwindale	In the event that prehistoric and/or burial remains are found	City of Irwindale Community Development Department	

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	American burial remains are found, the Tribe shall engage the City of Irwindale in formal Native American consultation.				
TCR-2	A Native American monitor from the Gabrieleño Band of Mission Indians – Kizh Nation shall be retained prior to commencement of ground-disturbing activities: • The project applicant shall retain a Native American monitor (or approved by) the Gabrieleño Band of Mission Indians – Kizh Nation the direct lienal descendants of the project location. The monitor shall be retained prior to the commencement of any ground-disturbing activity for the subject project, at all project locations (i.e., both onsite and any off-site locations that are included in the project description and/or required in connection with the project such as public improvement work). Ground-disturbing activity includes, but is not limited to, pavement removal, potholing, auguring, grubbing, tree removal, boring grading, excavation, drilling, trenching. • A copy of the executed monitoring agreement shall be provided to the City of Irwindale prior to the commencement of any ground-disturbing activity for the project, or the issuance of permit necessary to commence a ground-disturbing activity. • The project applicant shall provide the Tribe with a minimum of 30 days advance written notice of the commencement of any project ground-disturbing activity so that the Tribe has sufficient time to secure and schedule a monitor for the project. • The project applicant shall hold at least one pre-construction sensitivity/educational meeting prior to the commencement of any ground-disturbing activities, where a senior member of the Gabrieleño Band of Mission Indians – Kizh Nation shall inform and educate the project's construction and managerial crew and staff members (including any project subcontractors and consultants) about the tribal cultural resources mitigation measures and compliance obligations, as well as places of	Project Applicant, Native American Monitor	Prior to commencement of ground-disturbing activities	City of Irwindale Community Development Department	

Mitigation Monitoring and Reporting Program

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	significance located on the project site (if any), the appearance of potential tribal cultural resources, and other informational and operational guidance to aid in the project's compliance with the mitigation measures. • The Native American Monitor shall complete daily monitoring logs that shall provide descriptions of the relevant ground disturbing activities, the type of construction activities performed; locations of ground-disturbing activities; soil types; cultural-related materials; and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs shall identify and describe any discovered tribal cultural resources, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs shall be provided to the project applicant and/or lead agency upon written request. • Native American monitoring for the project shall conclude upon the latter of the following: (1) written confirmation from a designated project point of contact to the Tribe that all ground-disturbing activities and all phases that may involve ground-disturbing activities on the project site and at any off-site project location are complete; or (2) written notice by the Tribe to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase (known by the Tribe at that time) at the project site and at any off-site project location possess the potential to impact tribal cultural resources.				
TCR-3	Discovery of tribal cultural resources, human remains, and or grave goods: • Upon the discovery of a tribal cultural resource, all construction activities in the immediate vicinity of the discovery (i.e., not less than surrounding 50 feet) shall cease. The Gabrieleño Band of	Project Applicant, Construction Contractor	Upon discovery of tribal cultural resources, human remains, or grave goods	City of Irwindale Community Development Department	

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	Mission Indians – Kizh Nation shall be immediately informed of the discovery, and the Kizh monitor shall promptly report to the location of the discovery to evaluate the tribal cultural resource and advise the project manager regarding the matter, protocol, and any mitigating requirements. No project construction activities shall resume in the surrounding 50 feet of the discovered tribal cultural resource unless and until the Tribe has completed its assessment, evaluation and recovery of the discovered tribal cultural resource and surveyed the surrounding area. • The Tribe shall recover and retain all discovered tribal cultural resources in the form and/or manner the Tribe deems appropriate in its sole discretion, and for any purpose the Tribe deems appropriate, including but not limited to, educational, cultural and/or historic purposes. • If Native American human remains and/or grave goods are discovered or recognized on the project site or at any off-site project location, then all construction activities shall immediately cease. Native American human remains are defined to include an inhumation or cremation, and in any state of decomposition or skeletal completeness (Pub. Res. Code § 5097.98(d)(1)). Funerary objects, referred to as associated grave goods, shall be treated in the same manner and with the same dignity and respect as human remains. (Pub. Res. Code § 5097.98(a), (d)(1) and (2). • Any discoveries of human skeletal material or human remains shall be immediately reported to the County Coroner (Health & Safety Code § 7050.5(c); 14 Cal. Code Regs. §15064.5(e)(1)(B)), and all ground-disturbing project ground-disturbing activities on site and in any other areas where the presence of human remains and/or grave goods are suspected to be present, shall immediately halt and remain halted until the coroner has determined the nature of the remains (14 Cal. Code Regs. § 15064.5(e)). If the coroner recognizes the human				

Mitigation Monitoring and Reporting Program

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed. • Thereafter, construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or grave goods, if the Tribe determines in its sole discretion that resuming construction activities at that distance is acceptable and provide the project manager express consent of that determination (along with any other mitigation measures the Tribal monitor and/or archaeologist deems necessary) (14 Cal. Code Regs. § 15064.5(f)). Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or grave goods. • Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes. • Any discovery of human remains and/or grave goods discovered and/or recovered shall be kept confidential to prevent further disturbance.				
TCR-4	• Procedures for burials, funerary remains, and grave goods: • As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented for all discovered Native American human remains and/or grave goods. Tribal traditions include, but are not limited to, the preparation of the soil for burial, the burial of funerary objects and/or the deceased, and the ceremonial burning of human remains.	Project Applicant, Construction Contractor, Native American Monitor, Qualified Archaeologist	In the event that Native American remains and/or grave goods are discovered	City of Irwindale Community Development Department	

Table 1 Mitigation Monitoring Requirements

Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
• If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated grave goods are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later, as well as other items made exclusively for burial purposes or to contain human remains. Cremations shall either be removed in bulk or by means necessary to ensure complete recovery of all sacred materials. • In the case where discovered human remains cannot be fully recovered (and documented) on the same day, the remains shall be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe shall make every effort to divert the project while keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials shall be removed. • In the event preservation in place is not possible despite good faith efforts by the project applicant/developer and/or landowner, before ground-disturbing activities may resume on the project site, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. The site of reburial/repatriation shall be agreed upon by the Tribe and the landowner and shall be protected in perpetuity. • Each occurrence of human remains and associated grave goods shall be stored using opaque cloth bags. All human remains, grave goods, funerary objects, sacred objects and objects of cultural patrimony shall be removed to a secure				

Mitigation Monitoring and Reporting Program

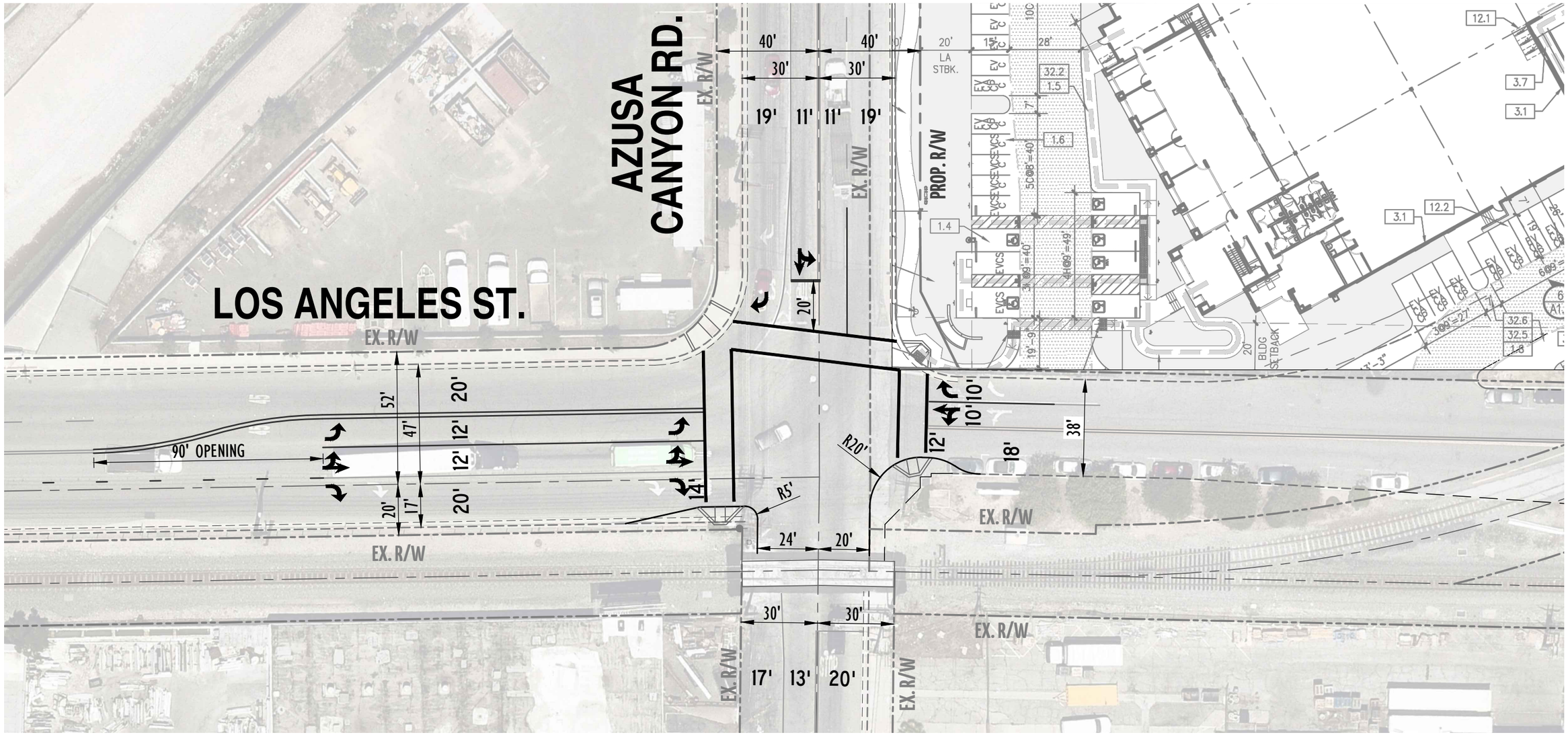
Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	container on site if possible. These items shall be retained and shall be reburied within six months of recovery. • The Tribe shall work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery data recovery-related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.				

Appendix 1 Concept Striping Plans

Appendices

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SCALE: 1" = 40' (ON 11" x 17" SHEET)

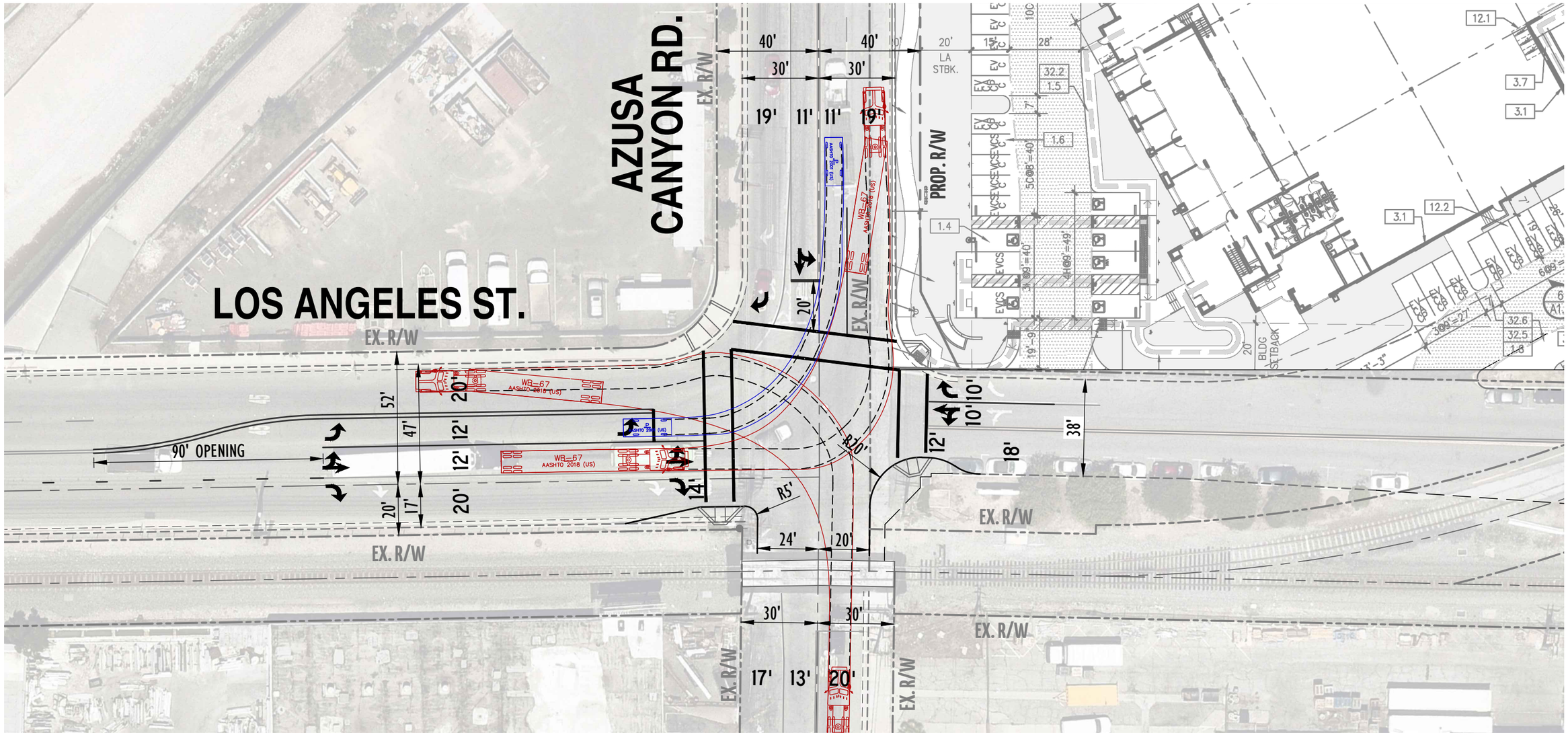
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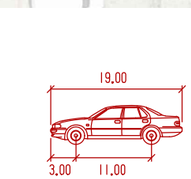
AZUSA CANYON RD. AT LOS ANGELES ST.
CONCEPT STRIPING PLAN - ALTERNATIVE 1

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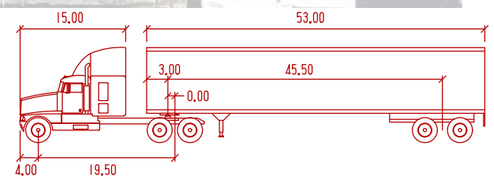
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	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



WB-67

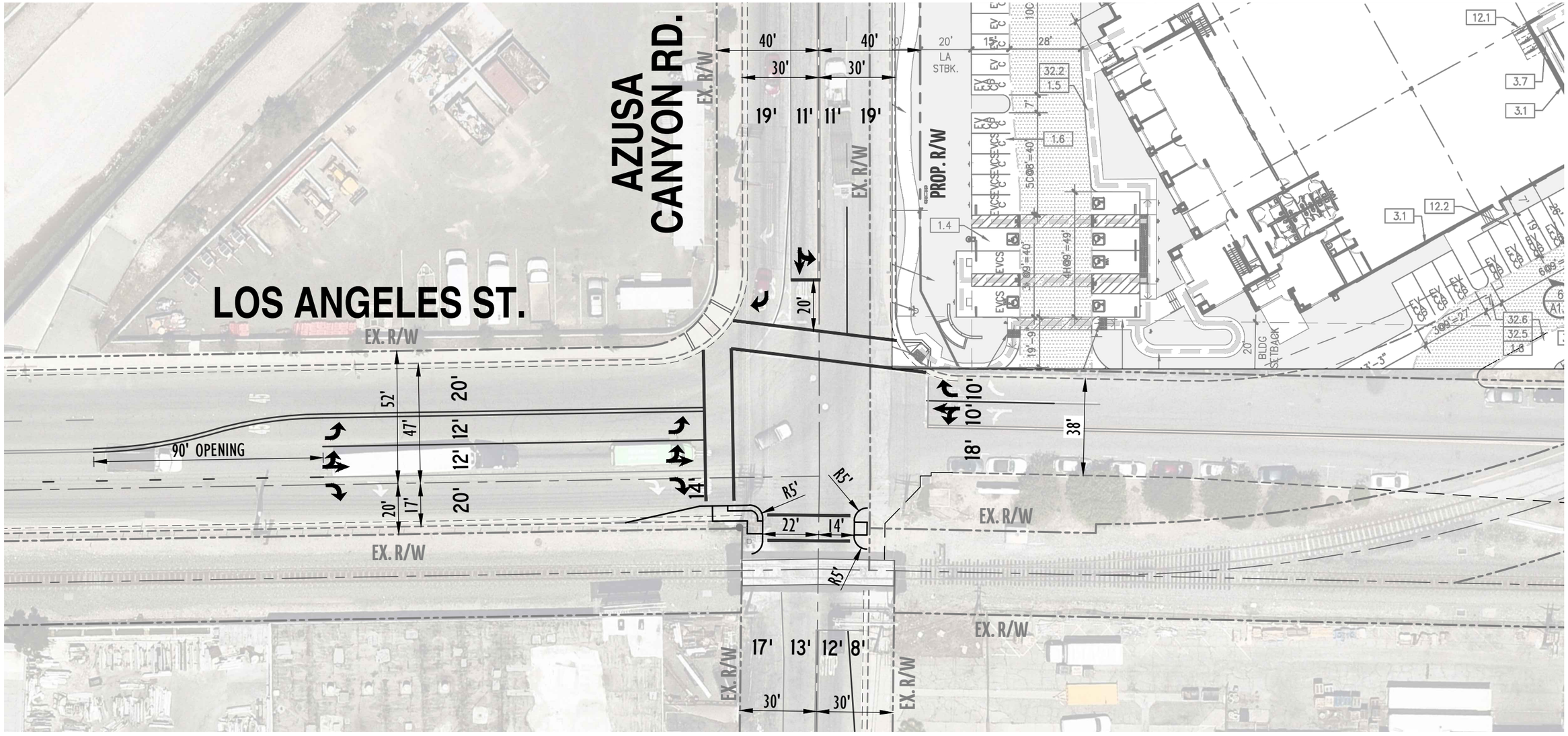
	feet		
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Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

SCALE: 1" = 40' (ON 11" x 17" SHEET)

0 20 40 80 120

AZUSA CANYON RD. AT LOS ANGELES ST.
CONCEPT STRIPING PLAN - ALTERNATIVE 1 (WITH TRUCK TURNS)

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SCALE: 1" = 40' (ON 11" x 17" SHEET)

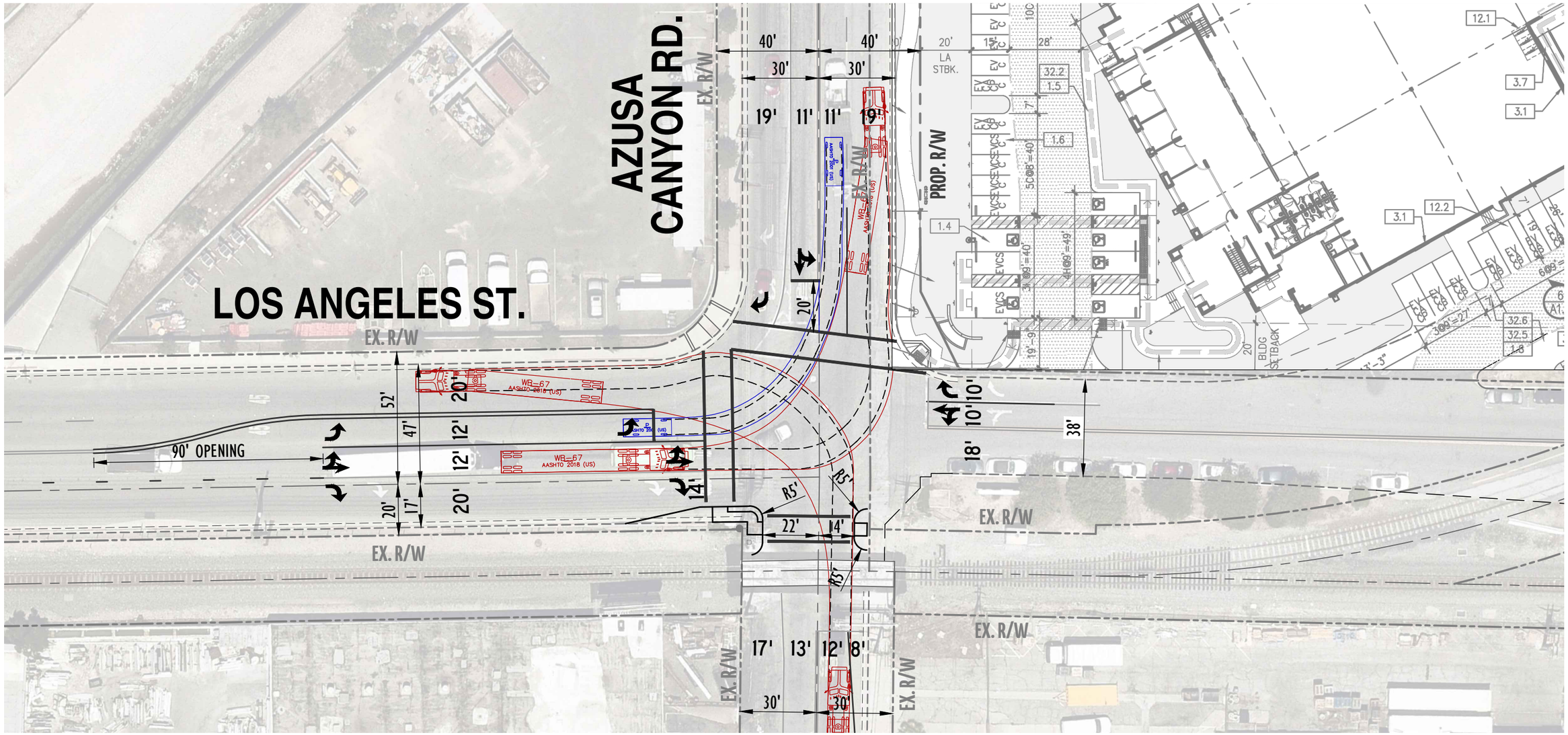
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AZUSA CANYON RD. AT LOS ANGELES ST.
CONCEPT STRIPING PLAN - ALTERNATIVE 2

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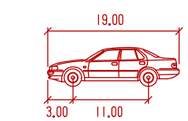
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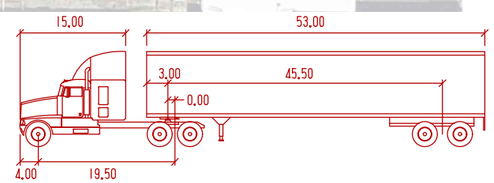
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	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



WB-67

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

AZUSA CANYON RD. AT LOS ANGELES ST.
CONCEPT STRIPING PLAN - ALTERNATIVE 2

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Appendices

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Appendix 6A Azusa Canyon Road Warehouse, Transportation Analysis (11/1/21)

Azusa Canyon Road Warehouse

TRANSPORTATION ANALYSIS

CITY OF IRWINDALE, CALIFORNIA

PREPARED BY:

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NOVEMBER 1, 2021

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LIST OF ABBREVIATED TERMS

[1]	Reference
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
ICU	Intersection Capacity Utilization
ITE	Institute of Transportation Engineers
LOS	Level of Service
PHF	Peak Hour Factor
Project	Azusa Canyon Road Warehouse
TA	Transportation Analysis
V/C	Volume to Capacity

ES EXECUTIVE SUMMARY

The purpose of this traffic impact analysis is to evaluate the proposed Azusa Canyon Road Warehouse Project from a traffic circulation standpoint. The proposed project is located north of Los Angeles Street and east of Azusa Canyon Road, in the City of Irwindale. Exhibit ES-1 illustrates the general vicinity of the project site.

The Proposed Project plans the demolition of the existing on-site buildings and structures for the construction of a stand-alone speculative concrete tilt-up warehouse building (approximately 125,475 square feet).

Exhibit ES-2 illustrates the intersection analysis locations which include the proposed site access driveways, adjacent roadways, and intersections around the site. The intersection analysis locations have been selected based on locations where the project is anticipated to contribute 50 (or more) peak hour trips. The intersection analysis locations have also been refined based on the traffic study scoping and discussions with City staff.

The intersection analysis locations identified on Exhibit ES-2 include five intersections and one driveway along Azusa Canyon Road (Cypress Street, Los Angeles Street, San Bernardino Road, Arrow Highway, Olive Street, and Driveway 1) and two driveways along Los Angeles Street (Driveway 2 and Driveway 3).

For all analysis scenarios, study area intersections meet the minimum guidelines recommended by the City's Traffic Study Guidelines with the exception of #2 Azusa Canyon Road/ Los Angeles and #4 Azusa Canyon Road / Arrow Highway.

The following recommendations are based on the improvements needed to provide acceptable level of service.

Azusa Canyon Road / Los Angeles Street (#2) **–** The following improvements are necessary to address existing deficient operations:

- The Project will be fully responsible in installing a traffic signal control.
- The Project will be fully responsible in modifying lane striping for the eastbound and westbound approach to provide the following :
    - Eastbound approach: 1 left turn lane, 1 shared left/through lane, and maintain existing right turn lane.
    - Westbound approach: 1 left turn lane, 1 shared through/right lane.

Azusa Canyon Road / Arrow Highway (#4) – The project will be partially responsible through contribution on a fair share basis for the following intersection improvements to address existing deficient operations:

- Project to contribute to 3rd westbound through lane.
- Project to contribute to addition of northbound right turn overlap signal phase to existing northbound right turn lane.

EXHIBIT ES-A: Vicinity Map

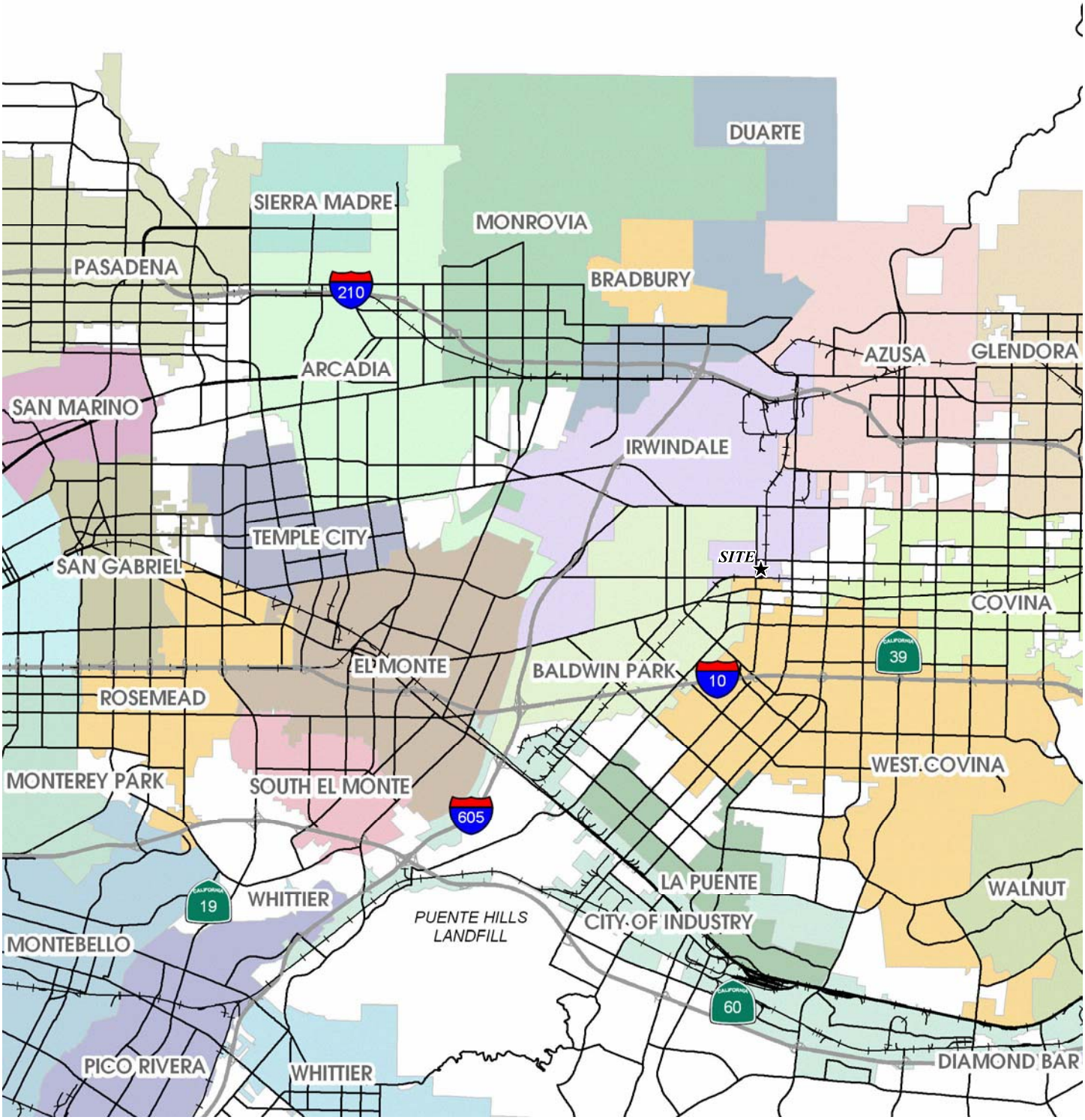
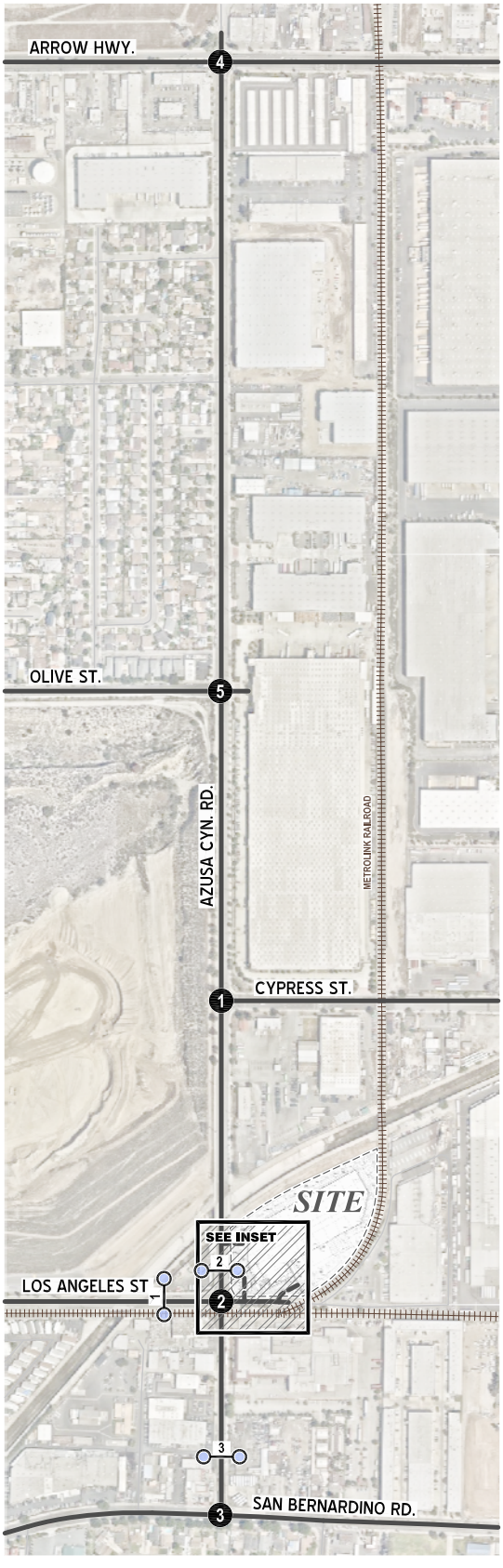
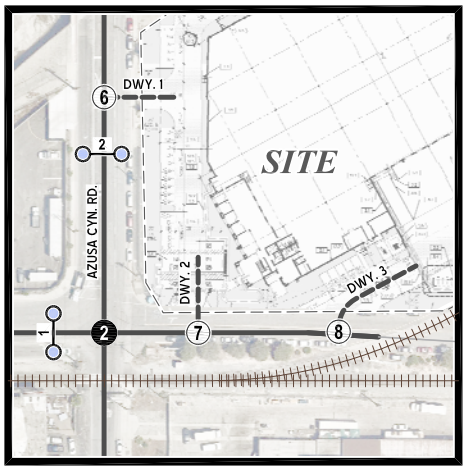


EXHIBIT ES-B: STUDY AREA



INSET



LEGEND:

- 5 = EXISTING ANALYSIS LOCATION
- (3) = FUTURE ANALYSIS LOCATION
- 3 = DAILY COUNT LOCATION
- = FUTURE PROJECT DRIVEWAY

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1 INTRODUCTION

This report presents the results of the transportation analysis (TA) for the proposed Azusa Canyon Road Warehouse development ("Project"), which is located north of Los Angeles Street and east of Azusa Canyon Road (4416 Azusa Canyon Road) in the City of Irwindale, California as shown on Exhibit 1-1.

The purpose of this TA is to evaluate the potential deficiencies to traffic and circulation associated with the development of the proposed Project, and to recommend improvements in order to meet the City's applicable thresholds. The study follows the City of Irwindale, California's Policy Guidelines for Traffic Impact Reports (dated December 30, 2014, "City's Traffic Study Guidelines"). [1]

1.1 PROJECT OVERVIEW

The proposed Project involves the demolition of the existing on-site buildings and structures for the construction of a stand-alone speculative concrete tilt-up warehouse building (approximately 125,475 square feet) (see Exhibit 1-2). The Project is anticipated to be developed within a single phase with an anticipated opening year of 2022. The Project is proposed to have two driveways at Los Angeles Street and one driveway at Azusa Canyon Road.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates published by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual, 10th Edition, 2017. [2] The Project is anticipated to generate a total of 262 two-way trips per day on a typical weekday, with 29 AM peak hour trips and 35 PM peak hour trips with a mixture of passenger car and truck trips. Existing baseline site land uses generate an estimated 110 trip-ends per day with 10 AM peak hour trips and 11 PM peak hour trips, with the mixture of passenger car and truck trips. The proposed Project is anticipated to generate an increase of 222 PCE trip-ends per day with 27 additional AM PCE peak hour trips and 30 additional PM PCE peak hour trips, in comparison to existing baseline site land uses. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.2 ANALYSIS SCENARIOS

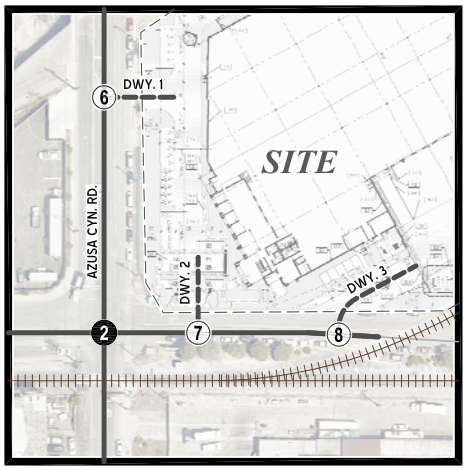
For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following scenarios:

- Existing (hypothetical "non-COVID" 2021)
- Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use
- Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use Plus Proposed Project
- Interim Year Cumulative Plus Site Baseline Land Use Without Proposed Project (2022)
- Interim Year Cumulative Plus Site Baseline Land Use With Proposed Project (2022)
- 2040 Plus Site Baseline Land Use Without Proposed Project
- 2040 Plus Site Baseline Land Use With Proposed Project

EXHIBIT 1-1: LOCATION MAP



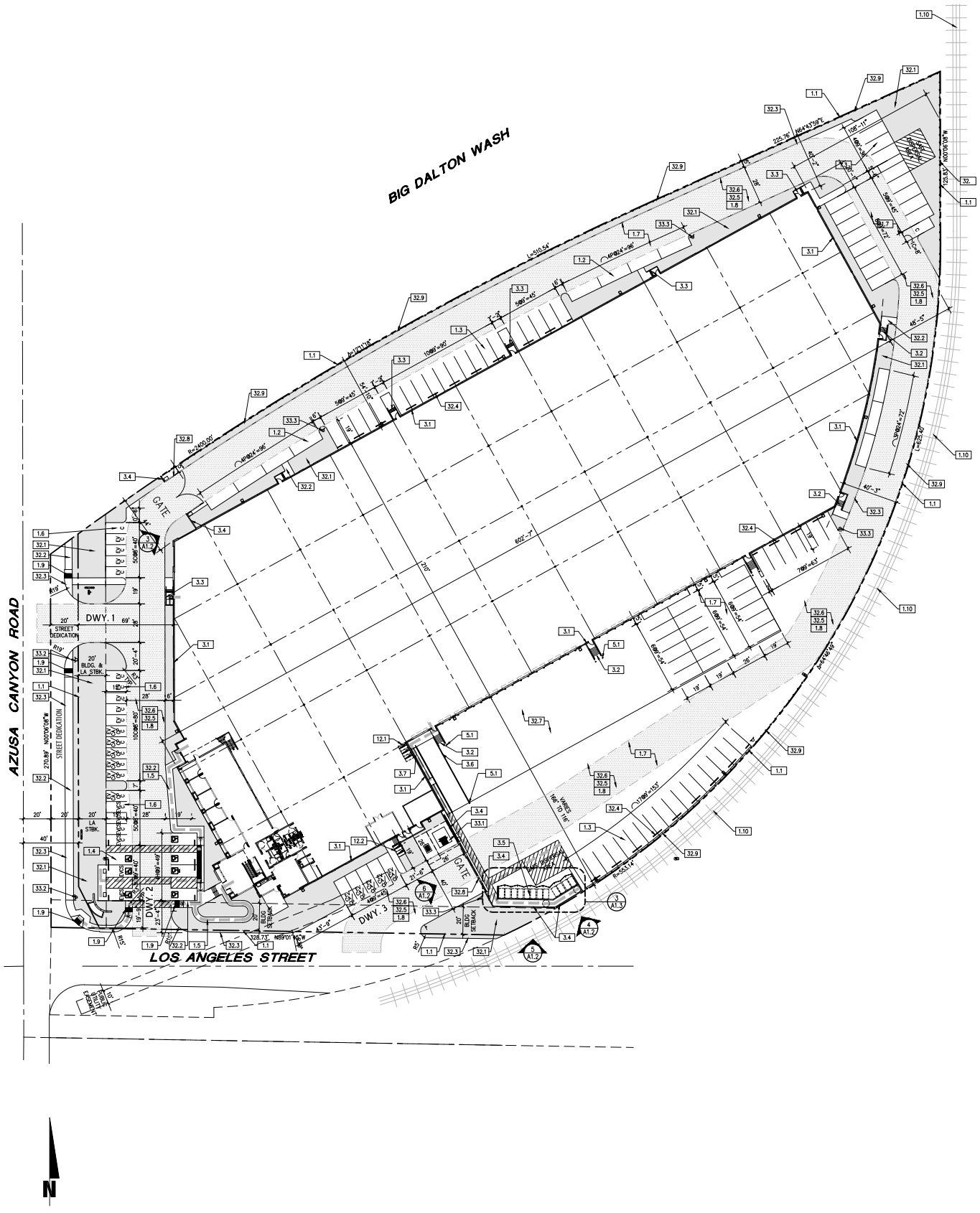
INSET



LEGEND:

- 5 = EXISTING ANALYSIS LOCATION
- 3 = PROJECT DRIVEWAY ANALYSIS LOCATION
- = FUTURE PROJECT DRIVEWAY

EXHIBIT 1-2: PRELIMINARY SITE PLAN



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1.2.1 EXISTING (HYPOTHETICAL "NON-COVID" 2021) CONDITIONS

Information for Existing conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. In light of the currently ongoing COVID-19 pandemic, traffic counts need to be modified to present hypothetical conditions without reductions in traffic associated with closures of schools and local businesses. Pursuant to the approved scoping agreement, historic traffic counts from other studies within the area were utilized and adjusted.

Peak hour 2014 traffic volumes in PCE (passenger car equivalent) have been derived from the Olive Pit Mining and Reclamation Project Traffic Impact Analysis Report, July 2014, prepared by Urban Crossroads, for the intersections of Azusa Canyon Road/Cypress Street (#1), Azusa Canyon Road/Los Angeles Street (#2), Azusa Canyon Road/Arrow Highway (#4), and Azusa Canyon Road/Olive Street (#5). Daily counts (in PCE) were also derived from the Olive Pit 2014 study on Azusa Canyon Road, north of Los Angeles Street and Los Angeles Street, west of Azusa Canyon Road.

These 2014 counts have been adjusted by adding 7 years of background (ambient) growth at the rate of 2% per year, total of 14.9% compounded over a 7-year period in order to estimate hypothetical "non-COVID" 2021 conditions.

New classified traffic counts have also been collected in June 2021 during the following timeframes: 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM for the 5 existing intersection analysis locations (Azusa Canyon Road at / Cypress Street, Azusa Canyon Road / Los Angeles Street, Azusa Canyon Road / Olive Street, and Azusa Canyon Road / Arrow Highway, and Azusa Canyon Road / San Bernardino Road). Classified daily vehicle counts have also been collected in June 2021 at Los Angeles Street west of Azusa Canyon Road, Azusa Canyon Road north of Los Angeles Street, and Azusa Canyon Road north of San Bernardino Street.

At the four intersection locations where 2014 counts are available, the June 2021 counts are compared to the hypothetical "non-COVID" volume estimates (estimated using growth assumptions).

1.2.2 EXISTING (HYPOTHETICAL "NON-COVID" 2021) PLUS SITE BASELINE LAND USE CONDITIONS

Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use conditions represents conditions without COVID travel changes, but with the baseline site uses. A comparison of the Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use (2021) With Project and Without Project traffic conditions analyses determine the effect of the potential Project on Existing Baseline conditions.

1.2.3 INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE (2022) CONDITIONS

A comparison of the Interim Year Cumulative Plus Site Baseline Land Use (2022) With Project and Without Project traffic conditions analyses determine the potential near-term cumulative circulation system deficiencies. The Interim Year volumes include the existing site baseline land uses. To account for background traffic growth, an ambient growth factor of 1.02% (2 percent

per year for 1 year). Conservatively, the TA estimates the area ambient traffic growth for 2022 conditions and then adds traffic generated by other known or probable related projects in conjunction with Project traffic. These related projects are at least in part already accounted for in the assumed 2% of ambient growth; and some of these related projects would likely not be implemented and operational within the 2022 Interim Year time frame assumed for the Project.

1.2.4 2040 Plus Site Baseline Land Use Conditions

A comparison of the 2040Plus Site Baseline Land Use With Project and Without Project traffic conditions analyses determine the potential long range cumulative circulation system deficiencies. The 2040 volumes include the existing site baseline land uses.

1.3 Study Area

The study area was defined in conformance with the requirements of the City of Irwindale, California Traffic Study Guidelines. A traffic study scoping agreement summarizing the study area, trip generation, trip distribution and analysis methodology was provided to the City of Irwindale, California for review. The agreement approved by the City of Irwindale, California is included in Appendix 1.1.

The eight study area intersection locations shown on Exhibit 1-1 and listed in Table 1-1 were selected for this TA based on an approved scoping agreement with the City of Irwindale, California.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location
1	Azusa Canyon Road / Cypress Street
2	Azusa Canyon Road / Los Angeles Street
3	Azusa Canyon Road / San Bernardino Road
4	Azusa Canyon Road / Arrow Highway
5	Azusa Canyon Road / Olive Street
6	Azusa Canyon Road / Driveway 1
7	Los Angeles Street / Driveway 2
8	Los Angeles Street / Driveway 3

1.4 Analysis Findings

This section provides a summary of the analysis results for Existing, Interim Year Cumulative, and 2040 traffic conditions. For all study area intersections, analysis results are provided using the Highway Capacity Manual (HCM) [4] methodology for signalized and unsignalized intersections and Intersection Capacity Utilization (ICU) is also utilized evaluate signalized intersections.

Existing (2021) Conditions

For Existing (hypothetical "non-COVID" 2021), Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use, and Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use Plus Proposed Project conditions, the study area intersections meet the minimum guidelines recommended by the City's Traffic Study Guidelines with the exception of #2 Azusa Canyon Road/ Los Angeles and #4 Azusa Canyon Road / Arrow Highway.

Interim Year Cumulative Plus Site Baseline Land Use (2022) With Project Conditions

For Interim Year Cumulative Plus Site Baseline Land Use and for Interim Year Cumulative Plus Site Baseline Land Use Plus Proposed Project conditions, the study area intersections meet the minimum guidelines recommended by the City's Traffic Study Guidelines with the exception of #2 Azusa Canyon Road/ Los Angeles and #4 Azusa Canyon Road / Arrow Highway.

2040 Plus Site Baseline Land Use With Project Conditions

For 2040 Plus Site Baseline Land Use and for 2040 Plus Site Baseline Land Use Plus Proposed Project conditions, the study area intersections meet the minimum guidelines recommended by the City's Traffic Study Guidelines with the exception of #2 Azusa Canyon Road/ Los Angeles and #4 Azusa Canyon Road / Arrow Highway.

1.5 RECOMMENDATIONS

1.5.1 SITE ADJACENT AND SITE ACCESS RECOMMENDATIONS

The following recommendations are based on the improvements needed to provide acceptable level of service. Exhibit 1-3 shows the site access recommendations.

Azusa Canyon Road / Los Angeles Street (#2) – The following improvements are necessary to address existing deficient operations:

- Project will be fully responsible in installing a traffic signal control.
- Project will be fully responsible in modifying the existing striping for the eastbound and westbound approach to provide the following lane configuration:
    - Eastbound: 1 left turn, 1 shared left/through lane, and maintain existing right turn lane
    - Westbound: 1 left turn and 1 shared through/right lane.

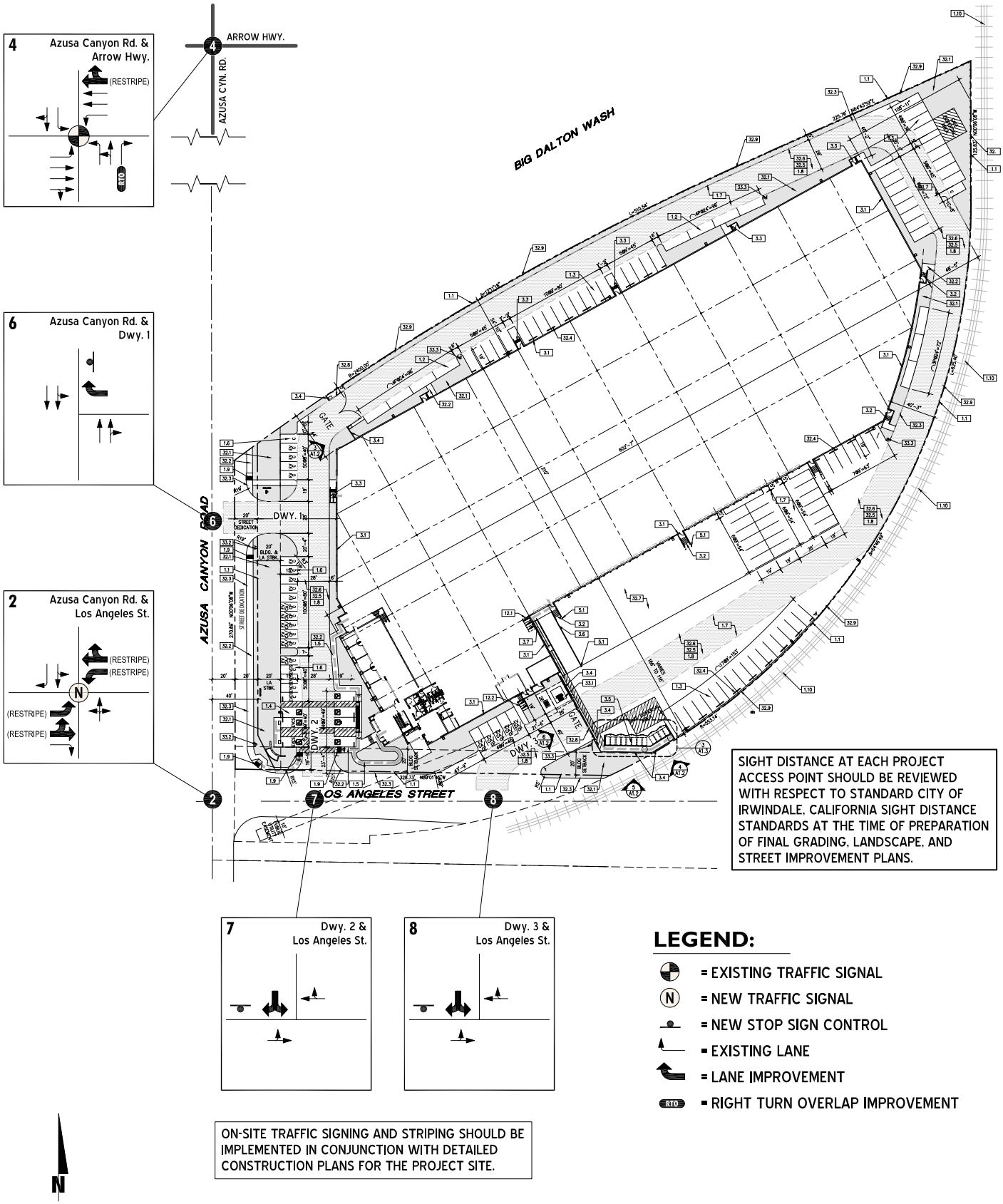
Azusa Canyon Road / Arrow Highway (#4) – The following improvements are necessary to address existing deficient operations:

- Project will be partially responsible and contribute to 3rd westbound through lane.
- Project will be partially responsible and contribute to the addition of a northbound right turn overlap signal phase to an existing northbound right turn lane.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard City of Irwindale, California sight distance standards at the time of preparation of final grading, landscape, and street improvement plans.

EXHIBIT 1-3: SITE ACCESS RECOMMENDATIONS



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1.5.2 PROJECT FAIR SHARE CALCULATIONS

Per City of Irwindale Guidelines, the project shall pay its fair share of improvements to eliminate any of the significant impacts. Based on the intersection analysis results (see Table 9-1), the project is anticipated to contribute additional traffic causing significant impacts up to 2040 conditions, fair share calculation is therefore based on 2040 conditions to address all significant impacts caused by the project.

The Project fair share calculation (see Table 9-1) indicates that the project contributes approximately 9% of the new traffic at the intersection of Azusa Canyon Road / Los Angeles Street (#2) and 2% of the new traffic at the intersection of Azusa Canyon Road / Arrow Highway (#4).

It should be noted however that due the Project's proximity to the intersection of Azusa Canyon Road/Los Angeles Street (#2), the Project will be fully responsible for the installation of traffic signal and lane striping modification improvements at this intersection. For the intersection improvements at Azusa Canyon Road/Arrow Highway (#4), the Project will be partially responsible and contribute on a fair share basis.

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2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with the City of Irwindale, California traffic study requirements. [1]

Pursuant to City of Irwindale, California Traffic Impact Analysis Policy Guidelines, the current Highway Capacity Manual (HCM) methodology is used to evaluate study area intersections. The Highway Capacity Manual (HCM) (6th Edition) [4] utilizes a saturation flow rate of 1,900 vehicles per hour of green (vphg) per lane in each scenario for intersection delay calculation purposes. In addition, all signalized study area intersections are analyzed using the Intersection Capacity Utilization (ICU) technique. To calculate an ICU, the volume of traffic using the intersection is compared with the capacity of the intersection. ICU is usually expressed as a volume to capacity (V/C) ratio. The V/C represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. ICU analysis is performed using the Synchro 11 software.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. LOS analysis was conducted to determine existing traffic conditions.

2.2.1 SIGNALIZED INTERSECTIONS

Signalized intersection operations have been evaluated based on the methodology described in the HCM.[4] Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections within the City of Irwindale, California. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and

capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM, 6th Edition

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. [4]

For all study area signalized intersections, ICU analysis will also be performed using the Synchro 11 software. It should be noted that the Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information. Therefore, consistent with the City's guidelines, both the Synchro v/c ratio (ICU) and delay results will be presented in the report.

Level of Service	Critical Volume-to-Capacity Ratio
A	0.00 - 0.60
B	0.61 - 0.70
C	0.71 - 0.80
D	0.81 - 0.90
E	0.91 - 1.00
F	>1.00

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Irwindale, California requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM (6th Edition). [4] The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION HCM LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM (6th Edition)

At two-way or side-street stop-controlled intersections, the LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole, but rather the delay/associated LOS is reported for the minor street turning movement with the highest delay. For all-way stop controlled intersections, LOS is based solely on control delay for assessment of LOS at the approach and intersection levels. For side-street stop-controlled intersections, the highest delay and associated LOS is reported (typically the left turn movement on the minor street).

The traffic modeling software package Synchro (Version 10) has been utilized to analyze unsignalized intersections within the study area. Synchro is a macroscopic traffic software program that is based on the unsignalized intersection capacity analysis as specified in the HCM (6th Edition). [4]Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by the Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the California Department of Transportation (Caltrans) CA MUTCD for all study area intersections. [5]

The signal warrant criteria for Existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The Caltrans CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. [5] Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing study area intersections for all analysis scenarios. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Traffic signal warrant analysis was performed for the unsignalized intersection of Azusa Canyon Road at Los Angeles Street. The traffic signal warrant analysis is presented in the subsequent Section 3 *Area Conditions* of this report..

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified.

2.4 LOS CRITERIA

City of Irwindale requires that LOS will not exceed LOS “D” at all intersections (excluding State Highway facilities) on arterial and collector streets.

In addition, a significant impact occurs in one of the following cases:

- When a signalized intersection operates at mid-range LOS “D” (45.0 seconds) or better under existing or future baseline conditions, and the addition of project trips degrades the intersection operations to LOS “E” or “F”. The project mitigation should bring the facility to operate at mid-range LOS “D” at minimum.
- When a signalized intersection operates at mid-range LOS “E” (67.5 seconds) for State Highways or better under existing or future baseline conditions, and the addition of project trips degrades the intersection operations to 67.6 seconds (LOS “E”) or worse (LOS “F”). The project mitigation should bring the facility to operate at mid-range LOS “E” at minimum.
- When a signalized intersection operates at LOS “E” for non-state or LOS “F” (for State) under existing or future baseline conditions, and the addition of more than 50 peak hour project trips

contributes to the continuing operational failure at the intersection. The project mitigation should bring the facility to pre-project conditions.

- At an unsignalized intersection, when the minor stop-controlled approach operates at LOS "F" and does not have acceptable operation in terms of total control delay, and the addition of project trips increases the total control delay to more than 4.0 vehicle hours for a single lane approach or 5.0 vehicle hours for a multi-lane approach. The project mitigation should bring the facility to operate at LOS "E" (at a minimum) or bring the total control delay to less than 4.0 vehicle-hours for a single lane approach or 5.0 vehicle-hours for a multi-lane approach (at a minimum).
- At an unsignalized intersection, when the minor stop controlled approach operates at LOS "F" and does not have an acceptable operation in terms of total control delay, and the addition of more than 50 peak hour project trips contributes to the continuing operational failure at the minor approach. The project mitigation should bring the facility to pre-project conditions

2.5 LOS ANGELES COUNTY CONGESTION MANAGEMENT PROGRAM (CMP) CONSISTENCY REQUIREMENTS

The proposed project is located within the jurisdiction of the City of Irwindale in Los Angeles County. Therefore, this traffic study is required to address all CMP requirements of the Los Angeles County Congestion Management Program. The purpose of the Los Angeles County Congestion Management Program (CMP) is to address the impact of local growth on the regional transportation system. The goals of the CMP are summarized below:

- To link local land use decisions with their impacts on regional transportation, and air quality;
- To develop a partnership among transportation decision makers on devising appropriate transportation solutions that include all modes of travel; and
- To provide transportation projects which are eligible to compete for state gas tax funds.

The CMP offers the following mechanisms to meet these goals:

- Tracking and analysis to determine how the regional highway and transit systems are performing;
- Analysis of the impacts of local land use decisions on regional transportation;
- Local implementation of Transportation Demand Management design guidelines that ensure new development includes improvements supportive of transit and TDM;
- Tracking new building activity throughout Los Angeles County; and Implementation of local strategies which benefit the regional transportation system and offset the impact of new development.

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3 AREA CONDITIONS

This section provides a summary of the existing circulation network, City's Circulation Element Network, and a review of existing peak hour intersection operations analyses.

3.1 EXISTING CIRCULATION NETWORK

The study area includes a total of eight existing and future intersections as shown previously on Exhibit 1-1. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF IRWINDALE, CALIFORNIA CIRCULATION NETWORK

As previously noted, the Project site is located within the City of Irwindale, California. Exhibit 3-2 shows street classification network, as identified in the City's Circulation Element. [6]

Major Highways are the most highly traveled routes which require more than 4 lanes of travel, channelized medians, and access control/limitations on intersecting streets. The typical right-of-way width for these highways is 100 feet. Alternative major highway sections may be established by the County to accommodate features such as raised medians, bicycle facilities, and wider parkways with varying right-of-way widths. The following study area roadway is designated as a major highway:

- Arrow Highway

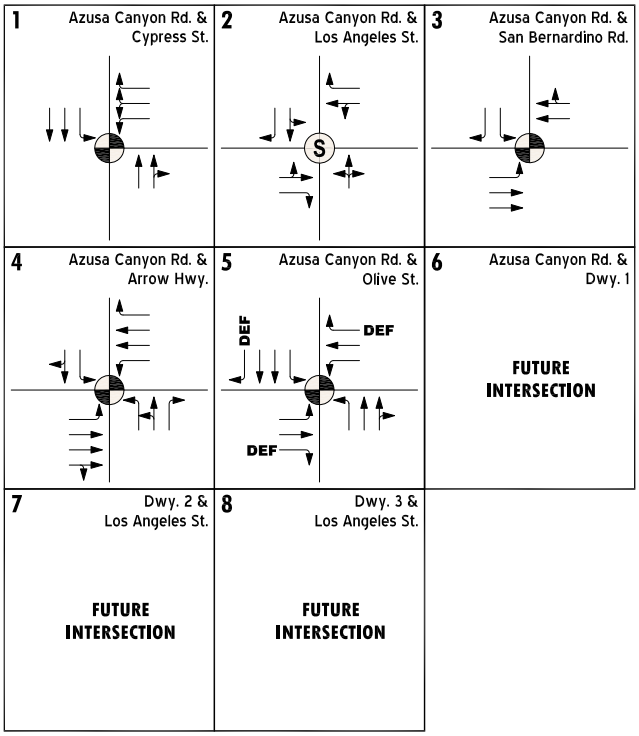
Secondary Highways are less heavily traveled than major arterials and act as oversized collector roads that are intended to remove heavier traffic from local streets. Although not required, access control is also desirable along these roadways. Secondary highways generally have four lanes of vehicular traffic on 80 feet of right-of-way. However, configuration and width may vary with traffic demand and existing conditions. In a few cases, routes that carry major highway levels of traffic are classified as secondary highways because it is impractical to widen them to major highway standards. Alternative secondary highway sections may be established by the County to accommodate features such as raised medians, bicycle facilities, and wider parkways with varying right-of-way widths. The following study area roadways are designated as a Secondary Highway:

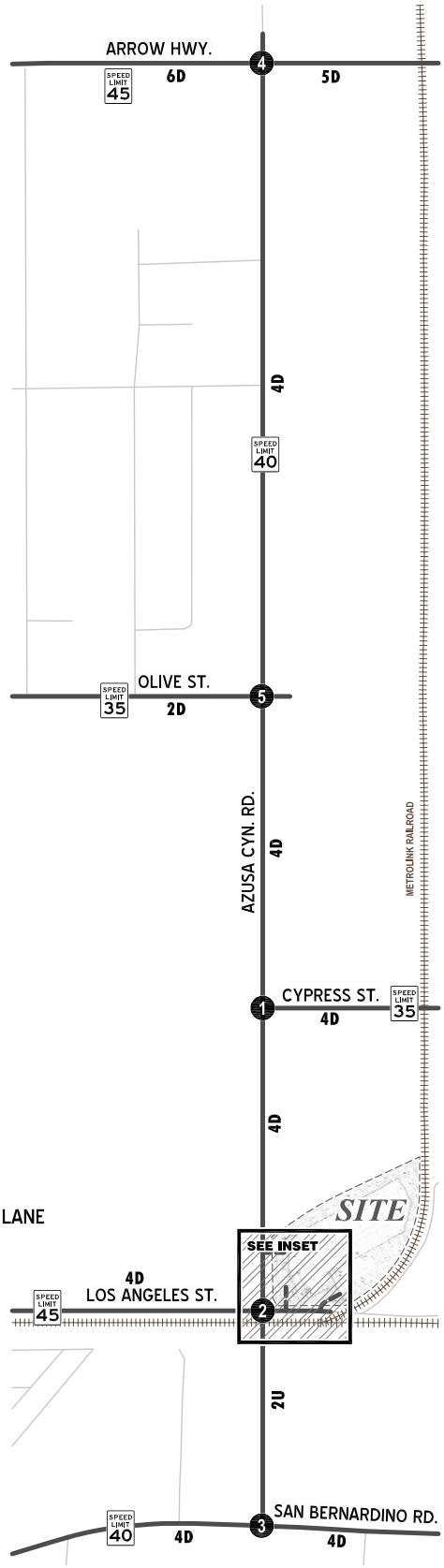
- Azusa Canyon Road
- Cypress Street
- Los Angeles Street

3.3 TRANSIT SERVICE

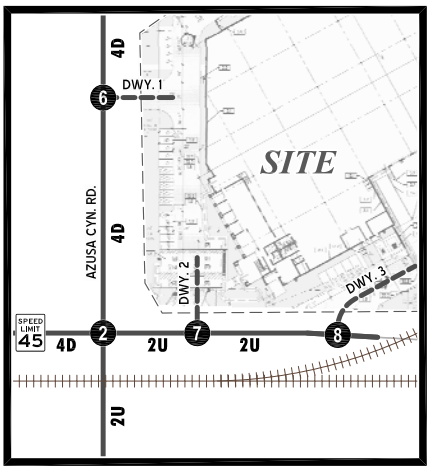
The study area is currently served by the Foothill Transit Agency with bus service along Arrow Highway via Route 492. San Bernardino Road, within the study area, is served by Metro via route 190/194.

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS





INSET

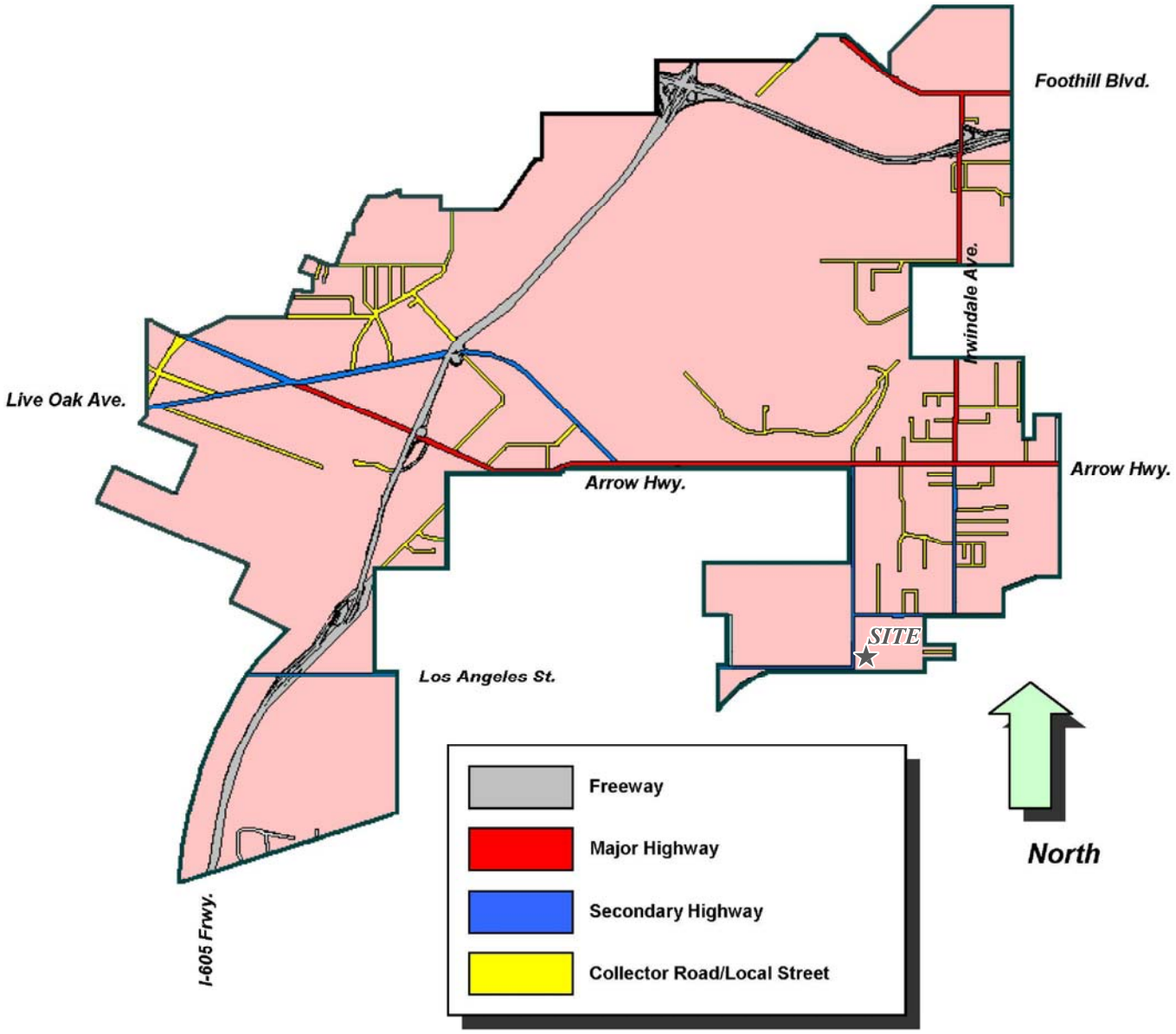


LEGEND:

- 8 = INTERSECTION ID
- = TRAFFIC SIGNAL
- S = ALL WAY STOP
- = STOP SIGN
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- DEF = DEFACTO RIGHT TURN LANE

N

EXHIBIT 3-2: CITY OF IRWINDALE GENERAL PLAN CIRCULATION ELEMENT



3.4 TRUCK ROUTE

Exhibit 3-3 shows the City of Irwindale truck routes, as identified in the City's General Plan. [6]. As shown in Exhibit 3-3, Arrow Highway is a designated truck route within the study area.

3.5 BICYCLE & PEDESTRIAN FACILITIES

Existing pedestrian and bicycle facilities (e.g., crosswalks, sidewalks, bike lanes, etc.) within the study area are shown on Exhibit 3-4. As shown in Exhibit 3-4, the only existing bike path within the study area is located on Big Dalton Wash.

The City of Irwindale has a draft Active Transportation Plan released in January 2021. Proposed bikeways are shown on Azusa Canyon Road, Los Angeles Street, and Arrow Highway. Recommended pedestrian improvements are shown along Arrow Highway and Big Dalton Wash, with high visibility continental crosswalks at the intersections of Azusa Canyon Road with Arrow Highway and Los Angeles Street.

3.6 EXISTING TRAFFIC COUNTS

Information for Existing conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. In light of the currently ongoing COVID-19 pandemic, traffic counts need to be modified to present hypothetical conditions without reductions in traffic associated with closures of schools and local businesses. Pursuant to the approved scoping agreement, historic traffic counts from other studies within the area were utilized and adjusted.

Peak hour 2014 traffic volumes in PCE (passenger car equivalent) have been derived from the Olive Pit Mining and Reclamation Project Traffic Impact Analysis Report, July 2014, prepared by Urban Crossroads, for the intersections of Azusa Canyon Road/Cypress Street (#1), Azusa Canyon Road/Los Angeles Street (#2), Azusa Canyon Road/Arrow Highway (#4), and Azusa Canyon Road/Olive Street (#5). Daily counts (in PCE) were also derived from the Olive Pit 2014 study on Azusa Canyon Road, north of Los Angeles Street and Los Angeles Street, west of Azusa Canyon Road.

These 2014 counts have been adjusted by adding 7 years of background (ambient) growth at the rate of 2% per year, total of 14.9% compounded over a 7-year period in order to estimate hypothetical "non-COVID" 2021 conditions.

New traffic counts have also been collected in June 2021 during the following timeframes: 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM for the 5 existing intersection analysis locations (Azusa Canyon Road at / Cypress Street, Azusa Canyon Road / Los Angeles Street, Azusa Canyon Road / Olive Street, and Azusa Canyon Road / Arrow Highway, and Azusa Canyon Road / San Bernardino Road). These counts include vehicle classification (passenger cars, buses/recreational vehicles, 3 axle trucks, and 4 or more axle trucks) and have been converted to PCE. To represent the impact large trucks, buses and recreational vehicles have on traffic flow; trucks are converted into passenger car equivalents (PCEs). By their size alone, these vehicles occupy the same space as

EXHIBIT 3-3: CITY OF IRWINDALE TRUCK ROUTES

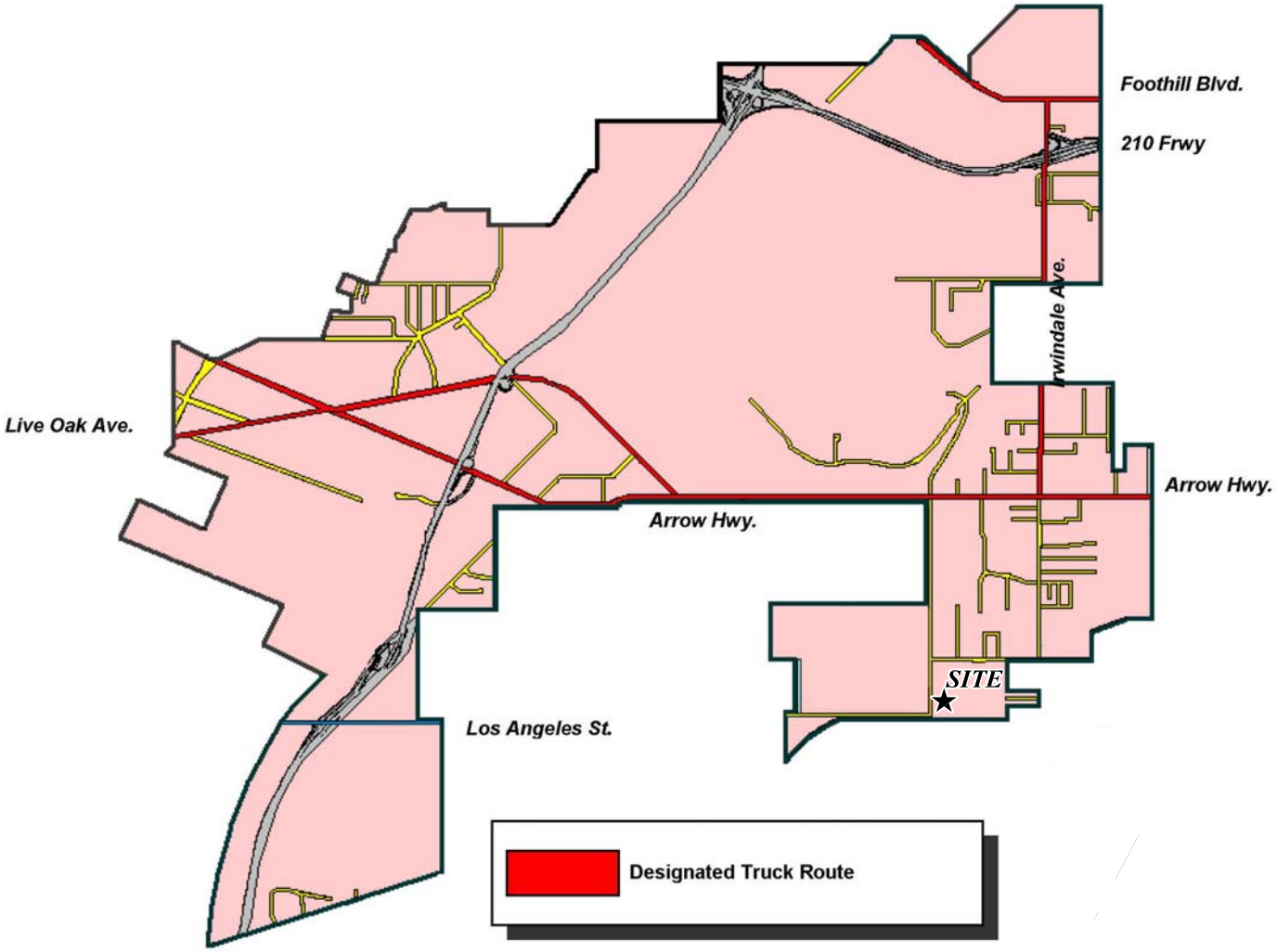
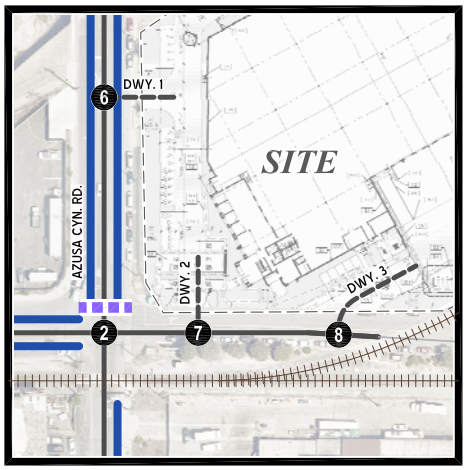




EXHIBIT 3-4: EXISTING PEDESTRIAN AND BICYCLE FACILITIES



INSET



LEGEND:

- 8 = INTERSECTION ID
- = BUS STOP
- = SIDEWALK/PATH
- = CROSSWALK

two or more passenger cars. In addition, the time it takes for them to accelerate and decelerate is also much longer than for passenger cars, and varies depending on the type of vehicle and number of axles. For the purpose of this analysis, a PCE factor of 1.5 will be applied to 2-axle trucks, 2.0 for 3-axle trucks and 3.0 for 4+-axle trucks to estimate each turning movement.

Classified daily vehicle counts have also been collected in June 2021 at Los Angeles Street west of Azusa Canyon Road, Azusa Canyon Road north of Los Angeles Street, and Azusa Canyon Road north of San Bernardino Street.

At the four intersection locations where 2014 counts are available, the June 2021 counts are compared to the hypothetical "non-COVID" volume estimates (estimated using growth assumptions).

Average morning and evening peak hour volume comparison at the four locations where 2014 data is available, indicate that the hypothetical 2021 ("non-COVID") are approximately 54.13% higher than the June 2021 counts (see table below).

ESTIMATED "NON-COVID" 2021 COUNTS AND NEW 2021 (COVID) PEAK HOUR COUNTS VOLUMES COMPARISON SUMMARY

ID	Intersection	Existing 2021 (Estimated) [1] (Non-COVID)			Existing 2021 Counts (COVID)		
		AM	PM	TOTAL	AM	PM	TOTAL
1	Azusa Canyon Rd. / Cypress St.	2,047	2,137	**4,184**	934	1,356	**2,290**
2	Azusa Canyon Rd. / Los Angeles St.	1,507	1,928	**3,435**	875	1,369	**2,244**
4	Azusa Canyon Rd. / Arrow Hwy.	4,180	3,858	**8,038**	2,716	3,167	**5,883**
5	Azusa Canyon Rd. / Olive St.	1,607	1,534	**3,141**	749	1,030	**1,779**
TOTAL		9,341	9,457	**18,798**	5,274	6,922	**12,196**
AVERAGE AM/PM HISTORICAL COUNT % FACTOR (to be applied to the 2021 COVID counts)							**54.13%**

[1] 2014 counts from Olive Pit Mining and Reclamation Project Traffic Impact Analysis (June 2014) + 14.9% compounded over 7-year period (2% per year).

These adjustments have been applied to the new 2021 intersection counts. Existing weekday AM and weekday PM peak hour intersection volumes are also shown on Exhibit 3-5. The 2021 raw manual peak hour turning movement traffic count data sheets are included in Appendix "3.1".

Average daily traffic volume comparison at the two locations where 2014 data is available, indicate that the hypothetical 2021 ("non-COVID") are approximately 20.51% higher than the June 2021 counts (see table below).

ESTIMATED "NON-COVID" 2021 COUNTS AND NEW 2021 (COVID) DAILY COUNTS VOLUMES COMPARISON SUMMARY

ID	Roadway Segment	EXISTING ADT COUNTS	
		Existing 2021 (Estimated) [1] (Non-COVID)	Existing 2021 Counts (COVID)
		ADT	ADT
1	Azusa Cyn., north of Los Angeles St.	13,957	11,699
2	Los Angeles St., west of Azusa Cyn. Rd.	12,366	10,144
TOTAL		26,323	21,843
GROWTH			**20.51%**

[1] 2014 counts from Olive Pit Mining and Reclamation Project Traffic Impact Analysis (June 2014) + 14.9% compounded over 7-year period (2% per year).

The estimated Existing 2021 "non-COVID-19" weekday ADT volumes on arterial highways throughout the study area are also shown on Exhibit 3-5. Where counts are unavailable, the following formula for each intersection leg has been utilized:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 11.628 = Leg Volume

For the roadway segments along Azusa Canyon Road, north and south of Los Angeles Street, and Los Angeles Street, west of Azusa Canyon Road has 24-hour tube count data available in close proximity to the study area, a comparison between the estimated PM peak hour and daily traffic count volumes indicated that a PM peak-to-daily relationship of approximately 8.6 percent would sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. As such, the above equation utilizing a factor of 11.628 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 8.60 percent (i.e., 1/0.0860 = 11.628).

3.6 EXISTING CONDITIONS INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA. As shown in Table 3-1, the following intersections are currently operating at an unacceptable level of service (LOS "E" or worse):

- #2 – Azusa Canyon Road / Los Angeles Street
- #4 - Azusa Canyon Road / Arrow Highway

3.7 EXISTING TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. The unsignalized study area intersection of Azusa Canyon Road / Los Angeles Street currently warrants a traffic signal for Existing (2021) traffic conditions. Existing conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3. It should be noted that the unsignalized Project Driveway intersections are not anticipated to meet warrants for future conditions.

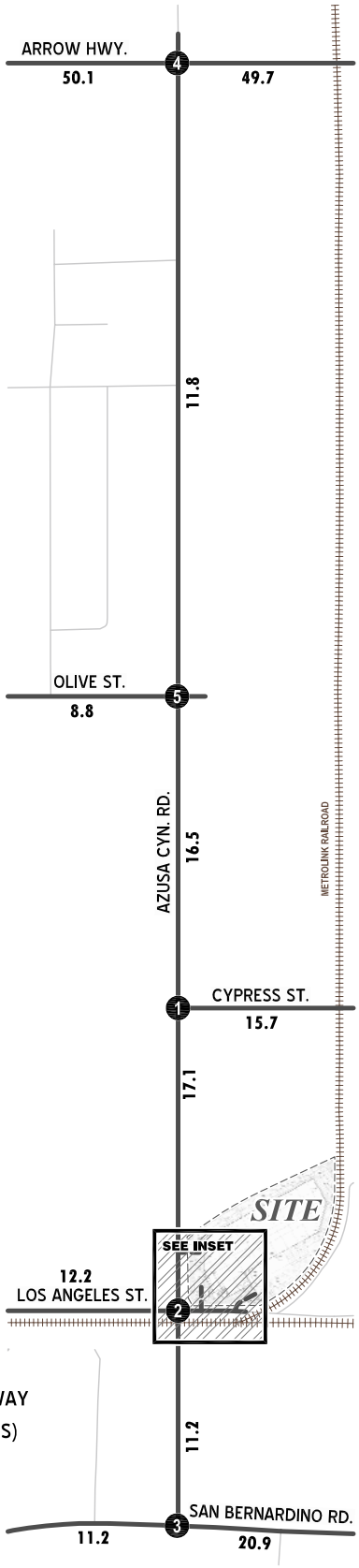
EXHIBIT 3-5: EXISTING (HYPOTHETICAL "NON-COVID" 2021) TRAFFIC VOLUMES (PCE)

AM PEAK HOUR

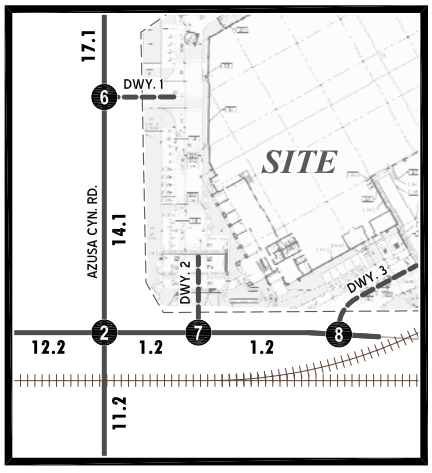
1 Azusa Canyon Rd. & Cypress St. 216, 146, 379, 236, 305, 168	**2** Azusa Canyon Rd. & Los Angeles St. 274, 151, 14, 18, 5, 6, 194, 9, 186, 225, 257, 8	**3** Azusa Canyon Rd. & San Bernardino Rd. 76, 259, 427, 341, 77, 145	**4** Azusa Canyon Rd. & Arrow Hwy. 40, 12, 20, 42, 2178, 140, 25, 945, 199, 432, 17, 137
5 Azusa Canyon Rd. & Olive St. 32, 240, 3, 1, 1, 71, 2, 122, 122, 550, 12	**6** Azusa Canyon Rd. & Dwy. 1 **DATA NOT AVAILABLE**	**7** Dwy. 2 & Los Angeles St. **DATA NOT AVAILABLE**	**8** Dwy. 3 & Los Angeles St. **DATA NOT AVAILABLE**

PM PEAK HOUR

1 Azusa Canyon Rd. & Cypress St. 431, 445, 202, 177, 336, 523	**2** Azusa Canyon Rd. & Los Angeles St. 190, 424, 9, 17, 20, 37, 512, 6, 396, 173, 316, 11	**3** Azusa Canyon Rd. & San Bernardino Rd. 151, 748, 365, 348, 126, 339	**4** Azusa Canyon Rd. & Arrow Hwy. 46, 11, 32, 35, 1315, 217, 39, 2408, 339, 160, 14, 265
5 Azusa Canyon Rd. & Olive St. 72, 529, 1, 1, 1, 3, 105, 1, 344, 233, 305, 1	**6** Azusa Canyon Rd. & Dwy. 1 **DATA NOT AVAILABLE**	**7** Dwy. 2 & Los Angeles St. **DATA NOT AVAILABLE**	**8** Dwy. 3 & Los Angeles St. **DATA NOT AVAILABLE**



INSET



LEGEND:

- # = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)

N

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URBAN CROSSROADS

TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (HYPOTHETICAL "NON-COVID" 2021) CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												HCM				ICU			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM
1	Azusa Canyon Rd. / Cypress St.	TS	0	2	0	1	2	0	0	0	0	1	1!	1	20.6	31.5	C	C	0.30	0.59	A	A
2	Azusa Canyon Rd. / Los Angeles St.	AWS	0	1!	0	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	31.8	**94.7**	D	**F**	-	-	-	-
3	Azusa Canyon Rd. / San Bernardino Rd.	TS	0	0	0	1	0	d	1	2	0	0	2	0	20.6	30.4	C	C	0.39	0.76	A	C
4	Azusa Canyon Rd. / Arrow Hwy.	TS	1.5	0.5	1	1	1	0	1	3	0	1	2	d	51.2	**59.8**	D	**E**	**0.93**	0.82	**E**	D
5	Azusa Canyon Rd. / Olive St.	TS	1	2	0	1	2	d	1	1	d	1	1	d	15.1	27.0	B	C	0.32	0.43	A	A

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

" - " value is shown for unsignalized ICU values. Delay and level of service is calculated using Synchro 11 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop

[4] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network.

The Project is anticipated to be developed within a single phase with an anticipated opening year of 2022. The Project is proposed to have two full access driveways at Los Angeles Street and one right-out/left-in only driveway at Azusa Canyon Road.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development. The ITE Trip Generation Manual (10th Edition, 2017) is a nationally recognized source for estimating site-specific trip generation. [2]

In order to estimate the traffic characteristics of the Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition, 2017) manual for ITE Land Use Code 150 (Warehousing) and 140 (Manufacturing) are utilized.

For purposes of this TA, the Project consists of 112,830 square feet of warehouse and 17,000 square feet of manufacturing. The site was previously occupied by Pepsi, which is the existing baseline site use.

Trip generation rates and resulting calculations for the proposed Project are shown on Table 4-1. The Project is anticipated to generate 262 trip-ends per day with 29 AM peak hour trips and 35 PM peak hour trips, with the mixture of passenger car and truck trips as shown in Table 4-1.

Table 4-2 presents the anticipated Passenger Car Equivalent (PCE) trip-ends for the proposed Project, resulting in 362 daily PCE trips with 45 AM PCE peak hour trips and 46 PM PCE peak hour trips.

Vehicle trip generation rates and resulting values for the existing baseline land uses at the Project site are shown in Table 4-3. Existing baseline site land uses generate an estimated 110 trip-ends per day with 10 AM peak hour trips and 11 PM peak hour trips, with the mixture of passenger car and truck trips as shown in Table 4-3. Table 4-4 presents the anticipated PCE trip-ends for the existing baseline site land uses, resulting in 140 PCE trip-ends per day with 18 AM PCE peak hour trips and 16 PM PCE peak hour trips.

As shown in Table 4-5, the proposed Project is anticipated to generate an increase of 222 PCE trip-ends per day with 27 additional AM PCE peak hour trips and 30 additional PM PCE peak hour trips, in comparison to existing baseline site land uses.

TABLE 4-1: PROPOSED PROJECT TRIP GENERATION SUMMARY (ACTUAL VEHICLES)

Trip Generation Rates[1]									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing[3]	150	112.830 TSF	0.130	0.040	0.170	0.050	0.140	0.190	1.740
79.57% Passenger Cars			0.103	0.032	0.135	0.040	0.112	0.152	1.385
3.46% 2-Axle Trucks			0.004	0.001	0.005	0.002	0.005	0.007	0.060
4.64% 3-Axle Trucks			0.006	0.002	0.008	0.002	0.006	0.008	0.081
12.33% 4-Axle+ Trucks			0.016	0.005	0.021	0.006	0.017	0.023	0.215
Manufacturing[3]	140	17.000 TSF	0.480	0.140	0.620	0.210	0.460	0.670	3.930
61.20% Passenger Cars			0.294	0.086	0.380	0.129	0.282	0.411	2.405
6.10% 2-Axle Trucks			0.029	0.009	0.038	0.013	0.028	0.041	0.240
12.70% 3-Axle Trucks			0.061	0.018	0.079	0.027	0.058	0.085	0.499
19.90% 4-Axle+ Trucks			0.096	0.028	0.124	0.042	0.092	0.134	0.782

Proposed Project Trip Generation Results									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing	150	112.830 TSF							
- Passenger Cars			12	4	16	5	13	18	156
- Truck Trips									
2-axle:			*0*	*0*	*0*	*0*	*1*	*1*	*7*
3-axle:			*1*	*0*	*1*	*0*	*1*	*1*	*9*
4+-axle:			*2*	*1*	*3*	*1*	*2*	*3*	*24*
- Net Truck Trips (Actual Vehicles)			3	1	4	1	4	5	40
Warehousing Subtotal (Actual Vehicles)			**15**	**5**	**20**	**6**	**17**	**23**	**196**
Manufacturing	140	17.0 TSF							
- Passenger Cars			5	1	6	2	5	7	41
- Truck Trips									
2-axle:			*0*	*0*	*0*	*0*	*0*	*0*	*4*
3-axle:			*1*	*0*	*1*	*1*	*1*	*2*	*8*
4+-axle:			*2*	*0*	*2*	*1*	*2*	*3*	*13*
- Net Truck Trips (Actual Vehicles)			3	0	3	2	3	5	25
Manufacturing Subtotal (Actual Vehicles)			**8**	**1**	**9**	**4**	**8**	**12**	**66**
PROPOSED PROJECT TRIPS (ACTUAL VEHICLES)[4]			**23**	**6**	**29**	**10**	**25**	**35**	**262**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017) and 10th Edition Supplement (2020).

[2] TSF = Thousand Square Feet

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study(August 2003) for ITE LU Code 150 - Heavy Warehouse Vehicle Mix and ITE LU Code 140 - Heavy Industrial Vehicle Mix

[4] Total Net Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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TABLE 4-2: PROPOSED PROJECT TRIP GENERATION SUMMARY (PCE)

Trip Generation Rates[1]									
			AM Peak Hour			PM Peak Hour			
Land Use	ITE LU Code	Quantity[2]	In	Out	Total	In	Out	Total	Daily
Warehousing[3]	150	112.830 TSF	0.169	0.053	0.222	0.065	0.182	0.247	2.282
79.57% Passenger Cars			0.103	0.032	0.135	0.040	0.111	0.151	1.385
3.46% 2-Axle Trucks; (PCE = 1.5)			0.006	0.002	0.008	0.003	0.008	0.011	0.090
4.64% 3-Axle Trucks; (PCE = 2.0)			0.012	0.004	0.016	0.004	0.012	0.016	0.162
12.33% 4-Axle+ Trucks; (PCE = 3.0)			0.048	0.015	0.063	0.018	0.051	0.069	0.645
Manufacturing[3]	140	17.000 TSF	0.748	0.220	0.968	0.329	0.716	1.045	6.109
61.20% Passenger Cars			0.294	0.086	0.380	0.129	0.282	0.411	2.405
6.10% 2-Axle Trucks			0.044	0.014	0.058	0.020	0.042	0.062	0.360
12.70% 3-Axle Trucks			0.122	0.036	0.158	0.054	0.116	0.170	0.998
19.90% 4-Axle+ Trucks			0.288	0.084	0.372	0.126	0.276	0.402	2.346

Proposed Project Trip Generation Results									
			AM Peak Hour			PM Peak Hour			
Land Use	ITE LU Code	Quantity[2]	In	Out	Total	In	Out	Total	Daily
Warehousing	150	112.830 TSF							
- Passenger Cars			12	4	16	5	13	18	156
- Truck Trips									
2-axle (PCE = 1.5):			*1*	*0*	*1*	*0*	*1*	*1*	*11*
3-axle (PCE = 2.0):			*2*	*1*	*3*	*0*	*1*	*1*	*18*
4+-axle (PCE = 3.0):			*6*	*3*	*9*	*2*	*6*	*8*	*73*
- Net Truck Trips (PCE)			9	4	13	2	8	10	102
Warehousing Subtotal (PCE)			**21**	**8**	**29**	**7**	**21**	**28**	**258**
Manufacturing	140	17.0 TSF							
- Passenger Cars			5	1	6	2	5	7	41
- Truck Trips									
2-axle (PCE = 1.5):			*1*	*0*	*1*	*0*	*1*	*1*	*6*
3-axle (PCE = 2.0):			*2*	*1*	*3*	*1*	*2*	*3*	*17*
4+-axle (PCE = 3.0):			*5*	*1*	*6*	*2*	*5*	*7*	*40*
- Net Truck Trips (PCE)			8	2	10	3	8	11	63
Manufacturing Subtotal (PCE)			**13**	**3**	**16**	**5**	**13**	**18**	**104**
PROPOSED PROJECT TRIPS (PCE)[4]			**34**	**11**	**45**	**12**	**34**	**46**	**362**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

[2] TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study(August 2003) for ITE LU Code 150 - Heavy Warehouse Vehicle Mix and ITE LU Code 140 - Heavy Industrial Vehicle Mix

[4] Total Trips (PCE) = Passenger Cars + Net Truck Trips (PCE)

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TABLE 4-3: EXISTING SITE BASELINE LAND USE TRIP GENERATION SUMMARY (ACTUAL VEHICLES)

Trip Generation Rates[1]									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing[3]	150	62.713 TSF	0.130	0.040	0.170	0.050	0.140	0.190	1.740
80.3% Passenger Cars			0.104	0.032	0.136	0.040	0.113	0.153	1.398
5.2% 2-Axle Trucks			0.007	0.002	0.009	0.003	0.007	0.010	0.090
4.5% 3-Axle Trucks			0.006	0.002	0.008	0.002	0.006	0.008	0.078
10.0% 4-Axle+ Trucks			0.013	0.004	0.017	0.005	0.014	0.019	0.174

Existing Site Baseline Land Use Trip Generation Results									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing	150	62.713 TSF							
- Passenger Cars			7	2	9	3	7	10	88
- Truck Trips									
2-axle:			*0*	*0*	*0*	*0*	*0*	*0*	*6*
3-axle:			*0*	*0*	*0*	*0*	*0*	*0*	*5*
4+-axle:			*1*	*0*	*1*	*0*	*1*	*1*	*11*
- Net Truck Trips (Actual Vehicles)			1	0	1	0	1	1	22
Existing Site Baseline Land Use Trip Generation Subtotal (Actual Vehicles) [4]			**8**	**2**	**10**	**3**	**8**	**11**	**110**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017) and 10th Edition Supplement (2020).

[2] TSF = Thousand Square Feet

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study(August 2003) for ITE LU Code 150 - Light Warehouse use with 100 tsf gross floor area or less.

[4] Total Net Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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TABLE 4-4: EXISTING SITE BASELINE LAND USE TRIP GENERATION SUMMARY (PCE)

Trip Generation Rates[1]									
			AM Peak Hour			PM Peak Hour			
Land Use	ITE LU Code	Quantity[2]	In	Out	Total	In	Out	Total	Daily
Warehousing[3,4]	150	62.713 TSF	0.166	0.051	0.217	0.064	0.178	0.242	2.211
80.3% Passenger Cars			0.104	0.032	0.136	0.040	0.113	0.153	1.398
5.2% 2-Axle Trucks; (PCE = 1.5)			0.011	0.003	0.014	0.005	0.011	0.016	0.135
4.5% 3-Axle Trucks; (PCE = 2.0)			0.012	0.004	0.016	0.004	0.012	0.016	0.156
10.0% 4-Axle+ Trucks; (PCE = 3.0)			0.039	0.012	0.051	0.015	0.042	0.057	0.522

Existing Site Baseline Land Use Trip Generation Results									
			AM Peak Hour			PM Peak Hour			
Land Use	ITE LU Code	Quantity[2]	In	Out	Total	In	Out	Total	Daily
Warehousing	150	62.713 TSF							
- Passenger Cars			7	2	9	3	7	10	88
- Truck Trips									
2-axle (PCE = 1.5):			*1*	*0*	*1*	*0*	*1*	*1*	*9*
3-axle (PCE = 2.0):			*2*	*1*	*3*	*0*	*1*	*1*	*10*
4+-axle (PCE = 3.0):			*3*	*2*	*5*	*1*	*3*	*4*	*33*
- Net Truck Trips (PCE)			6	3	9	1	5	6	52
Existing Site Baseline Land Use Trip Generation Subtotal (PCE)[5]			**13**	**5**	**18**	**4**	**12**	**16**	**140**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

[2] TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study(August 2003) for ITE LU Code 150 - Light Warehouse use with 100 tsf gross floor area or less.

[4] Total Trips (PCE) = Passenger Cars + Net Truck Trips (PCE)

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TABLE 4-5: LAND USE AND TRIP GENERATION COMPARISON SUMMARY

COMPARISON SUMMARY								
		AM Peak Hour			PM Peak Hour			
Land Use[2]	Quantity[1]	In	Out	Total	In	Out	Total	Daily
Existing Site Baseline Land Use (PCE)	62.713 TSF	13	5	18	4	12	16	140
Proposed Project (PCE)	129.83 TSF	34	11	45	12	34	46	362
DELTA ***(Proposed - Existing)***		**21**	**6**	**27**	**8**	**22**	**30**	**222**

[1] TSF = Thousand Square Feet

[2] PCE = Passenger Car Equivalent

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4.2 PROJECT TRIP DISTRIBUTION

Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land use and surrounding regional access routes are considered, to identify the route where the Project traffic would distribute. The Project trip distribution was developed based on anticipated travel patterns to and from the Project site. The existing roadway network and location of regional destinations have been reviewed to develop the Project trip distribution pattern. Exhibit 4-1 illustrates the Project trip distribution patterns for the Project.

4.3 MODAL SPLIT

The traffic reducing potential of public transit, walking, or bicycling have not been considered in this TA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes.

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project AM and PM peak hour traffic volumes are shown on Exhibit 4-2.

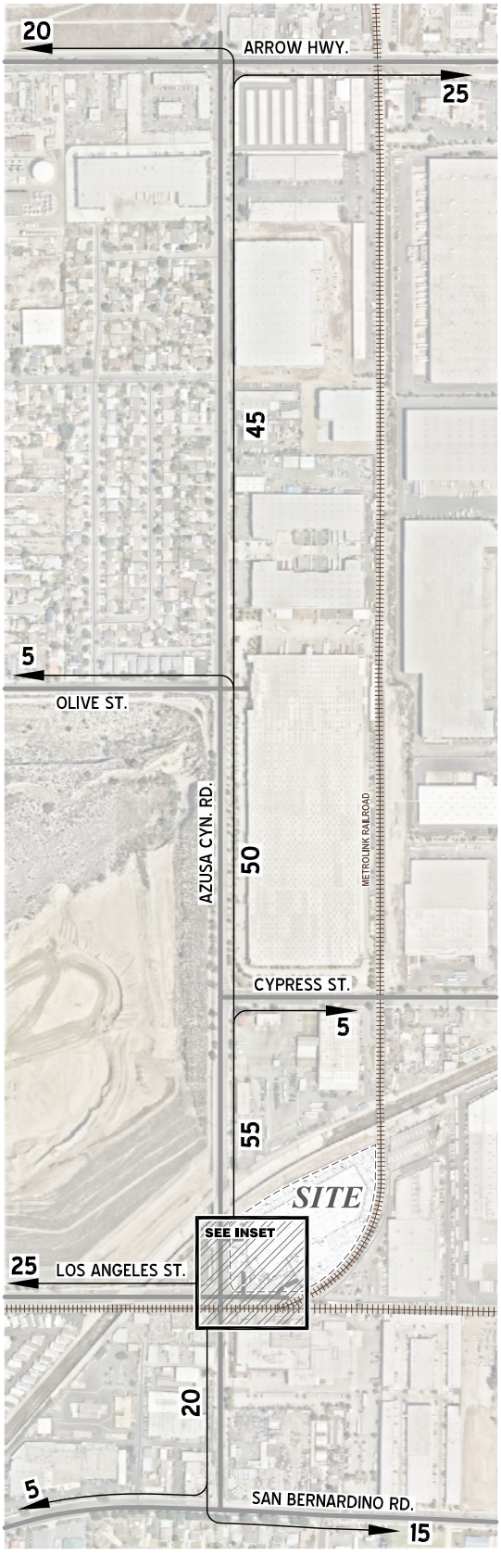
4.5 BACKGROUND TRAFFIC

The Interim Year Cumulative (2022) With Project traffic conditions analyses determine the Project's contribution to near-term traffic deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth from Existing (2021) conditions of 1.02% (2% per year) is included for Interim Year Cumulative (2022) traffic conditions, as well as traffic generated by cumulative development projects that could affect the study intersections.

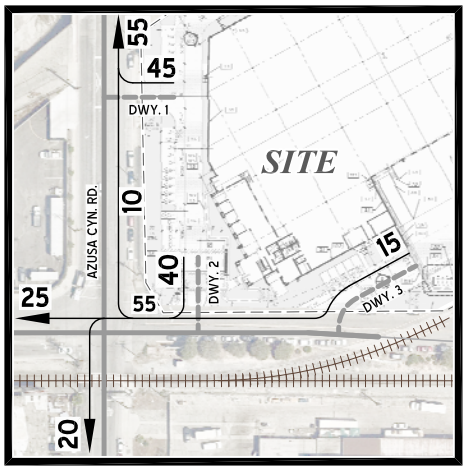
4.6 CUMULATIVE DEVELOPMENT TRAFFIC

Exhibit 4-3 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-6. The list of cumulative projects has been developed based on information provided by the Planning Department for the City of Irwindale, California. Cumulative development volumes are shown on Exhibit 4-4.

EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION



INSET



LEGEND:

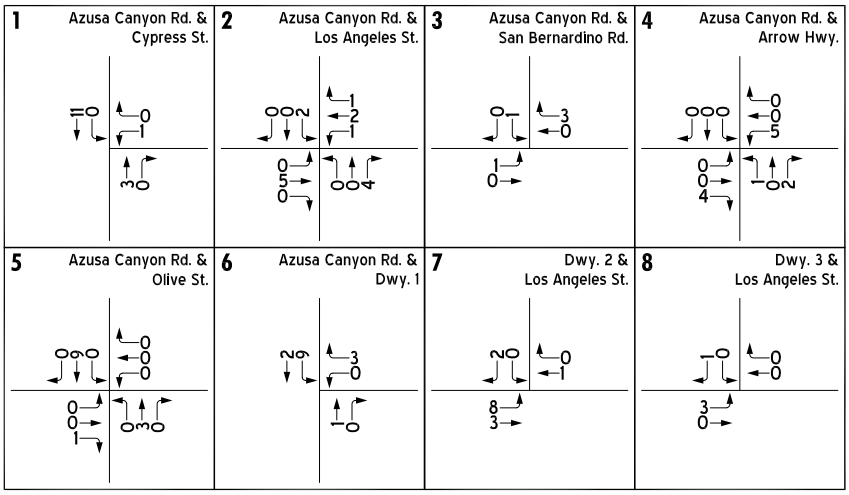
10 = PERCENT FROM/TO PROJECT

= FUTURE PROJECT DRIVEWAY

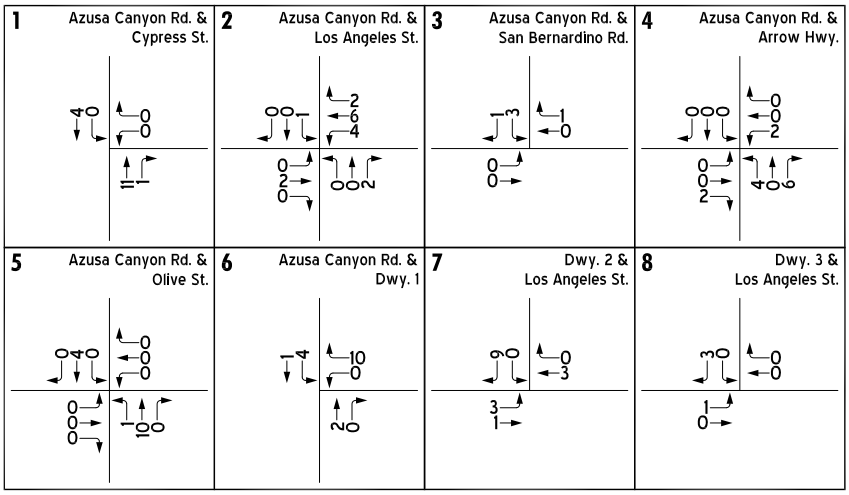
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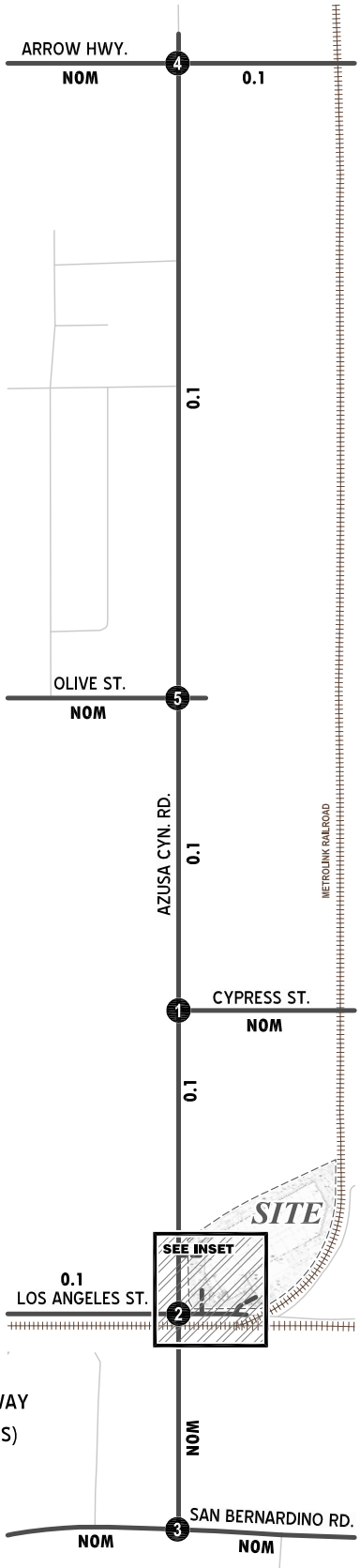
EXHIBIT 4-2: PROPOSED PROJECT ADDED TRAFFIC VOLUMES (PCE)

AM PEAK HOUR

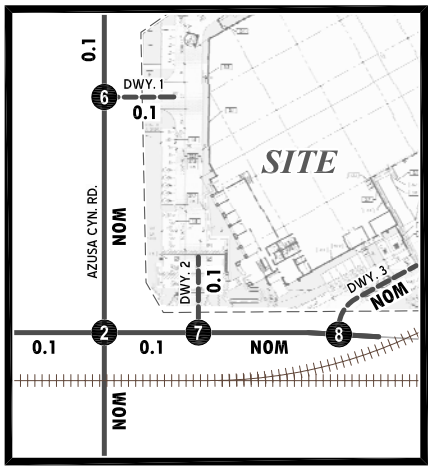


PM PEAK HOUR





INSET



LEGEND:

- # = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

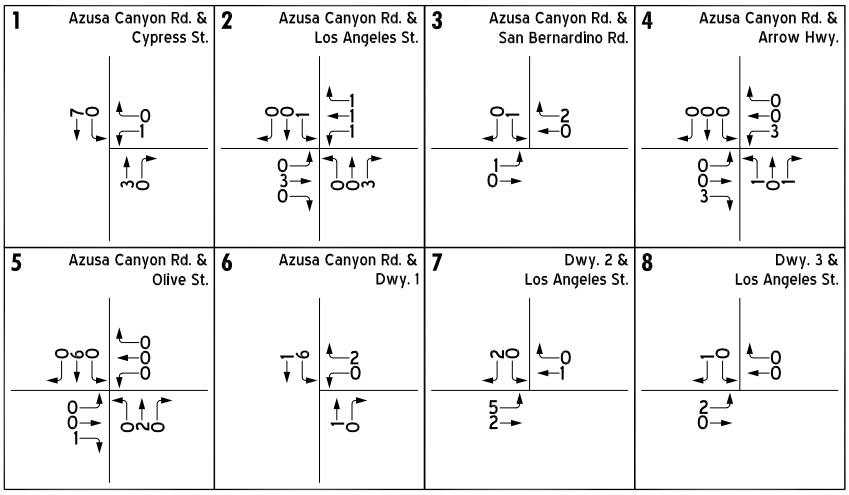
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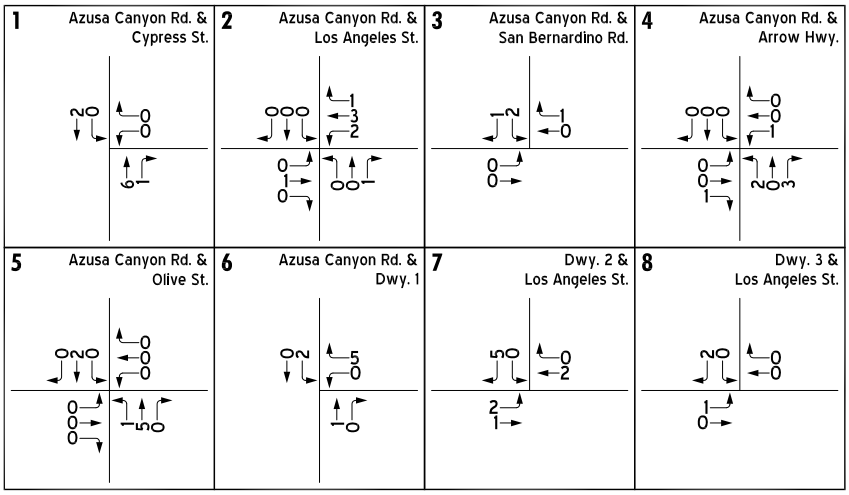
URBAN CROSSROADS

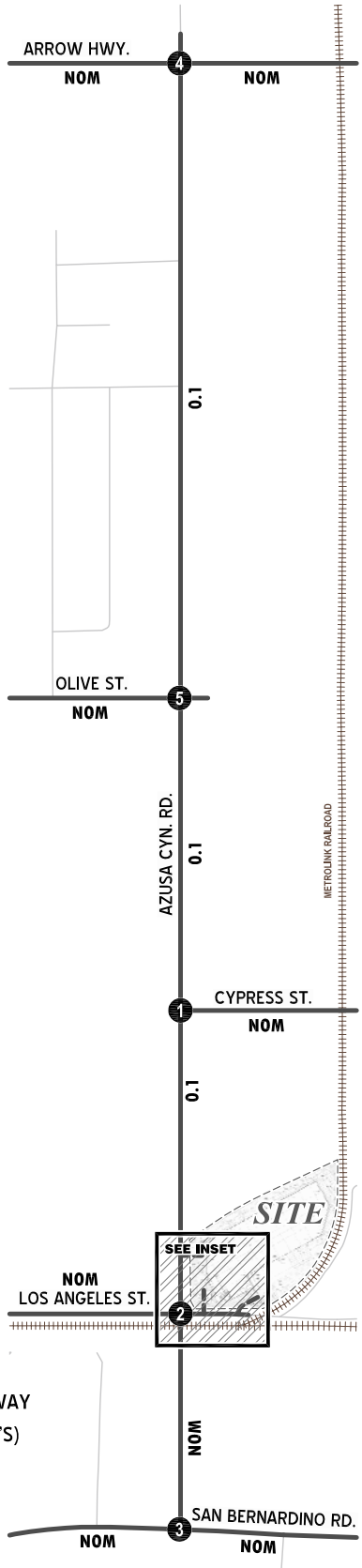
EXHIBIT 4-3: SITE EXISTING BASELINE TRAFFIC VOLUMES (PCE)

AM PEAK HOUR

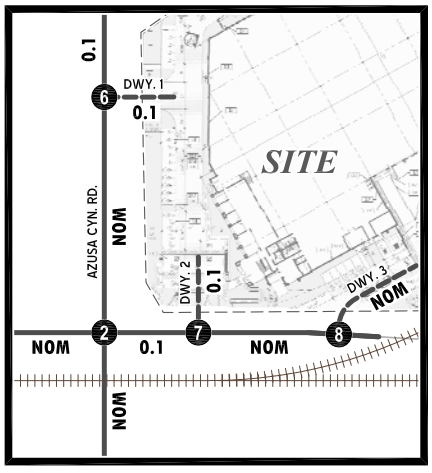


PM PEAK HOUR





INSET



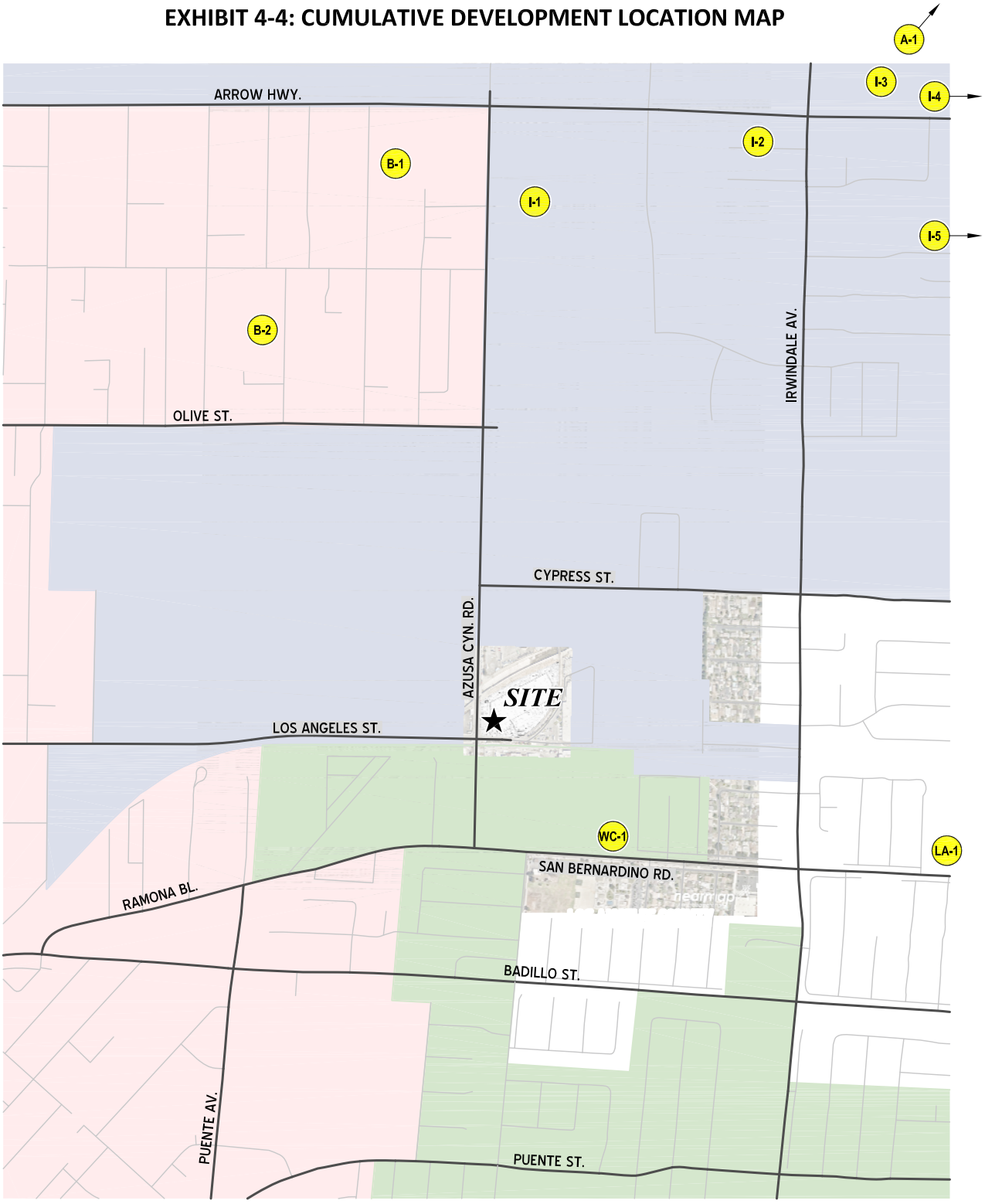
LEGEND:

#	= INTERSECTION ID
- - - -	= FUTURE PROJECT DRIVEWAY
10.0	= VEHICLES PER DAY (1000'S)
NOM	= NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

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EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP



LEGEND:

(#) = CUMULATIVE DEVELOPMENT PROJECTS (TRAFFIC ANALYSIS ZONE ID)

N

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URBAN CROSSROADS

TABLE 4-6: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF IRWINDALE				
I-1	5010 Azusa Cyn. Rd.	General Light Industrial	233.987	TSF
I-2	Wendy's	Fast-Food Restaurant	2.300	TSF
I-3	Panattoni Industrial - 1200 Arrow Hwy	Industrial Park	130.366	TSF
I-4	Arrow Highway Business Park	Warehousing	138.410	TSF
I-5	Vincent Avenue Industrial Building	Industrial Park	545.735	TSF
CITY OF BALDWIN PARK				
B-1	5115 Azusa Canyon Road Warehouse	Industrial Park	90.00	TSF
B-2	4923 Fortin Street	SFDR	15	DU
CITY OF WEST COVINA				
WC-1	1611 & 1623 San Bernardino Rd.	Condominium	24	DU
CITY OF AZUSA				
A-1	Crow Holdings Industrial	Industrial Park	146.0	TSF
COUNTY OF LOS ANGELES				
LA-1	Griswold Residential - 16209 San Bernardino Rd.	SFDR	68	DU

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Units; TSF = Thousand Square Feet

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5 EXISTING (HYPOTHETICAL "NON-COVID" 2021) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use Without Project and With Project conditions and the resulting intersection operations analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Existing (hypothetical "non-COVID" 2021) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following for With Project conditions:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Interim Year Cumulative (2021) Plus Site Baseline Land Use With Project conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 TRAFFIC VOLUME FORECASTS

This scenario includes adjusted Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use traffic volumes in the study area for Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use traffic conditions in conjunction with traffic associated with the proposed Project. The weekday AM and PM peak hour volumes which can be expected for Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use traffic conditions are shown on Exhibit 5-1. The weekday AM and PM peak hour volumes which can be expected for Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use With Project traffic conditions are shown on Exhibit 5-2.

5.3 INTERSECTION OPERATIONS ANALYSIS

Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 5-1. The intersection operations analysis worksheets for the weekday AM and PM peak hour volumes which can be expected for Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use traffic conditions are included in Appendix 5.1 of this TA. The intersection operations analysis worksheets for the weekday AM and PM peak hour volumes which can be expected for Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use With Project traffic conditions are included in Appendix 5.2 of this TA.

As shown on Table 5-1, there are no new intersections anticipated to operate at an unacceptable level of service (LOS "E" or worse), in addition to the two existing deficient intersections.

TABLE 5-1: INTERSECTION ANALYSIS FOR EXISTING (HYPTOTHETICAL "NON-COVID" 2021) PLUS SITE BASELINE LAND USE CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												WITHOUT PROJECT								WITH PROJECT							
															HCM				ICU				HCM				ICU			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]		Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Azusa Canyon Rd. / Cypress St.	TS	0	2	0	1	2	0	0	0	0	1	1!	1	20.6	31.6	C	C	0.30	0.59	A	A	20.6	31.7	C	C	0.30	0.60	A	A
2	Azusa Canyon Rd. / Los Angeles St.	AWS	0	1!	0	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	32.9	**96.4**	D	**F**	-	-	-	-	34.6	**100.2**	D	**F**	-	-	-	-
	- With Improvements	**TS**	0	1!	0	0.5	0.5	1	**1.5**	0.5	**1**	**1**	**1**	0	19.2	23.5	B	C	0.48	0.70	A	B	19.3	23.8	B	C	0.49	0.71	A	C
3	Azusa Canyon Rd. / San Bernardino Rd.	TS	0	0	0	1	0	d	1	2	0	0	2	0	20.6	30.4	C	C	0.39	0.77	A	C	20.7	30.6	C	C	0.39	0.77	A	C
4	Azusa Canyon Rd. / Arrow Hwy.	TS	1.5	0.5	1	1	1	0	1	3	0	1	2	d	51.3	**60.3**	D	**E**	**0.94**	0.82	**E**	D	51.4	**61.4**	D	**E**	**0.94**	0.83	**E**	D
	- With Improvements	TS	1.5	0.5	**1>**	1	1	0	1	3	0	1	**3**	0	29.4	32.7	C	C	0.70	0.82	B	D	29.6	33.4	C	C	0.70	0.82	B	D
5	Azusa Canyon Rd. / Olive St.	TS	1	2	0	1	2	d	1	1	d	1	1	d	15.1	27.2	B	C	0.32	0.43	A	A	15.1	27.4	B	C	0.32	0.43	A	A
6	Azusa Canyon Rd. / Dwy. 1	**CSS**	0.5	1.5	0	0	2	0	0	0	0	0	0	**1**	9.8	11.4	A	B	-	-	-	-	9.8	11.6	A	B	-	-	-	-
7	Dwy. 2 / Los Angeles St.	**CSS**	0	0	0	0	**1!**	0	0.5	0.5	0	0	1	0	8.4	8.7	A	A	-	-	-	-	8.5	8.7	A	A	-	-	-	-
8	Dwy. 3 / Los Angeles St.	**CSS**	0	0	0	0	**1!**	0	0.5	0.5	0	0	1	0	8.4	8.7	A	A	-	-	-	-	8.4	8.7	A	A	-	-	-	-

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; **1** = Improvement

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. " - " value is shown for unsignalized ICU values. Delay and level of service is calculated using Synchro 11 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

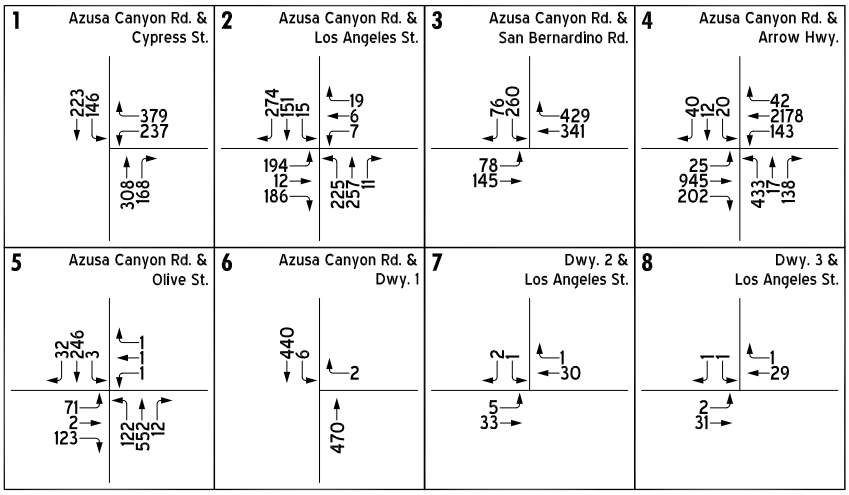
[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop

[4] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

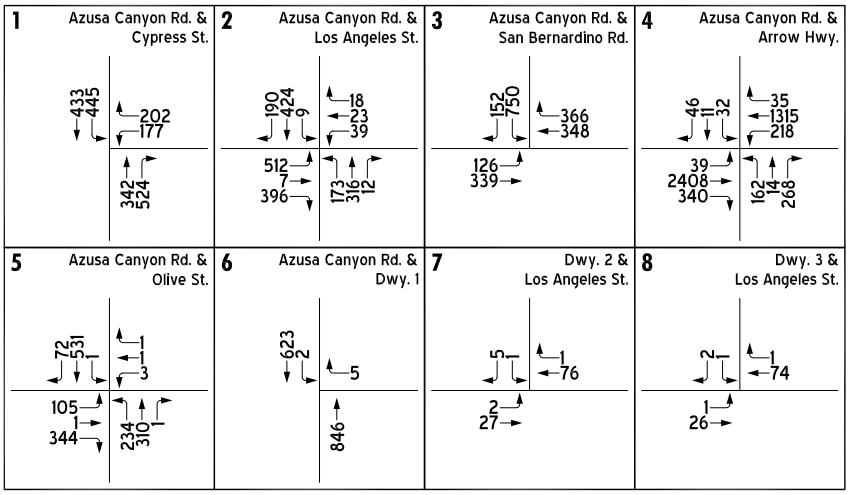
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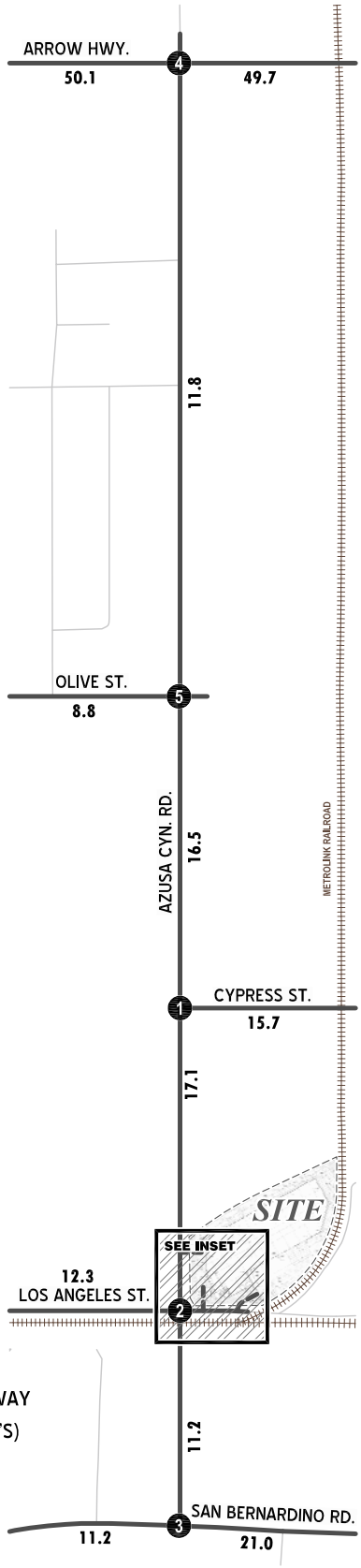
EXHIBIT 5-1: EXISTING (HYPOTHETICAL "NON-COVID" 2021) PLUS SITE BASELINE LAND USE TRAFFIC VOLUMES

AM PEAK HOUR

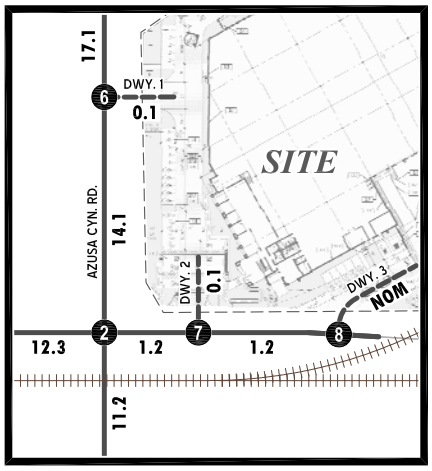


PM PEAK HOUR





INSET



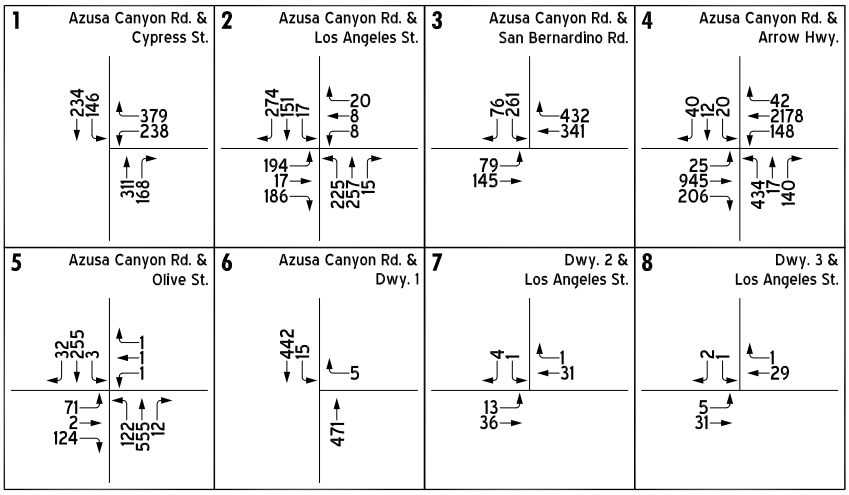
LEGEND:

- (#) = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

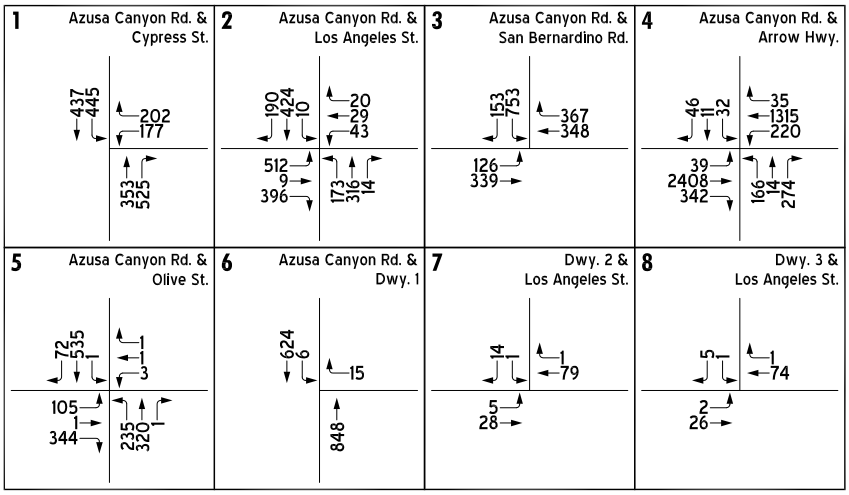
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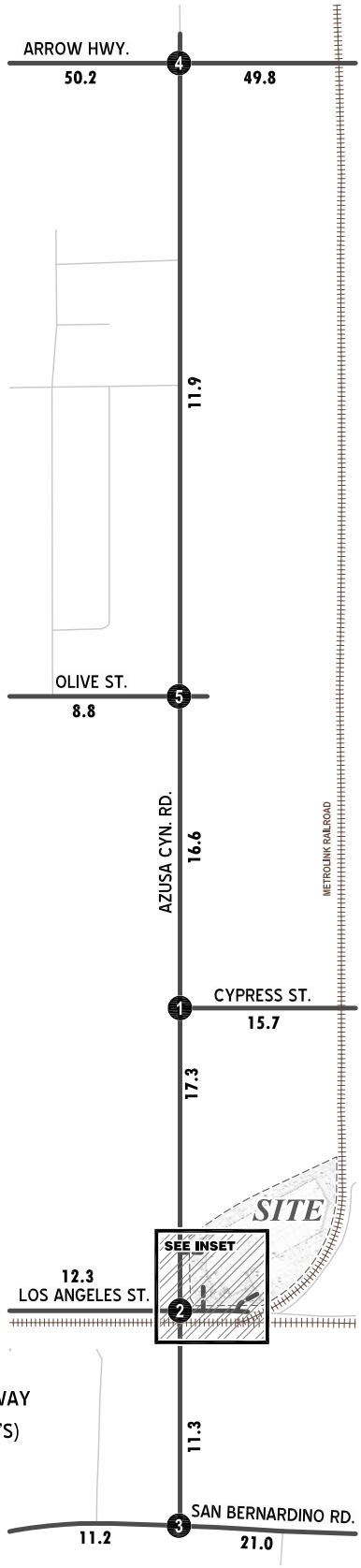
EXHIBIT 5-2: EXISTING (HYPOTHETICAL "NON-COVID" 2021) PLUS SITE BASELINE LAND USE PLUS PROPOSED PROJECT TRAFFIC VOLUMES

AM PEAK HOUR

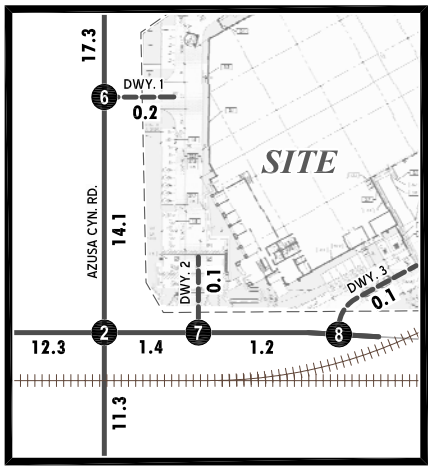


PM PEAK HOUR





INSET



LEGEND:

- (#) = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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URBAN CROSSROADS

6 INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE (2022) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Interim Year Cumulative Plus Site Baseline Land Use (2022) conditions and the resulting intersection operations analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Interim Year Cumulative Plus Site Baseline Land Use (2022) With Project conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Interim Year Cumulative Plus Site Baseline Land Use (2022) With Project conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

6.2 TRAFFIC VOLUME FORECASTS

This scenario includes adjusted Interim Year Cumulative Plus Site Baseline Land Use traffic volumes plus an ambient growth factor of 1.02% and other known cumulative development projects in the study area for Interim Year Cumulative Plus Site Baseline Land Use (2022) traffic conditions in conjunction with traffic associated with the proposed Project. The weekday AM and PM peak hour volumes which can be expected for Interim Year Cumulative Plus Site Baseline Land Use (2022) traffic conditions are shown on Exhibit 6-1. The weekday AM and PM peak hour volumes which can be expected for Interim Year Cumulative Plus Site Baseline Land Use (2022) With Project traffic conditions are shown on Exhibit 6-2.

6.3 INTERSECTION OPERATIONS ANALYSIS

Interim Year Cumulative Plus Site Baseline Land Use (2022) With Project peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 6-1. The intersection operations analysis worksheets for Interim Year Cumulative Plus Site Baseline Land Use (2022) traffic conditions are included in Appendix 6.1 of this TA. The intersection operations analysis worksheets for Interim Year Cumulative Plus Site Baseline Land Use (2022) With Project traffic conditions are included in Appendix 6.2 of this TA.

As shown on Table 6-1, there are no new intersections anticipated to operate at an unacceptable level of service (LOS "E" or worse), in addition to the two existing deficient intersections.

TABLE 6-1: INTERSECTION ANALYSIS FOR INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE (2022) CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												WITHOUT PROJECT								WITH PROJECT							
															HCM				ICU				HCM				ICU			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]		Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Azusa Canyon Rd. / Cypress St.	TS	0	2	0	1	2	0	0	0	0	1	1!	1	25.7	35.8	C	D	0.33	0.61	A	B	26.1	36.0	C	D	0.33	0.61	A	B
2	Azusa Canyon Rd. / Los Angeles St.	AWS	0	1!	0	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	**43.4**	**109.8**	**E**	**F**	-	-	-	-	**45.3**	**113.6**	**E**	**F**	-	-	-	-
	- With Improvements	**TS**	0	1!	0	0.5	0.5	1	**1.5**	0.5	**1**	**1**	**1**	0	19.5	24.1	B	C	0.52	0.76	A	C	21.6	25.3	C	C	0.53	0.76	A	C
3	Azusa Canyon Rd. / San Bernardino Rd.	TS	0	0	0	1	0	d	1	2	0	0	2	0	20.7	32.2	C	C	0.41	0.82	A	D	20.8	32.4	C	C	0.42	0.82	A	D
4	Azusa Canyon Rd. / Arrow Hwy.	TS	1.5	0.5	1	1	1	0	1	3	0	1	2	d	**61.4**	**74.8**	**E**	**E**	**0.98**	0.89	**E**	D	**61.6**	**78.5**	**E**	**E**	**0.98**	0.89	**E**	D
	- With Improvements	TS	1.5	0.5	**1>**	1	1	0	1	3	0	1	**3**	0	32.4	33.5	C	C	0.74	0.89	C	D	32.7	33.6	C	C	0.74	0.89	C	D
5	Azusa Canyon Rd. / Olive St.	TS	1	2	0	1	2	d	1	1	d	1	1	d	15.1	28.2	B	C	0.35	0.46	A	A	15.5	28.5	B	C	0.35	0.46	A	A
6	Azusa Canyon Rd. / Dwy. 1	**CSS**	0.5	1.5	0	0	2	0	0	0	0	0	0	**1**	10.0	11.6	A	B	-	-	-	-	10.0	11.7	A	B	-	-	-	-
7	Dwy. 2 / Los Angeles St.	**CSS**	0	0	0	0	**1!**	0	0.5	0.5	0	0	1	0	8.4	8.7	A	A	-	-	-	-	8.5	8.7	A	A	-	-	-	-
8	Dwy. 3 / Los Angeles St.	**CSS**	0	0	0	0	**1!**	0	0.5	0.5	0	0	1	0	8.4	8.7	A	A	-	-	-	-	8.4	8.7	A	A	-	-	-	-

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; **1** = Improvement

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. " - " value is shown for unsignalized ICU values. Delay and level of service is calculated using Synchro 11 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

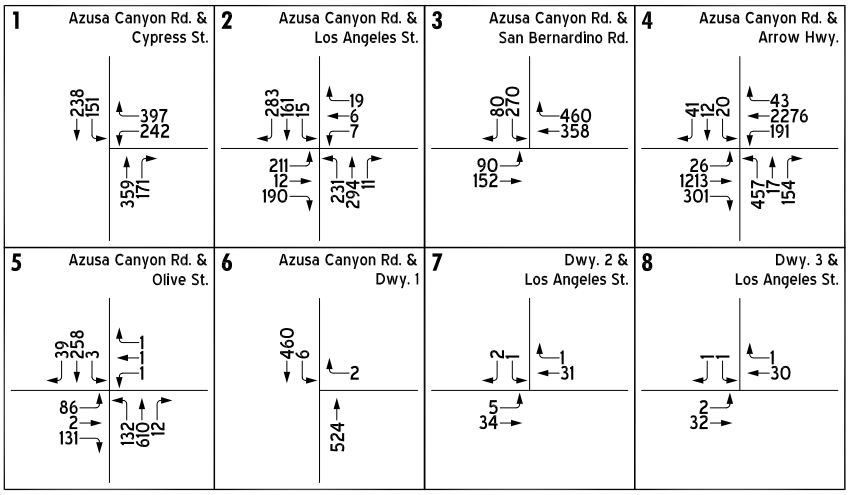
[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop

[4] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

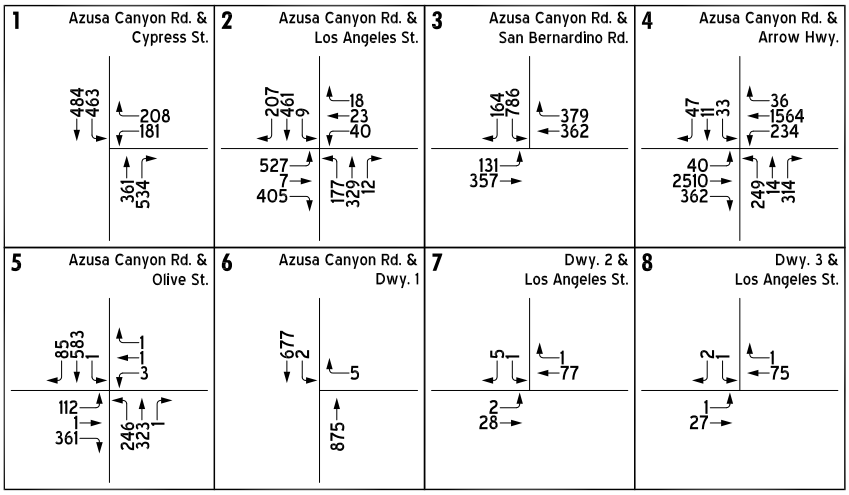
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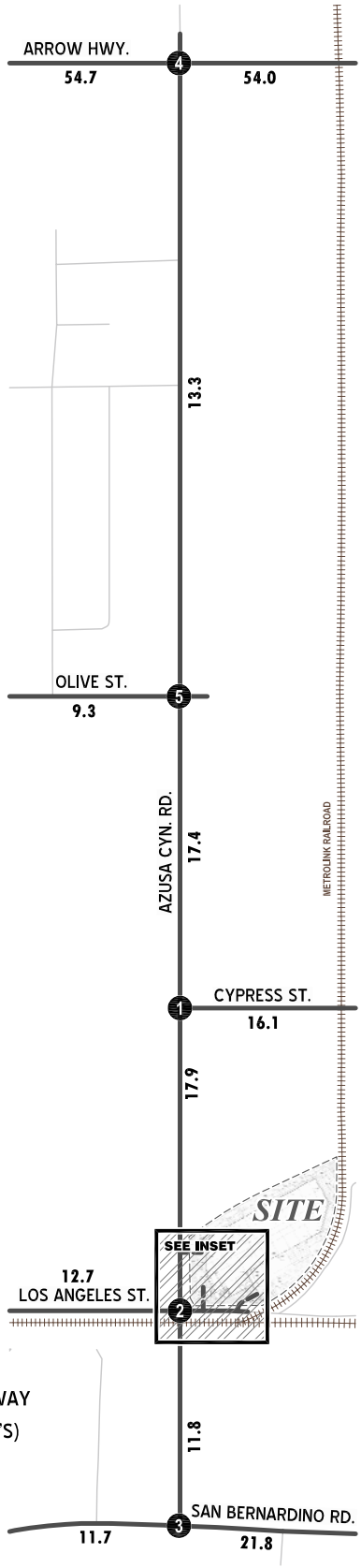
EXHIBIT 6-1: INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE (2022) TRAFFIC VOLUMES

AM PEAK HOUR

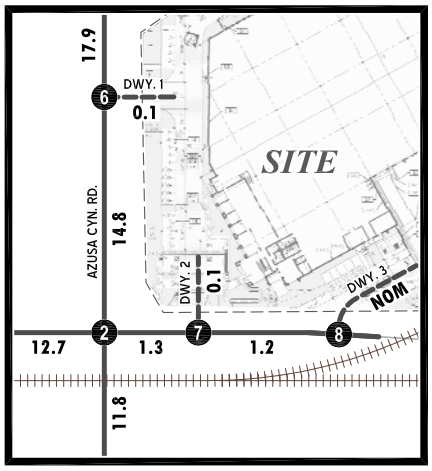


PM PEAK HOUR





INSET



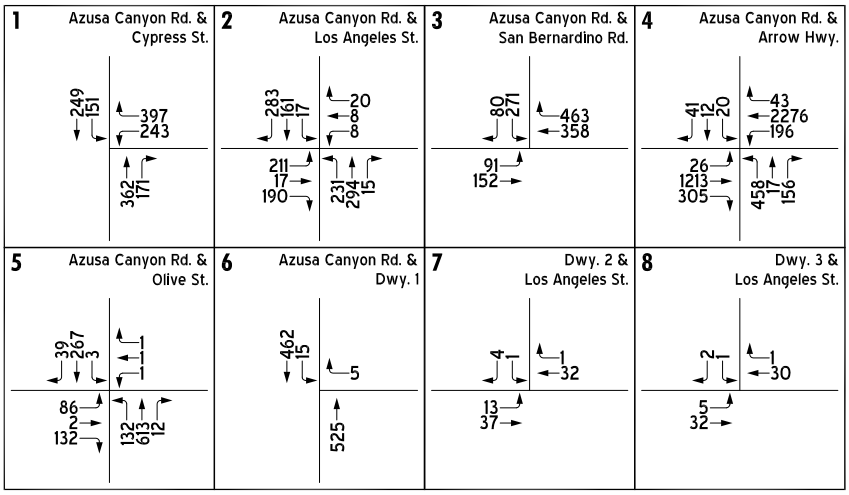
LEGEND:

- (#) = INTERSECTION ID
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- 10.0 = VEHICLES PER DAY (1000'S)
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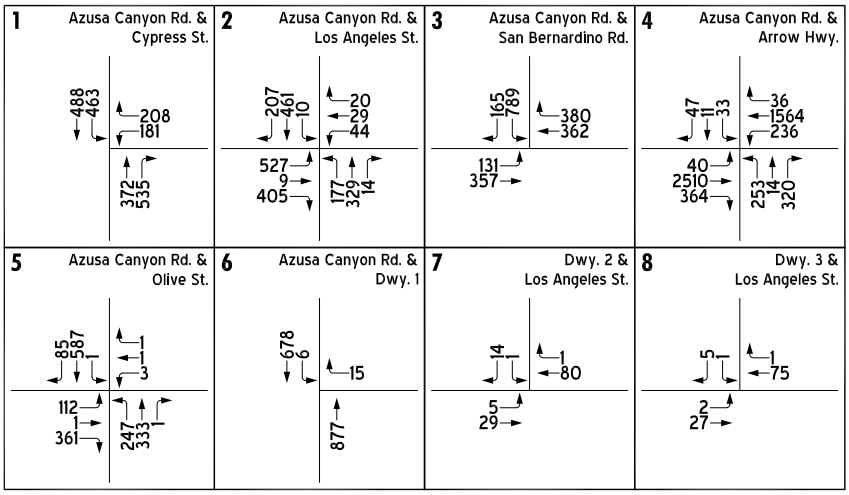
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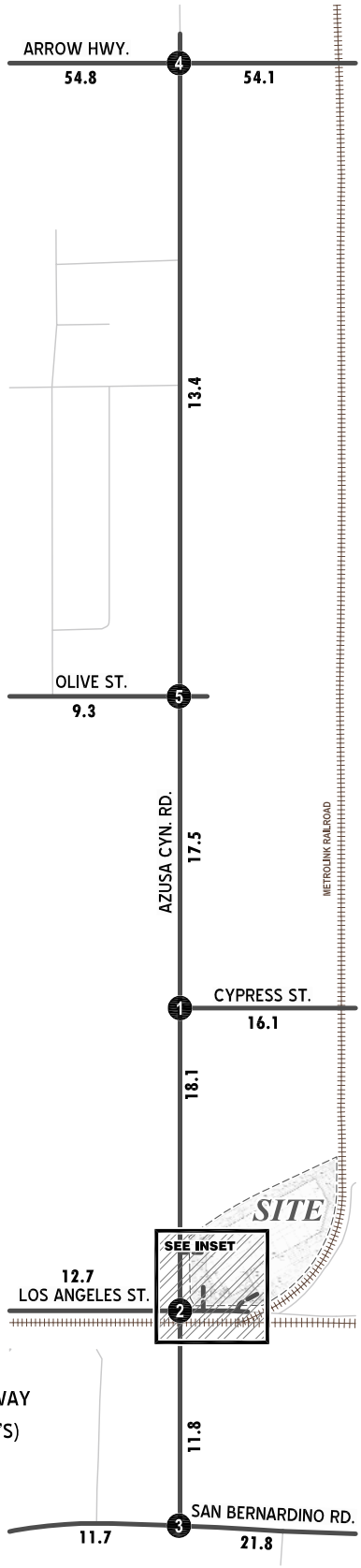
EXHIBIT 6-2: INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE (2022) WITH PROJECT TRAFFIC VOLUMES

AM PEAK HOUR

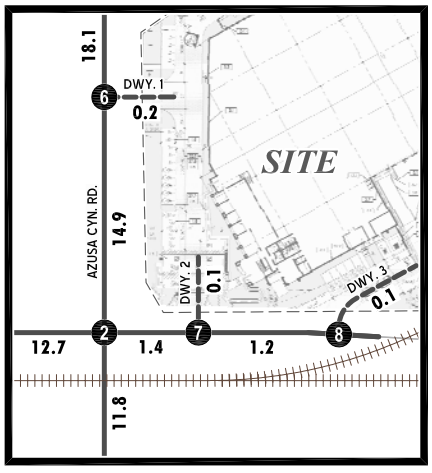


PM PEAK HOUR





INSET



LEGEND:

- # = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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7 2040 PLUS SITE BASELINE LAND USE TRAFFIC CONDITIONS

This section discusses the traffic forecasts for 2040 Plus Site Baseline Land Use conditions and the resulting intersection operations analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for 2040 Plus Site Baseline Land Use With Project conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for 2040 Plus Site Baseline Land Use With Project conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

7.2 TRAFFIC VOLUME FORECASTS

Horizon Year Without Project traffic conditions will include an ambient traffic growth factor of 10.6% based on the growth factors provided in LA County Congestion Management Program (CMP) for Regional Statistical Area (RSA) 26. The CMP indicates that 1.106 is an appropriate factor for volume increases between 2010 and 2035 (25 years). The proposed forecast year of 2040 is 19 years away, so implementing the 10.6% growth factor is a reasonable representation of potential future growth.

The weekday AM and PM peak hour volumes which can be expected for 2040 Plus Site Baseline Land Use traffic conditions are shown on Exhibit 7-1. The weekday AM and PM peak hour volumes which can be expected for 2040 Plus Site Baseline Land Use With Project traffic conditions are shown on Exhibit 7-2.

7.3 INTERSECTION OPERATIONS ANALYSIS

2040 Plus Site Baseline Land Use With Project peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 7-1. The intersection operations analysis worksheets for 2040 Plus Site Baseline Land Use traffic conditions are included in Appendix 7.1 of this TA. The intersection operations analysis worksheets for 2040 Plus Site Baseline Land Use With Project traffic conditions are included in Appendix 7.2 of this TA.

As shown on Table 7-1, there are no new intersections anticipated to operate at an unacceptable level of service (LOS "E" or worse), in addition to the two existing deficient intersections.

TABLE 7-1: INTERSECTION ANALYSIS FOR 2040 PLUS SITE BASELINE LAND USE CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												WITHOUT PROJECT								WITH PROJECT							
															HCM				ICU				HCM				ICU			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]		Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Azusa Canyon Rd. / Cypress St.	TS	0	2	0	1	2	0	0	0	0	1	1!	1	26.2	44.8	C	D	0.35	0.67	A	B	26.4	45.9	C	D	0.35	0.67	A	B
2	Azusa Canyon Rd. / Los Angeles St.	AWS	0	1!	0	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	**52.0**	**135.3**	**F**	**F**	-	-	-	-	**54.3**	**139.4**	**F**	**F**	-	-	-	-
	- With Improvements	**TS**	0	1!	0	0.5	0.5	1	**1.5**	0.5	**1**	**1**	**1**	0	23.1	27.8	C	C	0.55	0.85	A	D	23.4	28.1	C	C	0.56	0.86	A	D
3	Azusa Canyon Rd. / San Bernardino Rd.	TS	0	0	0	1	0	d	1	2	0	0	2	0	21.2	36.3	C	D	0.44	0.90	A	D	21.2	36.5	C	D	0.44	0.90	A	D
4	Azusa Canyon Rd. / Arrow Hwy.	TS	1.5	0.5	1	1	1	0	1	3	0	1	2	d	**76.8**	**92.4**	**E**	**F**	**1.03**	**0.94**	**F**	**E**	**77.0**	**93.6**	**E**	**F**	**1.03**	**0.95**	**F**	**E**
	- With Improvements	TS	1.5	0.5	**1>**	1	1	0	1	3	0	1	**3**	0	34.4	34.6	C	C	0.77	0.89	C	D	34.6	48.1	C	D	0.77	0.89	C	D
5	Azusa Canyon Rd. / Olive St.	TS	1	2	0	1	2	d	1	1	d	1	1	d	15.6	28.9	B	C	0.35	0.48	A	A	15.6	31.6	B	C	0.35	0.48	A	A
6	Azusa Canyon Rd. / Dwy. 1	**CSS**	0.5	1.5	0	0	2	0	0	0	0	0	0	**1**	10.0	11.9	A	B	-	-	-	-	10.0	12.1	A	B	-	-	-	-
7	Dwy. 2 / Los Angeles St.	**CSS**	0	0	0	0	**1!**	0	0.5	0.5	0	0	1	0	8.5	8.7	A	A	-	-	-	-	8.5	8.8	A	A	-	-	-	-
8	Dwy. 3 / Los Angeles St.	**CSS**	0	0	0	0	**1!**	0	0.5	0.5	0	0	1	0	8.5	8.7	A	A	-	-	-	-	8.5	8.7	A	A	-	-	-	-

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; **1** = Improvement

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. " - " value is shown for unsignalized ICU values. Delay and level of service is calculated using Synchro 11 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

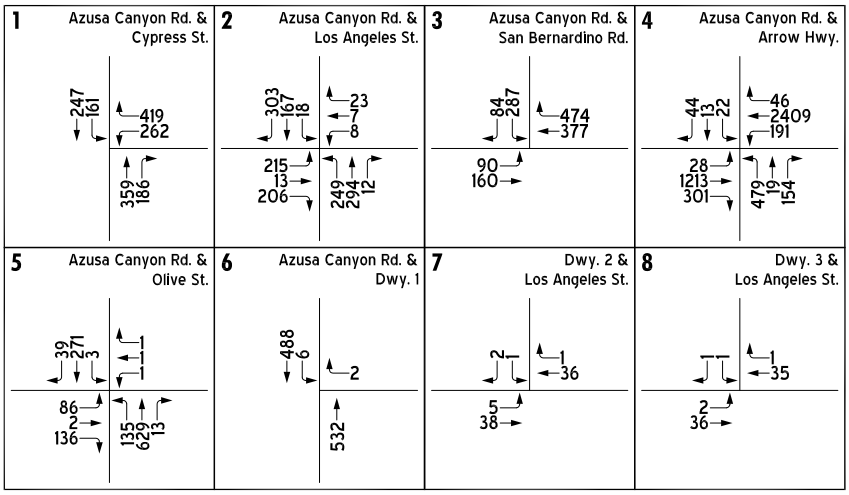
[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop

[4] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

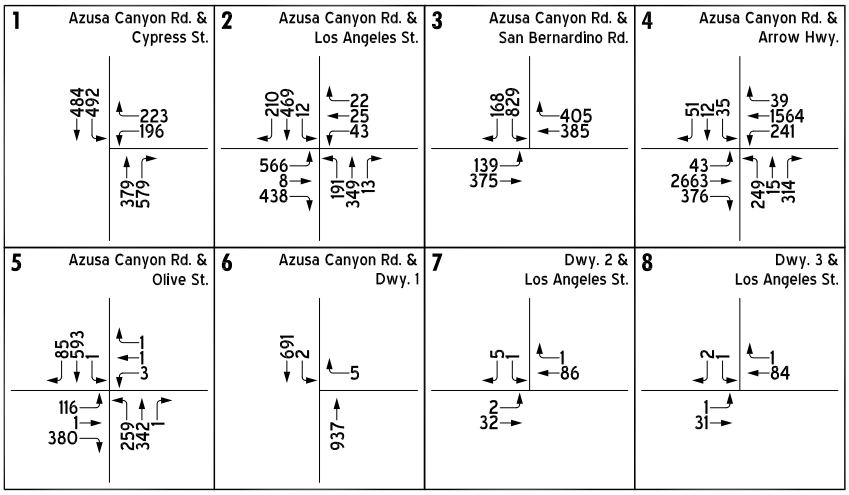
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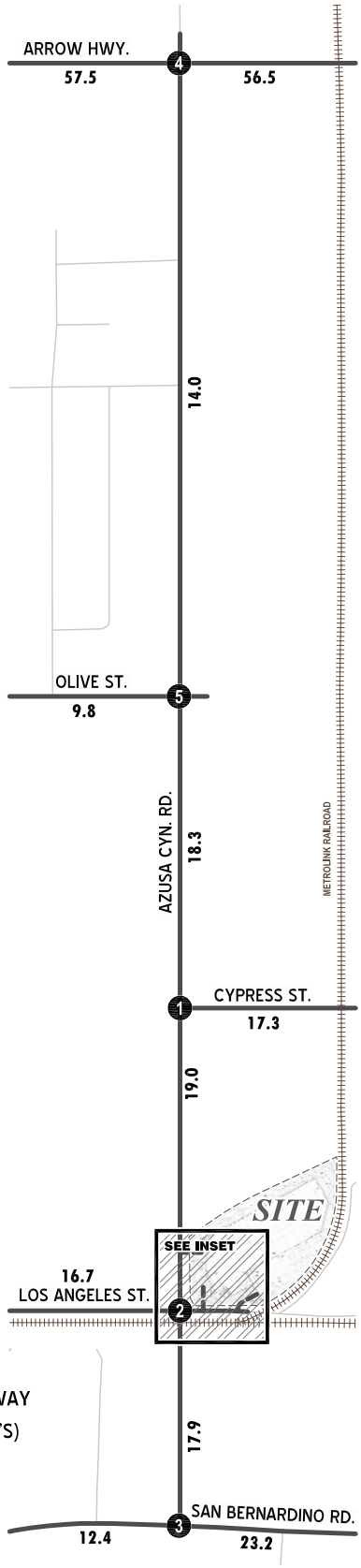
EXHIBIT 7-1: 2040 PLUS SITE BASELINE LAND USE TRAFFIC VOLUMES

AM PEAK HOUR

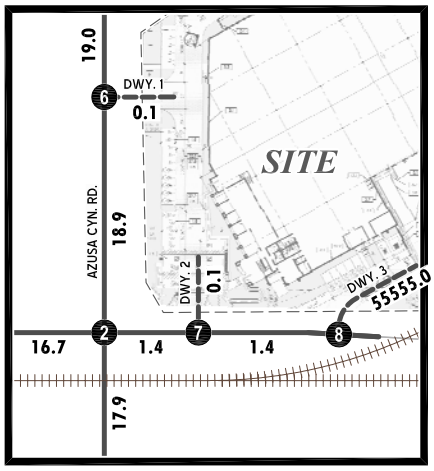


PM PEAK HOUR





INSET



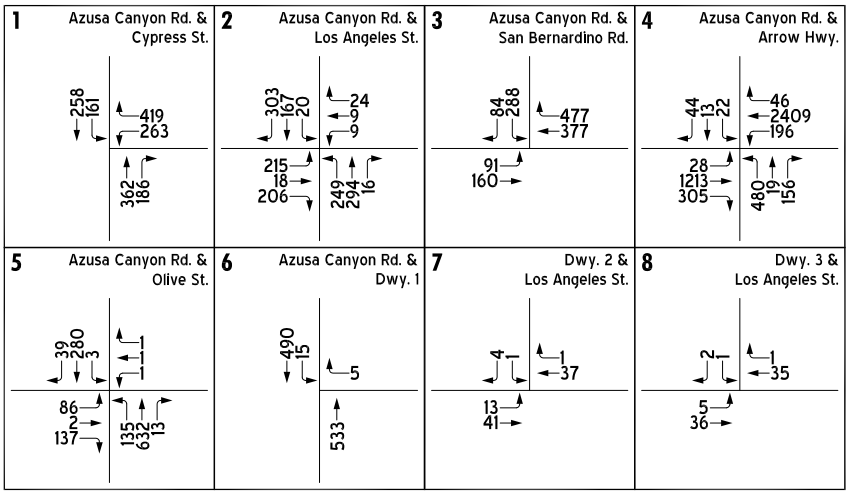
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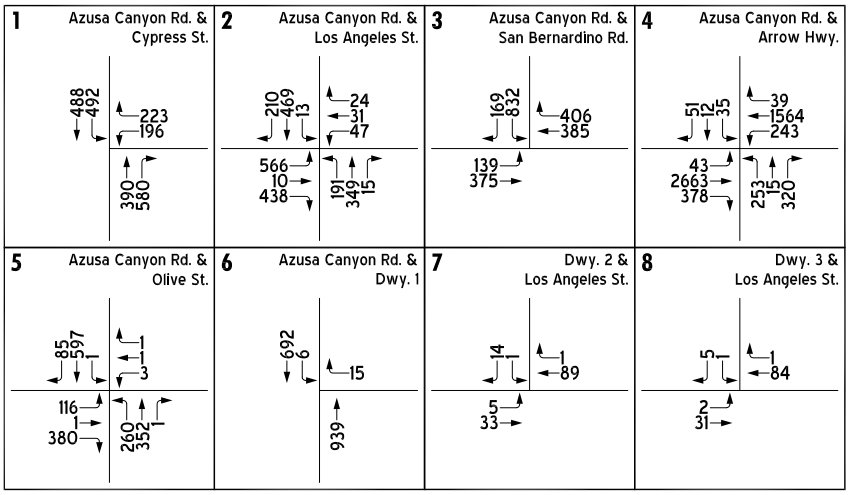
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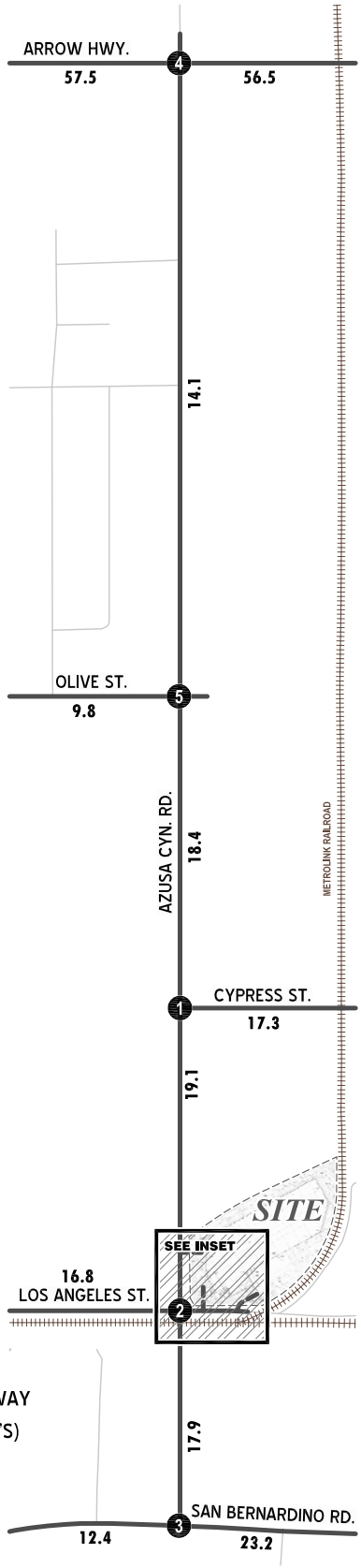
EXHIBIT 7-2: 2040 PLUS SITE BASELINE LAND USE WITH PROJECT TRAFFIC VOLUMES

AM PEAK HOUR

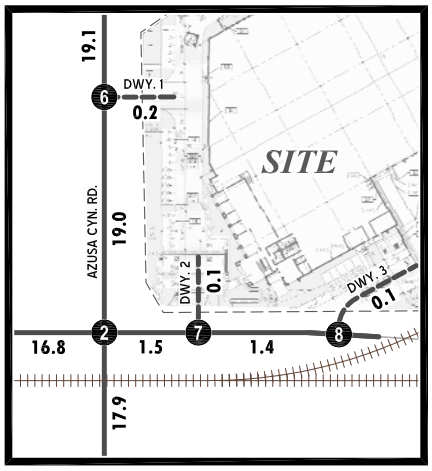


PM PEAK HOUR





INSET



LEGEND:

- (#) = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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8 VEHICLE MILES TRAVELED SCREENING ASSESSMENT

The County of Los Angeles Guidelines require VMT analysis for development projects that are estimated to generate a net increase of 110 or more daily vehicle trips. Daily vehicle trips are specifically related to on-road passenger vehicles (cars and light trucks). Heavy trucks are not included in a VMT traffic impact analysis.

The passenger car trip generation for the proposed Project is 197 daily trips (see Table 4-1), but the existing baseline site land use passenger car estimated trip generation is 88 daily trips (see Table 4-3). The net proposed Project passenger car trip generation is therefore 109 vehicles per day, which is less than the 110 vehicles per day that would require further VMT analysis.

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9 IMPROVEMENTS, SAFETY, & PROJECT FAIR SHARE

This section of the report summarizes the off-site improvements and fair share percentages required to meet level of service requirements at each of the analysis locations where improvements are required. Improvements which will eliminate all anticipated roadway operational deficiencies throughout the study area have been identified for 2040 With Project Buildout traffic conditions. The improvements were determined through the operations analysis sections of this traffic study. Per City of Irwindale guidelines, the project shall pay its fair share of improvements to eliminate any of the significant impacts identified in the analysis chapters of this report.

A qualitative review of on-site traffic circulation has been performed. Emergency vehicle access has been reviewed. This section includes a review of the Project site plan to address any potential increase in potential hazards due to design features such as sharp curves or dangerous intersections. The potential for the Project to adversely affect pedestrian safety and the adequacy of nearby pedestrian facilities is also reviewed.

9.1 OFF-SITE RECOMMENDED IMPROVEMENTS

To provide acceptable level of service and address existing deficient operations, the following off-site improvements are recommended:

Azusa Canyon Road / Los Angeles Street (#2) – The Project will be fully responsible to the following off-site improvements:

- Install traffic signal control
- Modify eastbound striping to provide 1 separate left turn lane, 1 shared left/through lane, and maintain existing right turn lane.
- Modify westbound approach to provide a separate left turn lane, shared through/right lane.

Azusa Canyon Road / Arrow Highway (#4) – The Project should contribute on a fair share basis to the following off-site improvements:

- Modify striping to provide a 3rd westbound through lane.
- Project to contribute to addition of northbound right turn overlap signal phase to existing northbound right turn lane.

9.2 SAFETY

The site currently exists with two driveways at Azusa Canyon Road and two driveways at Los Angeles Street. Each of the existing driveways connects to the arterial system at an angle other than 90 degrees. The Project proposes reconfiguring the existing driveways such that Driveway 1 connects perpendicular (approximately 90 degrees) at Azusa Canyon Road, Driveway 2 connects perpendicular (approximately 90 degrees) at Los Angeles Street, and Driveway 3 connects at a similar angle to the current easterly driveway at Los Angeles Street.

The Project site plan indicates pedestrian and accessible accommodations, including a concrete walkway along Azusa Canyon Road, and updated intersection features on the northeast corner of Azusa Canyon Road at Los Angeles Street (such as truncated dome curb access). In addition, an accessible path of travel is shown between the building, ADA parking spaces, and curb access at the intersection.

In conjunction with traffic signal implementation, the following improvements are recommended at the intersection of Azusa Canyon Road / Los Angeles Street (#2) to address potential safety concerns for pedestrians crossing the intersection as shown on Exhibit 9-1:

- Provide a new crosswalk on the east leg of the intersection.
- Provide a new crosswalk on the west leg of the intersection.
- Restrict on-street parking on the south side of Los Angeles Street, east of Azusa Canyon Road, within 150 feet of the intersection.
- Restrict on-street parking on the east side of Azusa Canyon Road, north of Los Angeles Street, within 150 feet of the intersection.

Sight distance and other safety considerations are recommended to be reviewed prior to finalization of the Project driveways. Therefore, the Site plan will not increase potential hazards on-site.

9.3 2040 WITH PROJECT FAIR SHARE PERCENTAGE

Per City of Irwindale Guidelines, the project shall pay its fair share of improvements to eliminate any of the significant impacts. Based on the intersection analysis results, the project is anticipated to contribute additional traffic causing significant impacts up to 2040 conditions, fair share calculation is therefore based on 2040 conditions to address all significant impacts caused by the project.

The project fair share percentages (%) towards the required improvements have also been calculated. Table 9-1 summarizes the 2040 With Project fair share percentages for the proposed project. As shown on Table 9-1, the project contributes approximately 9% of the new traffic at the intersection of Azusa Canyon Road / Los Angeles Street (#2) and 2% of the new traffic at the intersection of Azusa Canyon Road / Arrow Highway (#4). It should be noted however that due the Project's proximity to the intersection of Azusa Canyon Road/Los Angeles Street (#2), the Project will be fully responsible for the intersection improvements at this location.

TABLE 9-1: PROJECT FAIR SHARE PERCENTAGE CALCULATIONS

-

ID	Intersection	Existing (Hypothetical "Non-COVID" 2021) Plus Site Baseline Land Use Traffic[3]	2040 w/ Project Traffic[4]	Project (Net) Traffic	Total New Traffic[1]	Project Fair Share (%)[2]
2	Azusa Canyon Rd. / Los Angeles St.[4]					
	• AM Peak Hour	1,357	1,530	15	173	**9%**
	• PM Peak Hour	2,119	2,363	17	244	7%
4	Azusa Canyon Rd. / Arrow Hwy.					
	• AM Peak Hour	4,195	4,931	12	736	**2%**
	• PM Peak Hour	4,888	5,616	14	728	2%

[1] Total New Traffic = (2040 With Project Traffic - Existing 2021 Traffic)

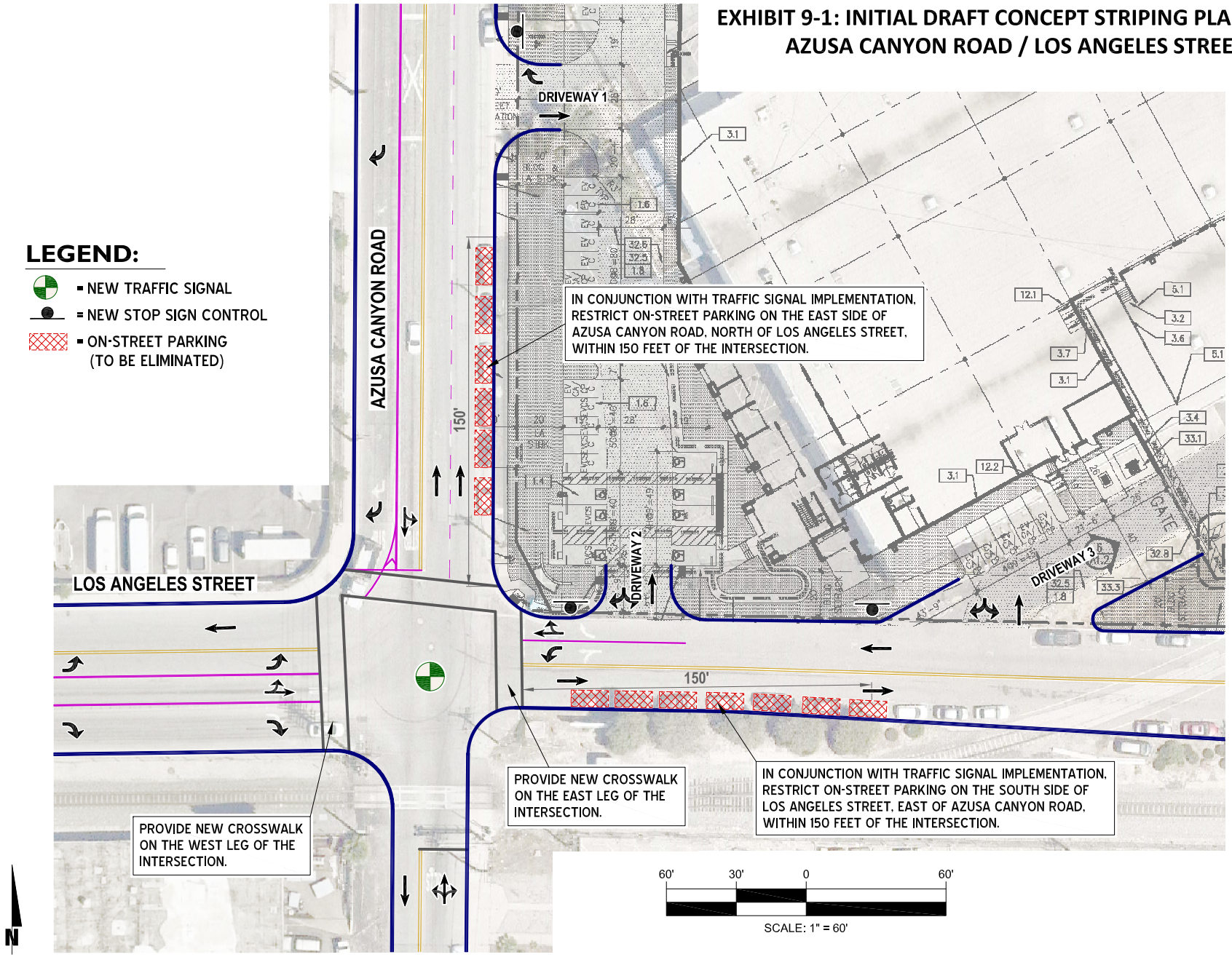
[2] Project Fair Share % = (Project Only Traffic / Total New Traffic)

[3] Existing volume include estimated traffic volume for the existing site land use (Pepsi Warehouse).

[4] The Project will be fully responsible (100%) for the intersection improvement at Azusa Canyon Road/Los Angeles Street (#2).

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EXHIBIT 9-1: INITIAL DRAFT CONCEPT STRIPING PLAN
AZUSA CANYON ROAD / LOS ANGELES STREET



10 SUMMARY OF FINDINGS

10.1 PROJECT ACCESS

The Project is proposing to construct the following improvements as design features in conjunction with development of the site.

- The Project should construct curb, gutter, sidewalk, and landscaping improvements along Azusa Canyon Road and Los Angeles Street as needed to facilitate site access along the Project's frontage, consistent with the City's standards.
- Driveway 1 on Azusa Canyon Road should be restricted to right-out/left-in only access.
- Driveway 2 on Los Angeles Street should be constructed with full access.
- Driveway 3 on Los Angeles Street should be constructed with full access.

10.2 TRAFFIC ANALYSIS RESULTS

The intersections of Azusa Canyon Road/Los Angeles Street (#2) and Azusa Canyon Road/Arrow Highway are anticipated to operate at an unacceptable LOS during the peak hours for Existing, Existing Plus Site Baseline Land Use without and with Project, Interim Year (2022) without and with Project, General Plan Buildout (2040) Without and With Project Conditions, with existing geometry. Providing the following improvements are anticipated to improve the intersections to operate at an acceptable LOS (LOS "D" or better) for future conditions:

Azusa Canyon Road / Los Angeles Street (#2) – The following improvements are necessary to address existing deficient operations:

- Project will be fully responsible in installing a traffic signal control.
- Project will be fully responsible in modifying the existing striping for the eastbound and westbound approach to provide the following lane configuration:
    - Eastbound: 1 left turn, 1 shared left/through lane, and maintain existing right turn lane
    - Westbound: 1 left turn and 1 shared through/right lane.

Azusa Canyon Road / Arrow Highway (#4) – The following improvements are necessary to address existing deficient operations:

- Project will be partially responsible and contribute to 3rd westbound through lane.
- Project will be partially responsible and contribute to the addition of a northbound right turn overlap signal phase to an existing northbound right turn lane.

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11 REFERENCES

[1] City of Irwindale, "Policy Guidelines for Taffic Impact Reports," Irwindale, December 30, 2014.

[2] Institute of Transportation Engineers, Trip Generation Manual, 10th Edition ed., 2017.

[3] Transportation Research Board, Highway Capacity Manual (HCM), 6th Edition ed., Washington, D.C.: National Academy of Sciences, 2016.

[4] Transportation Research Board, Highway Capacity Manual (HCM), 6th Edition ed., National Academy of Sciences, 2016.

[5] Caltrans, "California Manual on Uniform Traffic Control Devices (MUTCD)," in *California Manual on Uniform Traffic Control Devices (CAMUTCD)*, 2017.

[6] Los Angeles County, "Los Angeles County General Plan," Los Angeles County, Adopted October 6, 2015.

[7] Federal highway ADministration, "Field Guide for Selecting Countermeasures at Uncontrolled Pedestrian Crossing Locations," FHWA, Washington, DC.

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APPENDIX 1.1:

APPROVED SCOPING AGREEMENT

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URBAN CROSSROADS

urbanxroads.com

June 15, 2021

Mr. Daniel Co
City of Irwindale
5050 N. Irwindale Ave.
Irwindale, CA 91706

SUBJECT: AZUSA CANYON ROAD WAREHOUSE TRAFFIC ANALYSIS SCOPING AGREEMENT

Dear Mr. Daniel Co:

Urban Crossroads, Inc. is pleased to submit this traffic analysis scope regarding the proposed Azusa Canyon Road Warehouse ("Project"), which is located north of Los Angeles Street and east of Azusa Canyon (4416 Azusa Canyon Road) in the City of Irwindale. It is our understanding that the Project involves the demolition of the existing on-site buildings and structures for the construction of a stand-alone speculative concrete tilt-up warehouse building (approximately 125,475 square feet). This letter describes the draft proposed project trip generation and analysis procedures. It is acknowledged that that if the actual land use mix is not consistent with what is studied, a subsequent traffic study would be required by the City.

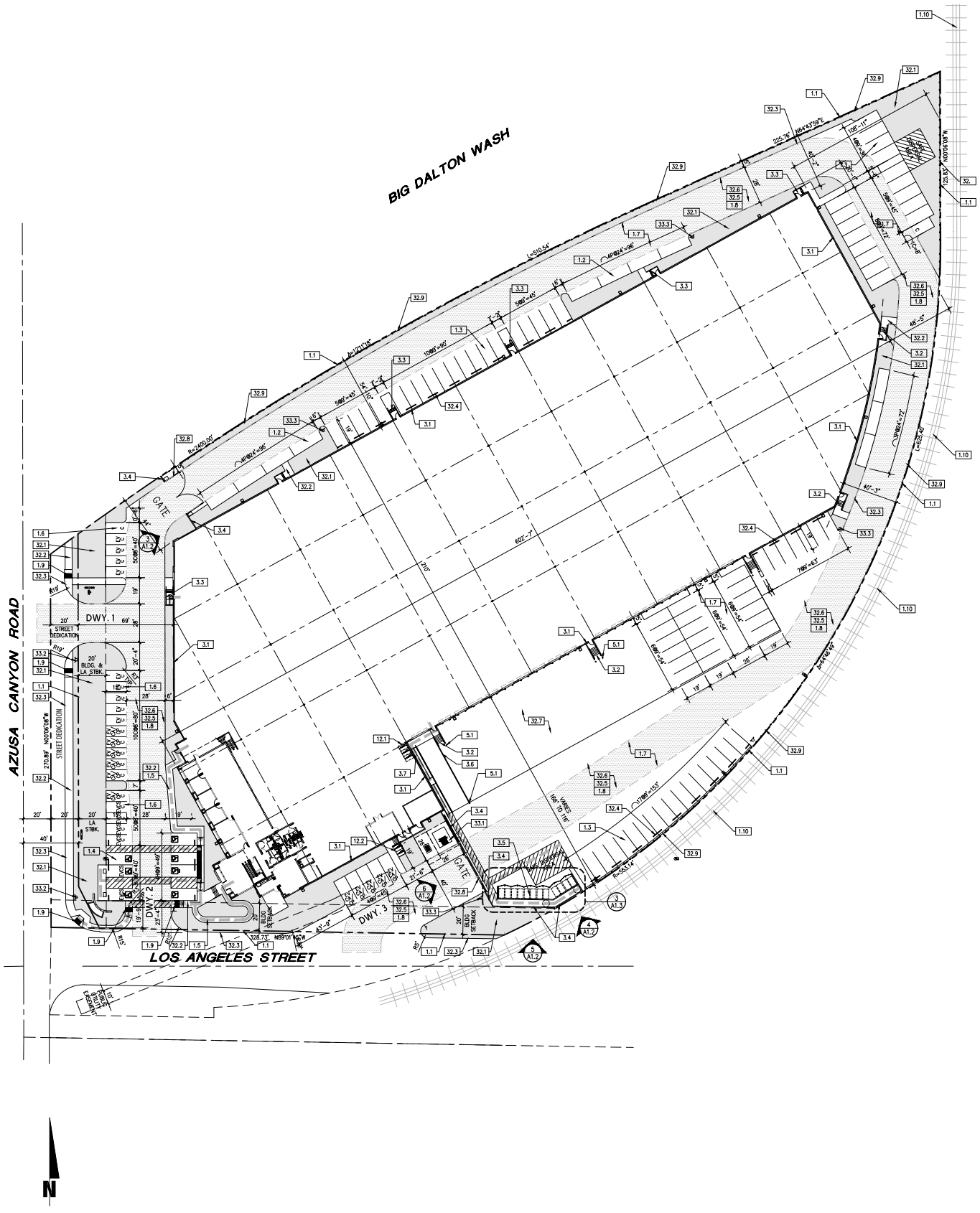
The site plan for the proposed Project is shown on Exhibit 1. Exhibit 2 depicts the proposed intersection analysis locations for this analysis. The Project is proposed to have two driveways at Los Angeles Street and one driveway at Azusa Canyon Road.

TRIP GENERATION

In order to estimate the traffic characteristics of the Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition, 2017) manual for ITE Land Use Code 150 (Warehousing) and 140 (Manufacturing) are utilized. Trip generation rates and resulting calculations for the proposed Project are shown on Table 1. The Project is anticipated to generate 262 trip-ends per day with 29 AM peak hour trips and 35 PM peak hour trips, with the mixture of passenger car and truck trips as shown in Table 1. Table 2 presents the anticipated Passenger Car Equivalent (PCE) trip-ends for the proposed Project, resulting in 362 daily PCE trips with 45 AM PCE peak hour trips and 46 PM PCE peak hour trips.

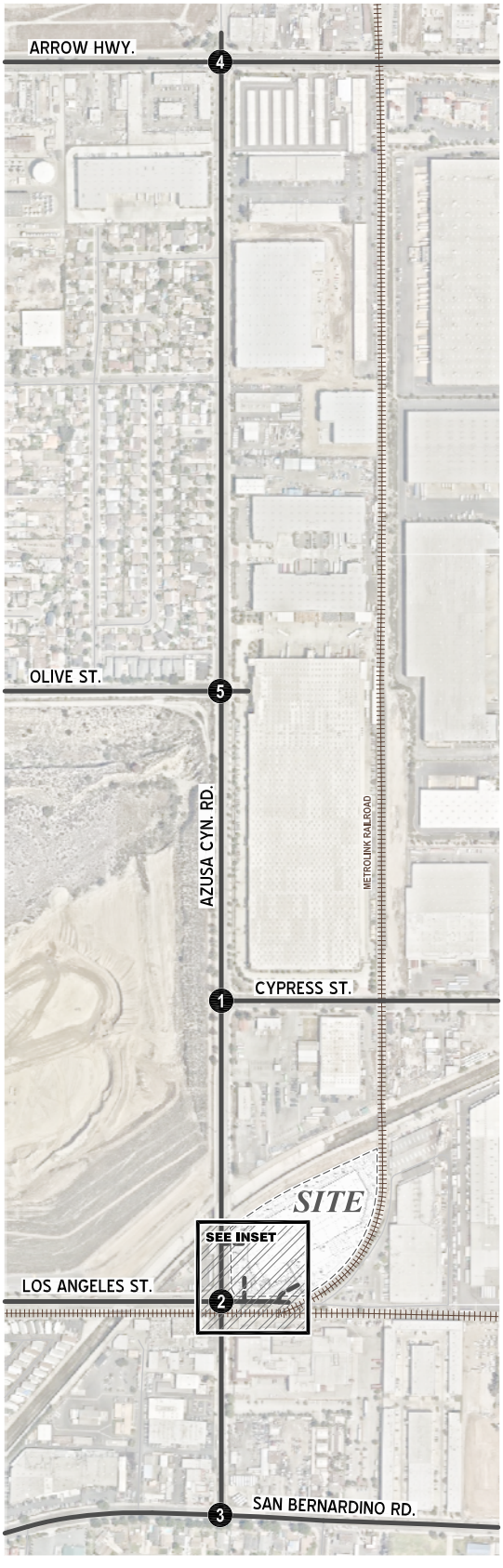
Vehicle trip generation rates and resulting values for the existing baseline land uses at the Project site are shown in Table 3. Existing baseline site land uses generate an estimated 110 trip-ends per day with 10 AM peak hour trips and 11 PM peak hour trips, with the mixture of passenger car and truck trips as shown in Table 3. Table 4 presents the anticipated PCE trip-ends for the existing baseline site land uses, resulting in 140 PCE trip-ends per day with 18 AM PCE peak hour trips and 16 PM PCE peak hour trips.

EXHIBIT 1: SITE PLAN

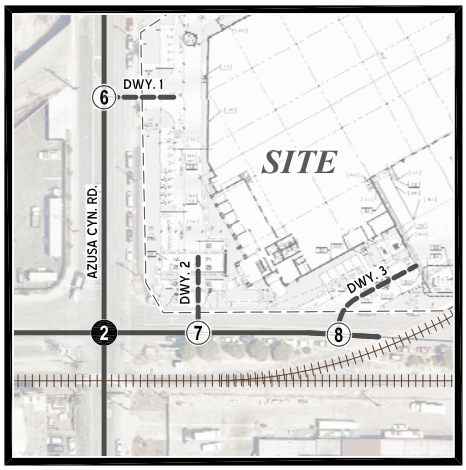


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EXHIBIT 2: STUDY AREA



INSET



LEGEND:

- 5 = EXISTING ANALYSIS LOCATION
- (3) = FUTURE ANALYSIS LOCATION
- = FUTURE PROJECT DRIVEWAY

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URBAN CROSSROADS

TABLE 1: PROPOSED PROJECT TRIP GENERATION SUMMARY (ACTUAL VEHICLES)

Trip Generation Rates[1]									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing[3]	150	112.830 TSF	0.130	0.040	0.170	0.050	0.140	0.190	1.740
79.57% Passenger Cars			0.103	0.032	0.135	0.040	0.112	0.152	1.385
3.46% 2-Axle Trucks			0.004	0.001	0.005	0.002	0.005	0.007	0.060
4.64% 3-Axle Trucks			0.006	0.002	0.008	0.002	0.006	0.008	0.081
12.33% 4-Axle+ Trucks			0.016	0.005	0.021	0.006	0.017	0.023	0.215
Manufacturing[3]	140	17.000 TSF	0.480	0.140	0.620	0.210	0.460	0.670	3.930
61.20% Passenger Cars			0.294	0.086	0.380	0.129	0.282	0.411	2.405
6.10% 2-Axle Trucks			0.029	0.009	0.038	0.013	0.028	0.041	0.240
12.70% 3-Axle Trucks			0.061	0.018	0.079	0.027	0.058	0.085	0.499
19.90% 4-Axle+ Trucks			0.096	0.028	0.124	0.042	0.092	0.134	0.782

Proposed Project Trip Generation Results									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing	150	112.830 TSF							
- Passenger Cars			12	4	16	5	13	18	156
- Truck Trips									
2-axle:			*0*	*0*	*0*	*0*	*1*	*1*	*7*
3-axle:			*1*	*0*	*1*	*0*	*1*	*1*	*9*
4+-axle:			*2*	*1*	*3*	*1*	*2*	*3*	*24*
- Net Truck Trips (Actual Vehicles)			3	1	4	1	4	5	40
Warehousing Subtotal (Actual Vehicles)			**15**	**5**	**20**	**6**	**17**	**23**	**196**
Manufacturing	140	17.0 TSF							
- Passenger Cars			5	1	6	2	5	7	41
- Truck Trips									
2-axle:			*0*	*0*	*0*	*0*	*0*	*0*	*4*
3-axle:			*1*	*0*	*1*	*1*	*1*	*2*	*8*
4+-axle:			*2*	*0*	*2*	*1*	*2*	*3*	*13*
- Net Truck Trips (Actual Vehicles)			3	0	3	2	3	5	25
Manufacturing Subtotal (Actual Vehicles)			**8**	**1**	**9**	**4**	**8**	**12**	**66**
PROPOSED PROJECT TRIPS (ACTUAL VEHICLES)[4]			**23**	**6**	**29**	**10**	**25**	**35**	**262**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017) and 10th Edition Supplement (2020).

[2] TSF = Thousand Square Feet

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study (August 2003) for ITE LU Code 150 - Heavy Warehouse Vehicle Mix and ITE LU Code 140 - Heavy Industrial Vehicle Mix

[4] Total Net Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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TABLE 2: PROPOSED PROJECT TRIP GENERATION SUMMARY (PCE)

Trip Generation Rates[1]									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing[3]	150	112.830 TSF	0.169	0.053	0.222	0.065	0.182	0.247	2.282
79.57% Passenger Cars			0.103	0.032	0.135	0.040	0.111	0.151	1.385
3.46% 2-Axle Trucks; (PCE = 1.5)			0.006	0.002	0.008	0.003	0.008	0.011	0.090
4.64% 3-Axle Trucks; (PCE = 2.0)			0.012	0.004	0.016	0.004	0.012	0.016	0.162
12.33% 4-Axle+ Trucks; (PCE = 3.0)			0.048	0.015	0.063	0.018	0.051	0.069	0.645
Manufacturing[3]	140	17.000 TSF	0.748	0.220	0.968	0.329	0.716	1.045	6.109
61.20% Passenger Cars			0.294	0.086	0.380	0.129	0.282	0.411	2.405
6.10% 2-Axle Trucks			0.044	0.014	0.058	0.020	0.042	0.062	0.360
12.70% 3-Axle Trucks			0.122	0.036	0.158	0.054	0.116	0.170	0.998
19.90% 4-Axle+ Trucks			0.288	0.084	0.372	0.126	0.276	0.402	2.346

Proposed Project Trip Generation Results									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing	150	112.830 TSF							
- Passenger Cars			12	4	16	5	13	18	156
- Truck Trips									
2-axle (PCE = 1.5):			*1*	*0*	*1*	*0*	*1*	*1*	*11*
3-axle (PCE = 2.0):			*2*	*1*	*3*	*0*	*1*	*1*	*18*
4+-axle (PCE = 3.0):			*6*	*3*	*9*	*2*	*6*	*8*	*73*
- Net Truck Trips (PCE)			9	4	13	2	8	10	102
Warehousing Subtotal (PCE)			**21**	**8**	**29**	**7**	**21**	**28**	**258**
Manufacturing	140	17.0 TSF							
- Passenger Cars			5	1	6	2	5	7	41
- Truck Trips									
2-axle (PCE = 1.5):			*1*	*0*	*1*	*0*	*1*	*1*	*6*
3-axle (PCE = 2.0):			*2*	*1*	*3*	*1*	*2*	*3*	*17*
4+-axle (PCE = 3.0):			*5*	*1*	*6*	*2*	*5*	*7*	*40*
- Net Truck Trips (PCE)			8	2	10	3	8	11	63
Manufacturing Subtotal (PCE)			**13**	**3**	**16**	**5**	**13**	**18**	**104**
PROPOSED PROJECT TRIPS (PCE)[4]			**34**	**11**	**45**	**12**	**34**	**46**	**362**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

[2] TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study (August 2003) for ITE LU Code 150 - Heavy Warehouse Vehicle Mix and ITE LU Code 140 - Heavy Industrial Vehicle Mix

[4] Total Trips (PCE) = Passenger Cars + Net Truck Trips (PCE)

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TABLE 3: EXISTING SITE BASELINE LAND USE TRIP GENERATION SUMMARY (ACTUAL VEHICLES)

Trip Generation Rates[1]									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing[3]	150	62.713 TSF	0.130	0.040	0.170	0.050	0.140	0.190	1.740
80.3% Passenger Cars			0.104	0.032	0.136	0.040	0.113	0.153	1.398
5.2% 2-Axle Trucks			0.007	0.002	0.009	0.003	0.007	0.010	0.090
4.5% 3-Axle Trucks			0.006	0.002	0.008	0.002	0.006	0.008	0.078
10.0% 4-Axle+ Trucks			0.013	0.004	0.017	0.005	0.014	0.019	0.174

Existing Site Baseline Land Use Trip Generation Results									
Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Warehousing	150	62.713 TSF							
- Passenger Cars			7	2	9	3	7	10	88
- Truck Trips									
2-axle:			*0*	*0*	*0*	*0*	*0*	*0*	*6*
3-axle:			*0*	*0*	*0*	*0*	*0*	*0*	*5*
4+-axle:			*1*	*0*	*1*	*0*	*1*	*1*	*11*
- Net Truck Trips (Actual Vehicles)			1	0	1	0	1	1	22
Existing Site Baseline Land Use Trip Generation Subtotal (Actual Vehicles)[4]			**8**	**2**	**10**	**3**	**8**	**11**	**110**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017) and 10th Edition Supplement (2020).

[2] TSF = Thousand Square Feet

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study(August 2003) for ITE LU Code 150 - Light Warehouse use with 100 tsf gross floor area or less.

[4] Total Net Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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TABLE 4: EXISTING SITE BASELINE LAND USE TRIP GENERATION SUMMARY (PCE)

Trip Generation Rates[1]									
			AM Peak Hour			PM Peak Hour			
Land Use	ITE LU Code	Quantity[2]	In	Out	Total	In	Out	Total	Daily
Warehousing[3,4]	150	62.713 TSF	0.166	0.051	0.217	0.064	0.178	0.242	2.211
80.3% Passenger Cars			0.104	0.032	0.136	0.040	0.113	0.153	1.398
5.2% 2-Axle Trucks; (PCE = 1.5)			0.011	0.003	0.014	0.005	0.011	0.016	0.135
4.5% 3-Axle Trucks; (PCE = 2.0)			0.012	0.004	0.016	0.004	0.012	0.016	0.156
10.0% 4-Axle+ Trucks; (PCE = 3.0)			0.039	0.012	0.051	0.015	0.042	0.057	0.522

Existing Site Baseline Land Use Trip Generation Results									
			AM Peak Hour			PM Peak Hour			
Land Use	ITE LU Code	Quantity[2]	In	Out	Total	In	Out	Total	Daily
Warehousing	150	62.713 TSF							
- Passenger Cars			7	2	9	3	7	10	88
- Truck Trips									
2-axle (PCE = 1.5):			*1*	*0*	*1*	*0*	*1*	*1*	*9*
3-axle (PCE = 2.0):			*2*	*1*	*3*	*0*	*1*	*1*	*10*
4+-axle (PCE = 3.0):			*3*	*2*	*5*	*1*	*3*	*4*	*33*
- Net Truck Trips (PCE)			6	3	9	1	5	6	52
Existing Site Baseline Land Use Trip Generation Subtotal (PCE)[5]			**13**	**5**	**18**	**4**	**12**	**16**	**140**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

[2] TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

[3] Vehicle Mix Source: City of Fontana Truck Trip Generation Study(August 2003) for ITE LU Code 150 - Light Warehouse use with 100 tsf gross floor area or less.

[4] Total Trips (PCE) = Passenger Cars + Net Truck Trips (PCE)

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As shown in Table 5, the proposed Project is anticipated to generate an increase of 222 PCE trip-ends per day with 27 additional AM PCE peak hour trips and 30 additional PM PCE peak hour trips, in comparison to existing baseline site land uses.

The net new project trip generation in the critical peak hour is estimated to be more than 25 but less than 50 vehicle trips, so a focused site traffic review is required by the City of Irwindale Policy Guidelines for Traffic Impact Reports.

EXISTING BASELINE SITE VOLUMES

Daily and peak hour PCE traffic volumes have been estimated for the existing baseline site land uses. These existing baseline site volumes (shown on Exhibit 3) will be added to the existing hypothetical "non-COVID" 2021 count data sets (discussed below).

TRIP DISTRIBUTION AND ASSIGNMENT

The Project trip distribution pattern is heavily influenced by the geographical location of the site, the location of surrounding uses, and the access to adjacent roadways. Exhibit 4 presents the trip distribution for the proposed Project. The resulting daily and peak hour traffic volumes associated with the proposed Project are shown on Exhibit 5.

ANALYSIS SCENARIOS

The analysis of peak hour operations at study area intersections will be provided for the following analysis scenarios:

- Existing (hypothetical "non-COVID" 2021)
- Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use
- Existing (hypothetical "non-COVID" 2021) Plus Site Baseline Land Use Plus Proposed Project
- Interim Year Cumulative Plus Site Baseline Land Use Without Proposed Project (2022)
- Interim Year Cumulative Plus Site Baseline Land Use With Proposed Project (2022)
- 2040 Plus Site Baseline Land Use Without Proposed Project
- 2040 Plus Site Baseline Land Use With Proposed Project

The City of Irwindale General Plan Circulation Element is depicted on Exhibit 6. Truck routes in the City of Irwindale are shown on Exhibit 7. The City of Baldwin Park General Plan Circulation Element is depicted on Exhibit 8. Truck routes in the City of Baldwin Park are shown on Exhibit 9.

For the purposes of this focused traffic analysis, the following intersections will be evaluated as shown previously on Exhibit 2.

TABLE 5: LAND USE AND TRIP GENERATION COMPARISON SUMMARY

COMPARISON SUMMARY								
Land Use[2]	Quantity[1]	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Existing Site Baseline Land Use (PCE)	62.713 TSF	13	5	18	4	12	16	140
Proposed Project (PCE)	129.83 TSF	34	11	45	12	34	46	362
DELTA ***(Proposed - Existing)***		**21**	**6**	**27**	**8**	**22**	**30**	**222**

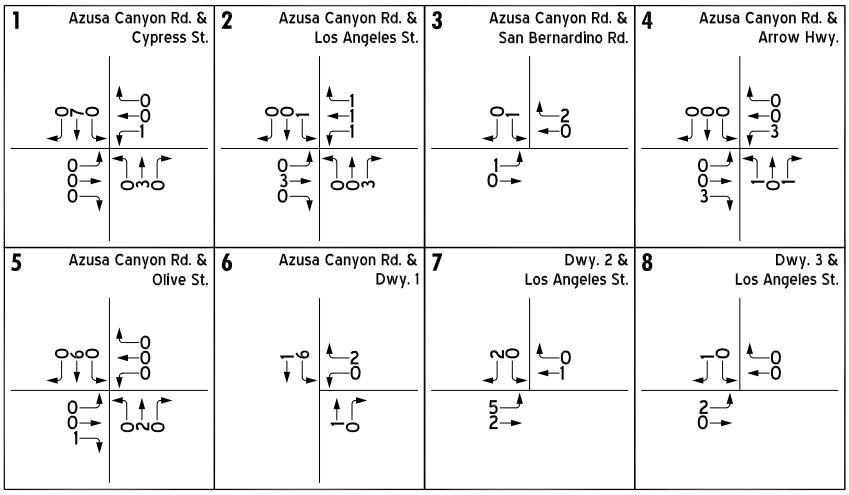
[1] TSF = Thousand Square Feet

[2] PCE = Passenger Car Equivalent

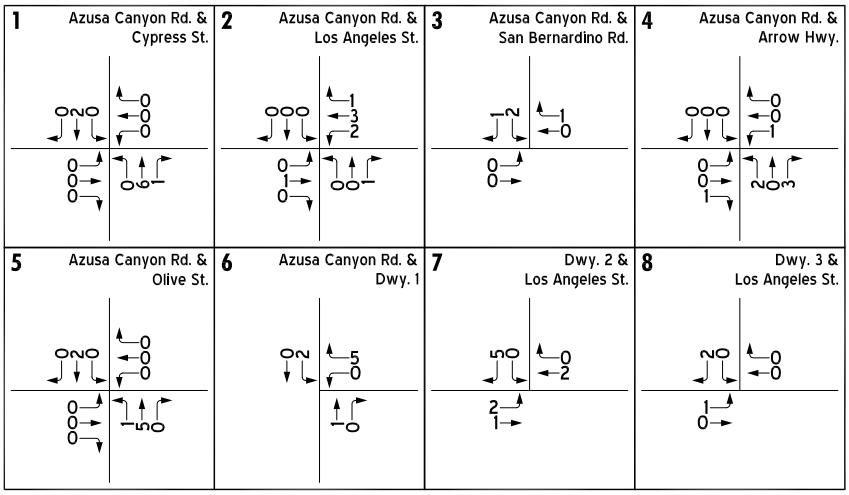
F:\UXRjobs_13600-14000_13800\13837\Excel\[13837 - TG.xlsx]TG Comparison

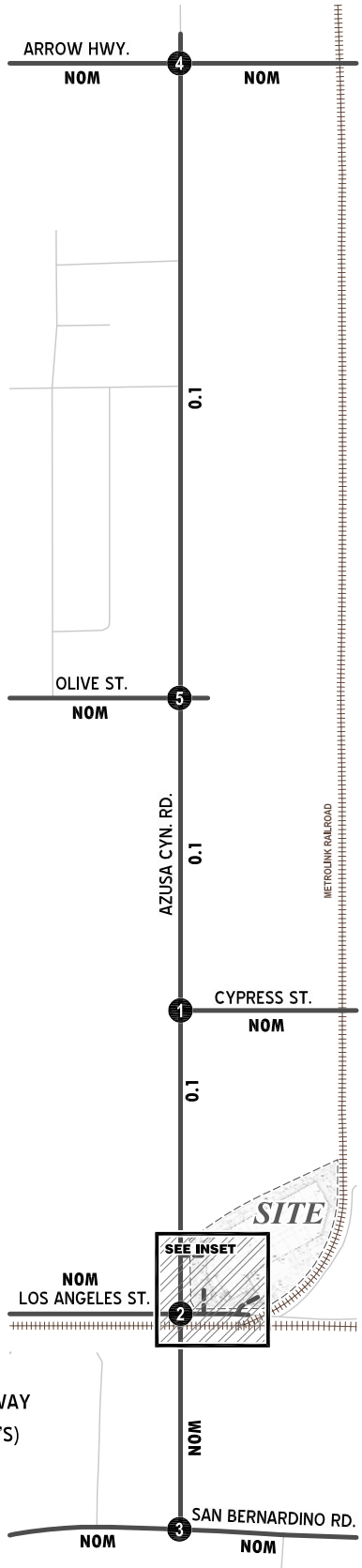
EXHIBIT 3: SITE EXISTING BASELINE TRAFFIC VOLUMES (PCE)

AM PEAK HOUR

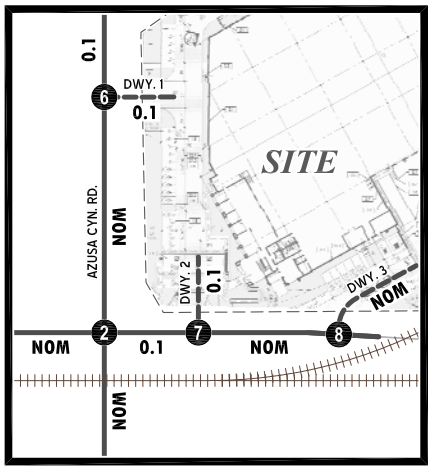


PM PEAK HOUR





INSET

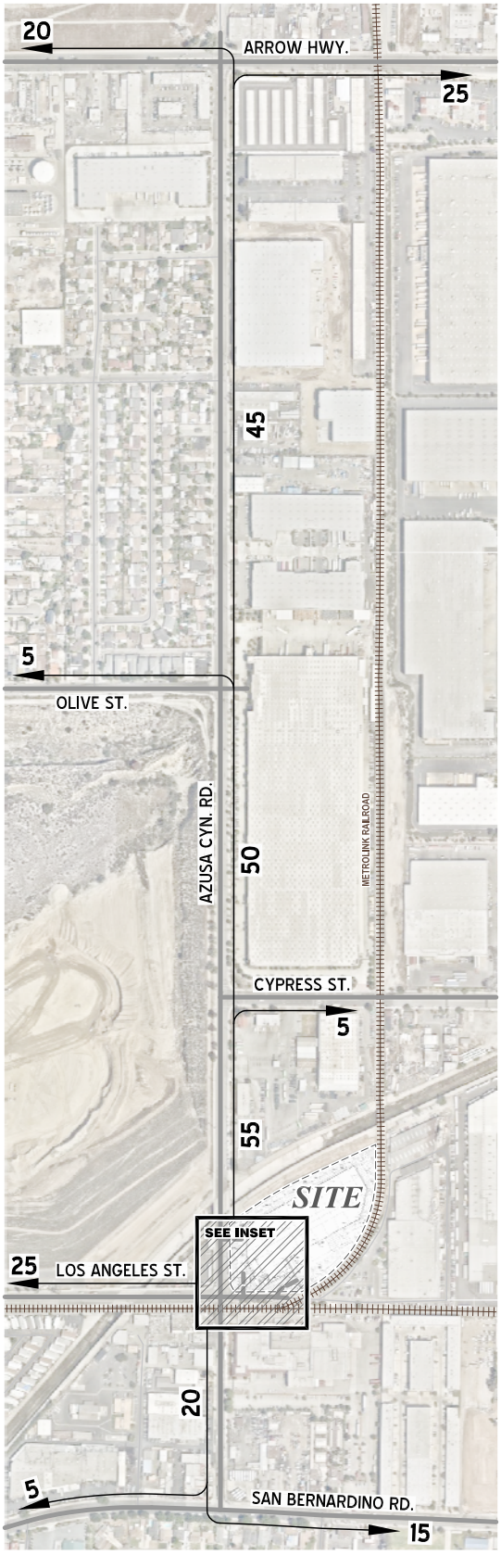


LEGEND:

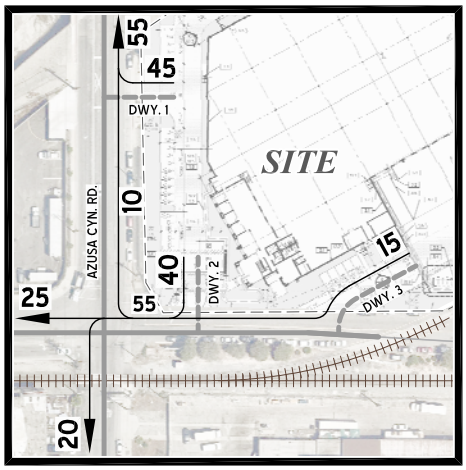
- (#) = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

EXHIBIT 4: PROJECT TRIP DISTRIBUTION



INSET



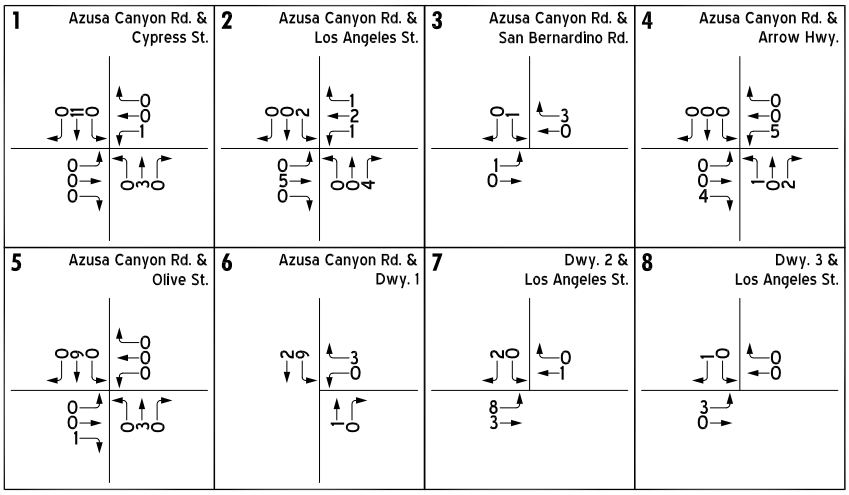
LEGEND:

10 = PERCENT FROM/TO PROJECT

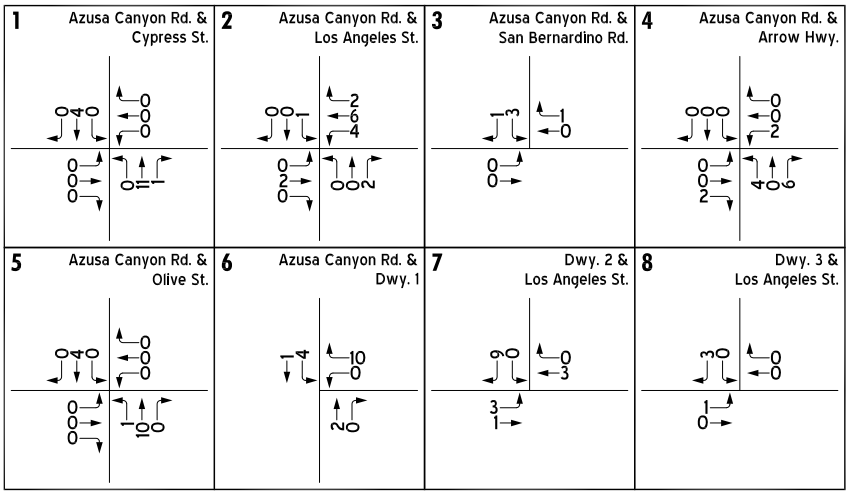
= FUTURE PROJECT DRIVEWAY

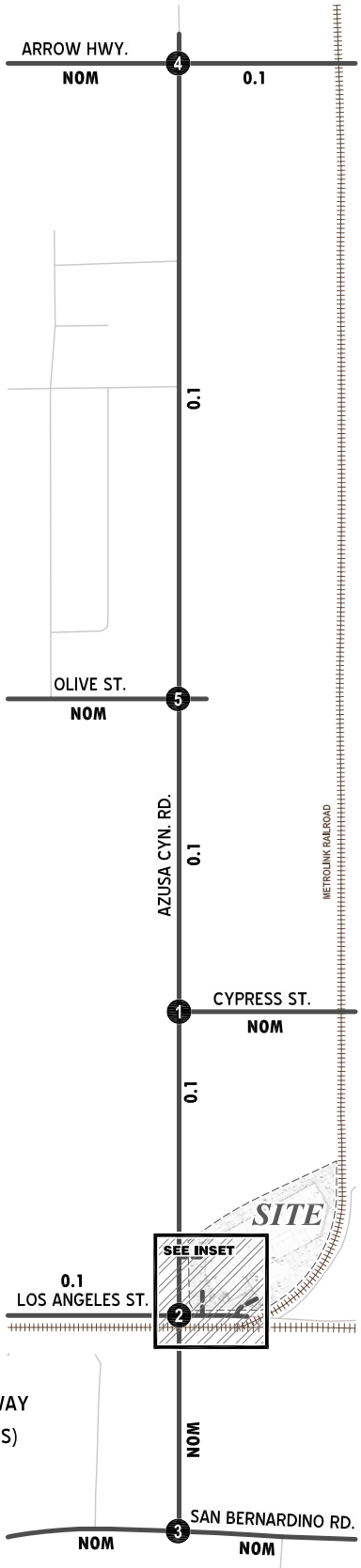
EXHIBIT 5: PROPOSED PROJECT ADDED TRAFFIC VOLUMES (PCE)

AM PEAK HOUR

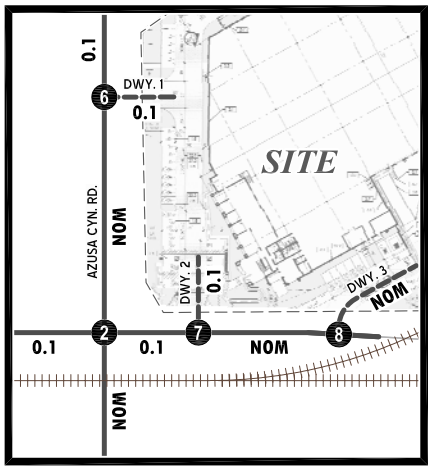


PM PEAK HOUR





INSET



LEGEND:

- # = INTERSECTION ID
- = FUTURE PROJECT DRIVEWAY
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

13837 - 01.dwg

URBAN CROSSROADS

EXHIBIT 6: CITY OF IRWINDALE GENERAL PLAN CIRCULATION ELEMENT

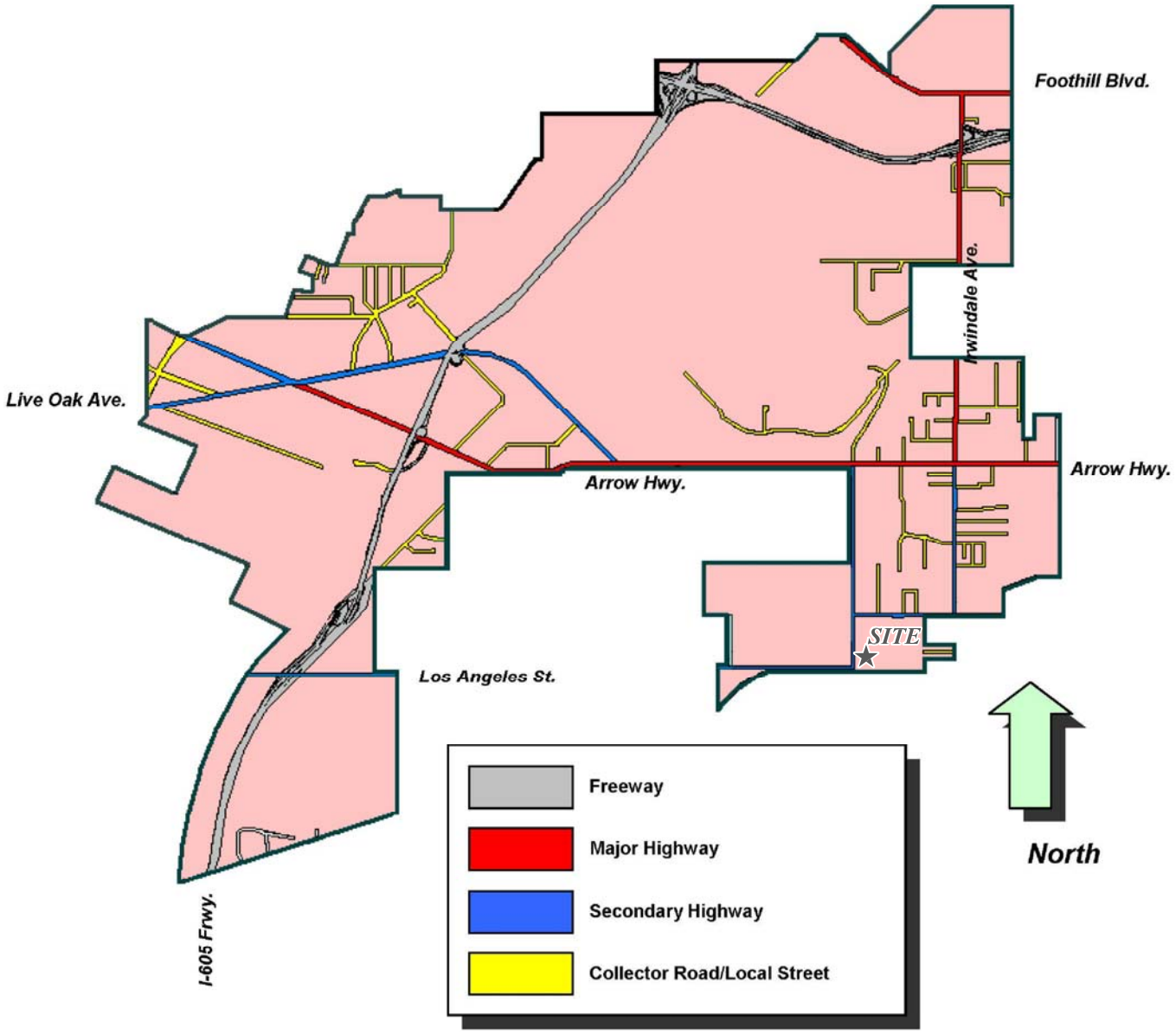




EXHIBIT 7: CITY OF IRWINDALE TRUCK ROUTES

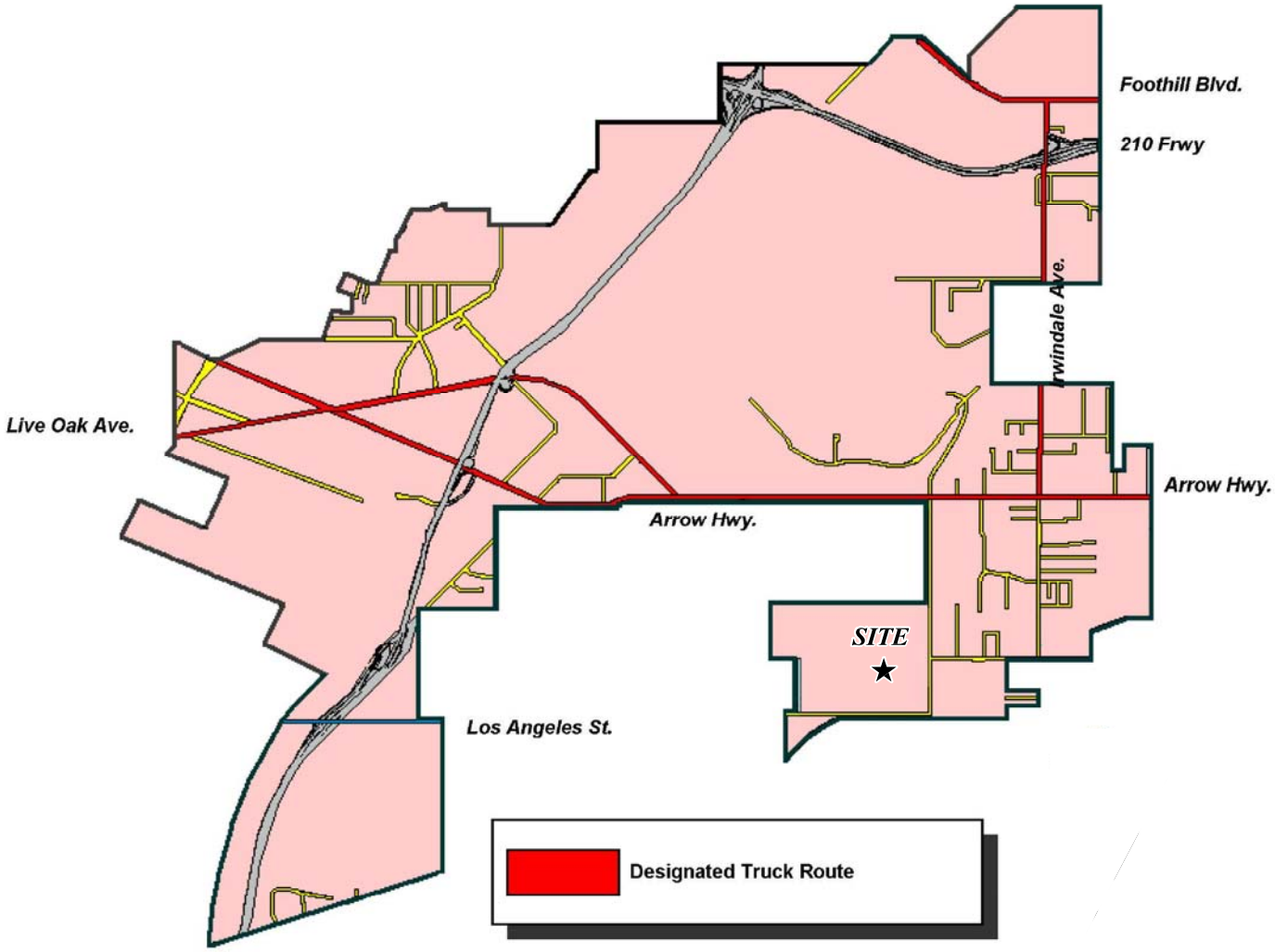


EXHIBIT 8: CITY OF BALDWIN PARK GENERAL PLAN CIRCULATION ELEMENT

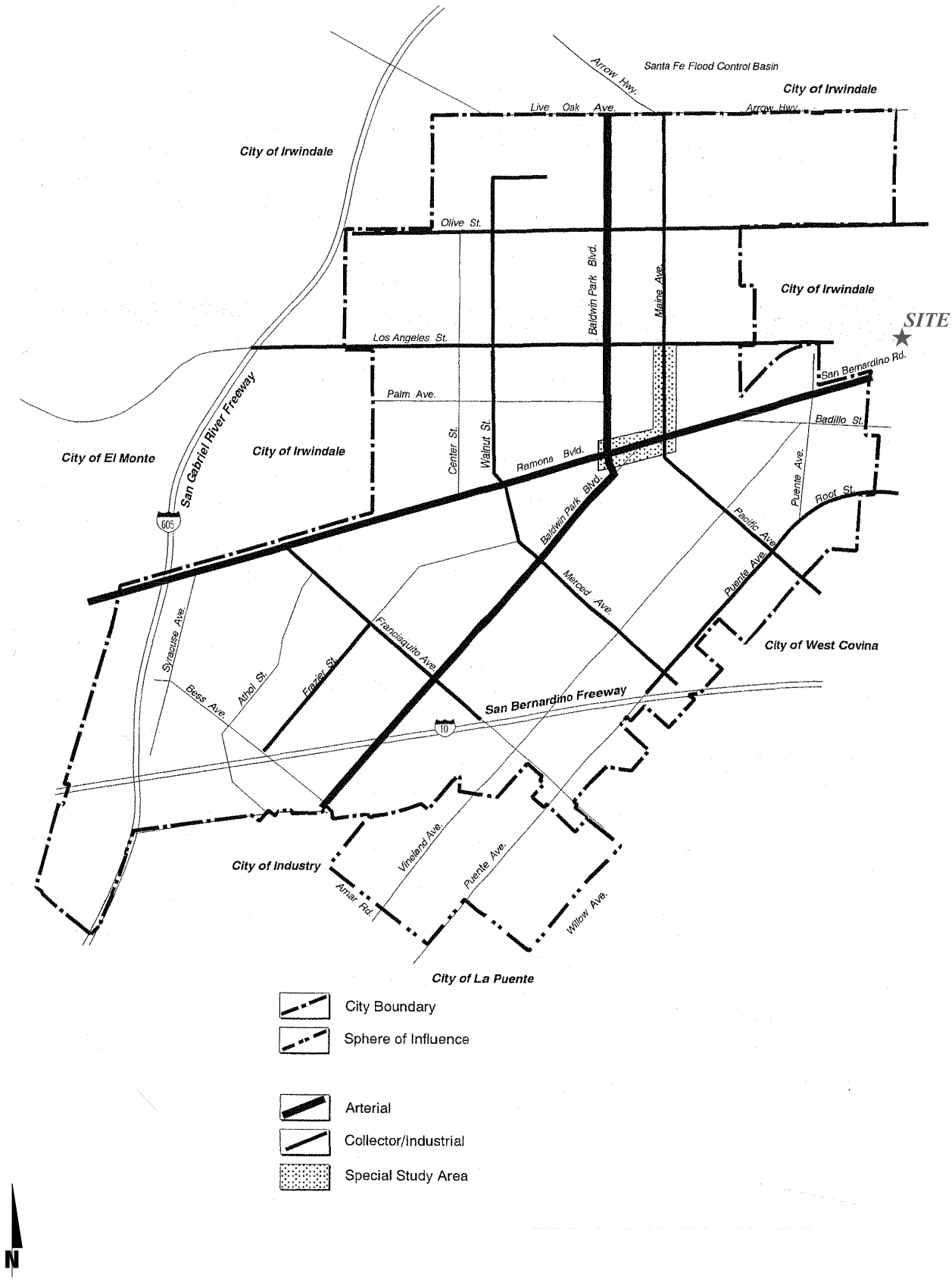
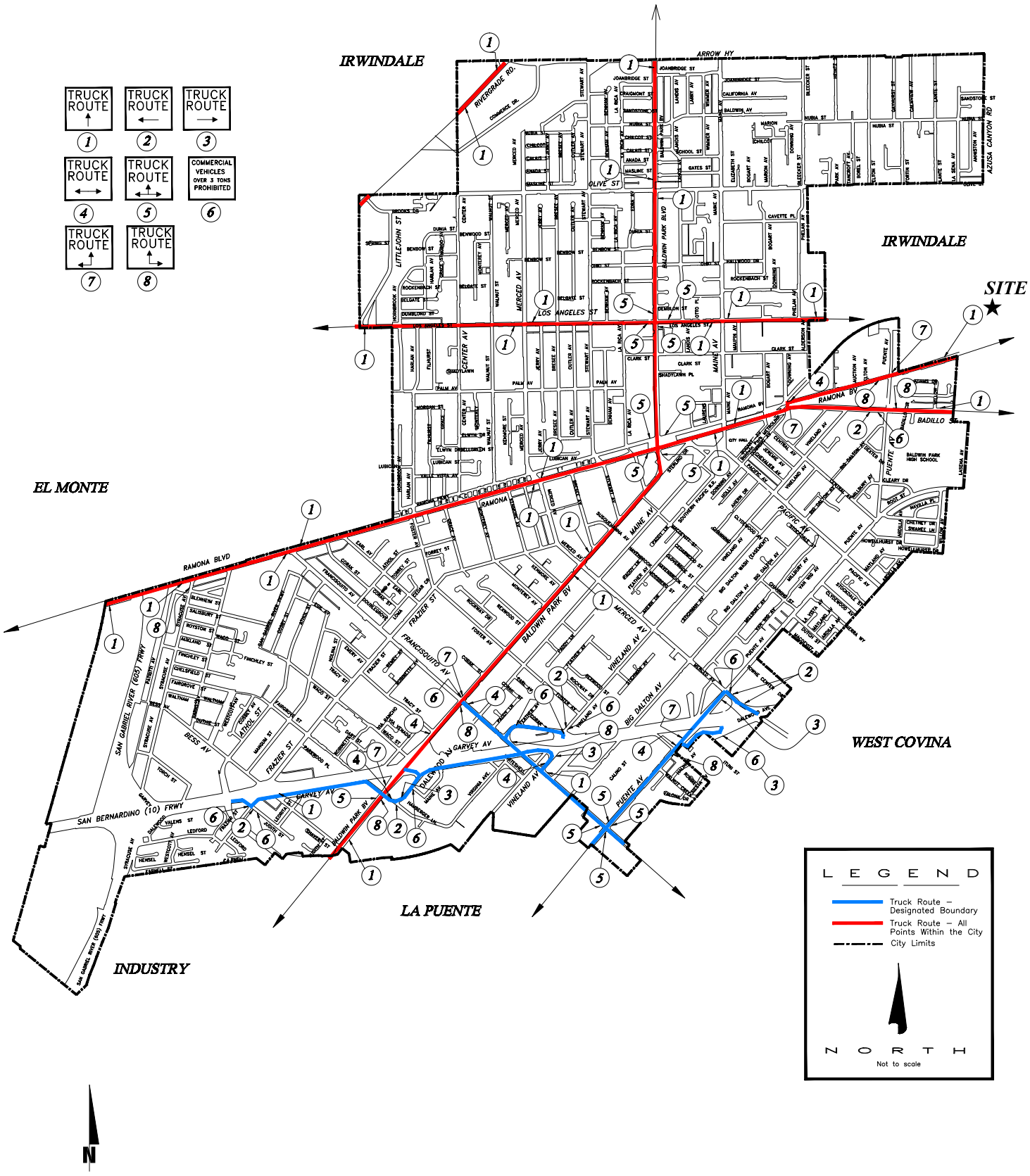


EXHIBIT 9: CITY OF BALDWIN PARK TRUCK ROUTES



13837 - 02.dwg

ID	Intersection Location
1	Azusa Canyon Road / Cypress Street
2	Azusa Canyon Road / Los Angeles Street
3	Azusa Canyon Road / San Bernardino Road
4	Azusa Canyon Road / Arrow Highway
5	Azusa Canyon Road / Olive Street
6	Azusa Canyon Road / Driveway 1
7	Los Angeles Street / Driveway 2
8	Los Angeles Street / Driveway 3

CUMULATIVE DEVELOPMENT TRAFFIC

We request that City staff review the list of cumulative development projects (shown on Exhibit 10 and listed on Table 6) for inclusion in the traffic study. An ambient growth rate of 2% per year will be utilized as a minimum if necessary.

LEVEL OF SERVICE (LOS) CRITERIA

Per the City of Irwindale's General Plan, LOS D as the threshold for acceptable traffic conditions on the circulation network.

ANALYSIS METHODOLOGY

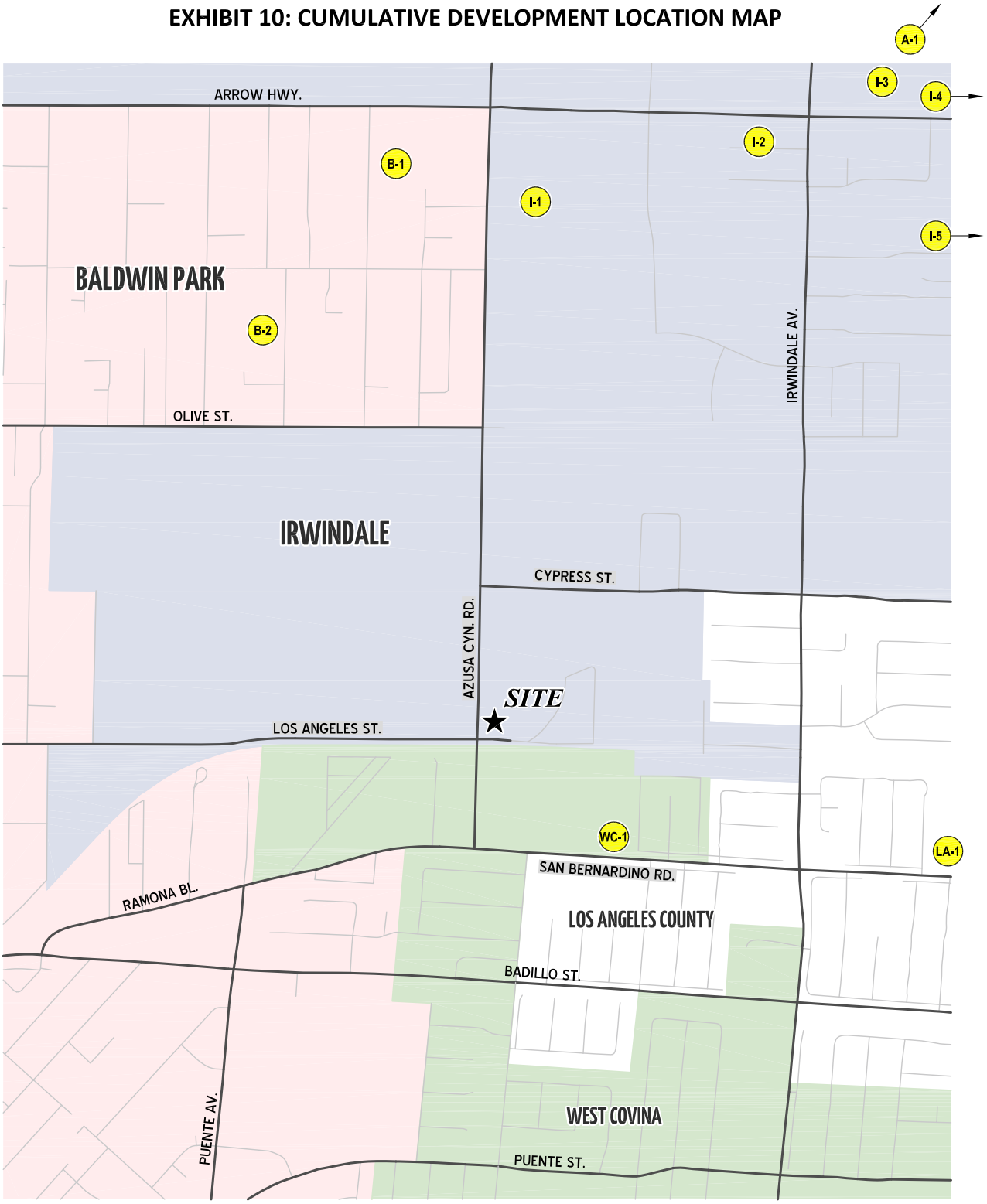
Analysis of signalized intersections will be based on the Intersection Capacity Utilization (ICU) methodology. The ICU methodology compares the traffic volumes using the intersection to the capacity of the intersection. The resulting ICU value represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic volumes if all approaches operate at capacity. ICU values are equated to level of service (LOS) in order to qualitatively describe the performance of a roadway facility, ranging from LOS A (free-flow conditions) to LOS F (extreme congestion).

For all study area signalized intersections, ICU analysis will be performed using the Synchro 11 software. It should be noted that the Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information. Therefore, consistent with the City's guidelines, both the Synchro v/c ratio (ICU) and delay results will be presented in the report.

The ICU analysis uses the following parameters: 1,600 vehicles per hour per lane for through and turn lanes, 2,880 vehicles per hour for dual left-turn lanes, and a total yellow clearance allocation of 10 percent.

The intersection delay methodology used to assess the performance of unsignalized intersections is based on the procedures contained in the Highway Capacity Manual (Transportation Research Board,

EXHIBIT 10: CUMULATIVE DEVELOPMENT LOCATION MAP



LEGEND:

(#) = CUMULATIVE DEVELOPMENT PROJECTS (TRAFFIC ANALYSIS ZONE ID)

N

13837 - 01.dwg

URBAN CROSSROADS

TABLE 6: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF IRWINDALE				
I-1	5010 Azusa Cyn. Rd.	General Light Industrial	233.987	TSF
I-2	Wendy's	Fast-Food Restaurant	2.300	TSF
I-3	Panattoni Industrial - 1200 Arrow Hwy	Industrial Park	130.366	TSF
I-4	Arrow Highway Business Park	Warehousing	138.410	TSF
I-5	Vincent Avenue Industrial Building	Industrial Park	545.735	TSF
CITY OF BALDWIN PARK				
B-1	5115 Azusa Canyon Road Warehouse	Industrial Park	90.00	TSF
B-2	4923 Fortin Street	SFDR	15	DU
CITY OF WEST COVINA				
WC-1	1611 & 1623 San Bernardino Rd.	Condominium	24	DU
CITY OF AZUSA				
A-1	Crow Holdings Industrial	Industrial Park	146.0	TSF
COUNTY OF LOS ANGELES				
LA-1	Griswold Residential - 16209 San Bernardino Rd.	SFDR	68	DU

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Units; TSF = Thousand Square Feet

F:\UXRjobs_13600-14000_13800\13837\Excel\[13837 - TG.xlsx]CM

6th Edition). The delay methodology considers the traffic volume and distribution of movements, traffic composition, and geometric characteristics to calculate the average control delay per vehicle and corresponding Level of Service. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay.

HYPOTHETICAL "NON-COVID" 2021 VOLUME ESTIMATES

Peak period turning movement counts were conducted in May 2014 at the Azusa Canyon Road / Cypress Street (#1), Azusa Canyon Road / Los Angeles Street (#2), Azusa Canyon Road / Arrow Highway (#4), and Azusa Canyon Road / Olive Street (#5) intersections. Daily counts were also conducted in May 2014 on Azusa Canyon Road, north of Los Angeles Street and Los Angeles Street, west of Azusa Canyon Road.

These 2014 counts will be adjusted by adding 7 years of background (ambient) growth at the rate of 2% per year, total of 14.9% compounded over a 7-year period in order to estimate hypothetical "non-COVID" 2021 conditions.

New traffic counts will also be collected in June 2021 during the following timeframes: 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM for the 5 existing intersection analysis locations (Azusa Canyon Road / Cypress Street, Azusa Canyon Road / Los Angeles Street, Azusa Canyon Road / Olive Street, and Azusa Canyon Road / Arrow Highway, and Azusa Canyon Road / San Bernardino Road). Due to the COVID-19 pandemic, these new 2021 peak hour counts may be lower than hypothetical non-COVID conditions.

Classified daily vehicle counts will be collected in June 2021 at Los Angeles Street west of Azusa Canyon Road, Azusa Canyon Road north of Los Angeles Street, and Azusa Canyon Road north of San Bernardino Street.

At the four intersection locations where 2014 counts are available, the June 2021 counts will be compared to the hypothetical "non-COVID" volume estimates (estimated using growth assumptions). If the hypothetical "non-COVID volume estimates are higher than the June 2021 counts, then an adjustment factor will be determined. This adjustment factor will then be applied to the June 2021 intersection counts at all three of the analysis locations. A similar process will be applied to the daily traffic counts.

Traffic signal warrants will be evaluated at the intersection of Azusa Canyon Road/Los Angeles Street (#2) for all analysis scenarios.

HORIZON YEAR (2040) TRAFFIC PROJECTIONS

Horizon Year Without Project traffic conditions will include an ambient traffic growth factor of 10.6% based on the growth factors provided in LA County Congestion Management Program (CMP) for Regional Statistical Area (RSA) 26. The CMP indicates that 1.106 is an appropriate factor for volume increases between 2010 and 2035 (25 years). The proposed forecast year of 2040 is 19 years away, so implementing the 10.6% growth factor is a reasonable representation of potential future growth.

Mr. Daniel Co
City of Irwindale
June 15, 2021

Cumulative project data is requested for nearby developments that could affect the study intersections, to be added on top of the ambient growth.

VEHICLE MILES TRAVELED (VMT)

A VMT screening assessment will be prepared under separate cover in accordance with SB743 and consistent with the methodology and thresholds outlined in the County of Los Angeles July 2020 VMT methodology guidelines.

The County of Los Angeles Guidelines require VMT analysis for development projects that are estimated to generate a net increase of 110 or more daily vehicle trips. Daily vehicle trips are specifically related to on-road passenger vehicles (cars and light trucks). Heavy trucks are not included in a VMT traffic impact analysis.

The passenger car trip generation for the proposed Project is 197 daily trips (see Table 1), but the existing baseline site land use passenger car estimated trip generation is 88 daily trips (see Table 3). The net proposed Project passenger car trip generation is therefore 109 vehicles per day, which is less than the 110 vehicles per day that would require further VMT analysis.

SAFETY ASSESSMENT

Review of site safe design will be performed for traffic-specific issues identified in this scoping section. A qualitative review of on-site traffic circulation will be performed. Emergency vehicle access will be reviewed. The Project site plan will be reviewed for an increase in (1) potential hazards due to design features such as sharp curves or dangerous intersections or (2) incompatible uses such as farm equipment. The potential for the Project to adversely affect pedestrian safety and the adequacy of nearby pedestrian facilities will be reviewed.

Please review this scoping agreement and let us know if it is acceptable, or if the City requests any changes to this proposed scope of work. If you have any questions, please contact John Kain at (949) 375-2435 or Marlie Whiteman at (714) 585-0574.

Respectfully submitted,

URBAN CROSSROADS, INC.





John Kain, AICP
Principal

Marlie Whiteman, PE
Senior Associate

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APPENDIX 3.1:

TRAFFIC COUNTS

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Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268
counts@countsunlimited.com

City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

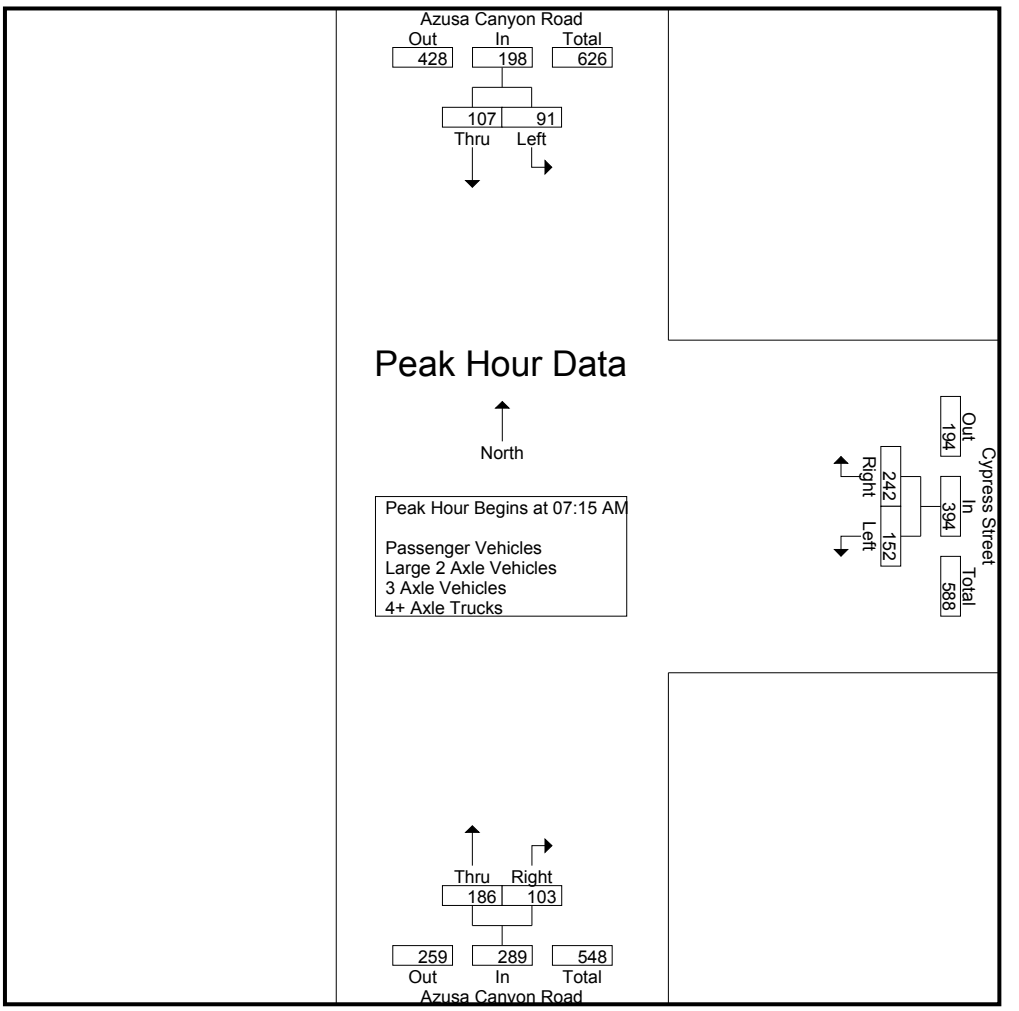
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	13	22	35	33	66	99	38	17	55	189
07:15 AM	20	28	48	39	58	97	58	18	76	221
07:30 AM	33	21	54	47	50	97	40	32	72	223
07:45 AM	21	32	53	40	80	120	46	27	73	246
Total	87	103	190	159	254	413	182	94	276	879
08:00 AM	17	26	43	26	54	80	42	26	68	191
08:15 AM	18	33	51	34	47	81	49	26	75	207
08:30 AM	16	34	50	28	33	61	40	20	60	171
08:45 AM	27	37	64	26	22	48	46	30	76	188
Total	78	130	208	114	156	270	177	102	279	757
Grand Total	165	233	398	273	410	683	359	196	555	1636
Apprch %	41.5	58.5		40	60		64.7	35.3		
Total %	10.1	14.2	24.3	16.7	25.1	41.7	21.9	12	33.9	
Passenger Vehicles	158	192	350	267	401	668	340	183	523	1541
% Passenger Vehicles	95.8	82.4	87.9	97.8	97.8	97.8	94.7	93.4	94.2	94.2
Large 2 Axle Vehicles	3	12	15	6	7	13	9	11	20	48
% Large 2 Axle Vehicles	1.8	5.2	3.8	2.2	1.7	1.9	2.5	5.6	3.6	2.9
3 Axle Vehicles	1	2	3	0	0	0	6	0	6	9
% 3 Axle Vehicles	0.6	0.9	0.8	0	0	0	1.7	0	1.1	0.6
4+ Axle Trucks	3	27	30	0	2	2	4	2	6	38
% 4+ Axle Trucks	1.8	11.6	7.5	0	0.5	0.3	1.1	1	1.1	2.3

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	20	28	48	39	58	97	**58**	18	**76**	221
07:30 AM	**33**	21	**54**	**47**	50	97	40	**32**	72	223
07:45 AM	21	**32**	53	40	**80**	**120**	46	27	73	**246**
08:00 AM	17	26	43	26	54	80	42	26	68	191
Total Volume	91	107	198	152	242	394	186	103	289	881
% App. Total	46	54		38.6	61.4		64.4	35.6		
PHF	.689	.836	.917	.809	.756	.821	.802	.805	.951	.895

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268
counts@countsunlimited.com

City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:00 AM			07:15 AM		
+0 mins.	17	26	43	33	66	99	**58**	18	**76**
+15 mins.	18	33	51	39	58	97	40	**32**	72
+30 mins.	16	34	50	**47**	50	97	46	27	73
+45 mins.	**27**	**37**	**64**	40	**80**	**120**	42	26	68
Total Volume	78	130	208	159	254	413	186	103	289
% App. Total	37.5	62.5		38.5	61.5		64.4	35.6	
PHF	.722	.878	.813	.846	.794	.860	.802	.805	.951

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City of Irwindale
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E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

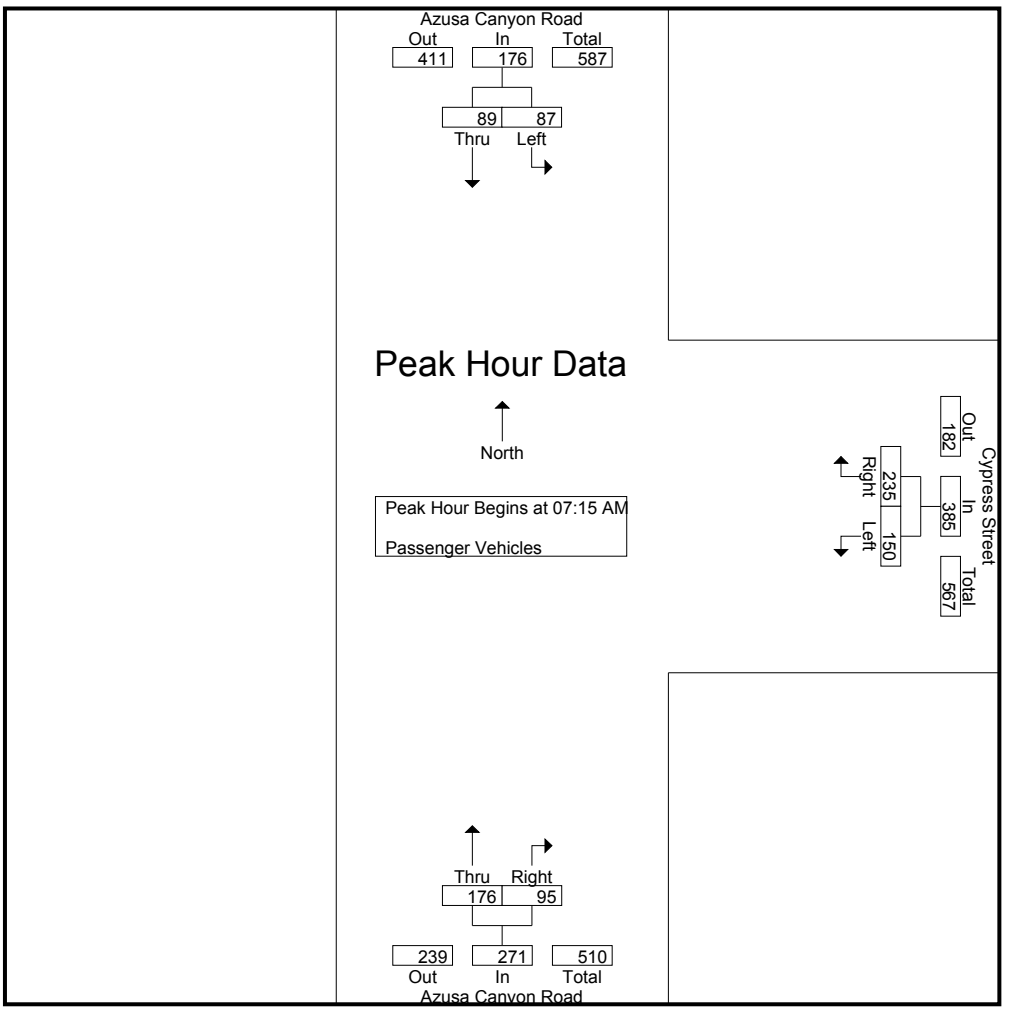
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	12	19	31	31	64	95	38	16	54	180
07:15 AM	20	27	47	38	57	95	53	17	70	212
07:30 AM	32	17	49	47	48	95	38	30	68	212
07:45 AM	20	23	43	40	78	118	45	25	70	231
Total	84	86	170	156	247	403	174	88	262	835
08:00 AM	15	22	37	25	52	77	40	23	63	177
08:15 AM	18	22	40	32	47	79	44	23	67	186
08:30 AM	15	29	44	28	33	61	38	20	58	163
08:45 AM	26	33	59	26	22	48	44	29	73	180
Total	74	106	180	111	154	265	166	95	261	706
Grand Total	158	192	350	267	401	668	340	183	523	1541
Apprch %	45.1	54.9		40	60		65	35		
Total %	10.3	12.5	22.7	17.3	26	43.3	22.1	11.9	33.9	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	20	**27**	47	38	57	95	**53**	17	**70**	212
07:30 AM	**32**	17	**49**	**47**	48	95	38	**30**	68	212
07:45 AM	20	23	43	40	**78**	**118**	45	25	70	**231**
08:00 AM	15	22	37	25	52	77	40	23	63	177
Total Volume	87	89	176	150	235	385	176	95	271	832
% App. Total	49.4	50.6		39	61		64.9	35.1		
PHF	.680	.824	.898	.798	.753	.816	.830	.792	.968	.900

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	20	**27**	47	38	57	95	**53**	17	**70**
+15 mins.	**32**	17	**49**	**47**	48	95	38	**30**	68
+30 mins.	20	23	43	40	**78**	**118**	45	25	70
+45 mins.	15	22	37	25	52	77	40	23	63
Total Volume	87	89	176	150	235	385	176	95	271
% App. Total	49.4	50.6		39	61		64.9	35.1	
PHF	.680	.824	.898	.798	.753	.816	.830	.792	.968

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

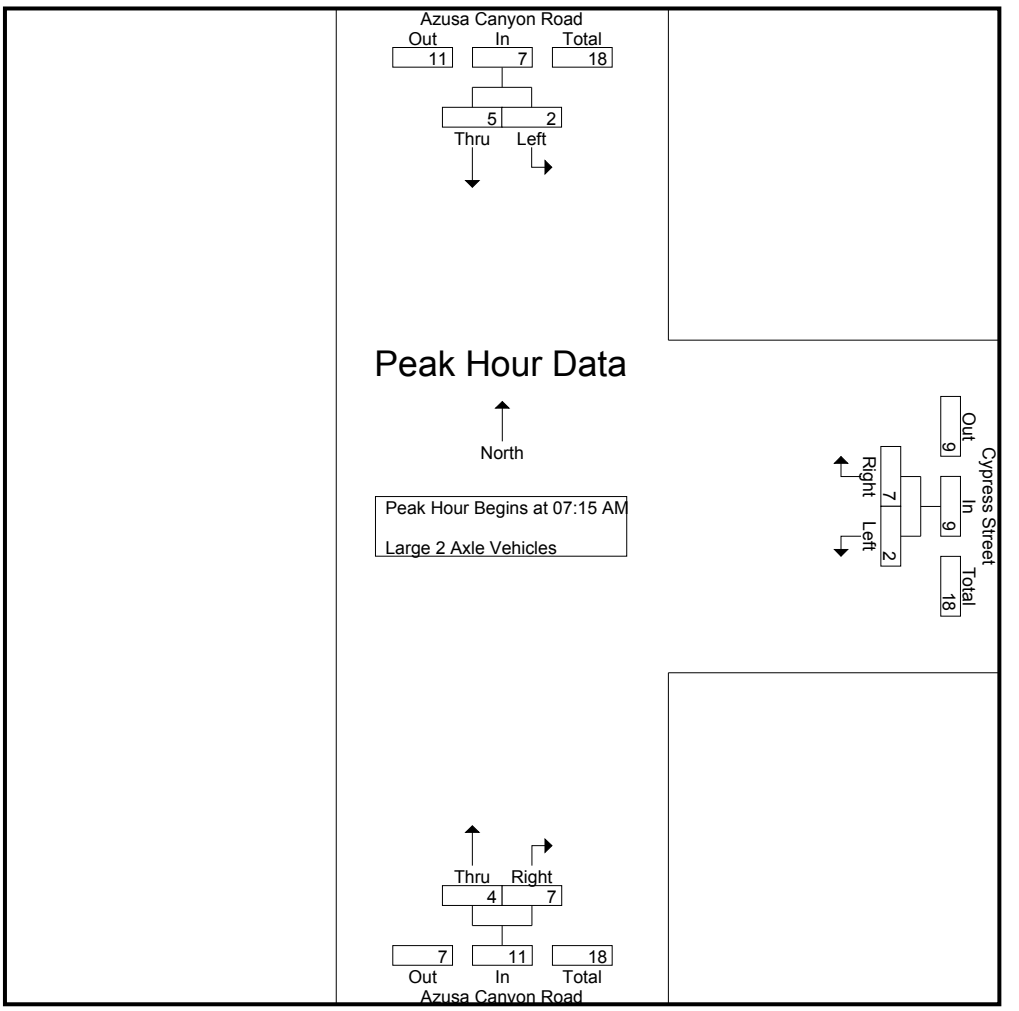
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	2	0	2	0	1	1	4
07:15 AM	0	0	0	1	1	2	2	1	3	5
07:30 AM	1	2	3	0	2	2	1	2	3	8
07:45 AM	1	2	3	0	2	2	0	2	2	7
Total	2	5	7	3	5	8	3	6	9	24
08:00 AM	0	1	1	1	2	3	1	2	3	7
08:15 AM	0	0	0	2	0	2	3	2	5	7
08:30 AM	1	3	4	0	0	0	1	0	1	5
08:45 AM	0	3	3	0	0	0	1	1	2	5
Total	1	7	8	3	2	5	6	5	11	24
Grand Total	3	12	15	6	7	13	9	11	20	48
Apprch %	20	80		46.2	53.8		45	55		
Total %	6.2	25	31.2	12.5	14.6	27.1	18.8	22.9	41.7	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	**1**	1	2	**2**	1	**3**	5
07:30 AM	**1**	**2**	**3**	0	**2**	2	1	**2**	3	**8**
07:45 AM	1	2	3	0	2	2	0	2	2	7
08:00 AM	0	1	1	1	2	**3**	1	2	3	7
Total Volume	2	5	7	2	7	9	4	7	11	27
% App. Total	28.6	71.4		22.2	77.8		36.4	63.6		
PHF	.500	.625	.583	.500	.875	.750	.500	.875	.917	.844

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	**1**	1	2	**2**	1	**3**
+15 mins.	**1**	**2**	**3**	0	**2**	2	1	**2**	3
+30 mins.	1	2	3	0	2	2	0	2	2
+45 mins.	0	1	1	1	2	**3**	1	2	3
Total Volume	2	5	7	2	7	9	4	7	11
% App. Total	28.6	71.4		22.2	77.8		36.4	63.6	
PHF	.500	.625	.583	.500	.875	.750	.500	.875	.917

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

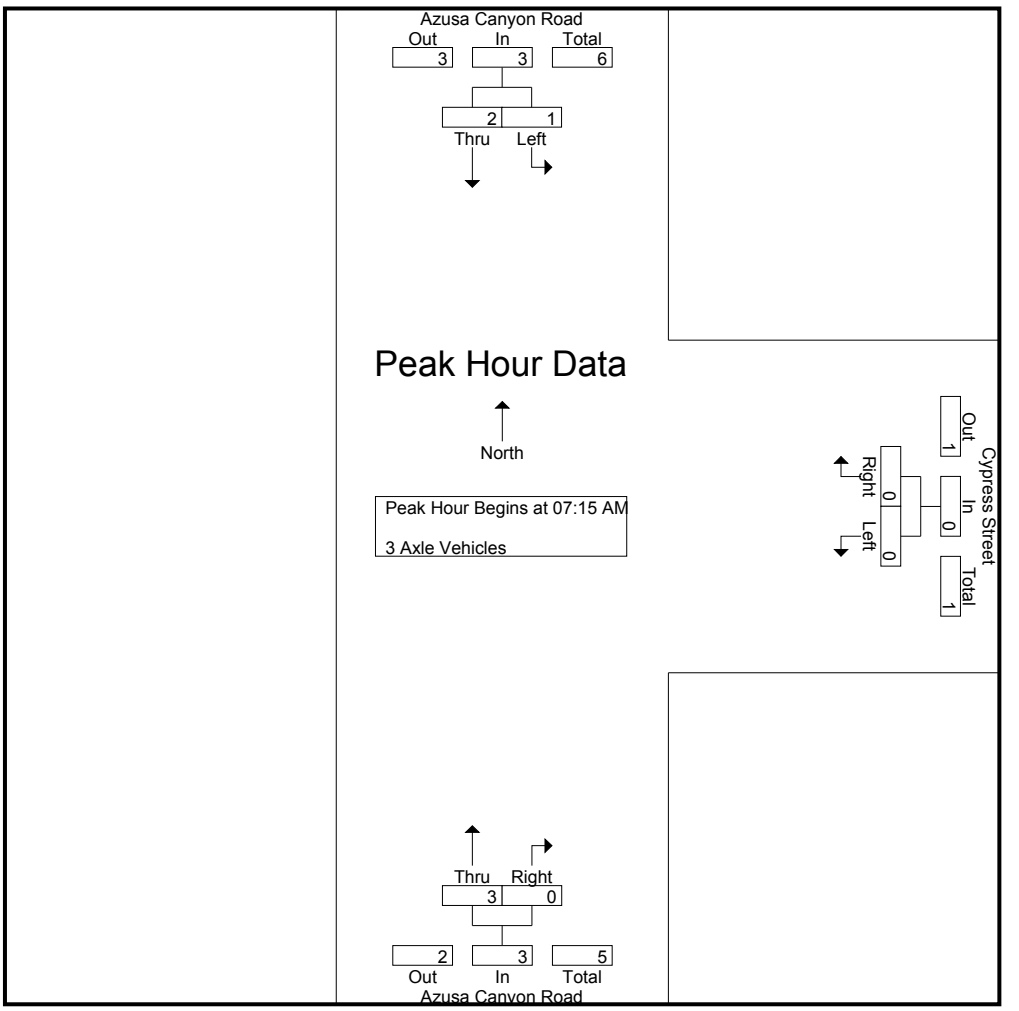
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	1	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	0	0	2	0	2	4
08:00 AM	1	0	1	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	2	0	2	2
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	1	0	1	1
Total	1	0	1	0	0	0	4	0	4	5
Grand Total	1	2	3	0	0	0	6	0	6	9
Apprch %	33.3	66.7		0	0		100	0		
Total %	11.1	22.2	33.3	0	0	0	66.7	0	66.7	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**1**	**1**	0	0	0	**1**	0	**1**	**2**
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	1	1	0	0	0	0	0	0	1
08:00 AM	**1**	0	1	0	0	0	1	0	1	2
Total Volume	1	2	3	0	0	0	3	0	3	6
% App. Total	33.3	66.7		0	0		100	0		
PHF	.250	.500	.750	.000	.000	.000	.750	.000	.750	.750

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	**1**	**1**	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	**1**	0	1	0	0	0	1	0	1
Total Volume	1	2	3	0	0	0	3	0	3
% App. Total	33.3	66.7		0	0		100	0	
PHF	.250	.500	.750	.000	.000	.000	.750	.000	.750

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
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Groups Printed- 4+ Axle Trucks

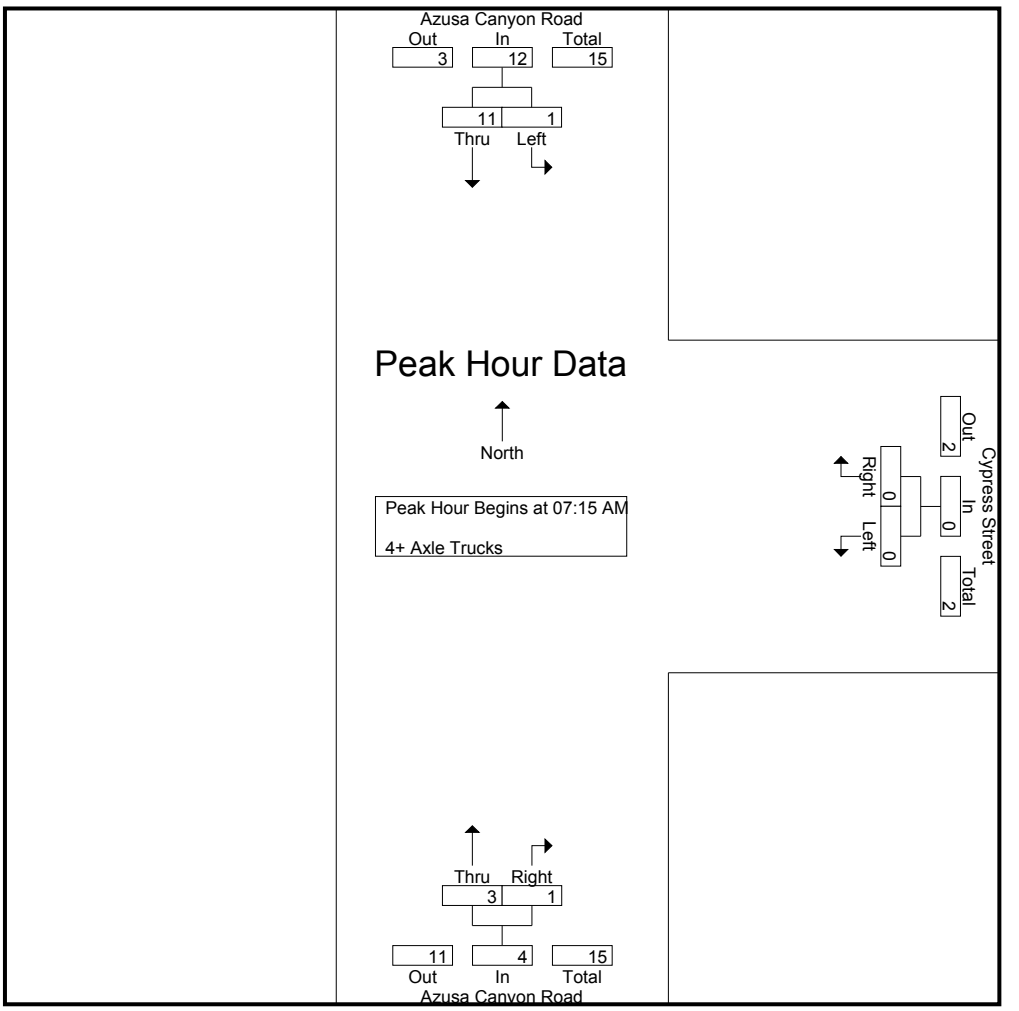
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	2	3	0	2	2	0	0	0	5
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	2	2	0	0	0	0	0	0	2
07:45 AM	0	6	6	0	0	0	1	0	1	7
Total	1	10	11	0	2	2	3	0	3	16
08:00 AM	1	3	4	0	0	0	0	1	1	5
08:15 AM	0	11	11	0	0	0	0	1	1	12
08:30 AM	0	2	2	0	0	0	1	0	1	3
08:45 AM	1	1	2	0	0	0	0	0	0	2
Total	2	17	19	0	0	0	1	2	3	22
Grand Total	3	27	30	0	2	2	4	2	6	38
Apprch %	10	90		0	100		66.7	33.3		
Total %	7.9	71.1	78.9	0	5.3	5.3	10.5	5.3	15.8	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	0	0	**2**	0	**2**	2
07:30 AM	0	2	2	0	0	0	0	0	0	2
07:45 AM	0	**6**	**6**	0	0	0	1	0	1	**7**
08:00 AM	**1**	3	4	0	0	0	0	**1**	1	5
Total Volume	1	11	12	0	0	0	3	1	4	16
% App. Total	8.3	91.7		0	0		75	25		
PHF	.250	.458	.500	.000	.000	.000	.375	.250	.500	.571

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_AM
Site Code : 05121286
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	**2**	0	**2**
+15 mins.	0	2	2	0	0	0	0	0	0
+30 mins.	0	**6**	**6**	0	0	0	1	0	1
+45 mins.	**1**	3	4	0	0	0	0	**1**	1
Total Volume	1	11	12	0	0	0	3	1	4
% App. Total	8.3	91.7		0	0		75	25	
PHF	.250	.458	.500	.000	.000	.000	.375	.250	.500

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City of Irwindale
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Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
Start Date : 6/17/2021
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

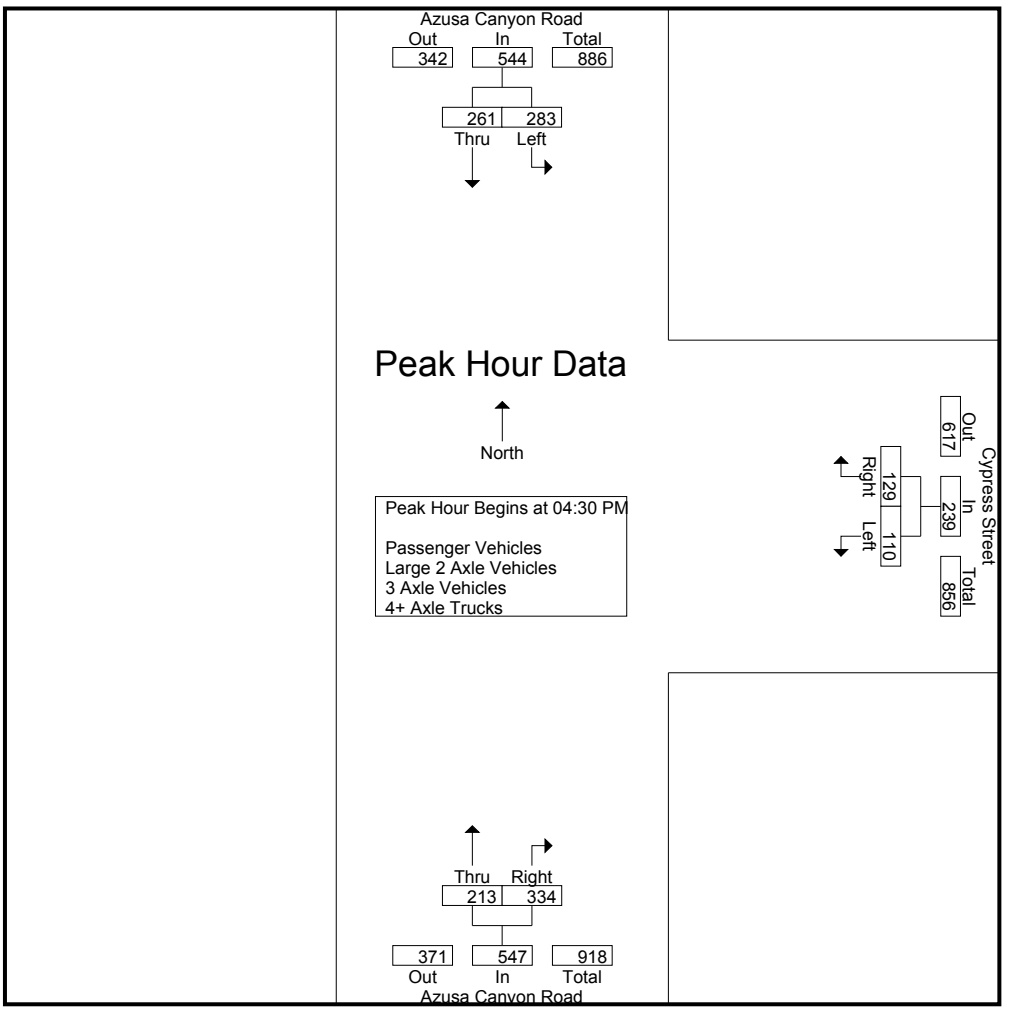
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	65	66	131	20	19	39	44	69	113	283
04:15 PM	61	68	129	28	32	60	54	87	141	330
04:30 PM	72	55	127	26	29	55	55	95	150	332
04:45 PM	66	69	135	26	27	53	53	81	134	322
Total	264	258	522	100	107	207	206	332	538	1267
05:00 PM	72	75	147	24	32	56	46	78	124	327
05:15 PM	73	62	135	34	41	75	59	80	139	349
05:30 PM	76	71	147	22	40	62	49	70	119	328
05:45 PM	49	55	104	29	25	54	37	77	114	272
Total	270	263	533	109	138	247	191	305	496	1276
Grand Total	534	521	1055	209	245	454	397	637	1034	2543
Apprch %	50.6	49.4		46	54		38.4	61.6		
Total %	21	20.5	41.5	8.2	9.6	17.9	15.6	25	40.7	
Passenger Vehicles	526	509	1035	197	240	437	389	624	1013	2485
% Passenger Vehicles	98.5	97.7	98.1	94.3	98	96.3	98	98	98	97.7
Large 2 Axle Vehicles	4	10	14	9	5	14	5	10	15	43
% Large 2 Axle Vehicles	0.7	1.9	1.3	4.3	2	3.1	1.3	1.6	1.5	1.7
3 Axle Vehicles	2	2	4	1	0	1	2	3	5	10
% 3 Axle Vehicles	0.4	0.4	0.4	0.5	0	0.2	0.5	0.5	0.5	0.4
4+ Axle Trucks	2	0	2	2	0	2	1	0	1	5
% 4+ Axle Trucks	0.4	0	0.2	1	0	0.4	0.3	0	0.1	0.2

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	72	55	127	26	29	55	55	**95**	**150**	332
04:45 PM	66	69	135	26	27	53	53	81	134	322
05:00 PM	72	**75**	**147**	24	32	56	46	78	124	327
05:15 PM	**73**	62	135	**34**	**41**	**75**	**59**	80	139	**349**
Total Volume	283	261	544	110	129	239	213	334	547	1330
% App. Total	52	48		46	54		38.9	61.1		
PHF	.969	.870	.925	.809	.787	.797	.903	.879	.912	.953

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:15 PM		
+0 mins.	66	69	135	24	32	56	54	87	141
+15 mins.	72	**75**	**147**	**34**	**41**	**75**	**55**	**95**	**150**
+30 mins.	73	62	135	22	40	62	53	81	134
+45 mins.	**76**	71	147	29	25	54	46	78	124
Total Volume	287	277	564	109	138	247	208	341	549
% App. Total	50.9	49.1		44.1	55.9		37.9	62.1	
PHF	.944	.923	.959	.801	.841	.823	.945	.897	.915

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Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
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Groups Printed- Passenger Vehicles

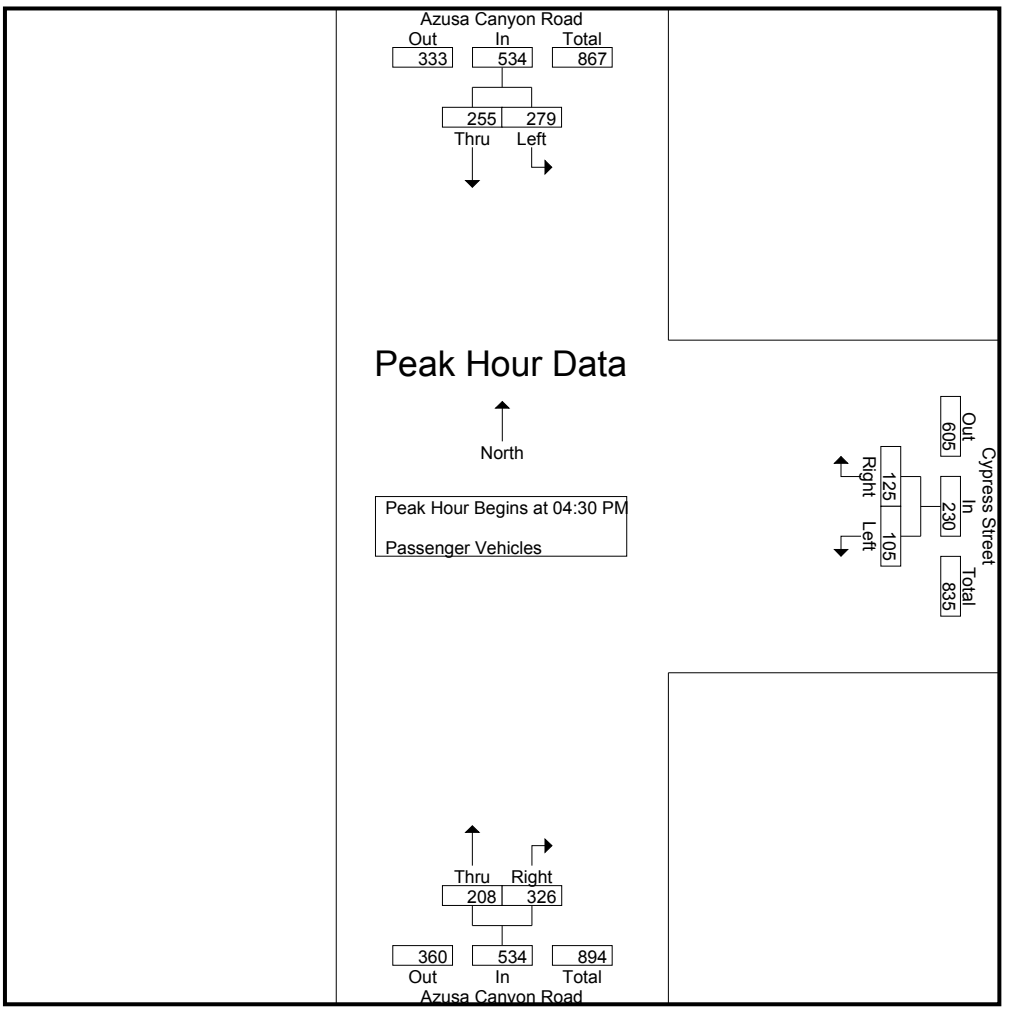
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	64	63	127	18	19	37	43	69	112	276
04:15 PM	60	67	127	24	32	56	53	85	138	321
04:30 PM	71	54	125	25	28	53	53	94	147	325
04:45 PM	63	69	132	25	25	50	53	78	131	313
Total	258	253	511	92	104	196	202	326	528	1235
05:00 PM	72	74	146	24	32	56	45	77	122	324
05:15 PM	73	58	131	31	40	71	57	77	134	336
05:30 PM	76	70	146	21	39	60	49	67	116	322
05:45 PM	47	54	101	29	25	54	36	77	113	268
Total	268	256	524	105	136	241	187	298	485	1250
Grand Total	526	509	1035	197	240	437	389	624	1013	2485
Apprch %	50.8	49.2		45.1	54.9		38.4	61.6		
Total %	21.2	20.5	41.6	7.9	9.7	17.6	15.7	25.1	40.8	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	71	54	125	25	28	53	53	**94**	**147**	325
04:45 PM	63	69	132	25	25	50	53	78	131	313
05:00 PM	72	**74**	**146**	24	32	56	45	77	122	324
05:15 PM	**73**	58	131	**31**	**40**	**71**	**57**	77	134	**336**
Total Volume	279	255	534	105	125	230	208	326	534	1298
% App. Total	52.2	47.8		45.7	54.3		39	61		
PHF	.955	.861	.914	.847	.781	.810	.912	.867	.908	.966

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	71	54	125	25	28	53	53	**94**	**147**
+15 mins.	63	69	132	25	25	50	53	78	131
+30 mins.	72	**74**	**146**	24	32	56	45	77	122
+45 mins.	**73**	58	131	**31**	**40**	**71**	**57**	77	134
Total Volume	279	255	534	105	125	230	208	326	534
% App. Total	52.2	47.8		45.7	54.3		39	61	
PHF	.955	.861	.914	.847	.781	.810	.912	.867	.908

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File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
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Groups Printed- Large 2 Axle Vehicles

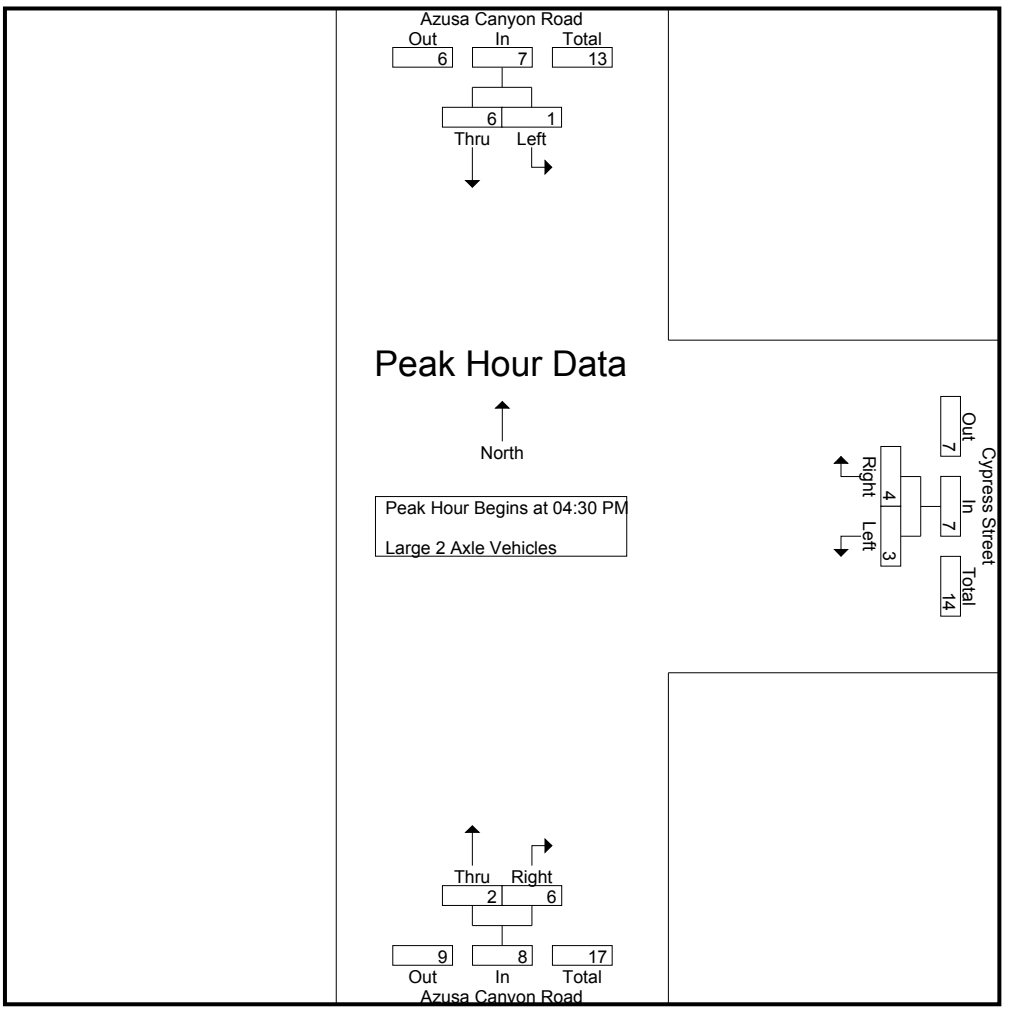
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	3	4	2	0	2	1	0	1	7
04:15 PM	0	1	1	3	0	3	1	2	3	7
04:30 PM	0	1	1	1	1	2	1	1	2	5
04:45 PM	1	0	1	0	2	2	0	2	2	5
Total	2	5	7	6	3	9	3	5	8	24
05:00 PM	0	1	1	0	0	0	1	1	2	3
05:15 PM	0	4	4	2	1	3	0	2	2	9
05:30 PM	0	0	0	1	1	2	0	2	2	4
05:45 PM	2	0	2	0	0	0	1	0	1	3
Total	2	5	7	3	2	5	2	5	7	19
Grand Total	4	10	14	9	5	14	5	10	15	43
Apprch %	28.6	71.4		64.3	35.7		33.3	66.7		
Total %	9.3	23.3	32.6	20.9	11.6	32.6	11.6	23.3	34.9	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	1	1	1	1	2	**1**	1	**2**	5
04:45 PM	**1**	0	1	0	**2**	2	0	**2**	2	5
05:00 PM	0	1	1	0	0	0	1	1	2	3
05:15 PM	0	**4**	**4**	**2**	1	**3**	0	2	2	**9**
Total Volume	1	6	7	3	4	7	2	6	8	22
% App. Total	14.3	85.7		42.9	57.1		25	75		
PHF	.250	.375	.438	.375	.500	.583	.500	.750	1.00	.611

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Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_PM
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	1	1	1	1	2	**1**	1	**2**
+15 mins.	**1**	0	1	0	**2**	2	0	**2**	2
+30 mins.	0	1	1	0	0	0	1	1	2
+45 mins.	0	**4**	**4**	**2**	1	**3**	0	2	2
Total Volume	1	6	7	3	4	7	2	6	8
% App. Total	14.3	85.7		42.9	57.1		25	75	
PHF	.250	.375	.438	.375	.500	.583	.500	.750	1.000

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File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

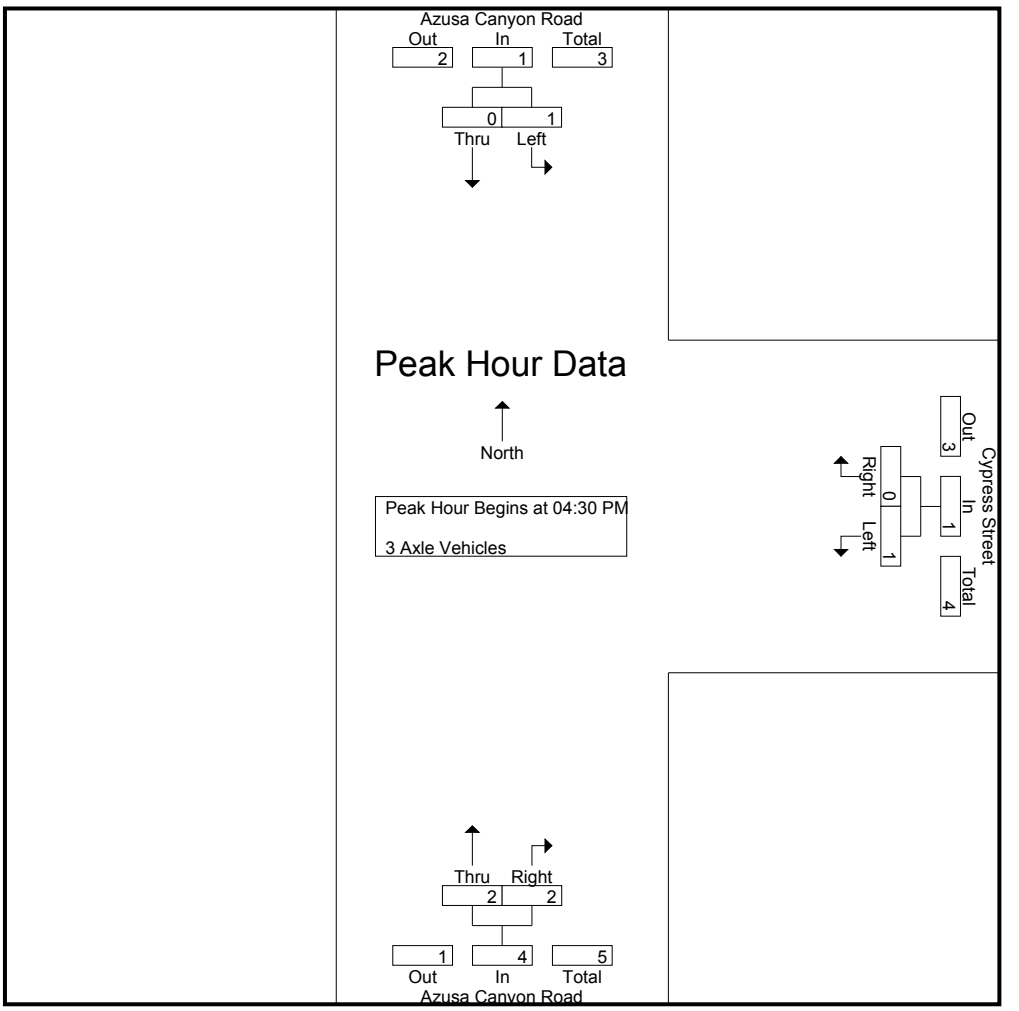
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	1	1	0	1	0	1	1	3
Total	2	0	2	1	0	1	0	1	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	2	1	3	3
05:30 PM	0	1	1	0	0	0	0	1	1	2
05:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	0	0	2	2	4	6
Grand Total	2	2	4	1	0	1	2	3	5	10
Apprch %	50	50		100	0		40	60		
Total %	20	20	40	10	0	10	20	30	50	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	**1**	0	**1**	**1**	0	**1**	0	**1**	1	**3**
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	**2**	1	**3**	3
Total Volume	1	0	1	1	0	1	2	2	4	6
% App. Total	100	0		100	0		50	50		
PHF	.250	.000	.250	.250	.000	.250	.250	.500	.333	.500

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Cypress Street
Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	**1**	0	**1**	**1**	0	**1**	0	**1**	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	**2**	1	**3**
Total Volume	1	0	1	1	0	1	2	2	4
% App. Total	100	0		100	0		50	50	
PHF	.250	.000	.250	.250	.000	.250	.250	.500	.333

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
Start Date : 6/17/2021
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Groups Printed- 4+ Axle Trucks

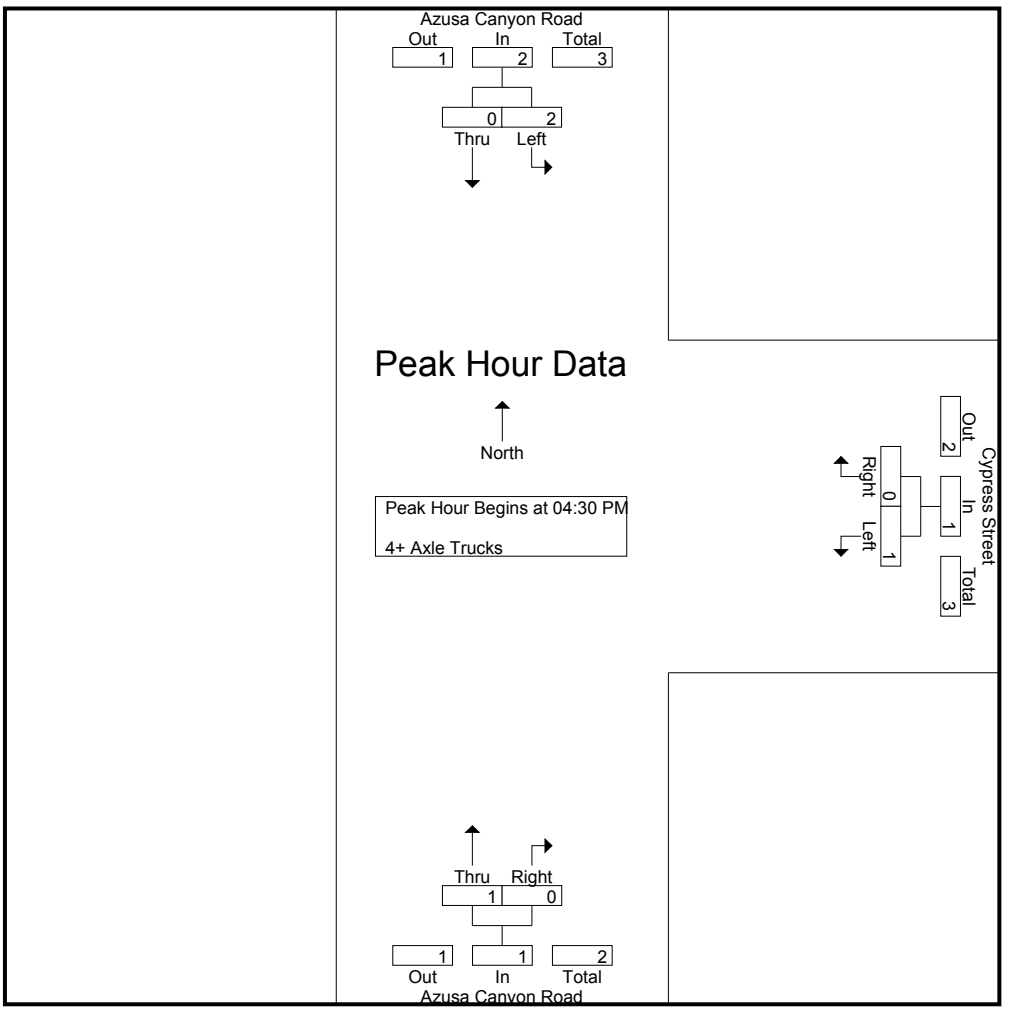
	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	1	0	1	0	0	0	1
04:30 PM	1	0	1	0	0	0	1	0	1	2
04:45 PM	1	0	1	0	0	0	0	0	0	1
Total	2	0	2	1	0	1	1	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	1	0	1	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	0	0	1
Grand Total	2	0	2	2	0	2	1	0	1	5
Apprch %	100	0		100	0		100	0		
Total %	40	0	40	40	0	40	20	0	20	

	Azusa Canyon Road Southbound			Cypress Street Westbound			Azusa Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	**1**	0	**1**	0	0	0	**1**	0	**1**	**2**
04:45 PM	1	0	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	**1**	0	**1**	0	0	0	1
Total Volume	2	0	2	1	0	1	1	0	1	4
% App. Total	100	0		100	0		100	0		
PHF	.500	.000	.500	.250	.000	.250	.250	.000	.250	.500

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File Name : 01_IRW_Azusa Canyon_Cypress_PM
Site Code : 05121286
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	**1**	0	**1**	0	0	0	**1**	0	**1**
+15 mins.	1	0	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	**1**	0	**1**	0	0	0
Total Volume	2	0	2	1	0	1	1	0	1
% App. Total	100	0		100	0		100	0	
PHF	.500	.000	.500	.250	.000	.250	.250	.000	.250

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

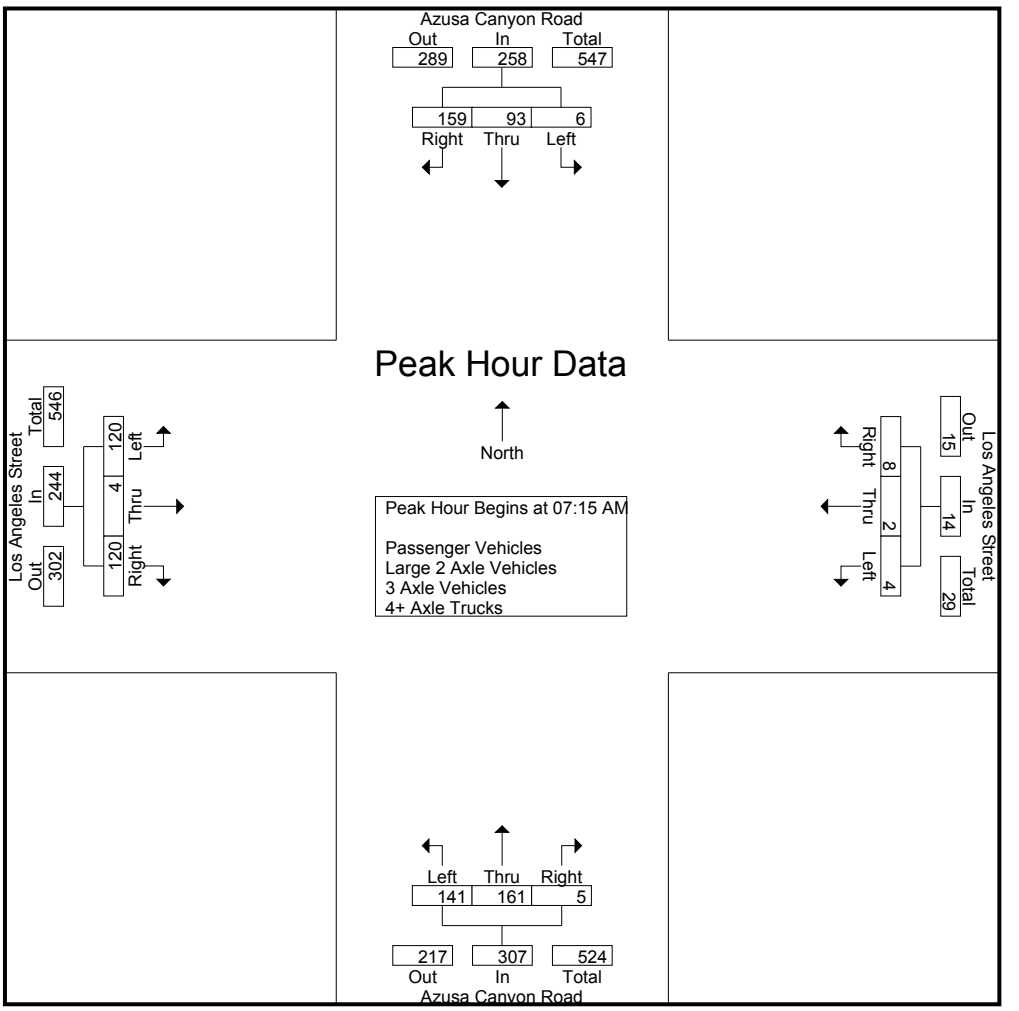
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	19	32	54	0	0	1	1	26	32	1	59	19	0	16	35	149
07:15 AM	1	26	39	66	0	0	2	2	37	43	0	80	29	2	26	57	205
07:30 AM	1	19	48	68	1	0	1	2	30	39	3	72	36	1	33	70	212
07:45 AM	3	28	37	68	1	2	2	5	39	43	1	83	27	1	35	63	219
Total	8	92	156	256	2	2	6	10	132	157	5	294	111	4	110	225	785
08:00 AM	1	20	35	56	2	0	3	5	35	36	1	72	28	0	26	54	187
08:15 AM	1	25	38	64	0	0	2	2	30	49	2	81	25	0	27	52	199
08:30 AM	1	32	29	62	1	0	3	4	22	32	1	55	25	0	25	50	171
08:45 AM	1	33	27	61	0	0	0	0	35	39	1	75	36	0	29	65	201
Total	4	110	129	243	3	0	8	11	122	156	5	283	114	0	107	221	758
Grand Total	12	202	285	499	5	2	14	21	254	313	10	577	225	4	217	446	1543
Apprch %	2.4	40.5	57.1		23.8	9.5	66.7		44	54.2	1.7		50.4	0.9	48.7		
Total %	0.8	13.1	18.5	32.3	0.3	0.1	0.9	1.4	16.5	20.3	0.6	37.4	14.6	0.3	14.1	28.9	
Passenger Vehicles	8	190	258	456	5	0	7	12	247	300	10	557	211	3	212	426	1451
% Passenger Vehicles	66.7	94.1	90.5	91.4	100	0	50	57.1	97.2	95.8	100	96.5	93.8	75	97.7	95.5	94
Large 2 Axle Vehicles	3	7	3	13	0	2	4	6	5	8	0	13	11	0	5	16	48
% Large 2 Axle Vehicles	25	3.5	1.1	2.6	0	100	28.6	28.6	2	2.6	0	2.3	4.9	0	2.3	3.6	3.1
3 Axle Vehicles	0	2	1	3	0	0	0	0	1	4	0	5	2	0	0	2	10
% 3 Axle Vehicles	0	1	0.4	0.6	0	0	0	0	0.4	1.3	0	0.9	0.9	0	0	0.4	0.6
4+ Axle Trucks	1	3	23	27	0	0	3	3	1	1	0	2	1	1	0	2	34
% 4+ Axle Trucks	8.3	1.5	8.1	5.4	0	0	21.4	14.3	0.4	0.3	0	0.3	0.4	25	0	0.4	2.2

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	26	39	66	0	0	2	2	37	**43**	0	80	29	**2**	26	57	205
07:30 AM	1	19	**48**	**68**	1	0	1	2	30	39	**3**	72	**36**	1	33	**70**	212
07:45 AM	**3**	**28**	37	68	1	**2**	2	**5**	**39**	43	1	**83**	27	1	**35**	63	**219**
08:00 AM	1	20	35	56	**2**	0	**3**	5	35	36	1	72	28	0	26	54	187
Total Volume	6	93	159	258	4	2	8	14	141	161	5	307	120	4	120	244	823
% App. Total	2.3	36	61.6		28.6	14.3	57.1		45.9	52.4	1.6		49.2	1.6	49.2		
PHF	.500	.830	.828	.949	.500	.250	.667	.700	.904	.936	.417	.925	.833	.500	.857	.871	.939

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:45 AM				07:30 AM				07:15 AM			
+0 mins.	1	26	39	66	1	**2**	2	**5**	30	39	**3**	72	29	**2**	26	57
+15 mins.	1	19	**48**	**68**	**2**	0	**3**	5	**39**	43	1	**83**	**36**	1	33	**70**
+30 mins.	**3**	**28**	37	68	0	0	2	2	35	36	1	72	27	1	**35**	63
+45 mins.	1	20	35	56	1	0	3	4	30	**49**	2	81	28	0	26	54
Total Volume	6	93	159	258	4	2	10	16	134	167	7	308	120	4	120	244
% App. Total	2.3	36	61.6		25	12.5	62.5		43.5	54.2	2.3		49.2	1.6	49.2	
PHF	.500	.830	.828	.949	.500	.250	.833	.800	.859	.852	.583	.928	.833	.500	.857	.871

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City of Irwindale
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Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

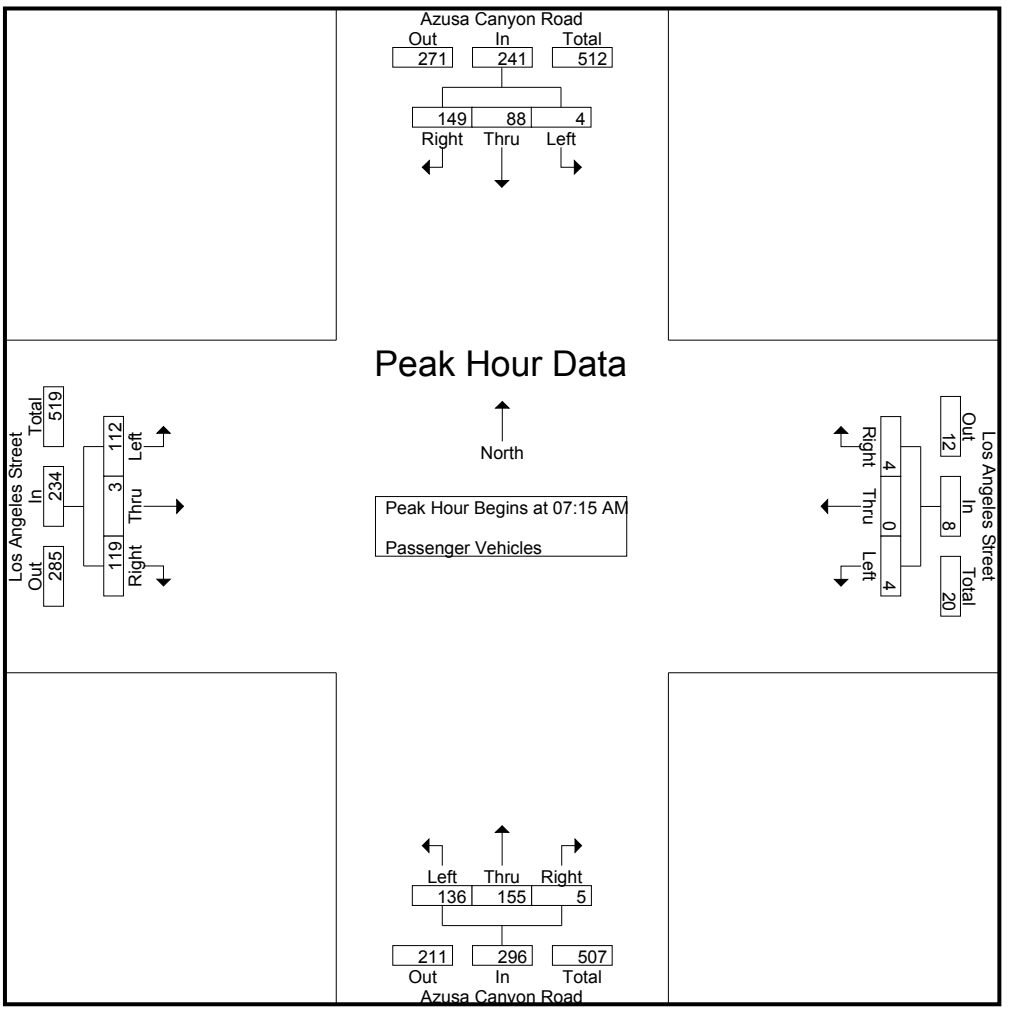
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	18	30	49	0	0	1	1	26	32	1	59	18	0	15	33	142
07:15 AM	1	25	39	65	0	0	1	1	35	41	0	76	26	2	26	54	196
07:30 AM	1	17	46	64	1	0	0	1	30	37	3	70	35	1	33	69	204
07:45 AM	2	27	33	62	1	0	1	2	38	43	1	82	26	0	34	60	206
Total	5	87	148	240	2	0	3	5	129	153	5	287	105	3	108	216	748
08:00 AM	0	19	31	50	2	0	2	4	33	34	1	68	25	0	26	51	173
08:15 AM	1	23	27	51	0	0	1	1	29	45	2	76	22	0	25	47	175
08:30 AM	1	30	26	57	1	0	1	2	21	31	1	53	25	0	25	50	162
08:45 AM	1	31	26	58	0	0	0	0	35	37	1	73	34	0	28	62	193
Total	3	103	110	216	3	0	4	7	118	147	5	270	106	0	104	210	703
Grand Total	8	190	258	456	5	0	7	12	247	300	10	557	211	3	212	426	1451
Apprch %	1.8	41.7	56.6		41.7	0	58.3		44.3	53.9	1.8		49.5	0.7	49.8		
Total %	0.6	13.1	17.8	31.4	0.3	0	0.5	0.8	17	20.7	0.7	38.4	14.5	0.2	14.6	29.4	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	25	39	**65**	0	0	1	1	35	41	0	76	26	**2**	26	54	196
07:30 AM	1	17	**46**	64	1	0	0	1	30	37	**3**	70	**35**	1	33	**69**	204
07:45 AM	**2**	**27**	33	62	1	0	1	2	**38**	**43**	1	**82**	26	0	**34**	60	**206**
08:00 AM	0	19	31	50	**2**	0	**2**	**4**	33	34	1	68	25	0	26	51	173
Total Volume	4	88	149	241	4	0	4	8	136	155	5	296	112	3	119	234	779
% App. Total	1.7	36.5	61.8		50	0	50		45.9	52.4	1.7		47.9	1.3	50.9		
PHF	.500	.815	.810	.927	.500	.000	.500	.500	.895	.901	.417	.902	.800	.375	.875	.848	.945

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Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	25	39	**65**	0	0	1	1	35	41	0	76	26	**2**	26	54
+15 mins.	1	17	**46**	64	1	0	0	1	30	37	**3**	70	**35**	1	33	**69**
+30 mins.	**2**	**27**	33	62	1	0	1	2	**38**	**43**	1	**82**	26	0	**34**	60
+45 mins.	0	19	31	50	**2**	0	**2**	**4**	33	34	1	68	25	0	26	51
Total Volume	4	88	149	241	4	0	4	8	136	155	5	296	112	3	119	234
% App. Total	1.7	36.5	61.8		50	0	50		45.9	52.4	1.7		47.9	1.3	50.9	
PHF	.500	.815	.810	.927	.500	.000	.500	.500	.895	.901	.417	.902	.800	.375	.875	.848

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File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

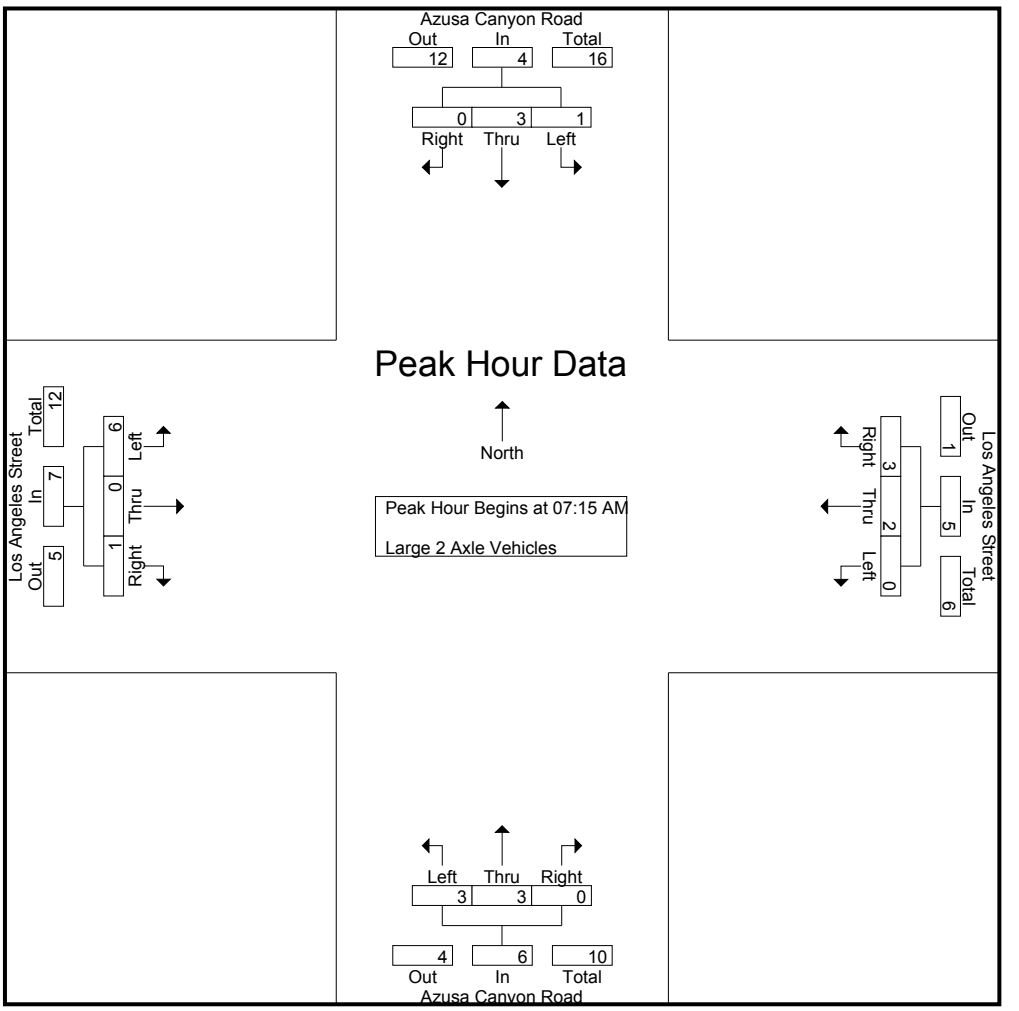
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	1	0	1	2	4
07:15 AM	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	1	3
07:30 AM	0	2	0	2	0	0	1	1	0	1	0	1	1	0	0	1	5
07:45 AM	0	0	0	0	0	2	1	3	1	0	0	1	1	0	1	2	6
Total	2	2	0	4	0	2	3	5	1	2	0	3	4	0	2	6	18
08:00 AM	1	1	0	2	0	0	0	0	2	1	0	3	3	0	0	3	8
08:15 AM	0	0	2	2	0	0	0	0	1	3	0	4	2	0	2	4	10
08:30 AM	0	2	1	3	0	0	1	1	1	1	0	2	0	0	0	0	6
08:45 AM	0	2	0	2	0	0	0	0	0	1	0	1	2	0	1	3	6
Total	1	5	3	9	0	0	1	1	4	6	0	10	7	0	3	10	30
Grand Total	3	7	3	13	0	2	4	6	5	8	0	13	11	0	5	16	48
Apprch %	23.1	53.8	23.1		0	33.3	66.7		38.5	61.5	0		68.8	0	31.2		
Total %	6.2	14.6	6.2	27.1	0	4.2	8.3	12.5	10.4	16.7	0	27.1	22.9	0	10.4	33.3	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	**1**	1	0	**1**	0	1	1	0	0	1	3
07:30 AM	0	**2**	0	**2**	0	0	1	1	0	1	0	1	1	0	0	1	5
07:45 AM	0	0	0	0	0	**2**	1	**3**	1	0	0	1	1	0	**1**	2	6
08:00 AM	**1**	1	0	2	0	0	0	0	**2**	1	0	**3**	**3**	0	0	**3**	**8**
Total Volume	1	3	0	4	0	2	3	5	3	3	0	6	6	0	1	7	22
% App. Total	25	75	0		0	40	60		50	50	0		85.7	0	14.3		
PHF	.250	.375	.000	.500	.000	.250	.750	.417	.375	.750	.000	.500	.500	.000	.250	.583	.688

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E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	**1**	1	0	**1**	0	1	1	0	0	1
+15 mins.	0	**2**	0	**2**	0	0	1	1	0	1	0	1	1	0	0	1
+30 mins.	0	0	0	0	0	**2**	1	**3**	1	0	0	1	1	0	**1**	2
+45 mins.	**1**	1	0	2	0	0	0	0	**2**	1	0	**3**	**3**	0	0	**3**
Total Volume	1	3	0	4	0	2	3	5	3	3	0	6	6	0	1	7
% App. Total	25	75	0		0	40	60		50	50	0		85.7	0	14.3	
PHF	.250	.375	.000	.500	.000	.250	.750	.417	.375	.750	.000	.500	.500	.000	.250	.583

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

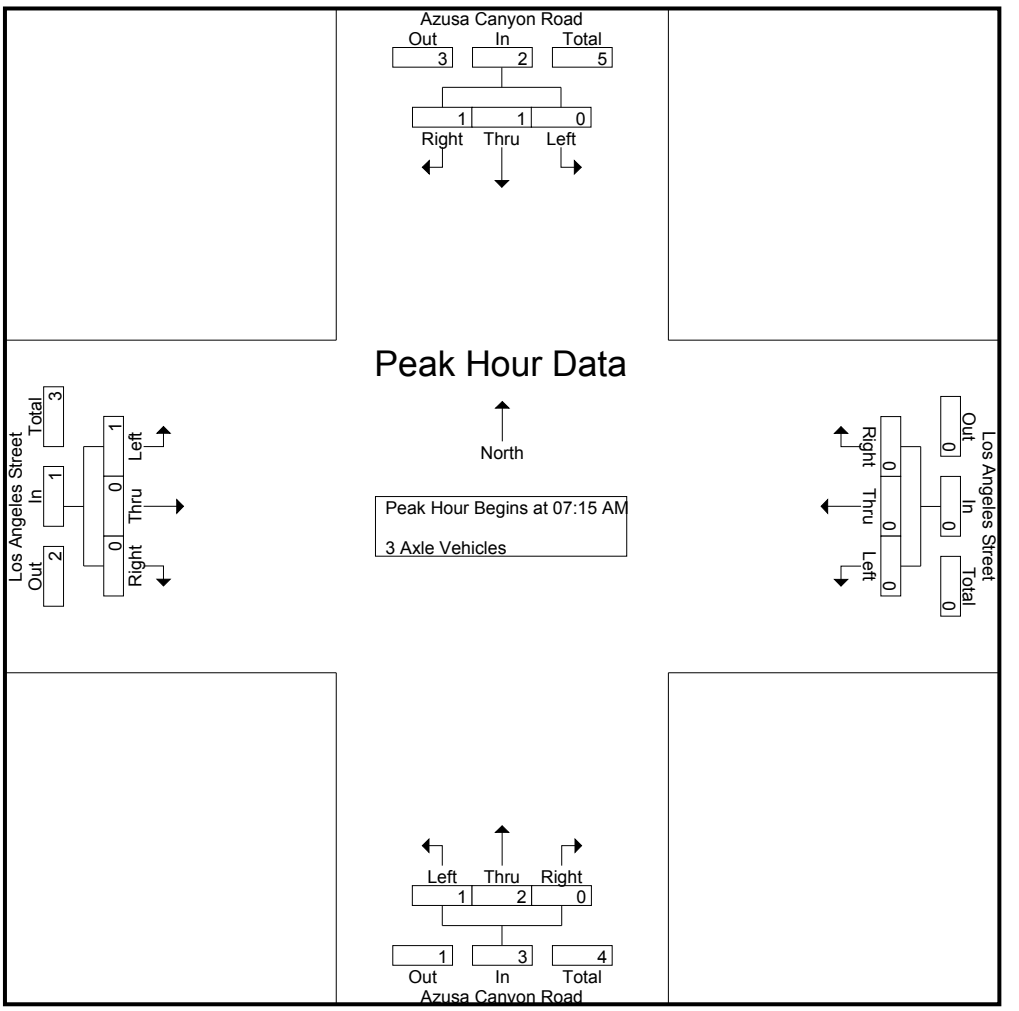
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	1	0	1	0	0	0	0	1	0	0	1	1	0	0	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	1	3	0	0	0	0	1	1	0	2	1	0	0	1	6
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	1	4
Grand Total	0	2	1	3	0	0	0	0	1	4	0	5	2	0	0	2	10
Apprch %	0	66.7	33.3		0	0	0		20	80	0		100	0	0		
Total %	0	20	10	30	0	0	0	0	10	40	0	50	20	0	0	20	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	**1**	0	0	0	0	**1**	0	0	**1**	**1**	0	0	**1**	**3**
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	1
07:45 AM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	1	1	2	0	0	0	0	1	2	0	3	1	0	0	1	6
% App. Total	0	50	50		0	0	0		33.3	66.7	0		100	0	0		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.250	.500	.000	.750	.250	.000	.000	.250	.500

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	**1**	0	0	**1**	**1**	0	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0
+30 mins.	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	1	1	2	0	0	0	0	1	2	0	3	1	0	0	1
% App. Total	0	50	50		0	0	0		33.3	66.7	0		100	0	0	
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.250	.500	.000	.750	.250	.000	.000	.250

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City of Irwindale
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Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

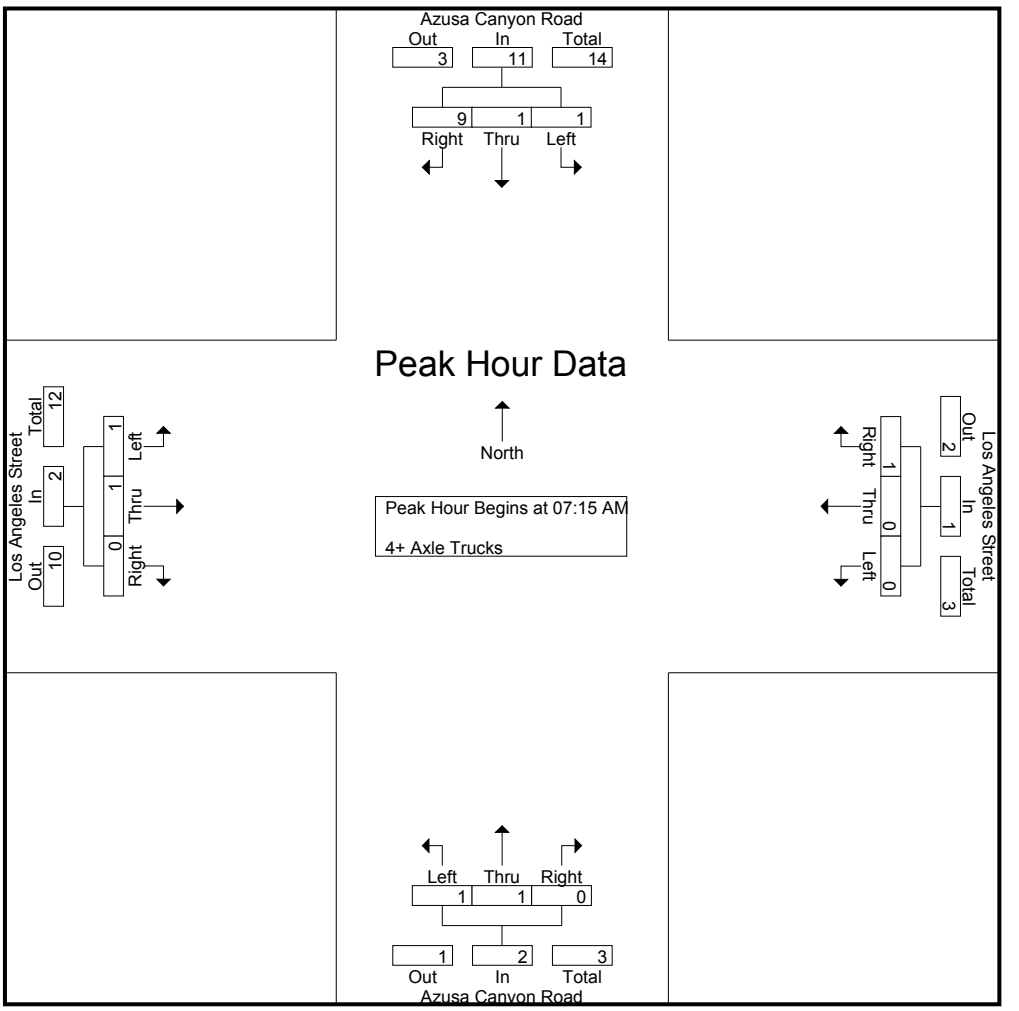
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	2	1	0	0	1	3
07:30 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	1	1	3	5	0	0	0	0	0	0	0	0	0	1	0	1	6
Total	1	1	7	9	0	0	0	0	1	1	0	2	1	1	0	2	13
08:00 AM	0	0	4	4	0	0	1	1	0	0	0	0	0	0	0	0	5
08:15 AM	0	2	9	11	0	0	1	1	0	0	0	0	0	0	0	0	12
08:30 AM	0	0	2	2	0	0	1	1	0	0	0	0	0	0	0	0	3
08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	16	18	0	0	3	3	0	0	0	0	0	0	0	0	21
Grand Total	1	3	23	27	0	0	3	3	1	1	0	2	1	1	0	2	34
Apprch %	3.7	11.1	85.2		0	0	100		50	50	0		50	50	0		
Total %	2.9	8.8	67.6	79.4	0	0	8.8	8.8	2.9	2.9	0	5.9	2.9	2.9	0	5.9	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	**1**	**1**	0	**2**	**1**	0	0	**1**	3
07:30 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	**1**	**1**	3	**5**	0	0	0	0	0	0	0	0	0	**1**	0	1	**6**
08:00 AM	0	0	**4**	4	0	0	**1**	**1**	0	0	0	0	0	0	0	0	5
Total Volume	1	1	9	11	0	0	1	1	1	1	0	2	1	1	0	2	16
% App. Total	9.1	9.1	81.8		0	0	100		50	50	0		50	50	0		
PHF	.250	.250	.563	.550	.000	.000	.250	.250	.250	.250	.000	.250	.250	.250	.000	.500	.667

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_AM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	**1**	**1**	0	**2**	**1**	0	0	**1**
+15 mins.	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	**1**	**1**	3	**5**	0	0	0	0	0	0	0	0	0	**1**	0	1
+45 mins.	0	0	**4**	4	0	0	**1**	**1**	0	0	0	0	0	0	0	0
Total Volume	1	1	9	11	0	0	1	1	1	1	0	2	1	1	0	2
% App. Total	9.1	9.1	81.8		0	0	100		50	50	0		50	50	0	
PHF	.250	.250	.563	.550	.000	.000	.250	.250	.250	.250	.000	.250	.250	.250	.000	.500

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City of Irwindale
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File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

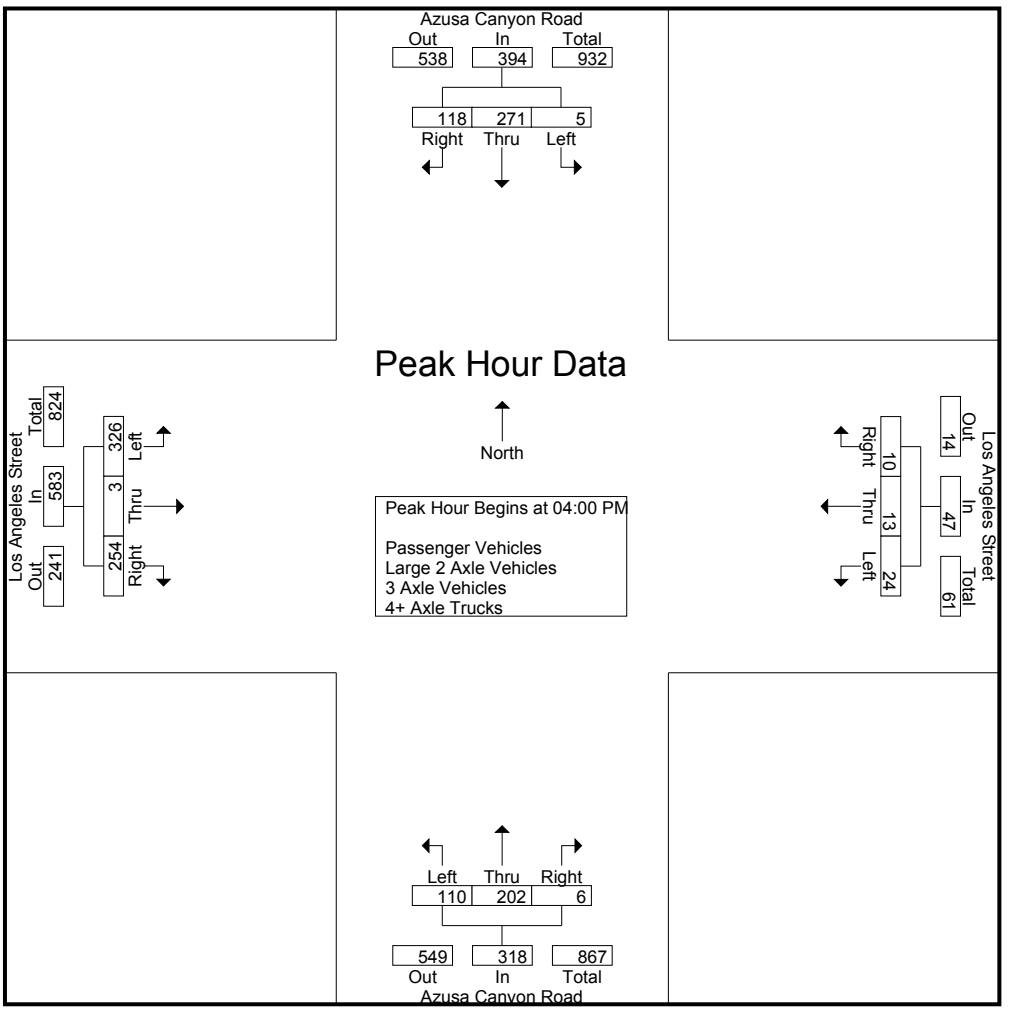
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	65	27	93	11	3	3	17	28	46	2	76	65	3	74	142	328
04:15 PM	2	64	31	97	7	6	2	15	29	53	0	82	87	0	65	152	346
04:30 PM	1	67	26	94	4	2	5	11	28	56	3	87	86	0	49	135	327
04:45 PM	1	75	34	110	2	2	0	4	25	47	1	73	88	0	66	154	341
Total	5	271	118	394	24	13	10	47	110	202	6	318	326	3	254	583	1342
05:00 PM	1	59	30	90	1	0	0	1	31	50	1	82	75	0	59	134	307
05:15 PM	3	67	34	104	2	2	2	6	23	43	2	68	92	0	64	156	334
05:30 PM	0	76	21	97	8	8	9	25	26	45	1	72	63	1	52	116	310
05:45 PM	0	54	30	84	1	2	1	4	26	41	0	67	74	1	52	127	282
Total	4	256	115	375	12	12	12	36	106	179	4	289	304	2	227	533	1233
Grand Total	9	527	233	769	36	25	22	83	216	381	10	607	630	5	481	1116	2575
Apprch %	1.2	68.5	30.3		43.4	30.1	26.5		35.6	62.8	1.6		56.5	0.4	43.1		
Total %	0.3	20.5	9	29.9	1.4	1	0.9	3.2	8.4	14.8	0.4	23.6	24.5	0.2	18.7	43.3	
Passenger Vehicles	6	516	221	743	36	24	21	81	212	371	9	592	614	3	477	1094	2510
% Passenger Vehicles	66.7	97.9	94.8	96.6	100	96	95.5	97.6	98.1	97.4	90	97.5	97.5	60	99.2	98	97.5
Large 2 Axle Vehicles	3	7	11	21	0	1	1	2	3	9	1	13	11	1	1	13	49
% Large 2 Axle Vehicles	33.3	1.3	4.7	2.7	0	4	4.5	2.4	1.4	2.4	10	2.1	1.7	20	0.2	1.2	1.9
3 Axle Vehicles	0	4	0	4	0	0	0	0	1	1	0	2	4	0	1	5	11
% 3 Axle Vehicles	0	0.8	0	0.5	0	0	0	0	0.5	0.3	0	0.3	0.6	0	0.2	0.4	0.4
4+ Axle Trucks	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2	4	5
% 4+ Axle Trucks	0	0	0.4	0.1	0	0	0	0	0	0	0	0	0.2	20	0.4	0.4	0.2

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	65	27	93	**11**	3	3	**17**	28	46	2	76	65	**3**	**74**	142	328
04:15 PM	**2**	64	31	97	7	**6**	2	15	**29**	53	0	82	87	0	65	152	**346**
04:30 PM	1	67	26	94	4	2	**5**	11	28	**56**	**3**	**87**	86	0	49	135	327
04:45 PM	1	**75**	**34**	**110**	2	2	0	4	25	47	1	73	**88**	0	66	**154**	341
Total Volume	5	271	118	394	24	13	10	47	110	202	6	318	326	3	254	583	1342
% App. Total	1.3	68.8	29.9		51.1	27.7	21.3		34.6	63.5	1.9		55.9	0.5	43.6		
PHF	.625	.903	.868	.895	.545	.542	.500	.691	.948	.902	.500	.914	.926	.250	.858	.946	.970

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City of Irwindale
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Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:15 PM				04:00 PM			
+0 mins.	1	75	**34**	**110**	**11**	3	3	**17**	29	53	0	82	65	**3**	**74**	142
+15 mins.	1	59	30	90	7	**6**	2	15	28	**56**	**3**	**87**	87	0	65	152
+30 mins.	**3**	67	34	104	4	2	**5**	11	25	47	1	73	86	0	49	135
+45 mins.	0	**76**	21	97	2	2	0	4	**31**	50	1	82	**88**	0	66	**154**
Total Volume	5	277	119	401	24	13	10	47	113	206	5	324	326	3	254	583
% App. Total	1.2	69.1	29.7		51.1	27.7	21.3		34.9	63.6	1.5		55.9	0.5	43.6	
PHF	.417	.911	.875	.911	.545	.542	.500	.691	.911	.920	.417	.931	.926	.250	.858	.946

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File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

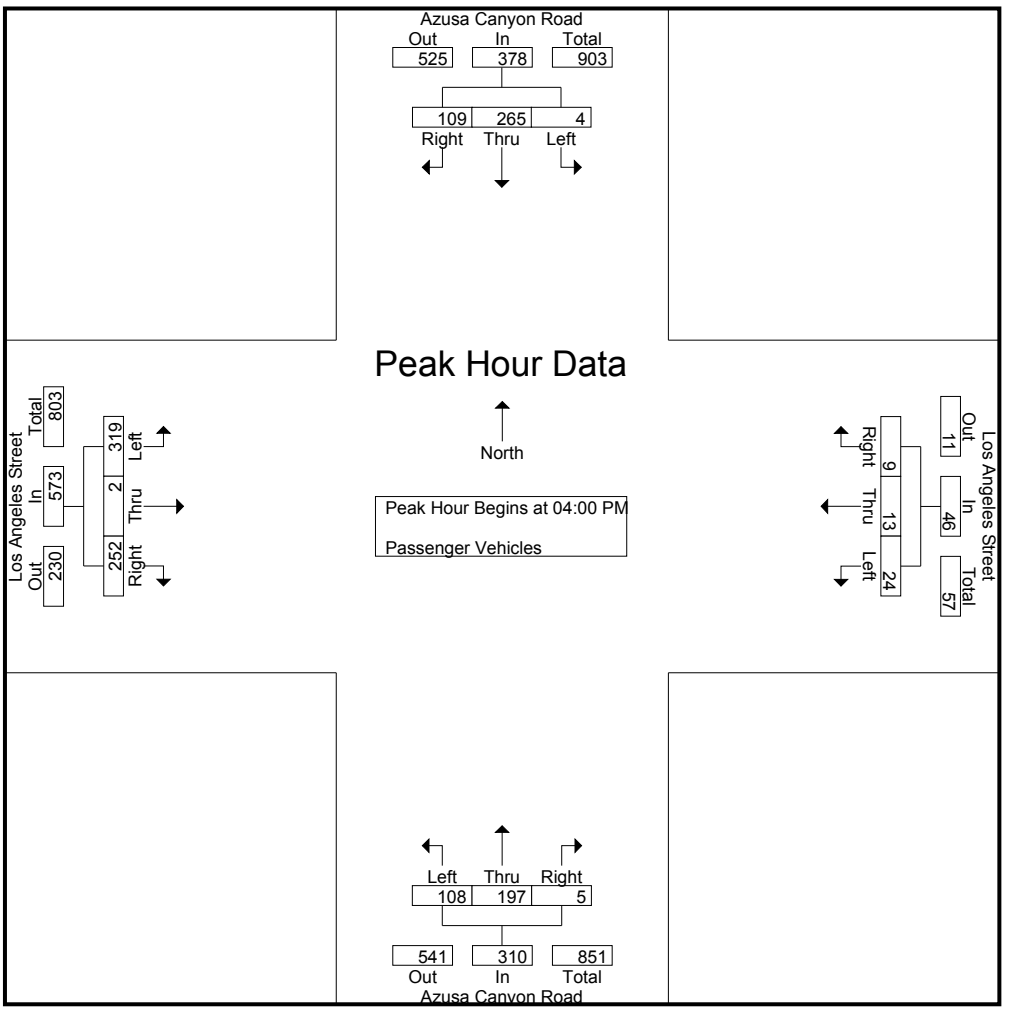
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	63	25	89	11	3	3	17	27	46	2	75	63	2	73	138	319
04:15 PM	1	63	28	92	7	6	2	15	29	51	0	80	85	0	64	149	336
04:30 PM	1	65	24	90	4	2	4	10	28	55	2	85	85	0	49	134	319
04:45 PM	1	74	32	107	2	2	0	4	24	45	1	70	86	0	66	152	333
Total	4	265	109	378	24	13	9	46	108	197	5	310	319	2	252	573	1307
05:00 PM	0	59	30	89	1	0	0	1	31	49	1	81	73	0	58	131	302
05:15 PM	2	64	32	98	2	1	2	5	21	41	2	64	88	0	64	152	319
05:30 PM	0	75	20	95	8	8	9	25	26	44	1	71	61	0	51	112	303
05:45 PM	0	53	30	83	1	2	1	4	26	40	0	66	73	1	52	126	279
Total	2	251	112	365	12	11	12	35	104	174	4	282	295	1	225	521	1203
Grand Total	6	516	221	743	36	24	21	81	212	371	9	592	614	3	477	1094	2510
Apprch %	0.8	69.4	29.7		44.4	29.6	25.9		35.8	62.7	1.5		56.1	0.3	43.6		
Total %	0.2	20.6	8.8	29.6	1.4	1	0.8	3.2	8.4	14.8	0.4	23.6	24.5	0.1	19	43.6	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**1**	63	25	89	**11**	3	3	**17**	27	46	**2**	75	63	**2**	**73**	138	319
04:15 PM	1	63	28	92	7	**6**	2	15	**29**	51	0	80	85	0	64	149	**336**
04:30 PM	1	65	24	90	4	2	**4**	10	28	**55**	2	**85**	85	0	49	134	319
04:45 PM	1	**74**	**32**	**107**	2	2	0	4	24	45	1	70	**86**	0	66	**152**	333
Total Volume	4	265	109	378	24	13	9	46	108	197	5	310	319	2	252	573	1307
% App. Total	1.1	70.1	28.8		52.2	28.3	19.6		34.8	63.5	1.6		55.7	0.3	44		
PHF	1.00	.895	.852	.883	.545	.542	.563	.676	.931	.895	.625	.912	.927	.250	.863	.942	.972

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Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	**1**	63	25	89	**11**	3	3	**17**	27	46	**2**	75	63	**2**	**73**	138
+15 mins.	1	63	28	92	7	**6**	2	15	**29**	51	0	80	85	0	64	149
+30 mins.	1	65	24	90	4	2	**4**	10	28	**55**	2	**85**	85	0	49	134
+45 mins.	1	**74**	**32**	**107**	2	2	0	4	24	45	1	70	**86**	0	66	**152**
Total Volume	4	265	109	378	24	13	9	46	108	197	5	310	319	2	252	573
% App. Total	1.1	70.1	28.8		52.2	28.3	19.6		34.8	63.5	1.6		55.7	0.3	44	
PHF	1.000	.895	.852	.883	.545	.542	.563	.676	.931	.895	.625	.912	.927	.250	.863	.942

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

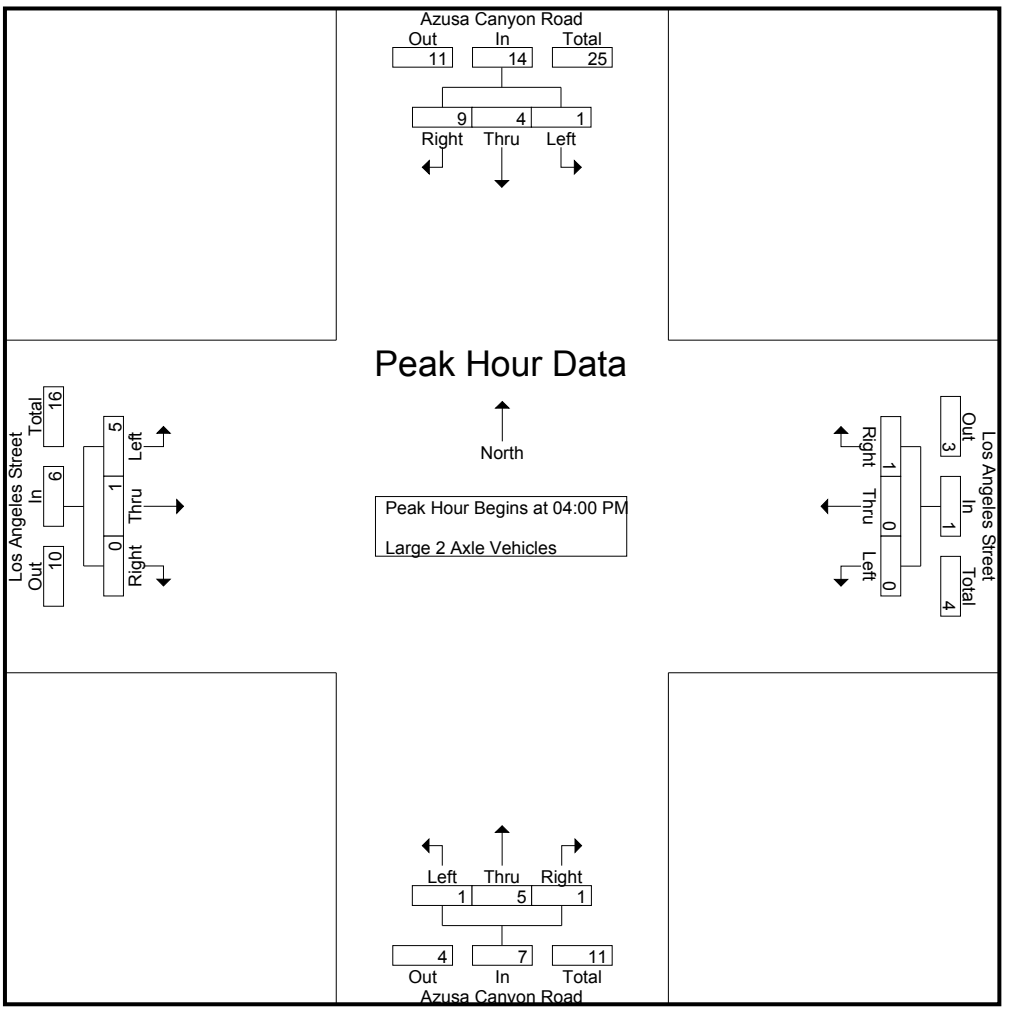
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	2	3	0	0	0	0	1	0	0	1	2	1	0	3	7
04:15 PM	1	1	3	5	0	0	0	0	0	2	0	2	1	0	0	1	8
04:30 PM	0	1	2	3	0	0	1	1	0	1	1	2	1	0	0	1	7
04:45 PM	0	1	2	3	0	0	0	0	0	2	0	2	1	0	0	1	6
Total	1	4	9	14	0	0	1	1	1	5	1	7	5	1	0	6	28
05:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2	0	0	2	4
05:15 PM	1	3	1	5	0	1	0	1	2	1	0	3	2	0	0	2	11
05:30 PM	0	0	1	1	0	0	0	0	0	1	0	1	1	0	1	2	4
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	2	3	2	7	0	1	0	1	2	4	0	6	6	0	1	7	21
Grand Total	3	7	11	21	0	1	1	2	3	9	1	13	11	1	1	13	49
Apprch %	14.3	33.3	52.4		0	50	50		23.1	69.2	7.7		84.6	7.7	7.7		
Total %	6.1	14.3	22.4	42.9	0	2	2	4.1	6.1	18.4	2	26.5	22.4	2	2	26.5	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	2	3	0	0	0	0	**1**	0	0	1	**2**	**1**	0	**3**	7
04:15 PM	**1**	1	**3**	**5**	0	0	0	0	0	**2**	0	**2**	1	0	0	1	**8**
04:30 PM	0	1	2	3	0	0	**1**	**1**	0	1	**1**	2	1	0	0	1	7
04:45 PM	0	1	2	3	0	0	0	0	0	2	0	2	1	0	0	1	6
Total Volume	1	4	9	14	0	0	1	1	1	5	1	7	5	1	0	6	28
% App. Total	7.1	28.6	64.3		0	0	100		14.3	71.4	14.3		83.3	16.7	0		
PHF	.250	1.00	.750	.700	.000	.000	.250	.250	.250	.625	.250	.875	.625	.250	.000	.500	.875

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**1**	2	3	0	0	0	0	**1**	0	0	1	**2**	**1**	0	**3**
+15 mins.	**1**	1	**3**	**5**	0	0	0	0	0	**2**	0	**2**	1	0	0	1
+30 mins.	0	1	2	3	0	0	**1**	**1**	0	1	**1**	2	1	0	0	1
+45 mins.	0	1	2	3	0	0	0	0	0	2	0	2	1	0	0	1
Total Volume	1	4	9	14	0	0	1	1	1	5	1	7	5	1	0	6
% App. Total	7.1	28.6	64.3		0	0	100		14.3	71.4	14.3		83.3	16.7	0	
PHF	.250	1.000	.750	.700	.000	.000	.250	.250	.250	.625	.250	.875	.625	.250	.000	.500

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

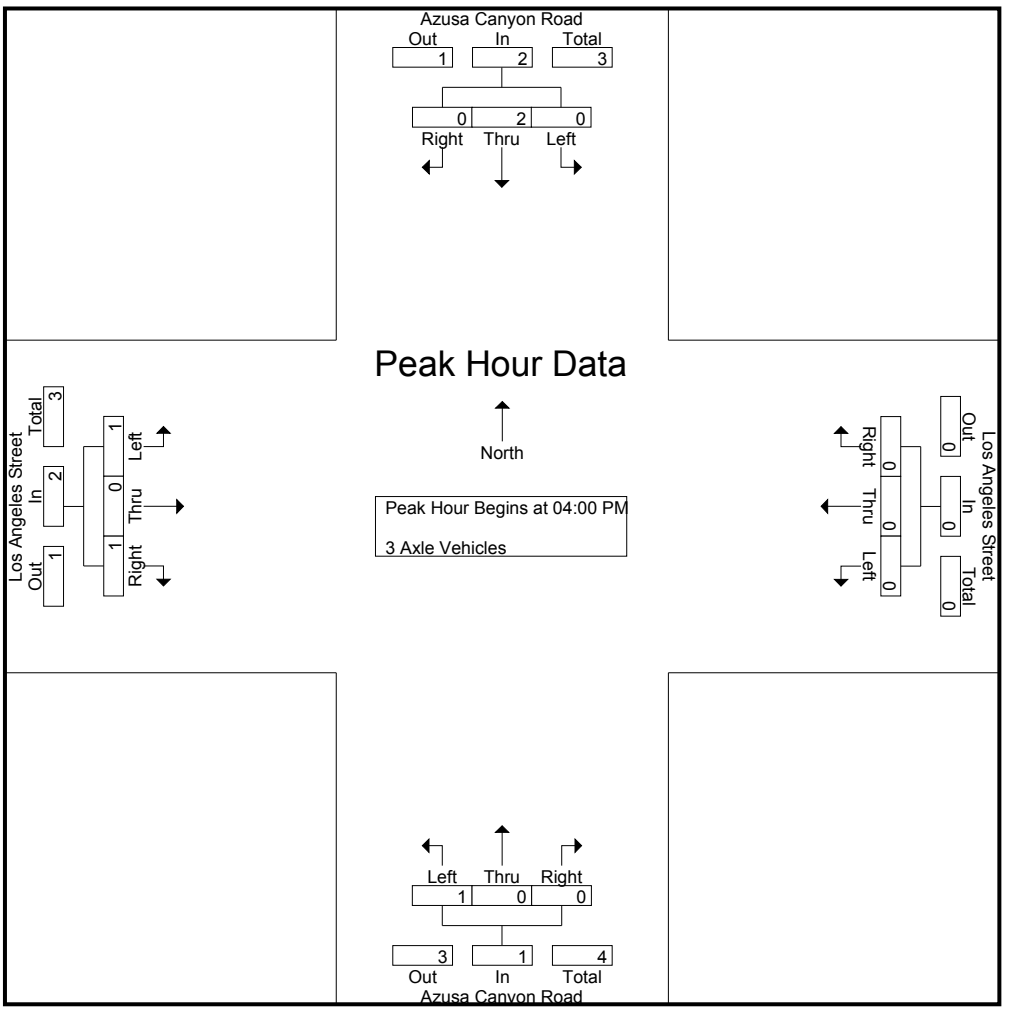
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
Total	0	2	0	2	0	0	0	0	1	0	0	1	1	0	1	2	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	2	3
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	1	0	1	3	0	0	3	6
Grand Total	0	4	0	4	0	0	0	0	1	1	0	2	4	0	1	5	11
Apprch %	0	100	0		0	0	0		50	50	0		80	0	20		
Total %	0	36.4	0	36.4	0	0	0	0	9.1	9.1	0	18.2	36.4	0	9.1	45.5	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	**1**	0	0	1	2
Total Volume	0	2	0	2	0	0	0	0	1	0	0	1	1	0	1	2	5
% App. Total	0	100	0		0	0	0		100	0	0		50	0	50		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.250	.500	.625

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	**1**	0	0	1
Total Volume	0	2	0	2	0	0	0	0	1	0	0	1	1	0	1	2
% App. Total	0	100	0		0	0	0		100	0	0		50	0	50	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.250	.500

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

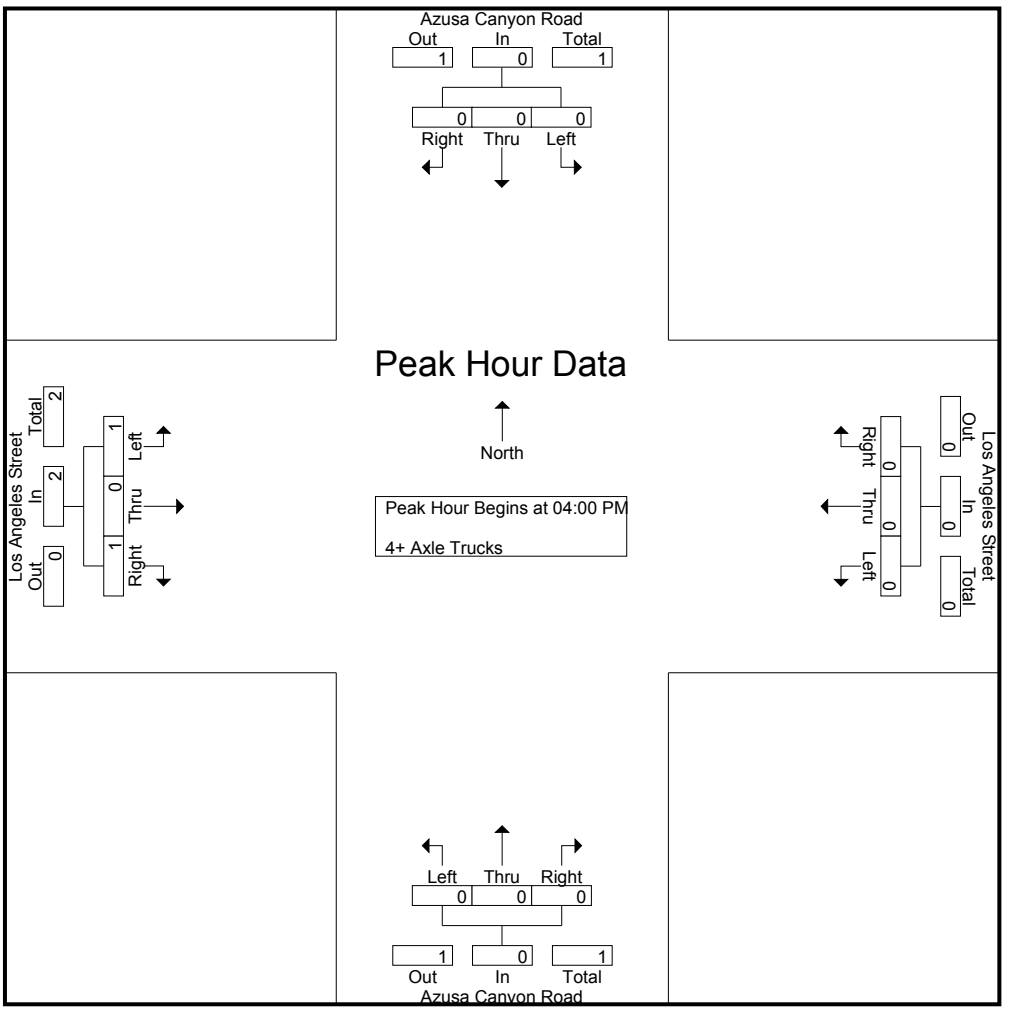
	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	2	3
Grand Total	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2	4	5
Apprch %	0	0	100		0	0	0		0	0	0		25	25	50		
Total %	0	0	20	20	0	0	0	0	0	0	0	0	20	20	40	80	

	Azusa Canyon Road Southbound				Los Angeles Street Westbound				Azusa Canyon Road Northbound				Los Angeles Street Eastbound				
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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**	**2**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2
% App. Total	0	0	0		0	0	0		0	0	0		50	0	50		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250	.250

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Los Angeles Street
Weather: Clear

File Name : 02_IRW_Azusa Canyon_Los Angeles_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
% App. Total	0	0	0		0	0	0		0	0	0		50	0	50	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

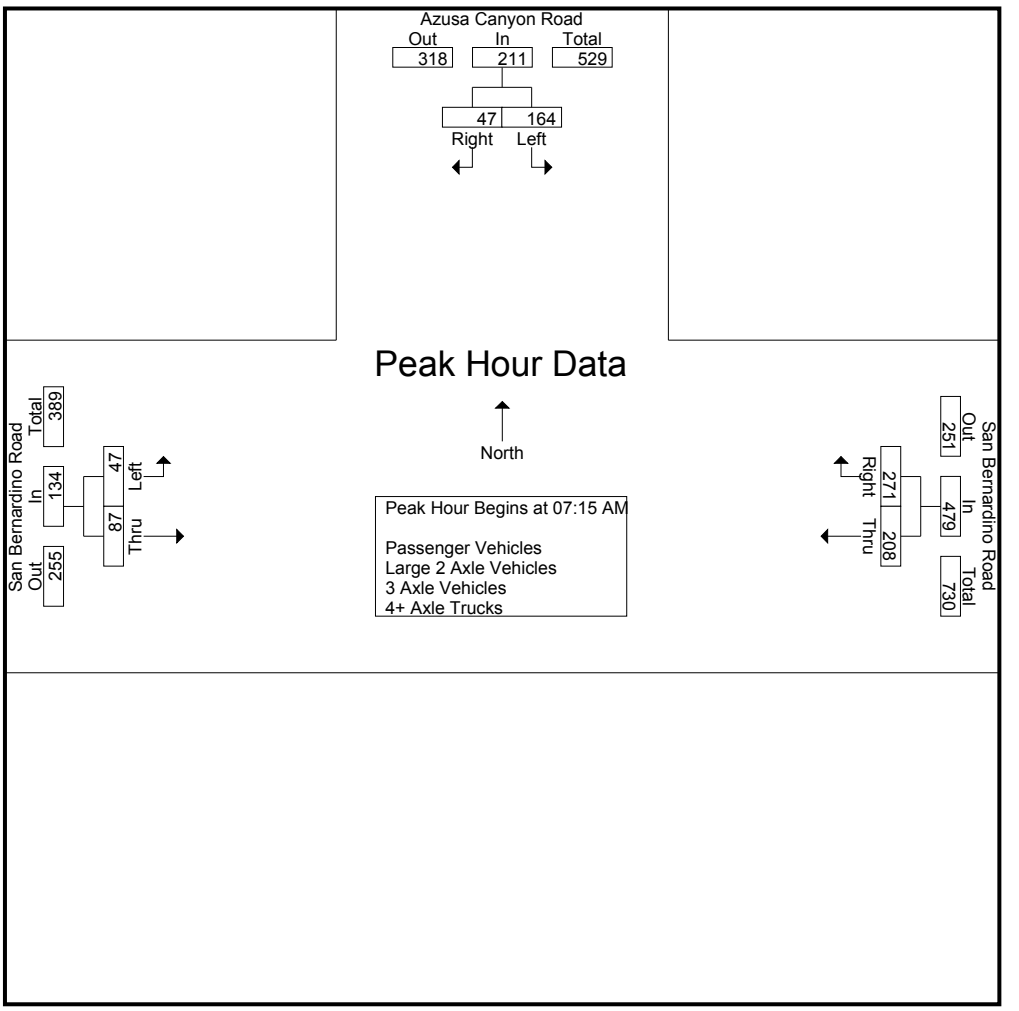
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	27	12	39	47	52	99	5	22	27	165
07:15 AM	34	16	50	42	72	114	14	21	35	199
07:30 AM	43	9	52	53	62	115	14	18	32	199
07:45 AM	51	12	63	66	74	140	9	19	28	231
Total	155	49	204	208	260	468	42	80	122	794
08:00 AM	36	10	46	47	63	110	10	29	39	195
08:15 AM	37	15	52	40	56	96	19	29	48	196
08:30 AM	38	20	58	53	53	106	4	28	32	196
08:45 AM	46	14	60	52	54	106	11	33	44	210
Total	157	59	216	192	226	418	44	119	163	797
Grand Total	312	108	420	400	486	886	86	199	285	1591
Apprch %	74.3	25.7		45.1	54.9		30.2	69.8		
Total %	19.6	6.8	26.4	25.1	30.5	55.7	5.4	12.5	17.9	
Passenger Vehicles	302	99	401	372	473	845	78	175	253	1499
% Passenger Vehicles	96.8	91.7	95.5	93	97.3	95.4	90.7	87.9	88.8	94.2
Large 2 Axle Vehicles	8	4	12	18	8	26	7	15	22	60
% Large 2 Axle Vehicles	2.6	3.7	2.9	4.5	1.6	2.9	8.1	7.5	7.7	3.8
3 Axle Vehicles	1	3	4	5	4	9	1	6	7	20
% 3 Axle Vehicles	0.3	2.8	1	1.2	0.8	1	1.2	3	2.5	1.3
4+ Axle Trucks	1	2	3	5	1	6	0	3	3	12
% 4+ Axle Trucks	0.3	1.9	0.7	1.2	0.2	0.7	0	1.5	1.1	0.8

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	34	**16**	50	42	72	114	**14**	21	35	199
07:30 AM	43	9	52	53	62	115	14	18	32	199
07:45 AM	**51**	12	**63**	**66**	**74**	**140**	9	19	28	**231**
08:00 AM	36	10	46	47	63	110	10	**29**	**39**	195
Total Volume	164	47	211	208	271	479	47	87	134	824
% App. Total	77.7	22.3		43.4	56.6		35.1	64.9		
PHF	.804	.734	.837	.788	.916	.855	.839	.750	.859	.892

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:15 AM			08:00 AM		
+0 mins.	**51**	12	**63**	42	72	114	10	29	39
+15 mins.	36	10	46	53	62	115	**19**	29	**48**
+30 mins.	37	15	52	**66**	**74**	**140**	4	28	32
+45 mins.	38	**20**	58	47	63	110	11	**33**	44
Total Volume	162	57	219	208	271	479	44	119	163
% App. Total	74	26		43.4	56.6		27	73	
PHF	.794	.713	.869	.788	.916	.855	.579	.902	.849

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City of Irwindale
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

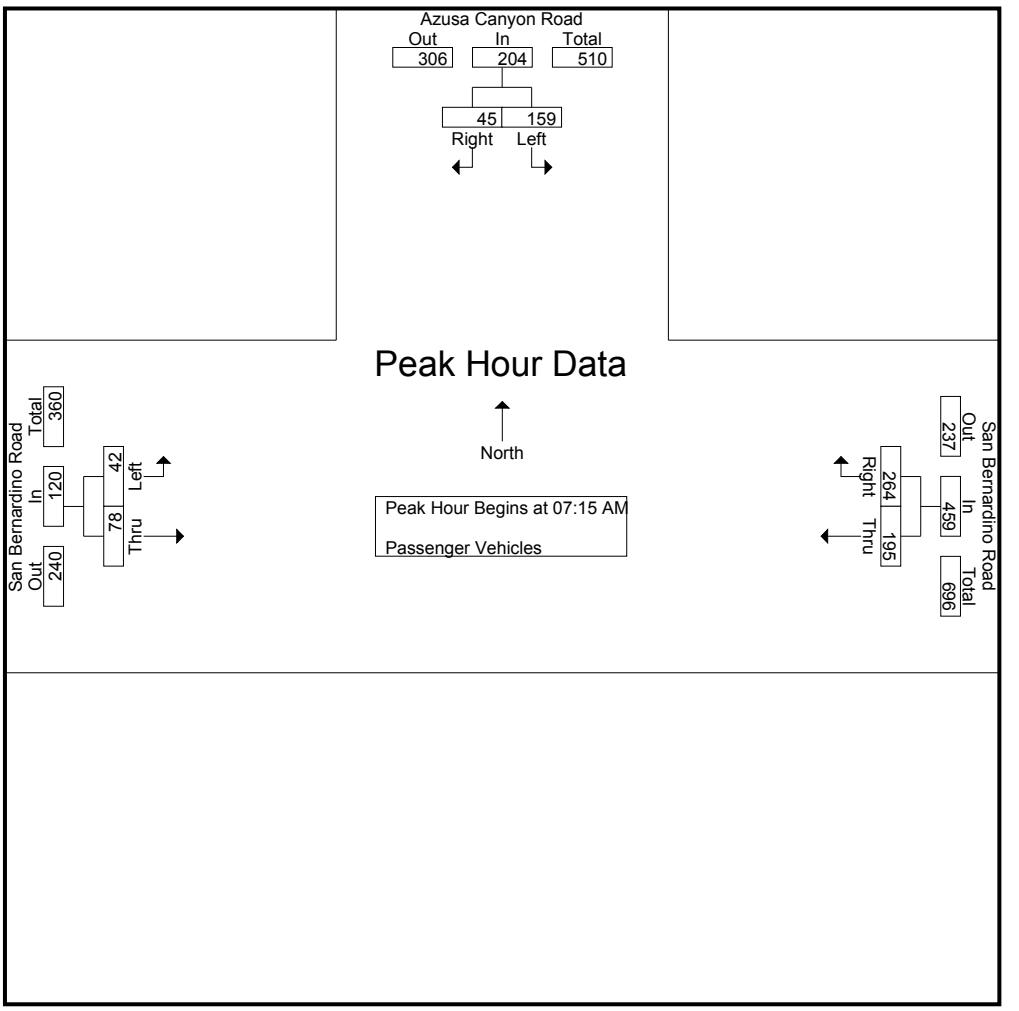
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	25	12	37	40	52	92	5	18	23	152
07:15 AM	33	15	48	41	70	111	13	19	32	191
07:30 AM	42	8	50	50	62	112	13	16	29	191
07:45 AM	49	12	61	61	72	133	7	17	24	218
Total	149	47	196	192	256	448	38	70	108	752
08:00 AM	35	10	45	43	60	103	9	26	35	183
08:15 AM	36	13	49	37	54	91	17	26	43	183
08:30 AM	38	17	55	53	52	105	3	22	25	185
08:45 AM	44	12	56	47	51	98	11	31	42	196
Total	153	52	205	180	217	397	40	105	145	747
Grand Total	302	99	401	372	473	845	78	175	253	1499
Apprch %	75.3	24.7		44	56		30.8	69.2		
Total %	20.1	6.6	26.8	24.8	31.6	56.4	5.2	11.7	16.9	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	33	**15**	48	41	70	111	**13**	19	32	191
07:30 AM	42	8	50	50	62	112	13	16	29	191
07:45 AM	**49**	12	**61**	**61**	**72**	**133**	7	17	24	**218**
08:00 AM	35	10	45	43	60	103	9	**26**	**35**	183
Total Volume	159	45	204	195	264	459	42	78	120	783
% App. Total	77.9	22.1		42.5	57.5		35	65		
PHF	.811	.750	.836	.799	.917	.863	.808	.750	.857	.898

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	33	**15**	48	41	70	111	**13**	19	32
+15 mins.	42	8	50	50	62	112	13	16	29
+30 mins.	**49**	12	**61**	**61**	**72**	**133**	7	17	24
+45 mins.	35	10	45	43	60	103	9	**26**	**35**
Total Volume	159	45	204	195	264	459	42	78	120
% App. Total	77.9	22.1		42.5	57.5		35	65	
PHF	.811	.750	.836	.799	.917	.863	.808	.750	.857

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City of Irwindale
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E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

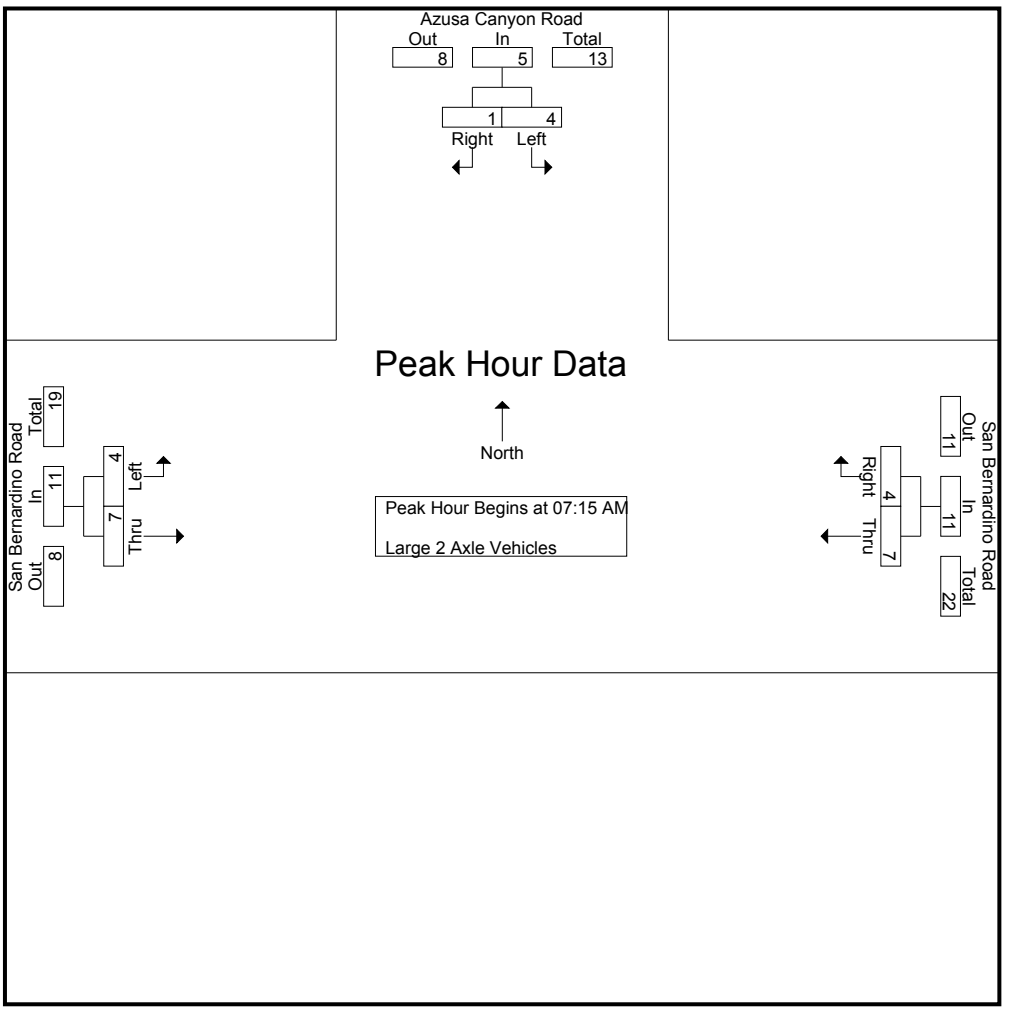
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	0	1	5	0	5	0	1	1	7
07:15 AM	1	0	1	0	0	0	1	2	3	4
07:30 AM	1	1	2	3	0	3	1	1	2	7
07:45 AM	1	0	1	1	1	2	2	2	4	7
Total	4	1	5	9	1	10	4	6	10	25
08:00 AM	1	0	1	3	3	6	0	2	2	9
08:15 AM	1	0	1	2	1	3	2	2	4	8
08:30 AM	0	2	2	0	1	1	1	3	4	7
08:45 AM	2	1	3	4	2	6	0	2	2	11
Total	4	3	7	9	7	16	3	9	12	35
Grand Total	8	4	12	18	8	26	7	15	22	60
Apprch %	66.7	33.3		69.2	30.8		31.8	68.2		
Total %	13.3	6.7	20	30	13.3	43.3	11.7	25	36.7	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**1**	0	1	0	0	0	1	**2**	3	4
07:30 AM	1	**1**	**2**	**3**	0	3	1	1	2	7
07:45 AM	1	0	1	1	1	2	**2**	2	**4**	7
08:00 AM	1	0	1	3	**3**	**6**	0	2	2	**9**
Total Volume	4	1	5	7	4	11	4	7	11	27
% App. Total	80	20		63.6	36.4		36.4	63.6		
PHF	1.00	.250	.625	.583	.333	.458	.500	.875	.688	.750

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	**1**	0	1	0	0	0	1	**2**	3
+15 mins.	1	**1**	**2**	**3**	0	3	1	1	2
+30 mins.	1	0	1	1	1	2	**2**	2	**4**
+45 mins.	1	0	1	3	**3**	**6**	0	2	2
Total Volume	4	1	5	7	4	11	4	7	11
% App. Total	80	20		63.6	36.4		36.4	63.6	
PHF	1.000	.250	.625	.583	.333	.458	.500	.875	.688

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

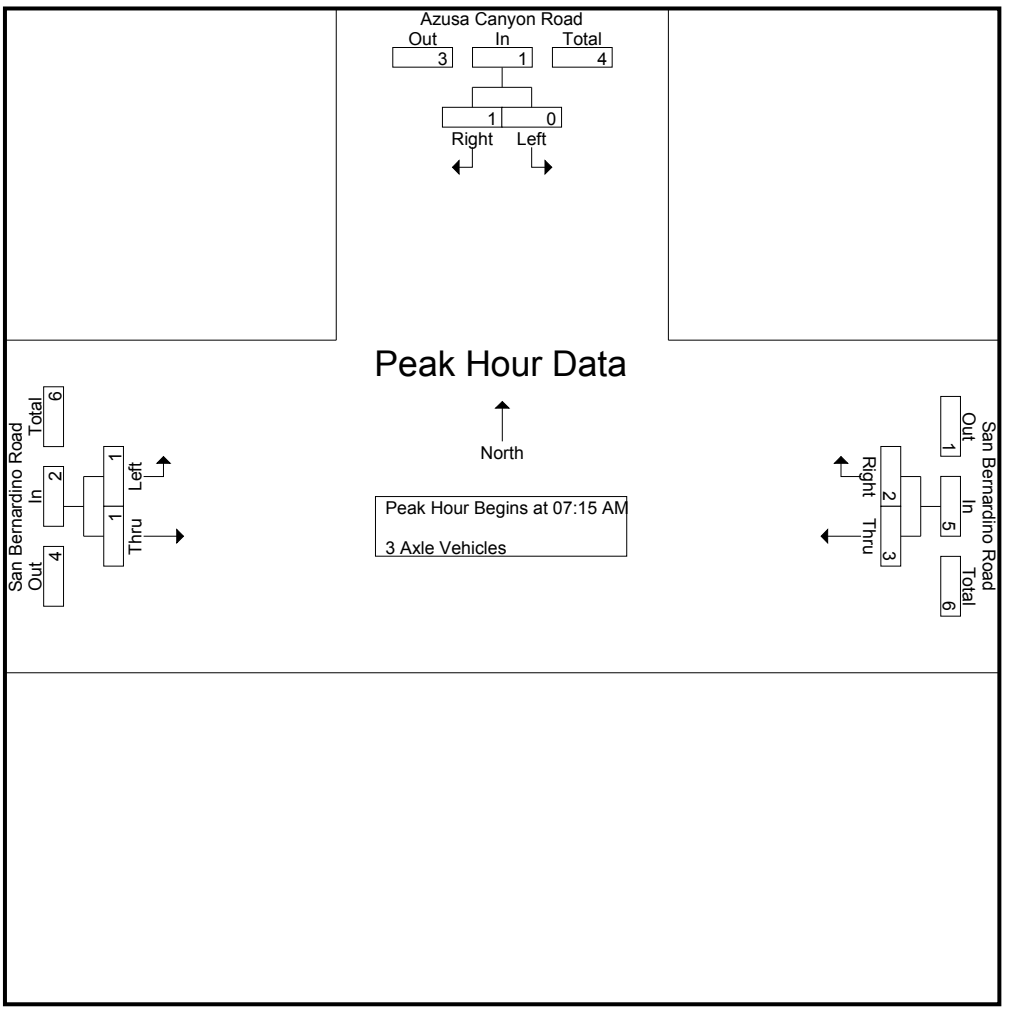
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	0	1	2	0	2	0	2	2	5
07:15 AM	0	1	1	1	1	2	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	1	1	2	0	0	0	2
Total	1	1	2	4	2	6	0	2	2	10
08:00 AM	0	0	0	1	0	1	1	1	2	3
08:15 AM	0	0	0	0	1	1	0	1	1	2
08:30 AM	0	1	1	0	0	0	0	2	2	3
08:45 AM	0	1	1	0	1	1	0	0	0	2
Total	0	2	2	1	2	3	1	4	5	10
Grand Total	1	3	4	5	4	9	1	6	7	20
Apprch %	25	75		55.6	44.4		14.3	85.7		
Total %	5	15	20	25	20	45	5	30	35	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**1**	**1**	**1**	**1**	**2**	0	0	0	**3**
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	1	1	2	0	0	0	2
08:00 AM	0	0	0	1	0	1	**1**	**1**	**2**	3
Total Volume	0	1	1	3	2	5	1	1	2	8
% App. Total	0	100		60	40		50	50		
PHF	.000	.250	.250	.750	.500	.625	.250	.250	.250	.667

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	**1**	**1**	**1**	**1**	**2**	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	1	1	2	0	0	0
+45 mins.	0	0	0	1	0	1	**1**	**1**	**2**
Total Volume	0	1	1	3	2	5	1	1	2
% App. Total	0	100		60	40		50	50	
PHF	.000	.250	.250	.750	.500	.625	.250	.250	.250

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City of Irwindale
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021

Groups Printed- 4+ Axle Trucks

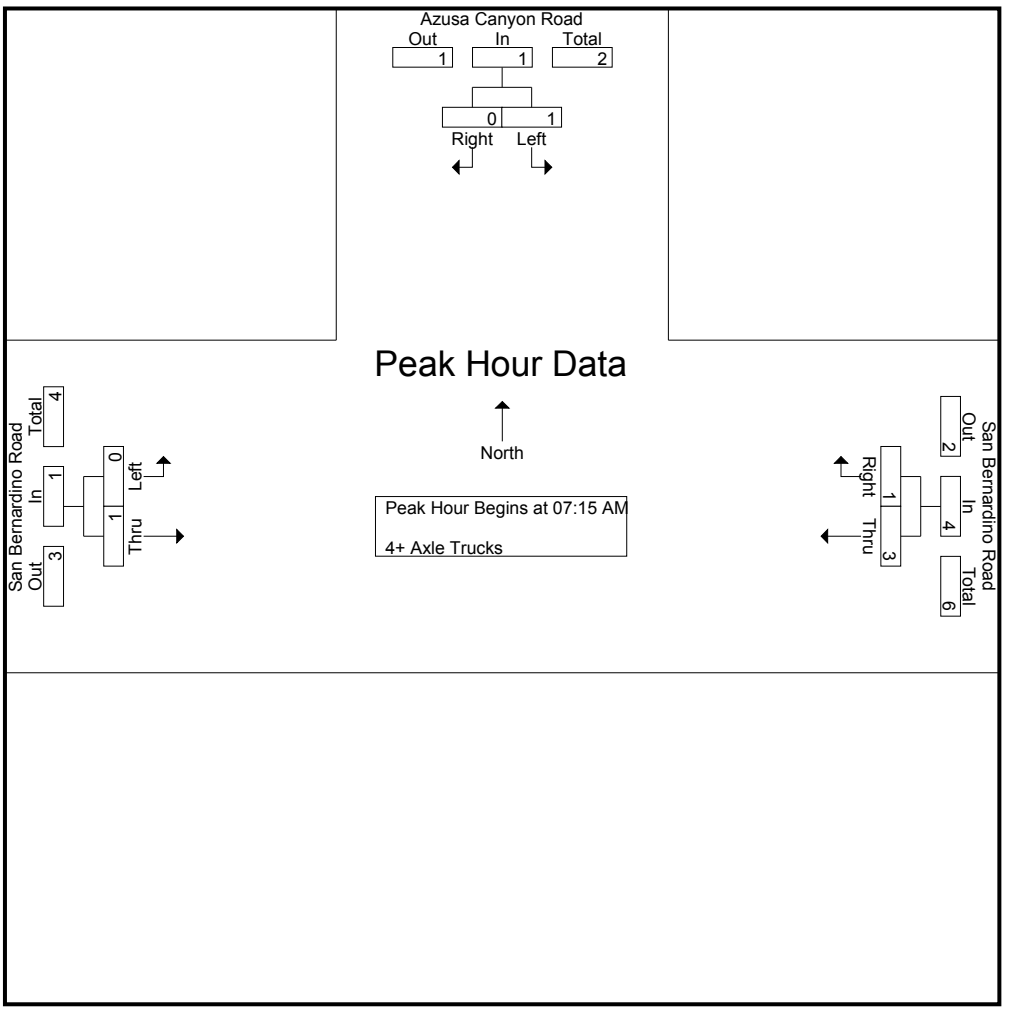
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	0	0	0	1	1	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	1	1	1
07:45 AM	1	0	1	3	0	3	0	0	0	4
Total	1	0	1	3	1	4	0	2	2	7
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	2	2	1	0	1	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	1	0	1	0	0	0	1
Total	0	2	2	2	0	2	0	1	1	5
Grand Total	1	2	3	5	1	6	0	3	3	12
Apprch %	33.3	66.7		83.3	16.7		0	100		
Total %	8.3	16.7	25	41.7	8.3	50	0	25	25	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	**1**	1	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	**1**	**1**	1
07:45 AM	**1**	0	**1**	**3**	0	**3**	0	0	0	**4**
08:00 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	3	1	4	0	1	1	6
% App. Total	100	0		75	25		0	100		
PHF	.250	.000	.250	.250	.250	.333	.000	.250	.250	.375

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_AM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	**1**	1	0	0	0
+15 mins.	0	0	0	0	0	0	0	**1**	**1**
+30 mins.	**1**	0	**1**	**3**	0	**3**	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	3	1	4	0	1	1
% App. Total	100	0		75	25		0	100	
PHF	.250	.000	.250	.250	.250	.333	.000	.250	.250

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

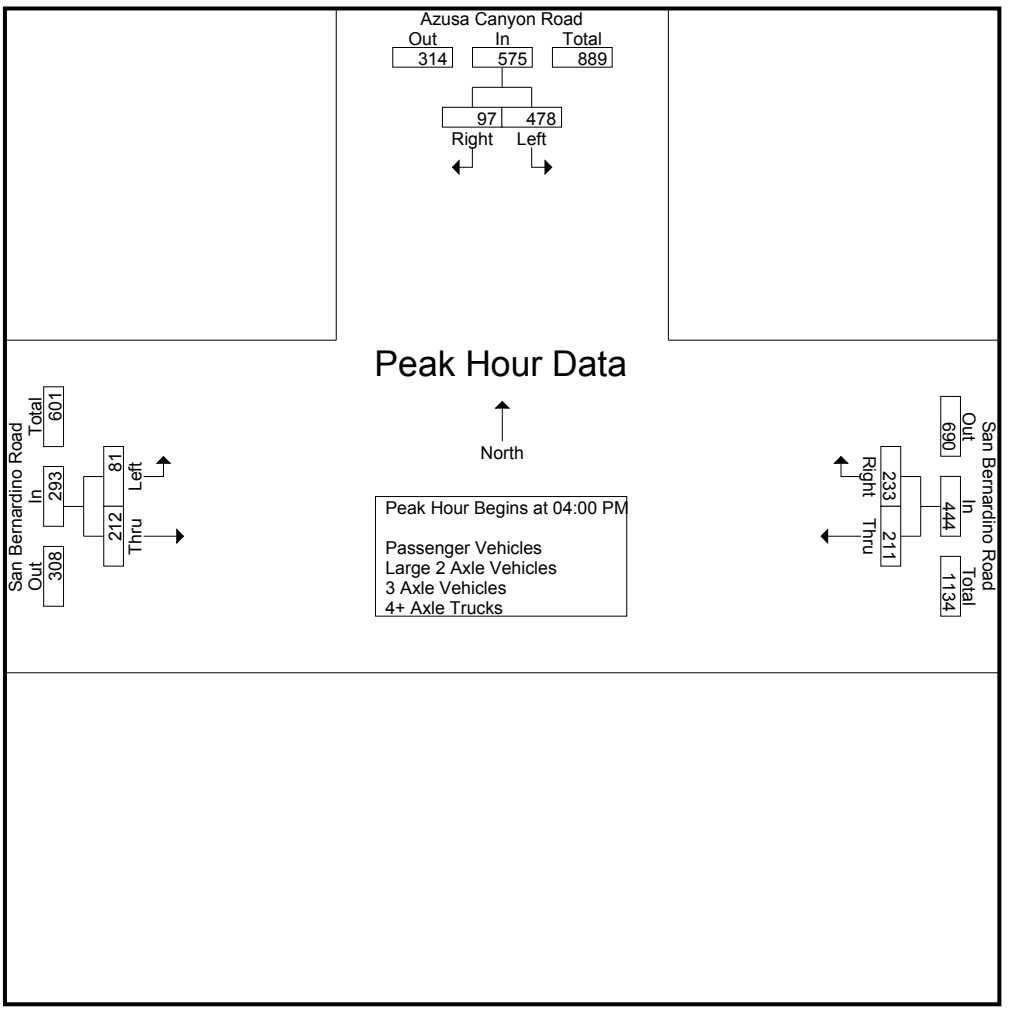
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	125	30	155	52	53	105	20	54	74	334
04:15 PM	119	18	137	47	67	114	21	72	93	344
04:30 PM	109	25	134	57	54	111	25	42	67	312
04:45 PM	125	24	149	55	59	114	15	44	59	322
Total	478	97	575	211	233	444	81	212	293	1312
05:00 PM	102	21	123	55	61	116	22	51	73	312
05:15 PM	120	23	143	70	46	116	18	54	72	331
05:30 PM	110	28	138	52	54	106	17	49	66	310
05:45 PM	88	20	108	44	49	93	18	57	75	276
Total	420	92	512	221	210	431	75	211	286	1229
Grand Total	898	189	1087	432	443	875	156	423	579	2541
Apprch %	82.6	17.4		49.4	50.6		26.9	73.1		
Total %	35.3	7.4	42.8	17	17.4	34.4	6.1	16.6	22.8	
Passenger Vehicles	885	183	1068	412	431	843	152	405	557	2468
% Passenger Vehicles	98.6	96.8	98.3	95.4	97.3	96.3	97.4	95.7	96.2	97.1
Large 2 Axle Vehicles	8	5	13	9	10	19	4	13	17	49
% Large 2 Axle Vehicles	0.9	2.6	1.2	2.1	2.3	2.2	2.6	3.1	2.9	1.9
3 Axle Vehicles	3	1	4	8	2	10	0	3	3	17
% 3 Axle Vehicles	0.3	0.5	0.4	1.9	0.5	1.1	0	0.7	0.5	0.7
4+ Axle Trucks	2	0	2	3	0	3	0	2	2	7
% 4+ Axle Trucks	0.2	0	0.2	0.7	0	0.3	0	0.5	0.3	0.3

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**125**	**30**	**155**	52	53	105	20	54	74	334
04:15 PM	119	18	137	47	**67**	**114**	21	**72**	**93**	**344**
04:30 PM	109	25	134	**57**	54	111	**25**	42	67	312
04:45 PM	125	24	149	55	59	114	15	44	59	322
Total Volume	478	97	575	211	233	444	81	212	293	1312
% App. Total	83.1	16.9		47.5	52.5		27.6	72.4		
PHF	.956	.808	.927	.925	.869	.974	.810	.736	.788	.953

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:30 PM			04:00 PM		
+0 mins.	**125**	**30**	**155**	57	54	111	20	54	74
+15 mins.	119	18	137	55	59	114	21	**72**	**93**
+30 mins.	109	25	134	55	**61**	**116**	**25**	42	67
+45 mins.	125	24	149	**70**	46	116	15	44	59
Total Volume	478	97	575	237	220	457	81	212	293
% App. Total	83.1	16.9		51.9	48.1		27.6	72.4	
PHF	.956	.808	.927	.846	.902	.985	.810	.736	.788

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File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

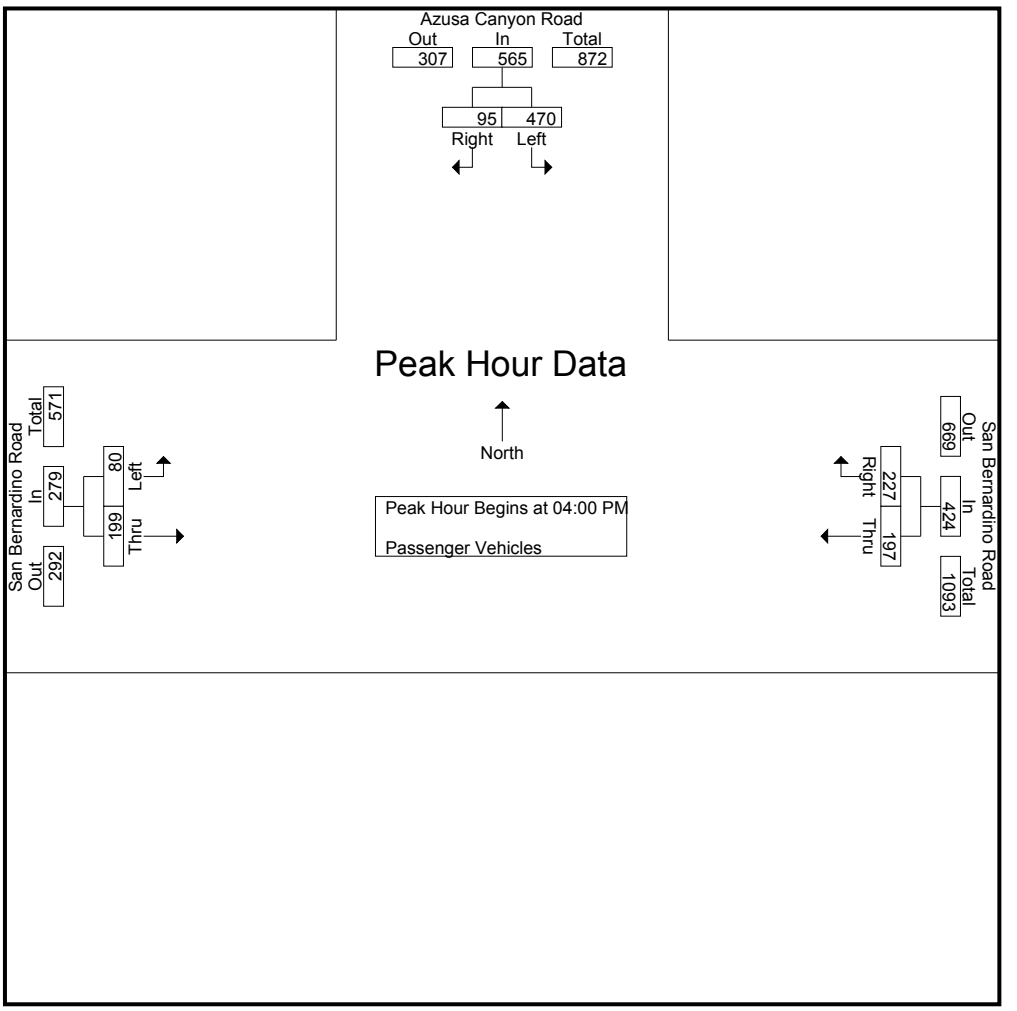
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	121	30	151	50	51	101	20	50	70	322
04:15 PM	117	17	134	42	65	107	21	70	91	332
04:30 PM	107	25	132	54	53	107	24	37	61	300
04:45 PM	125	23	148	51	58	109	15	42	57	314
Total	470	95	565	197	227	424	80	199	279	1268
05:00 PM	101	21	122	52	60	112	22	51	73	307
05:15 PM	120	20	140	69	43	112	17	51	68	320
05:30 PM	108	27	135	51	52	103	17	49	66	304
05:45 PM	86	20	106	43	49	92	16	55	71	269
Total	415	88	503	215	204	419	72	206	278	1200
Grand Total	885	183	1068	412	431	843	152	405	557	2468
Apprch %	82.9	17.1		48.9	51.1		27.3	72.7		
Total %	35.9	7.4	43.3	16.7	17.5	34.2	6.2	16.4	22.6	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	121	**30**	**151**	50	51	101	20	50	70	322
04:15 PM	117	17	134	42	**65**	107	21	**70**	**91**	**332**
04:30 PM	107	25	132	**54**	53	107	**24**	37	61	300
04:45 PM	**125**	23	148	51	58	**109**	15	42	57	314
Total Volume	470	95	565	197	227	424	80	199	279	1268
% App. Total	83.2	16.8		46.5	53.5		28.7	71.3		
PHF	.940	.792	.935	.912	.873	.972	.833	.711	.766	.955

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File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	121	**30**	**151**	50	51	101	20	50	70
+15 mins.	117	17	134	42	**65**	107	21	**70**	**91**
+30 mins.	107	25	132	**54**	53	107	**24**	37	61
+45 mins.	**125**	23	148	51	58	**109**	15	42	57
Total Volume	470	95	565	197	227	424	80	199	279
% App. Total	83.2	16.8		46.5	53.5		28.7	71.3	
PHF	.940	.792	.935	.912	.873	.972	.833	.711	.766

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City of Irwindale
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File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

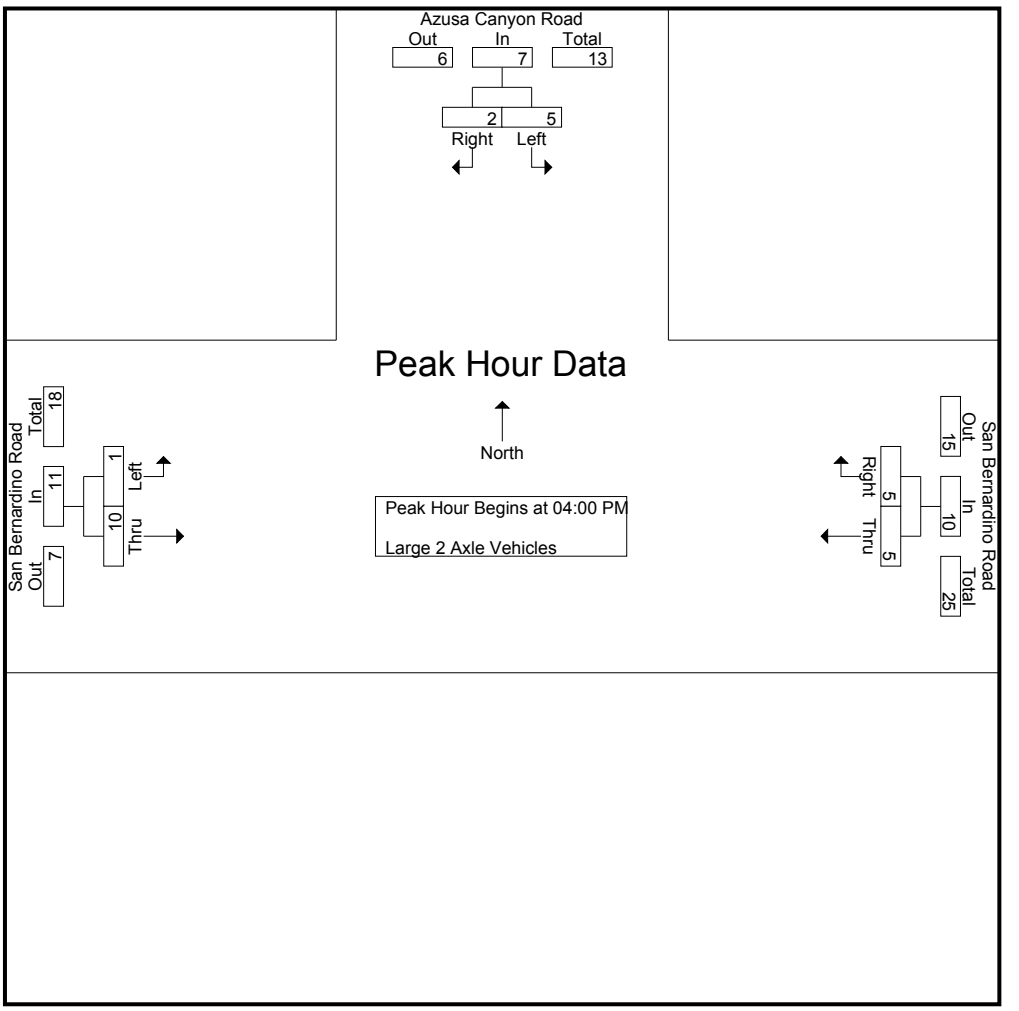
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	3	0	3	1	2	3	0	3	3	9
04:15 PM	1	1	2	2	2	4	0	2	2	8
04:30 PM	1	0	1	1	1	2	1	3	4	7
04:45 PM	0	1	1	1	0	1	0	2	2	4
Total	5	2	7	5	5	10	1	10	11	28
05:00 PM	0	0	0	2	1	3	0	0	0	3
05:15 PM	0	3	3	1	2	3	1	2	3	9
05:30 PM	2	0	2	1	2	3	0	0	0	5
05:45 PM	1	0	1	0	0	0	2	1	3	4
Total	3	3	6	4	5	9	3	3	6	21
Grand Total	8	5	13	9	10	19	4	13	17	49
Apprch %	61.5	38.5		47.4	52.6		23.5	76.5		
Total %	16.3	10.2	26.5	18.4	20.4	38.8	8.2	26.5	34.7	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**3**	0	**3**	1	**2**	3	0	**3**	3	**9**
04:15 PM	1	**1**	2	**2**	2	**4**	0	2	2	8
04:30 PM	1	0	1	1	1	2	**1**	3	**4**	7
04:45 PM	0	1	1	1	0	1	0	2	2	4
Total Volume	5	2	7	5	5	10	1	10	11	28
% App. Total	71.4	28.6		50	50		9.1	90.9		
PHF	.417	.500	.583	.625	.625	.625	.250	.833	.688	.778

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	**3**	0	**3**	1	**2**	3	0	**3**	3
+15 mins.	1	**1**	2	**2**	2	**4**	0	2	2
+30 mins.	1	0	1	1	1	2	**1**	3	**4**
+45 mins.	0	1	1	1	0	1	0	2	2
Total Volume	5	2	7	5	5	10	1	10	11
% App. Total	71.4	28.6		50	50		9.1	90.9	
PHF	.417	.500	.583	.625	.625	.625	.250	.833	.688

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021

Groups Printed- 3 Axle Vehicles

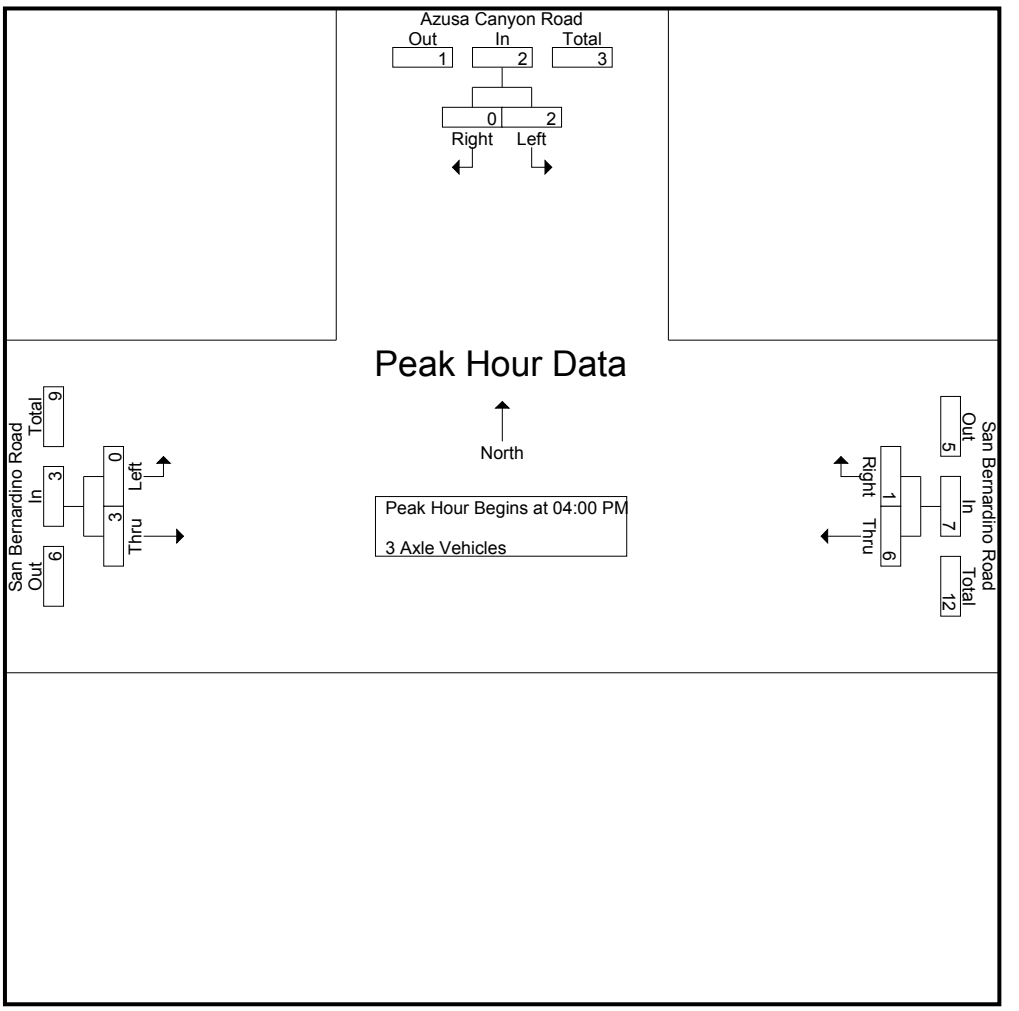
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	1	0	1	0	0	0	0	1	1	2
04:15 PM	0	0	0	3	0	3	0	0	0	3
04:30 PM	1	0	1	2	0	2	0	2	2	5
04:45 PM	0	0	0	1	1	2	0	0	0	2
Total	2	0	2	6	1	7	0	3	3	12
05:00 PM	0	0	0	1	0	1	0	0	0	1
05:15 PM	0	0	0	0	1	1	0	0	0	1
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	1	0	1	1	0	1	0	0	0	2
Total	1	1	2	2	1	3	0	0	0	5
Grand Total	3	1	4	8	2	10	0	3	3	17
Apprch %	75	25		80	20		0	100		
Total %	17.6	5.9	23.5	47.1	11.8	58.8	0	17.6	17.6	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**1**	0	**1**	0	0	0	0	1	1	2
04:15 PM	0	0	0	**3**	0	**3**	0	0	0	3
04:30 PM	1	0	1	2	0	2	0	**2**	**2**	**5**
04:45 PM	0	0	0	1	**1**	2	0	0	0	2
Total Volume	2	0	2	6	1	7	0	3	3	12
% App. Total	100	0		85.7	14.3		0	100		
PHF	.500	.000	.500	.500	.250	.583	.000	.375	.375	.600

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City of Irwindale
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	**1**	0	**1**	0	0	0	0	1	1
+15 mins.	0	0	0	**3**	0	**3**	0	0	0
+30 mins.	1	0	1	2	0	2	0	**2**	**2**
+45 mins.	0	0	0	1	**1**	2	0	0	0
Total Volume	2	0	2	6	1	7	0	3	3
% App. Total	100	0		85.7	14.3		0	100	
PHF	.500	.000	.500	.500	.250	.583	.000	.375	.375

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City of Irwindale
N/S: Azusa Canyon Road
E/W: San Bernardino Road
Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

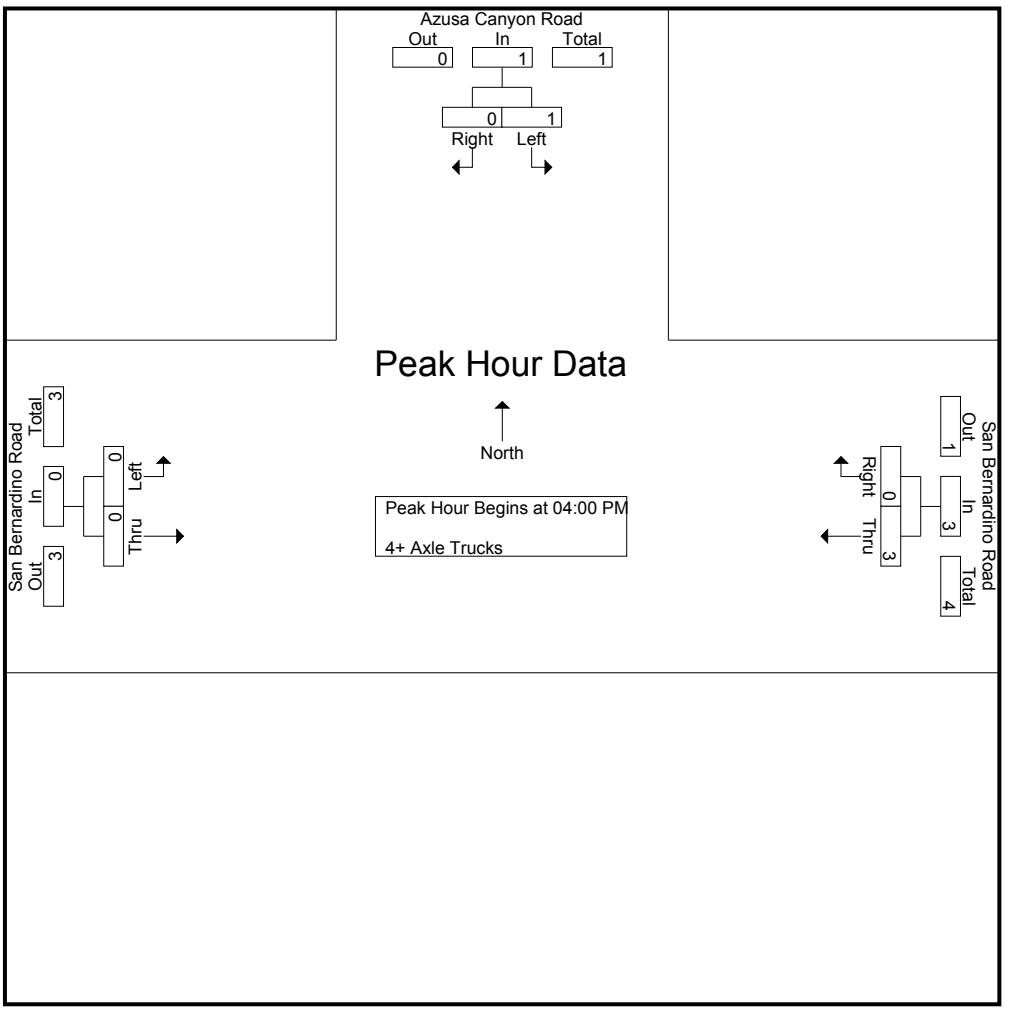
	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	0	0	1	0	1	0	0	0	1
04:15 PM	1	0	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	2	0	2	0	0	0	2
Total	1	0	1	3	0	3	0	0	0	4
05:00 PM	1	0	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	1	1	1
Total	1	0	1	0	0	0	0	2	2	3
Grand Total	2	0	2	3	0	3	0	2	2	7
Apprch %	100	0		100	0		0	100		
Total %	28.6	0	28.6	42.9	0	42.9	0	28.6	28.6	

	Azusa Canyon Road Southbound			San Bernardino Road Westbound			San Bernardino Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	1	0	1	0	0	0	1
04:15 PM	**1**	0	**1**	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	**2**	0	**2**	0	0	0	**2**
Total Volume	1	0	1	3	0	3	0	0	0	4
% App. Total	100	0		100	0		0	0		
PHF	.250	.000	.250	.375	.000	.375	.000	.000	.000	.500

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City of Irwindale
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Weather: Clear

File Name : 03_IRW_Azusa Canyon_San Bernardino_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	1	0	1	0	0	0
+15 mins.	**1**	0	**1**	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	**2**	0	**2**	0	0	0
Total Volume	1	0	1	3	0	3	0	0	0
% App. Total	100	0		100	0		0	0	
PHF	.250	.000	.250	.375	.000	.375	.000	.000	.000

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

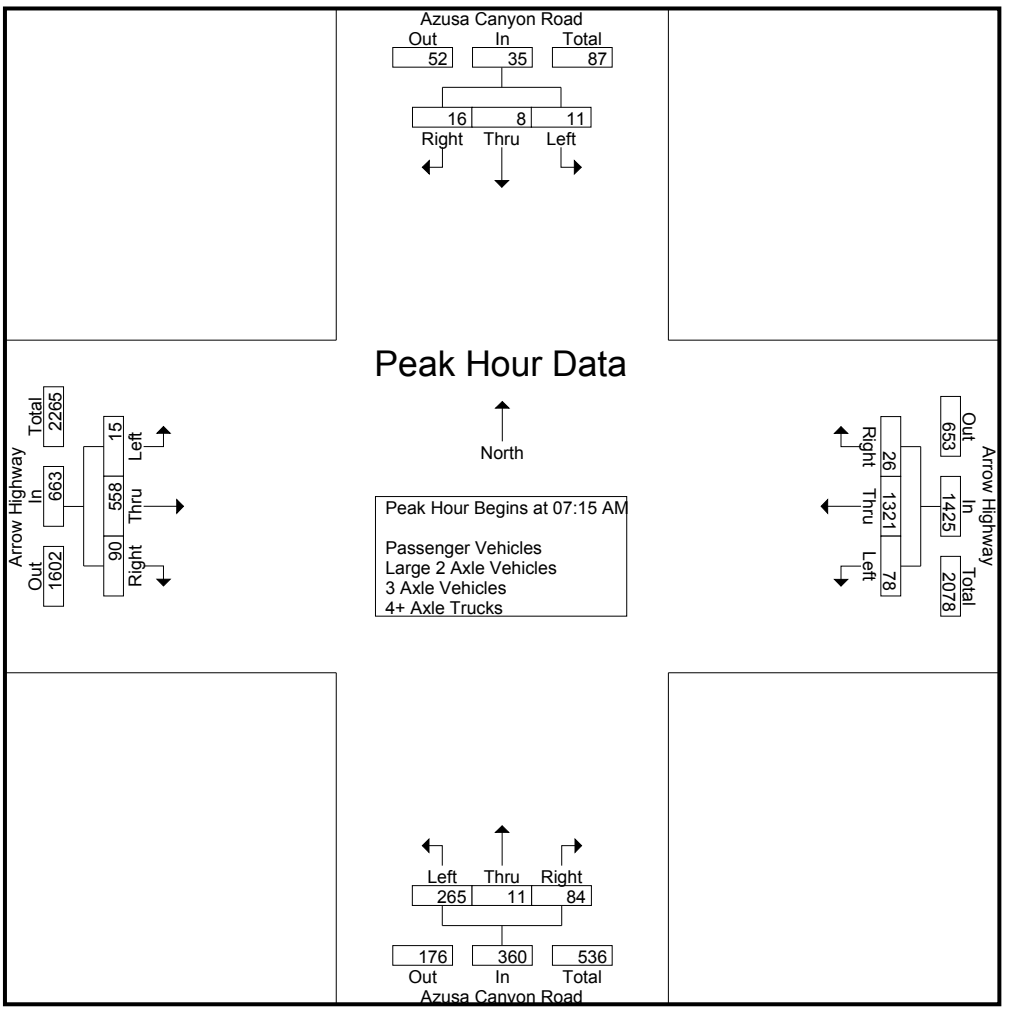
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	1	1	6	14	243	2	259	67	3	16	86	2	112	15	129	480
07:15 AM	5	3	2	10	22	330	4	356	68	0	18	86	2	120	17	139	591
07:30 AM	2	0	6	8	21	319	6	346	55	5	27	87	2	126	19	147	588
07:45 AM	2	2	4	8	20	347	6	373	77	3	19	99	3	177	26	206	686
Total	13	6	13	32	77	1239	18	1334	267	11	80	358	9	535	77	621	2345
08:00 AM	2	3	4	9	15	325	10	350	65	3	20	88	8	135	28	171	618
08:15 AM	3	0	2	5	14	309	4	327	59	2	24	85	4	131	16	151	568
08:30 AM	6	3	7	16	17	259	10	286	49	2	33	84	10	146	17	173	559
08:45 AM	1	2	1	4	15	256	7	278	42	1	26	69	1	139	21	161	512
Total	12	8	14	34	61	1149	31	1241	215	8	103	326	23	551	82	656	2257
Grand Total	25	14	27	66	138	2388	49	2575	482	19	183	684	32	1086	159	1277	4602
Apprch %	37.9	21.2	40.9		5.4	92.7	1.9		70.5	2.8	26.8		2.5	85	12.5		
Total %	0.5	0.3	0.6	1.4	3	51.9	1.1	56	10.5	0.4	4	14.9	0.7	23.6	3.5	27.7	
Passenger Vehicles	20	14	18	52	124	2229	46	2399	454	18	174	646	30	979	116	1125	4222
% Passenger Vehicles	80	100	66.7	78.8	89.9	93.3	93.9	93.2	94.2	94.7	95.1	94.4	93.8	90.1	73	88.1	91.7
Large 2 Axle Vehicles	5	0	3	8	6	78	3	87	8	1	4	13	0	52	6	58	166
% Large 2 Axle Vehicles	20	0	11.1	12.1	4.3	3.3	6.1	3.4	1.7	5.3	2.2	1.9	0	4.8	3.8	4.5	3.6
3 Axle Vehicles	0	0	2	2	1	28	0	29	6	0	1	7	1	27	3	31	69
% 3 Axle Vehicles	0	0	7.4	3	0.7	1.2	0	1.1	1.2	0	0.5	1	3.1	2.5	1.9	2.4	1.5
4+ Axle Trucks	0	0	4	4	7	53	0	60	14	0	4	18	1	28	34	63	145
% 4+ Axle Trucks	0	0	14.8	6.1	5.1	2.2	0	2.3	2.9	0	2.2	2.6	3.1	2.6	21.4	4.9	3.2

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**5**	**3**	2	**10**	**22**	330	4	356	68	0	18	86	2	120	17	139	591
07:30 AM	2	0	**6**	8	21	319	6	346	55	**5**	**27**	87	2	126	19	147	588
07:45 AM	2	2	4	8	20	**347**	6	**373**	**77**	3	19	**99**	3	**177**	26	**206**	**686**
08:00 AM	2	3	4	9	15	325	**10**	350	65	3	20	88	**8**	135	**28**	171	618
Total Volume	11	8	16	35	78	1321	26	1425	265	11	84	360	15	558	90	663	2483
% App. Total	31.4	22.9	45.7		5.5	92.7	1.8		73.6	3.1	23.3		2.3	84.2	13.6		
PHF	.550	.667	.667	.875	.886	.952	.650	.955	.860	.550	.778	.909	.469	.788	.804	.805	.905

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:15 AM				07:45 AM			
+0 mins.	2	2	4	8	**22**	330	4	356	68	0	18	86	3	**177**	26	**206**
+15 mins.	2	**3**	4	9	21	319	6	346	55	**5**	**27**	87	8	135	**28**	171
+30 mins.	3	0	2	5	20	**347**	6	**373**	**77**	3	19	**99**	4	131	16	151
+45 mins.	**6**	3	**7**	**16**	15	325	**10**	350	65	3	20	88	**10**	146	17	173
Total Volume	13	8	17	38	78	1321	26	1425	265	11	84	360	25	589	87	701
% App. Total	34.2	21.1	44.7		5.5	92.7	1.8		73.6	3.1	23.3		3.6	84	12.4	
PHF	.542	.667	.607	.594	.886	.952	.650	.955	.860	.550	.778	.909	.625	.832	.777	.851

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File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

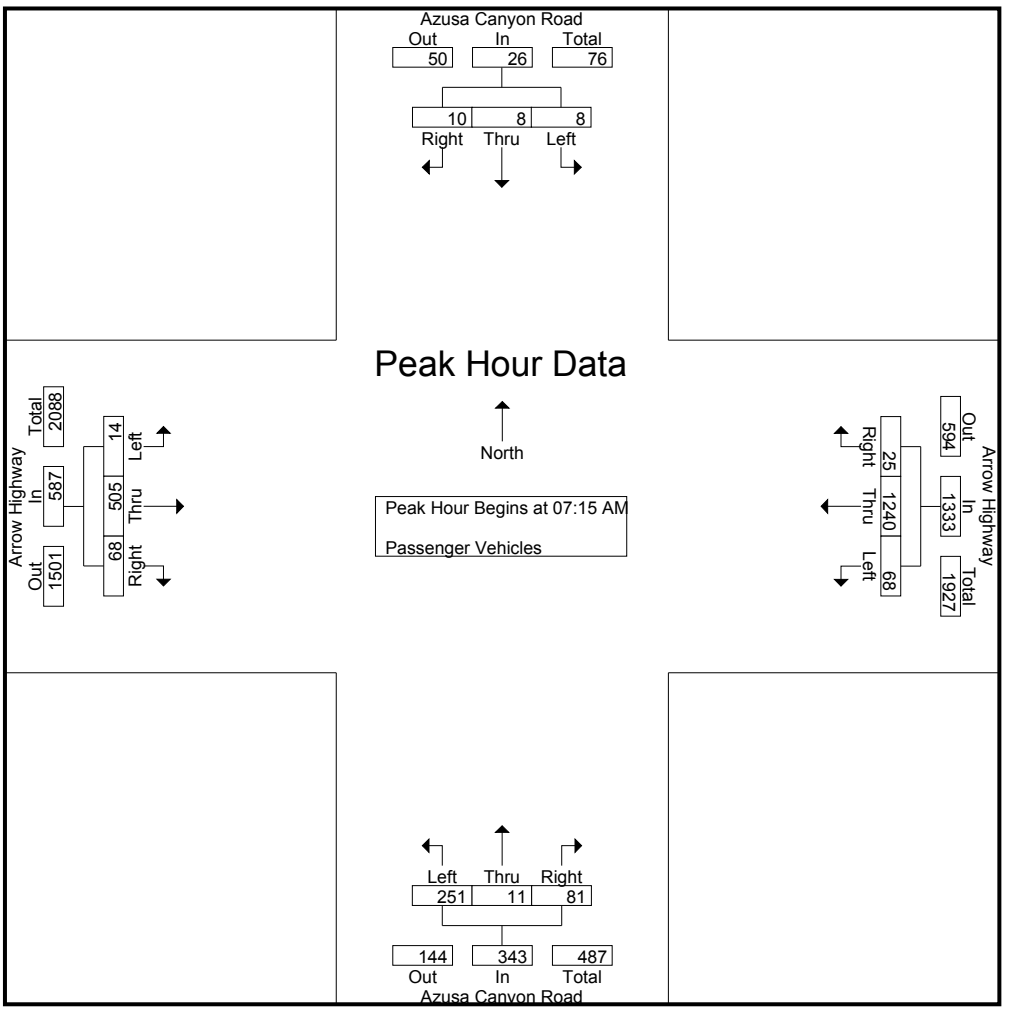
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	1	0	4	12	227	2	241	65	3	14	82	2	99	11	112	439
07:15 AM	4	3	1	8	19	308	4	331	66	0	18	84	2	107	15	124	547
07:30 AM	1	0	2	3	19	308	5	332	51	5	25	81	2	114	14	130	546
07:45 AM	2	2	3	7	16	323	6	345	74	3	18	95	3	163	20	186	633
Total	10	6	6	22	66	1166	17	1249	256	11	75	342	9	483	60	552	2165
08:00 AM	1	3	4	8	14	301	10	325	60	3	20	83	7	121	19	147	563
08:15 AM	3	0	2	5	13	291	4	308	54	1	24	79	4	116	8	128	520
08:30 AM	5	3	6	14	16	238	9	263	45	2	29	76	9	129	14	152	505
08:45 AM	1	2	0	3	15	233	6	254	39	1	26	66	1	130	15	146	469
Total	10	8	12	30	58	1063	29	1150	198	7	99	304	21	496	56	573	2057
Grand Total	20	14	18	52	124	2229	46	2399	454	18	174	646	30	979	116	1125	4222
Apprch %	38.5	26.9	34.6		5.2	92.9	1.9		70.3	2.8	26.9		2.7	87	10.3		
Total %	0.5	0.3	0.4	1.2	2.9	52.8	1.1	56.8	10.8	0.4	4.1	15.3	0.7	23.2	2.7	26.6	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**4**	**3**	1	**8**	**19**	308	4	331	66	0	18	84	2	107	15	124	547
07:30 AM	1	0	2	3	19	308	5	332	51	**5**	**25**	81	2	114	14	130	546
07:45 AM	2	2	3	7	16	**323**	6	**345**	**74**	3	18	**95**	3	**163**	**20**	**186**	**633**
08:00 AM	1	3	**4**	8	14	301	**10**	325	60	3	20	83	**7**	121	19	147	563
Total Volume	8	8	10	26	68	1240	25	1333	251	11	81	343	14	505	68	587	2289
% App. Total	30.8	30.8	38.5		5.1	93	1.9		73.2	3.2	23.6		2.4	86	11.6		
PHF	.500	.667	.625	.813	.895	.960	.625	.966	.848	.550	.810	.903	.500	.775	.850	.789	.904

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**4**	**3**	1	**8**	**19**	308	4	331	66	0	18	84	2	107	15	124
+15 mins.	1	0	2	3	19	308	5	332	51	**5**	**25**	81	2	114	14	130
+30 mins.	2	2	3	7	16	**323**	6	**345**	**74**	3	18	**95**	3	**163**	**20**	**186**
+45 mins.	1	3	**4**	8	14	301	**10**	325	60	3	20	83	**7**	121	19	147
Total Volume	8	8	10	26	68	1240	25	1333	251	11	81	343	14	505	68	587
% App. Total	30.8	30.8	38.5		5.1	93	1.9		73.2	3.2	23.6		2.4	86	11.6	
PHF	.500	.667	.625	.813	.895	.960	.625	.966	.848	.550	.810	.903	.500	.775	.850	.789

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City of Irwindale
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File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

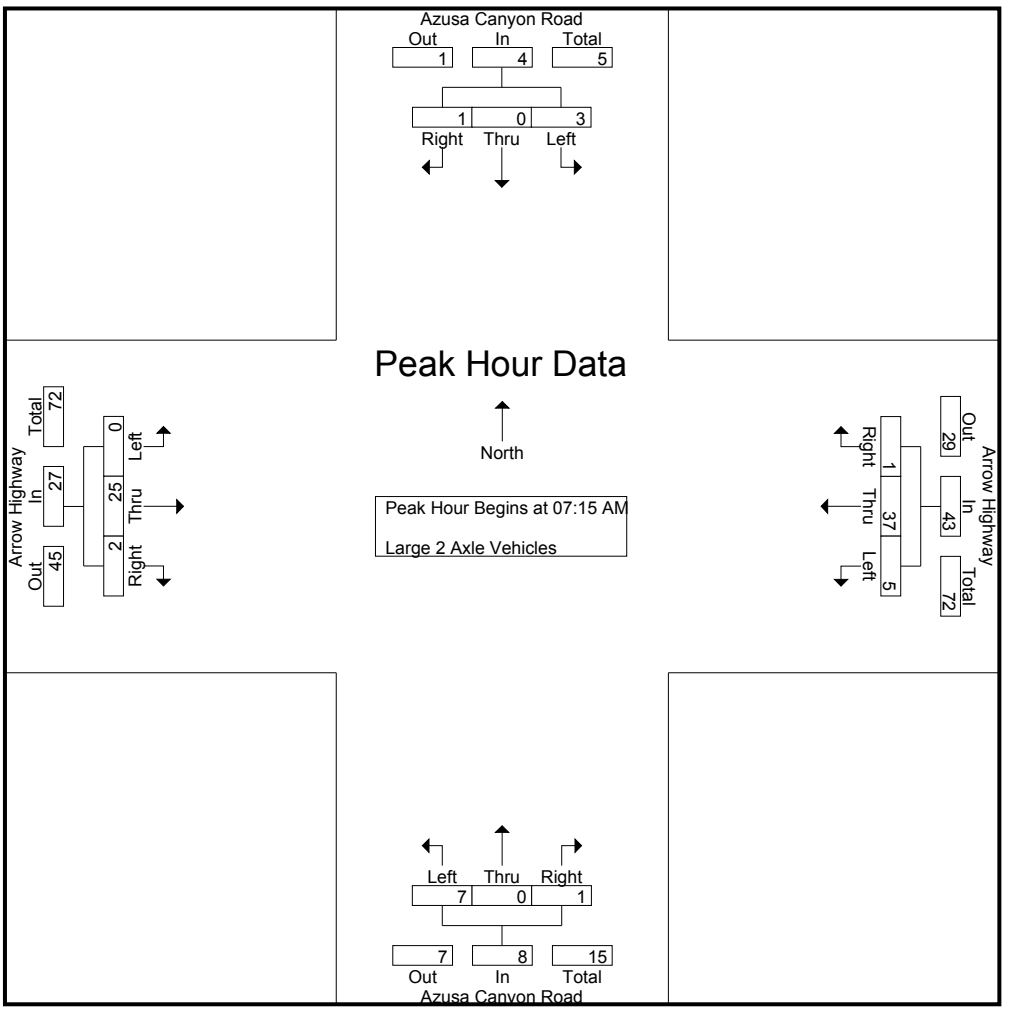
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	2	1	8	0	9	0	0	1	1	0	6	0	6	18
07:15 AM	1	0	0	1	1	10	0	11	1	0	0	1	0	7	0	7	20
07:30 AM	1	0	1	2	1	7	1	9	0	0	0	0	0	4	1	5	16
07:45 AM	0	0	0	0	3	7	0	10	2	0	1	3	0	6	1	7	20
Total	3	0	2	5	6	32	1	39	3	0	2	5	0	23	2	25	74
08:00 AM	1	0	0	1	0	13	0	13	4	0	0	4	0	8	0	8	26
08:15 AM	0	0	0	0	0	8	0	8	0	1	0	1	0	11	1	12	21
08:30 AM	1	0	0	1	0	10	1	11	1	0	2	3	0	7	1	8	23
08:45 AM	0	0	1	1	0	15	1	16	0	0	0	0	0	3	2	5	22
Total	2	0	1	3	0	46	2	48	5	1	2	8	0	29	4	33	92
Grand Total	5	0	3	8	6	78	3	87	8	1	4	13	0	52	6	58	166
Apprch %	62.5	0	37.5		6.9	89.7	3.4		61.5	7.7	30.8		0	89.7	10.3		
Total %	3	0	1.8	4.8	3.6	47	1.8	52.4	4.8	0.6	2.4	7.8	0	31.3	3.6	34.9	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	0	0	1	1	10	0	11	1	0	0	1	0	7	0	7	20
07:30 AM	1	0	**1**	**2**	1	7	**1**	9	0	0	0	0	0	4	**1**	5	16
07:45 AM	0	0	0	0	**3**	7	0	10	2	0	**1**	3	0	6	1	7	20
08:00 AM	1	0	0	1	0	**13**	0	**13**	**4**	0	0	**4**	0	**8**	0	**8**	**26**
Total Volume	3	0	1	4	5	37	1	43	7	0	1	8	0	25	2	27	82
% App. Total	75	0	25		11.6	86	2.3		87.5	0	12.5		0	92.6	7.4		
PHF	.750	.000	.250	.500	.417	.712	.250	.827	.438	.000	.250	.500	.000	.781	.500	.844	.788

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	0	0	1	1	10	0	11	1	0	0	1	0	7	0	7
+15 mins.	1	0	**1**	**2**	1	7	**1**	9	0	0	0	0	0	4	**1**	5
+30 mins.	0	0	0	0	**3**	7	0	10	2	0	**1**	3	0	6	1	7
+45 mins.	1	0	0	1	0	**13**	0	**13**	**4**	0	0	**4**	0	**8**	0	**8**
Total Volume	3	0	1	4	5	37	1	43	7	0	1	8	0	25	2	27
% App. Total	75	0	25		11.6	86	2.3		87.5	0	12.5		0	92.6	7.4	
PHF	.750	.000	.250	.500	.417	.712	.250	.827	.438	.000	.250	.500	.000	.781	.500	.844

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

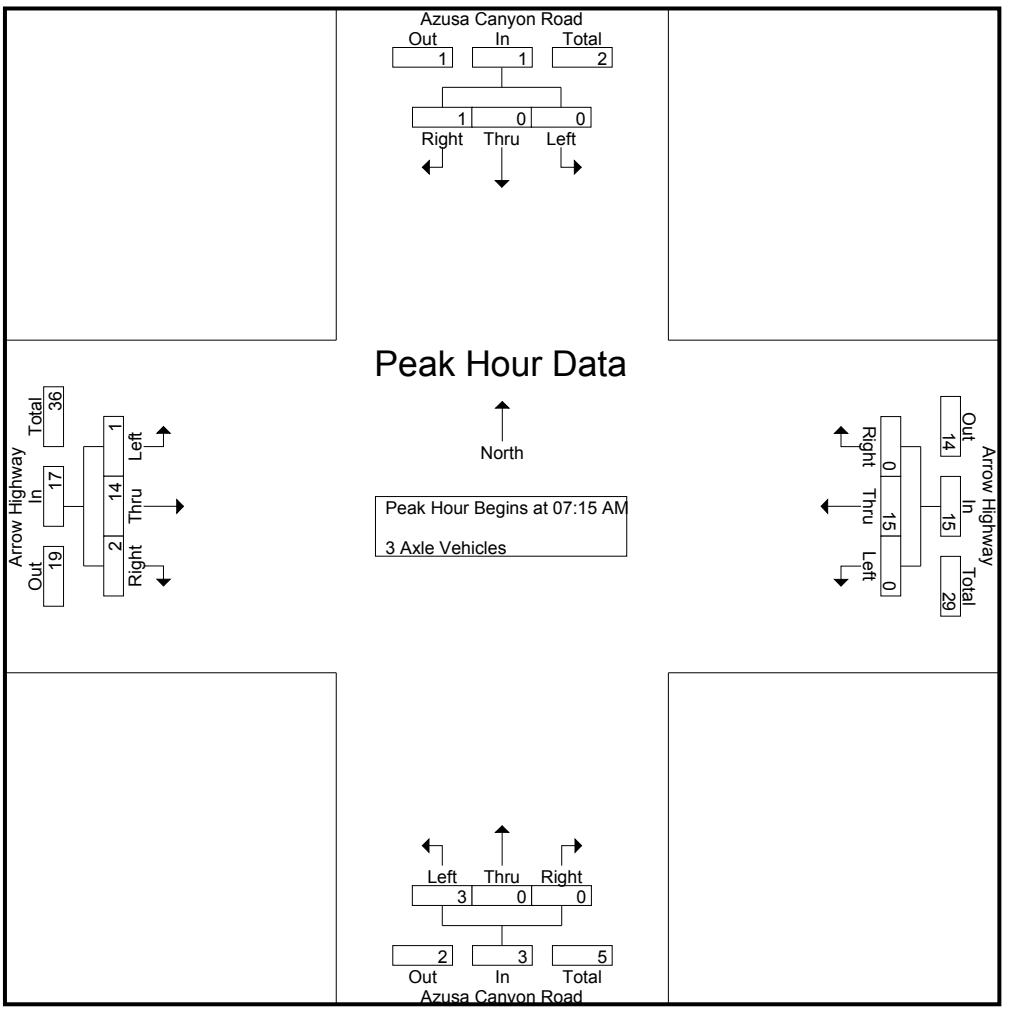
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	1	5	7
07:15 AM	0	0	1	1	0	4	0	4	1	0	0	1	0	3	0	3	9
07:30 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	6	0	6	8
07:45 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	4	1	5	14
Total	0	0	1	1	0	16	0	16	2	0	0	2	0	17	2	19	38
08:00 AM	0	0	0	0	0	1	0	1	1	0	0	1	1	1	1	3	5
08:15 AM	0	0	0	0	0	3	0	3	2	0	0	2	0	2	0	2	7
08:30 AM	0	0	1	1	1	3	0	4	0	0	1	1	0	3	0	3	9
08:45 AM	0	0	0	0	0	5	0	5	1	0	0	1	0	4	0	4	10
Total	0	0	1	1	1	12	0	13	4	0	1	5	1	10	1	12	31
Grand Total	0	0	2	2	1	28	0	29	6	0	1	7	1	27	3	31	69
Apprch %	0	0	100		3.4	96.6	0		85.7	0	14.3		3.2	87.1	9.7		
Total %	0	0	2.9	2.9	1.4	40.6	0	42	8.7	0	1.4	10.1	1.4	39.1	4.3	44.9	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	**1**	0	4	0	4	**1**	0	0	**1**	0	3	0	3	9
07:30 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	**6**	0	**6**	8
07:45 AM	0	0	0	0	0	**9**	0	**9**	0	0	0	0	0	4	**1**	5	**14**
08:00 AM	0	0	0	0	0	1	0	1	1	0	0	1	**1**	1	1	3	5
Total Volume	0	0	1	1	0	15	0	15	3	0	0	3	1	14	2	17	36
% App. Total	0	0	100		0	100	0		100	0	0		5.9	82.4	11.8		
PHF	.000	.000	.250	.250	.000	.417	.000	.417	.750	.000	.000	.750	.250	.583	.500	.708	.643

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	**1**	0	4	0	4	**1**	0	0	**1**	0	3	0	3
+15 mins.	0	0	0	0	0	1	0	1	1	0	0	1	0	**6**	0	**6**
+30 mins.	0	0	0	0	0	**9**	0	**9**	0	0	0	0	0	4	**1**	5
+45 mins.	0	0	0	0	0	1	0	1	1	0	0	1	**1**	1	1	3
Total Volume	0	0	1	1	0	15	0	15	3	0	0	3	1	14	2	17
% App. Total	0	0	100		0	100	0		100	0	0		5.9	82.4	11.8	
PHF	.000	.000	.250	.250	.000	.417	.000	.417	.750	.000	.000	.750	.250	.583	.500	.708

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City of Irwindale
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Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

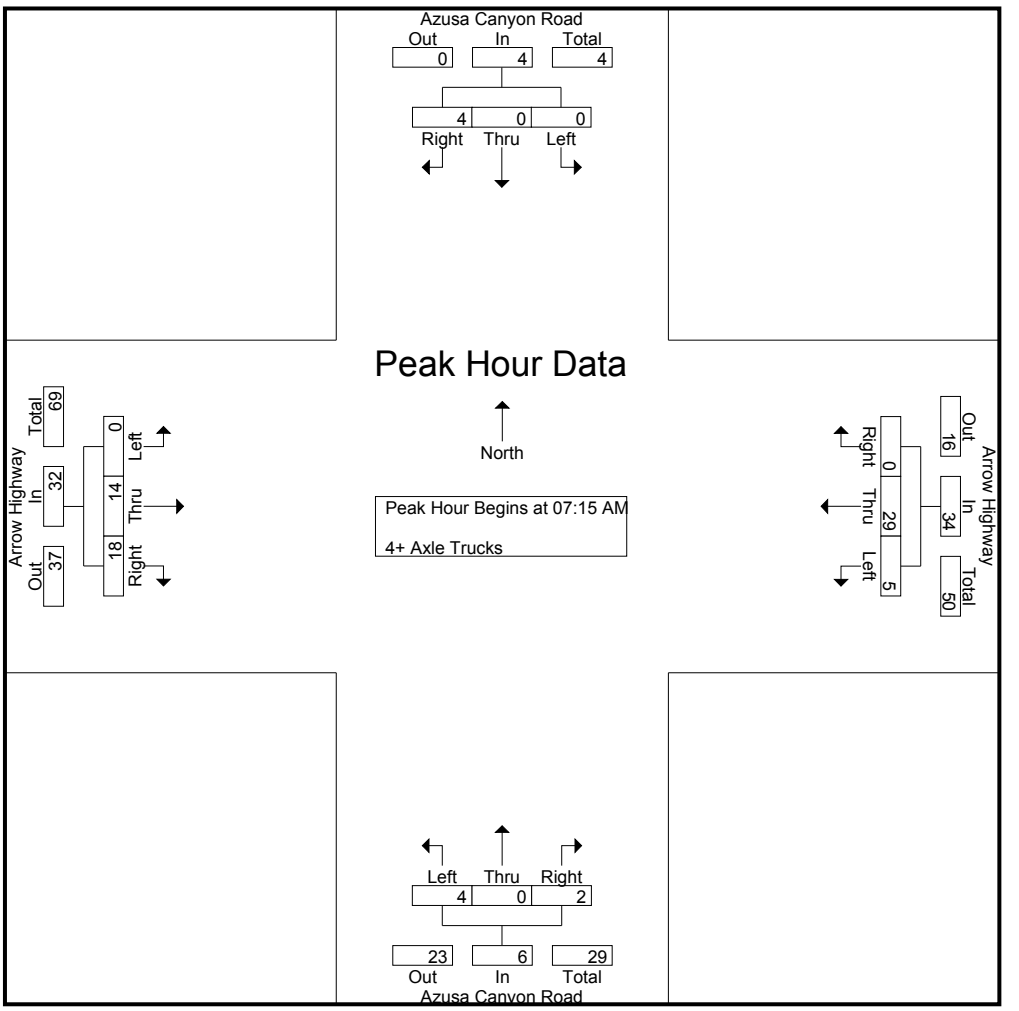
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	6	0	7	2	0	1	3	0	3	3	6	16
07:15 AM	0	0	0	0	2	8	0	10	0	0	0	0	0	3	2	5	15
07:30 AM	0	0	3	3	1	3	0	4	3	0	2	5	0	2	4	6	18
07:45 AM	0	0	1	1	1	8	0	9	1	0	0	1	0	4	4	8	19
Total	0	0	4	4	5	25	0	30	6	0	3	9	0	12	13	25	68
08:00 AM	0	0	0	0	1	10	0	11	0	0	0	0	0	5	8	13	24
08:15 AM	0	0	0	0	1	7	0	8	3	0	0	3	0	2	7	9	20
08:30 AM	0	0	0	0	0	8	0	8	3	0	1	4	1	7	2	10	22
08:45 AM	0	0	0	0	0	3	0	3	2	0	0	2	0	2	4	6	11
Total	0	0	0	0	2	28	0	30	8	0	1	9	1	16	21	38	77
Grand Total	0	0	4	4	7	53	0	60	14	0	4	18	1	28	34	63	145
Apprch %	0	0	100		11.7	88.3	0		77.8	0	22.2		1.6	44.4	54		
Total %	0	0	2.8	2.8	4.8	36.6	0	41.4	9.7	0	2.8	12.4	0.7	19.3	23.4	43.4	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	**2**	8	0	10	0	0	0	0	0	3	2	5	15
07:30 AM	0	0	**3**	**3**	1	3	0	4	**3**	0	**2**	**5**	0	2	4	6	18
07:45 AM	0	0	1	1	1	8	0	9	1	0	0	1	0	4	4	8	19
08:00 AM	0	0	0	0	1	**10**	0	**11**	0	0	0	0	0	**5**	**8**	**13**	**24**
Total Volume	0	0	4	4	5	29	0	34	4	0	2	6	0	14	18	32	76
% App. Total	0	0	100		14.7	85.3	0		66.7	0	33.3		0	43.8	56.2		
PHF	.000	.000	.333	.333	.625	.725	.000	.773	.333	.000	.250	.300	.000	.700	.563	.615	.792

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	**2**	8	0	10	0	0	0	0	0	3	2	5
+15 mins.	0	0	**3**	**3**	1	3	0	4	**3**	0	**2**	**5**	0	2	4	6
+30 mins.	0	0	1	1	1	8	0	9	1	0	0	1	0	4	4	8
+45 mins.	0	0	0	0	1	**10**	0	**11**	0	0	0	0	0	**5**	**8**	**13**
Total Volume	0	0	4	4	5	29	0	34	4	0	2	6	0	14	18	32
% App. Total	0	0	100		14.7	85.3	0		66.7	0	33.3		0	43.8	56.2	
PHF	.000	.000	.333	.333	.625	.725	.000	.773	.333	.000	.250	.300	.000	.700	.563	.615

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

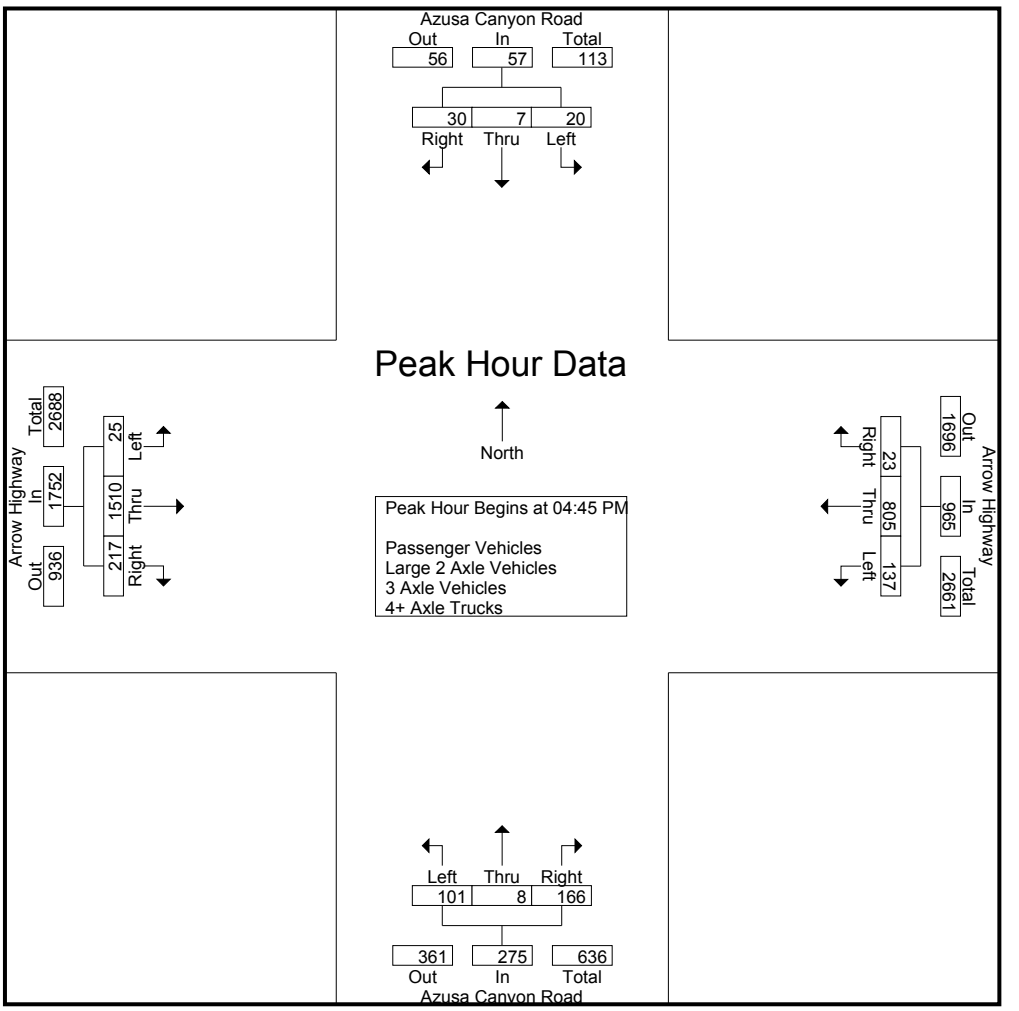
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	8	1	7	16	28	206	2	236	29	0	41	70	5	414	47	466	788
04:15 PM	6	1	12	19	25	170	6	201	29	3	46	78	2	382	53	437	735
04:30 PM	2	3	11	16	17	246	2	265	27	0	32	59	5	392	47	444	784
04:45 PM	6	2	8	16	30	175	6	211	21	0	39	60	3	352	43	398	685
Total	22	7	38	67	100	797	16	913	106	3	158	267	15	1540	190	1745	2992
05:00 PM	5	1	8	14	37	230	6	273	35	2	32	69	7	392	57	456	812
05:15 PM	6	3	10	19	38	185	8	231	19	2	55	76	4	373	58	435	761
05:30 PM	3	1	4	8	32	215	3	250	26	4	40	70	11	393	59	463	791
05:45 PM	6	1	5	12	33	160	4	197	23	2	34	59	4	333	42	379	647
Total	20	6	27	53	140	790	21	951	103	10	161	274	26	1491	216	1733	3011
Grand Total	42	13	65	120	240	1587	37	1864	209	13	319	541	41	3031	406	3478	6003
Apprch %	35	10.8	54.2		12.9	85.1	2		38.6	2.4	59		1.2	87.1	11.7		
Total %	0.7	0.2	1.1	2	4	26.4	0.6	31.1	3.5	0.2	5.3	9	0.7	50.5	6.8	57.9	
Passenger Vehicles	40	13	64	117	229	1495	37	1761	203	12	311	526	38	2927	393	3358	5762
% Passenger Vehicles	95.2	100	98.5	97.5	95.4	94.2	100	94.5	97.1	92.3	97.5	97.2	92.7	96.6	96.8	96.5	96
Large 2 Axle Vehicles	2	0	1	3	8	40	0	48	3	1	4	8	0	57	11	68	127
% Large 2 Axle Vehicles	4.8	0	1.5	2.5	3.3	2.5	0	2.6	1.4	7.7	1.3	1.5	0	1.9	2.7	2	2.1
3 Axle Vehicles	0	0	0	0	3	8	0	11	2	0	3	5	0	15	0	15	31
% 3 Axle Vehicles	0	0	0	0	1.2	0.5	0	0.6	1	0	0.9	0.9	0	0.5	0	0.4	0.5
4+ Axle Trucks	0	0	0	0	0	44	0	44	1	0	1	2	3	32	2	37	83
% 4+ Axle Trucks	0	0	0	0	0	2.8	0	2.4	0.5	0	0.3	0.4	7.3	1.1	0.5	1.1	1.4

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**6**	2	8	16	30	175	6	211	21	0	39	60	3	352	43	398	685
05:00 PM	5	1	8	14	37	**230**	6	**273**	**35**	2	32	69	7	392	57	456	**812**
05:15 PM	6	**3**	**10**	**19**	**38**	185	**8**	231	19	2	**55**	**76**	4	373	58	435	761
05:30 PM	3	1	4	8	32	215	3	250	26	**4**	40	70	**11**	**393**	**59**	**463**	791
Total Volume	20	7	30	57	137	805	23	965	101	8	166	275	25	1510	217	1752	3049
% App. Total	35.1	12.3	52.6		14.2	83.4	2.4		36.7	2.9	60.4		1.4	86.2	12.4		
PHF	.833	.583	.750	.750	.901	.875	.719	.884	.721	.500	.755	.905	.568	.961	.919	.946	.939

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:45 PM				04:45 PM			
+0 mins.	**8**	1	7	16	17	**246**	2	265	21	0	39	60	3	352	43	398
+15 mins.	6	1	**12**	**19**	30	175	6	211	**35**	2	32	69	7	392	57	456
+30 mins.	2	**3**	11	16	37	230	6	**273**	19	2	**55**	**76**	4	373	58	435
+45 mins.	6	2	8	16	**38**	185	**8**	231	26	**4**	40	70	**11**	**393**	**59**	**463**
Total Volume	22	7	38	67	122	836	22	980	101	8	166	275	25	1510	217	1752
% App. Total	32.8	10.4	56.7		12.4	85.3	2.2		36.7	2.9	60.4		1.4	86.2	12.4	
PHF	.688	.583	.792	.882	.803	.850	.688	.897	.721	.500	.755	.905	.568	.961	.919	.946

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City of Irwindale
N/S: Azusa Canyon Road
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Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

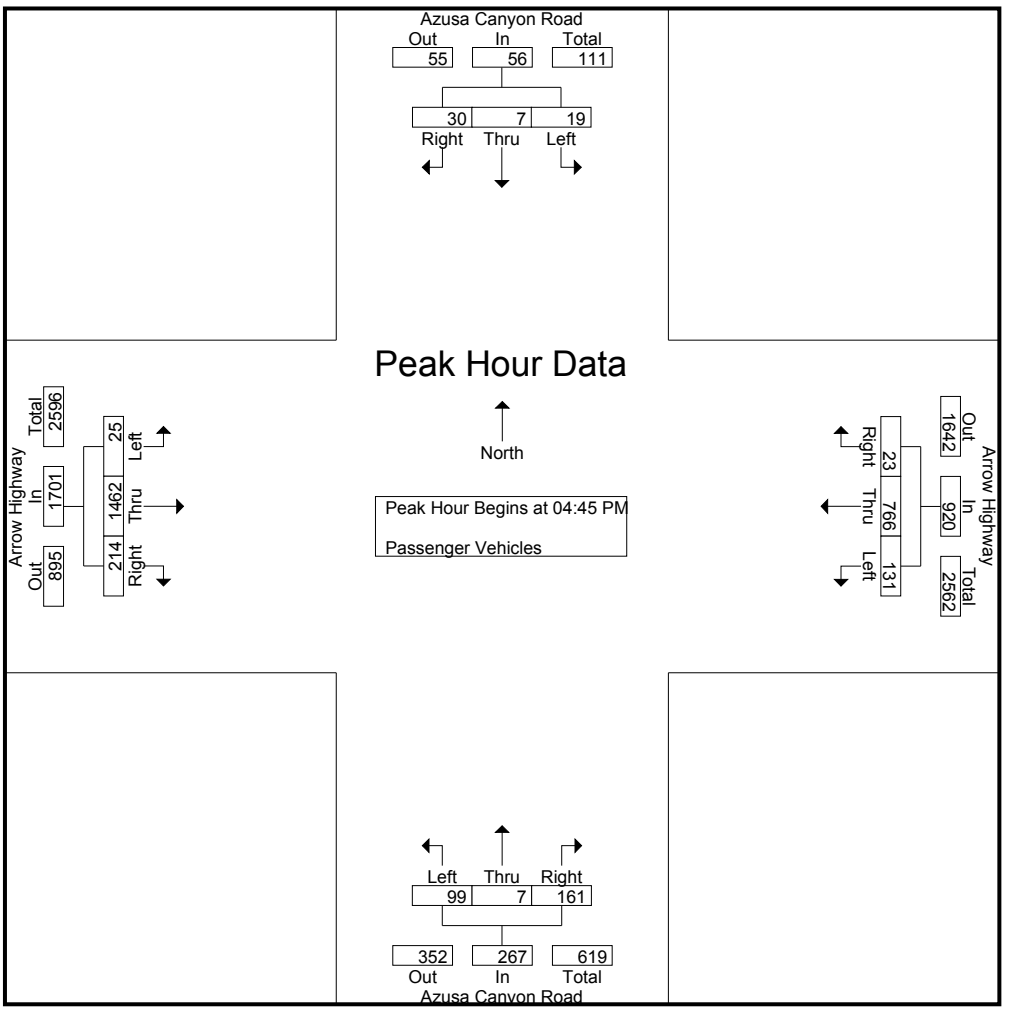
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	7	1	6	14	27	185	2	214	27	0	40	67	2	392	42	436	731
04:15 PM	6	1	12	19	23	158	6	187	29	3	45	77	2	367	51	420	703
04:30 PM	2	3	11	16	16	238	2	256	25	0	32	57	5	379	46	430	759
04:45 PM	6	2	8	16	28	165	6	199	20	0	38	58	3	339	42	384	657
Total	21	7	37	65	94	746	16	856	101	3	155	259	12	1477	181	1670	2850
05:00 PM	5	1	8	14	35	222	6	263	35	2	31	68	7	376	56	439	784
05:15 PM	5	3	10	18	36	175	8	219	19	2	52	73	4	367	57	428	738
05:30 PM	3	1	4	8	32	204	3	239	25	3	40	68	11	380	59	450	765
05:45 PM	6	1	5	12	32	148	4	184	23	2	33	58	4	327	40	371	625
Total	19	6	27	52	135	749	21	905	102	9	156	267	26	1450	212	1688	2912
Grand Total	40	13	64	117	229	1495	37	1761	203	12	311	526	38	2927	393	3358	5762
Apprch %	34.2	11.1	54.7		13	84.9	2.1		38.6	2.3	59.1		1.1	87.2	11.7		
Total %	0.7	0.2	1.1	2	4	25.9	0.6	30.6	3.5	0.2	5.4	9.1	0.7	50.8	6.8	58.3	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**6**	2	8	16	28	165	6	199	20	0	38	58	3	339	42	384	657
05:00 PM	5	1	8	14	35	**222**	6	**263**	**35**	2	31	68	7	376	56	439	**784**
05:15 PM	5	**3**	**10**	**18**	**36**	175	**8**	219	19	2	**52**	**73**	4	367	57	428	738
05:30 PM	3	1	4	8	32	204	3	239	25	**3**	40	68	**11**	**380**	**59**	**450**	765
Total Volume	19	7	30	56	131	766	23	920	99	7	161	267	25	1462	214	1701	2944
% App. Total	33.9	12.5	53.6		14.2	83.3	2.5		37.1	2.6	60.3		1.5	85.9	12.6		
PHF	.792	.583	.750	.778	.910	.863	.719	.875	.707	.583	.774	.914	.568	.962	.907	.945	.939

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**6**	2	8	16	28	165	6	199	20	0	38	58	3	339	42	384
+15 mins.	5	1	8	14	35	**222**	6	**263**	**35**	2	31	68	7	376	56	439
+30 mins.	5	**3**	**10**	**18**	**36**	175	**8**	219	19	2	**52**	**73**	4	367	57	428
+45 mins.	3	1	4	8	32	204	3	239	25	**3**	40	68	**11**	**380**	**59**	**450**
Total Volume	19	7	30	56	131	766	23	920	99	7	161	267	25	1462	214	1701
% App. Total	33.9	12.5	53.6		14.2	83.3	2.5		37.1	2.6	60.3		1.5	85.9	12.6	
PHF	.792	.583	.750	.778	.910	.863	.719	.875	.707	.583	.774	.914	.568	.962	.907	.945

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

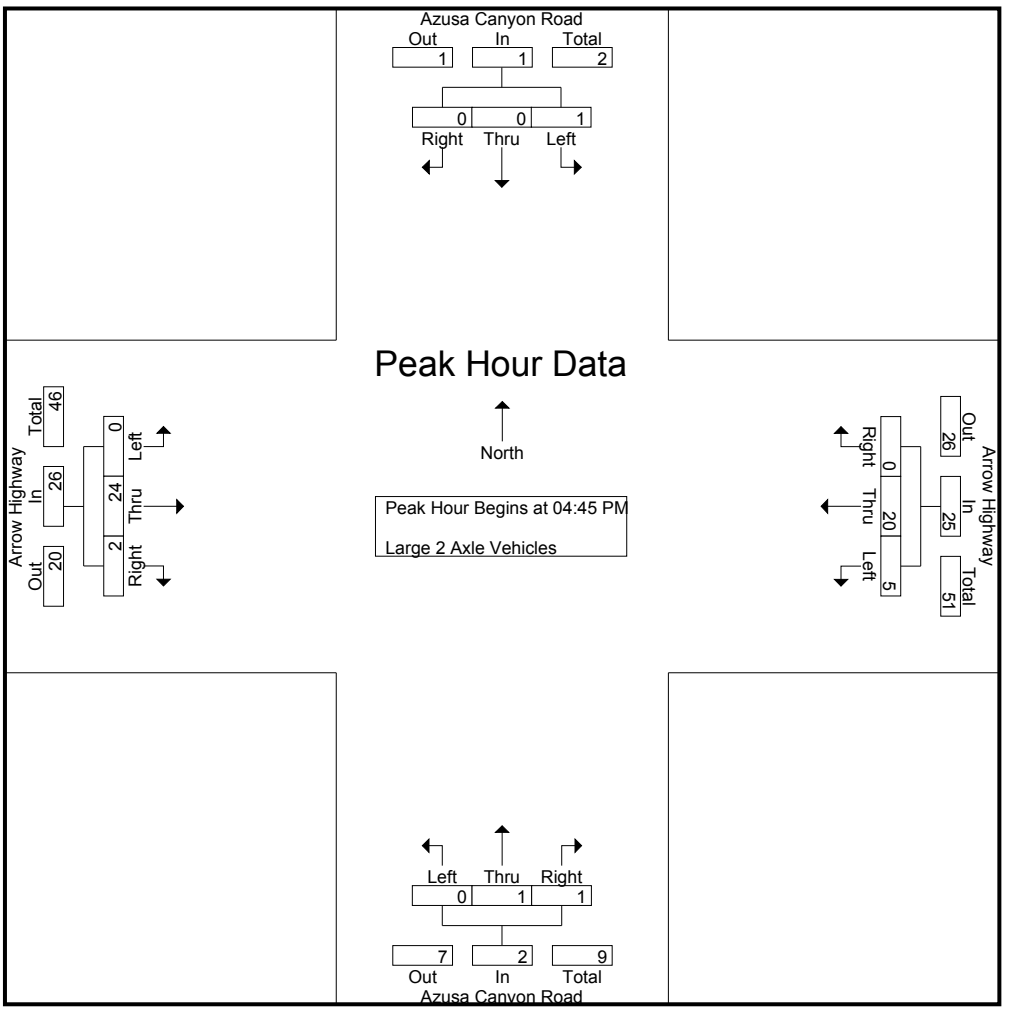
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	2	1	6	0	7	2	0	1	3	0	13	5	18	30
04:15 PM	0	0	0	0	1	5	0	6	0	0	1	1	0	8	2	10	17
04:30 PM	0	0	0	0	1	3	0	4	1	0	0	1	0	10	1	11	16
04:45 PM	0	0	0	0	1	4	0	5	0	0	0	0	0	7	1	8	13
Total	1	0	1	2	4	18	0	22	3	0	2	5	0	38	9	47	76
05:00 PM	0	0	0	0	2	3	0	5	0	0	0	0	0	9	0	9	14
05:15 PM	1	0	0	1	2	6	0	8	0	0	1	1	0	3	1	4	14
05:30 PM	0	0	0	0	0	7	0	7	0	1	0	1	0	5	0	5	13
05:45 PM	0	0	0	0	0	6	0	6	0	0	1	1	0	2	1	3	10
Total	1	0	0	1	4	22	0	26	0	1	2	3	0	19	2	21	51
Grand Total	2	0	1	3	8	40	0	48	3	1	4	8	0	57	11	68	127
Apprch %	66.7	0	33.3		16.7	83.3	0		37.5	12.5	50		0	83.8	16.2		
Total %	1.6	0	0.8	2.4	6.3	31.5	0	37.8	2.4	0.8	3.1	6.3	0	44.9	8.7	53.5	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	1	4	0	5	0	0	0	0	0	7	**1**	8	13
05:00 PM	0	0	0	0	**2**	3	0	5	0	0	0	0	0	**9**	0	**9**	**14**
05:15 PM	**1**	0	0	**1**	2	6	0	**8**	0	0	**1**	**1**	0	3	1	4	14
05:30 PM	0	0	0	0	0	**7**	0	7	0	**1**	0	1	0	5	0	5	13
Total Volume	1	0	0	1	5	20	0	25	0	1	1	2	0	24	2	26	54
% App. Total	100	0	0		20	80	0		0	50	50		0	92.3	7.7		
PHF	.250	.000	.000	.250	.625	.714	.000	.781	.000	.250	.250	.500	.000	.667	.500	.722	.964

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	1	4	0	5	0	0	0	0	0	7	**1**	8
+15 mins.	0	0	0	0	**2**	3	0	5	0	0	0	0	0	**9**	0	**9**
+30 mins.	**1**	0	0	**1**	2	6	0	**8**	0	0	**1**	**1**	0	3	1	4
+45 mins.	0	0	0	0	0	**7**	0	7	0	**1**	0	1	0	5	0	5
Total Volume	1	0	0	1	5	20	0	25	0	1	1	2	0	24	2	26
% App. Total	100	0	0		20	80	0		0	50	50		0	92.3	7.7	
PHF	.250	.000	.000	.250	.625	.714	.000	.781	.000	.250	.250	.500	.000	.667	.500	.722

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

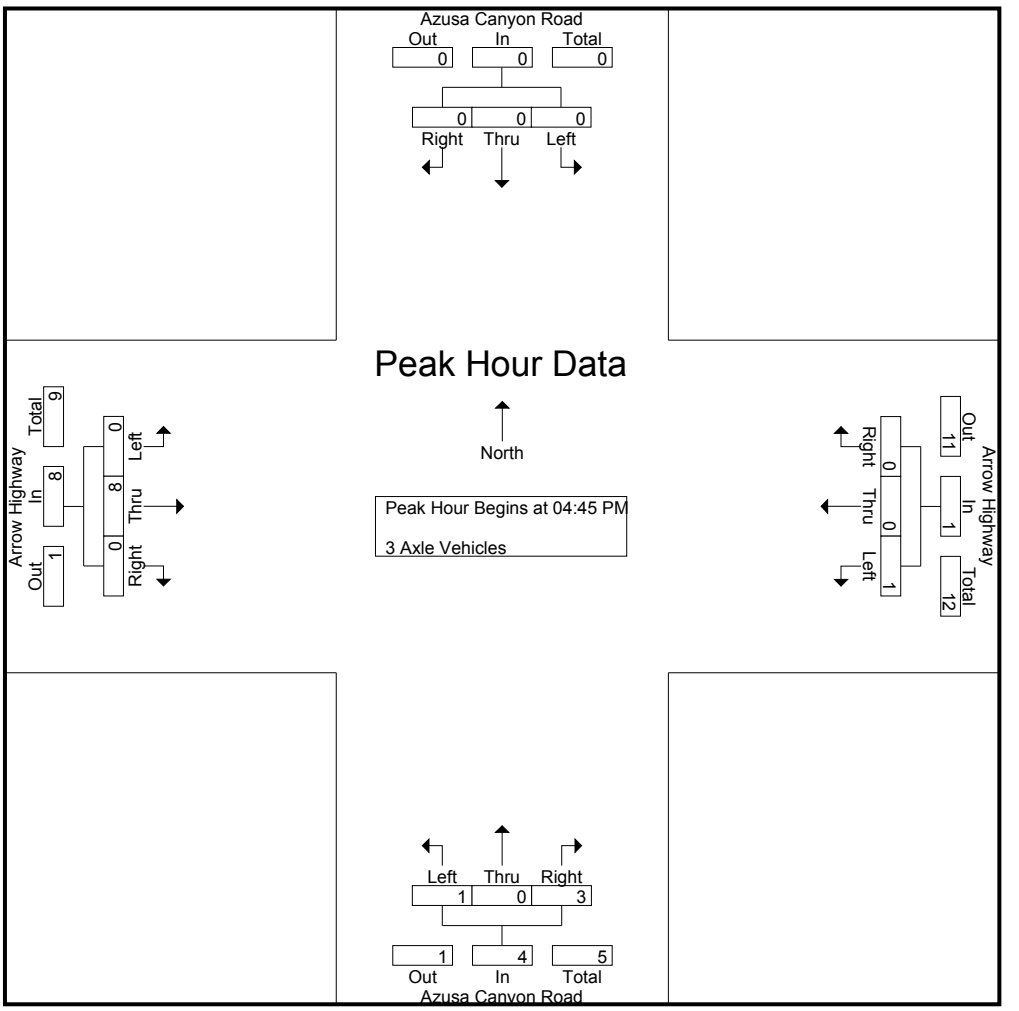
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
04:15 PM	0	0	0	0	1	2	0	3	0	0	0	0	0	2	0	2	5
04:30 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	1	0	1	4
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	2	8	0	10	1	0	0	1	0	8	0	8	19
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	4	0	4	5
05:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	3	4
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	0	1	1	0	3	4	0	7	0	7	12
Grand Total	0	0	0	0	3	8	0	11	2	0	3	5	0	15	0	15	31
Apprch %	0	0	0		27.3	72.7	0		40	0	60		0	100	0		
Total %	0	0	0	0	9.7	25.8	0	35.5	6.5	0	9.7	16.1	0	48.4	0	48.4	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	**4**	0	**4**	**5**
05:15 PM	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	**1**	0	0	1	0	3	0	3	4
Total Volume	0	0	0	0	1	0	0	1	1	0	3	4	0	8	0	8	13
% App. Total	0	0	0		100	0	0		25	0	75		0	100	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.375	.500	.000	.500	.000	.500	.650

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	**4**	0	**4**
+30 mins.	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	**1**	0	0	1	0	3	0	3
Total Volume	0	0	0	0	1	0	0	1	1	0	3	4	0	8	0	8
% App. Total	0	0	0		100	0	0		25	0	75		0	100	0	
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.375	.500	.000	.500	.000	.500

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

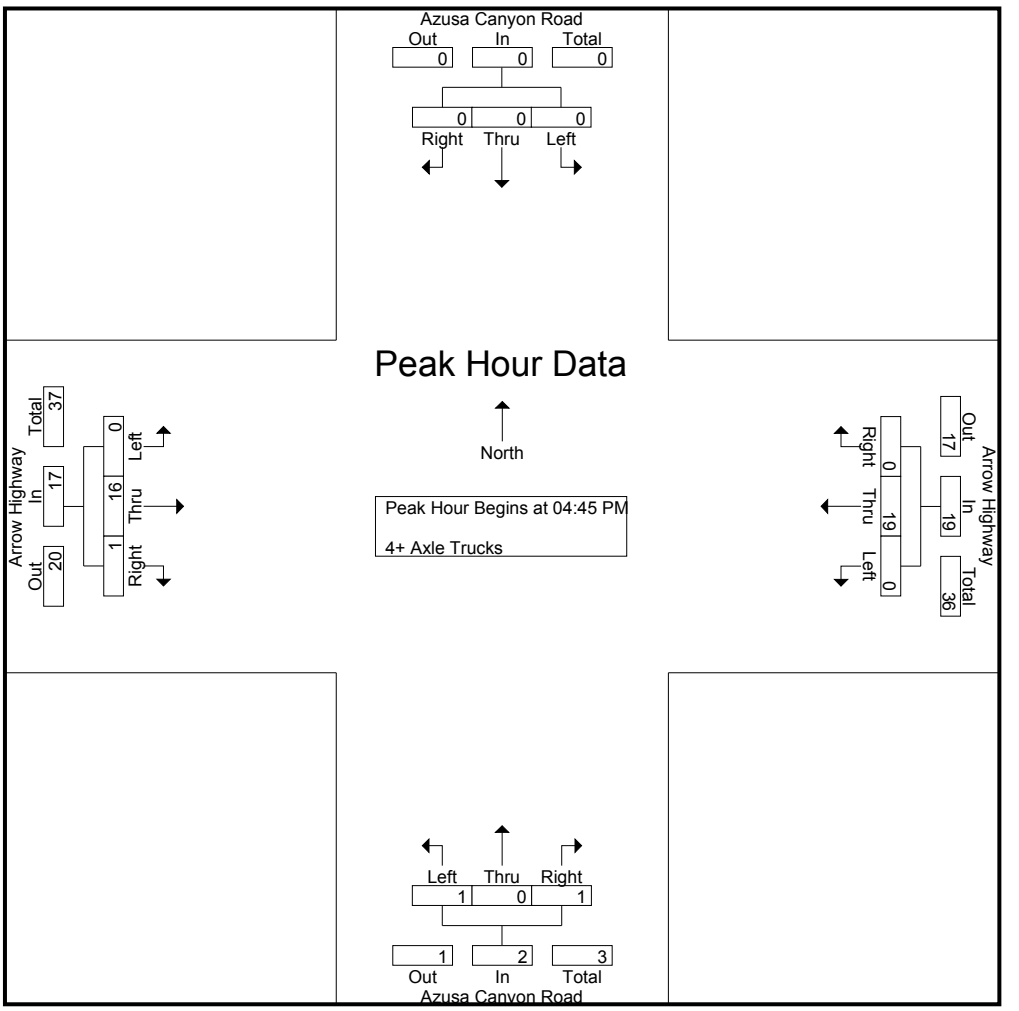
	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	11	0	11	0	0	0	0	3	5	0	8	19
04:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
04:45 PM	0	0	0	0	0	6	0	6	1	0	1	2	0	5	0	5	13
Total	0	0	0	0	0	25	0	25	1	0	1	2	3	17	0	20	47
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	1	4	9
05:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
05:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
05:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	4	1	5	11
Total	0	0	0	0	0	19	0	19	0	0	0	0	0	15	2	17	36
Grand Total	0	0	0	0	0	44	0	44	1	0	1	2	3	32	2	37	83
Apprch %	0	0	0		0	100	0		50	0	50		8.1	86.5	5.4		
Total %	0	0	0	0	0	53	0	53	1.2	0	1.2	2.4	3.6	38.6	2.4	44.6	

	Azusa Canyon Road Southbound				Arrow Highway Westbound				Azusa Canyon Road Northbound				Arrow Highway Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	**6**	0	**6**	**1**	0	**1**	**2**	0	**5**	0	**5**	**13**
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	**1**	4	9
05:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
05:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
Total Volume	0	0	0	0	0	19	0	19	1	0	1	2	0	16	1	17	38
% App. Total	0	0	0		0	100	0		50	0	50		0	94.1	5.9		
PHF	.000	.000	.000	.000	.000	.792	.000	.792	.250	.000	.250	.250	.000	.800	.250	.850	.731

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Arrow Highway
Weather: Clear

File Name : 04_IRW_Azusa Canyon_Arrow_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	**6**	0	**6**	**1**	0	**1**	**2**	0	**5**	0	**5**
+15 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	**1**	4
+30 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5
Total Volume	0	0	0	0	0	19	0	19	1	0	1	2	0	16	1	17
% App. Total	0	0	0		0	100	0		50	0	50		0	94.1	5.9	
PHF	.000	.000	.000	.000	.000	.792	.000	.792	.250	.000	.250	.250	.000	.800	.250	.850

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

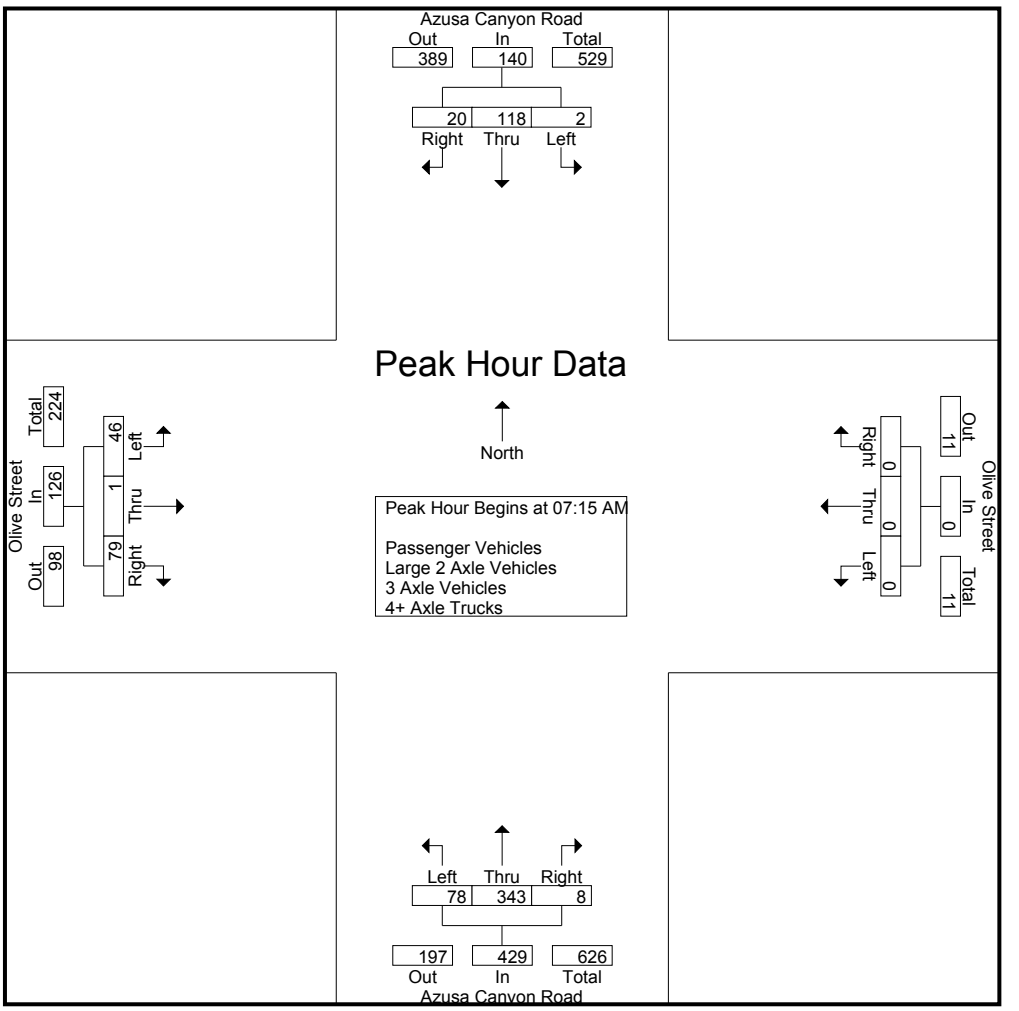
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	27	2	29	0	0	0	0	18	87	2	107	4	0	11	15	151
07:15 AM	2	20	6	28	0	0	0	0	24	83	7	114	10	1	22	33	175
07:30 AM	0	36	6	42	0	0	0	0	17	75	1	93	12	0	21	33	168
07:45 AM	0	29	6	35	0	0	0	0	19	103	0	122	12	0	20	32	189
Total	2	112	20	134	0	0	0	0	78	348	10	436	38	1	74	113	683
08:00 AM	0	33	2	35	0	0	0	0	18	82	0	100	12	0	16	28	163
08:15 AM	0	24	4	28	0	0	0	0	13	77	0	90	7	0	21	28	146
08:30 AM	0	32	2	34	0	0	0	0	11	68	0	79	12	0	22	34	147
08:45 AM	0	31	3	34	0	0	0	0	13	55	0	68	4	0	30	34	136
Total	0	120	11	131	0	0	0	0	55	282	0	337	35	0	89	124	592
Grand Total	2	232	31	265	0	0	0	0	133	630	10	773	73	1	163	237	1275
Apprch %	0.8	87.5	11.7		0	0	0		17.2	81.5	1.3		30.8	0.4	68.8		
Total %	0.2	18.2	2.4	20.8	0	0	0	0	10.4	49.4	0.8	60.6	5.7	0.1	12.8	18.6	
Passenger Vehicles	2	185	29	216	0	0	0	0	130	604	10	744	73	1	162	236	1196
% Passenger Vehicles	100	79.7	93.5	81.5	0	0	0	0	97.7	95.9	100	96.2	100	100	99.4	99.6	93.8
Large 2 Axle Vehicles	0	14	2	16	0	0	0	0	3	12	0	15	0	0	1	1	32
% Large 2 Axle Vehicles	0	6	6.5	6	0	0	0	0	2.3	1.9	0	1.9	0	0	0.6	0.4	2.5
3 Axle Vehicles	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
% 3 Axle Vehicles	0	1.3	0	1.1	0	0	0	0	0	1.1	0	0.9	0	0	0	0	0.8
4+ Axle Trucks	0	30	0	30	0	0	0	0	0	7	0	7	0	0	0	0	37
% 4+ Axle Trucks	0	12.9	0	11.3	0	0	0	0	0	1.1	0	0.9	0	0	0	0	2.9

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	20	**6**	28	0	0	0	0	**24**	83	**7**	114	10	**1**	**22**	**33**	175
07:30 AM	0	**36**	6	**42**	0	0	0	0	17	75	1	93	**12**	0	21	33	168
07:45 AM	0	29	6	35	0	0	0	0	19	**103**	0	**122**	12	0	20	32	**189**
08:00 AM	0	33	2	35	0	0	0	0	18	82	0	100	12	0	16	28	163
Total Volume	2	118	20	140	0	0	0	0	78	343	8	429	46	1	79	126	695
% App. Total	1.4	84.3	14.3		0	0	0		18.2	80	1.9		36.5	0.8	62.7		
PHF	.250	.819	.833	.833	.000	.000	.000	.000	.813	.833	.286	.879	.958	.250	.898	.955	.919

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	**2**	20	**6**	28	0	0	0	0	18	87	2	107	10	**1**	**22**	**33**
+15 mins.	0	**36**	6	**42**	0	0	0	0	**24**	83	**7**	114	**12**	0	21	33
+30 mins.	0	29	6	35	0	0	0	0	17	75	1	93	12	0	20	32
+45 mins.	0	33	2	35	0	0	0	0	19	**103**	0	**122**	12	0	16	28
Total Volume	2	118	20	140	0	0	0	0	78	348	10	436	46	1	79	126
% App. Total	1.4	84.3	14.3		0	0	0		17.9	79.8	2.3		36.5	0.8	62.7	
PHF	.250	.819	.833	.833	.000	.000	.000	.000	.813	.845	.357	.893	.958	.250	.898	.955

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

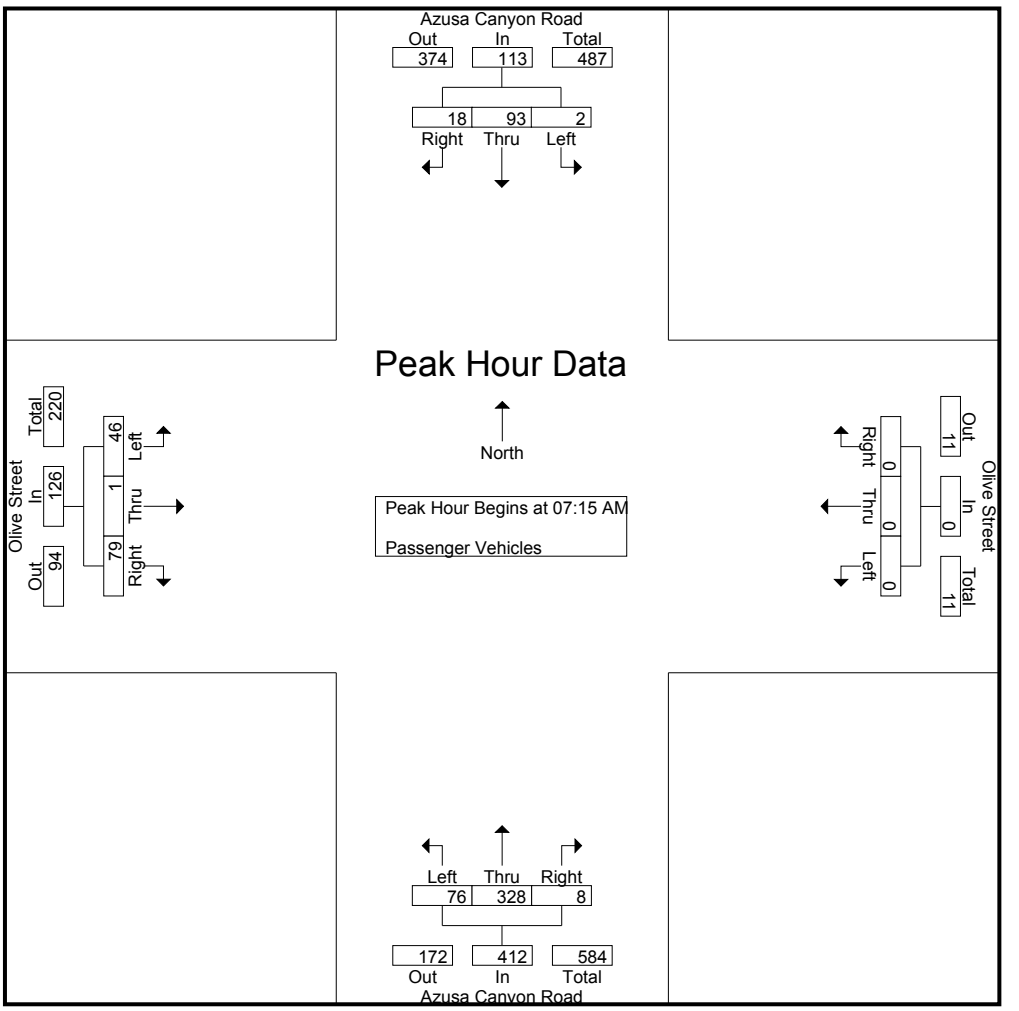
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	23	2	25	0	0	0	0	18	84	2	104	4	0	11	15	144
07:15 AM	2	20	5	27	0	0	0	0	22	79	7	108	10	1	22	33	168
07:30 AM	0	29	6	35	0	0	0	0	17	71	1	89	12	0	21	33	157
07:45 AM	0	21	5	26	0	0	0	0	19	100	0	119	12	0	20	32	177
Total	2	93	18	113	0	0	0	0	76	334	10	420	38	1	74	113	646
08:00 AM	0	23	2	25	0	0	0	0	18	78	0	96	12	0	16	28	149
08:15 AM	0	17	4	21	0	0	0	0	13	74	0	87	7	0	21	28	136
08:30 AM	0	26	2	28	0	0	0	0	11	64	0	75	12	0	21	33	136
08:45 AM	0	26	3	29	0	0	0	0	12	54	0	66	4	0	30	34	129
Total	0	92	11	103	0	0	0	0	54	270	0	324	35	0	88	123	550
Grand Total	2	185	29	216	0	0	0	0	130	604	10	744	73	1	162	236	1196
Apprch %	0.9	85.6	13.4		0	0	0		17.5	81.2	1.3		30.9	0.4	68.6		
Total %	0.2	15.5	2.4	18.1	0	0	0	0	10.9	50.5	0.8	62.2	6.1	0.1	13.5	19.7	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	20	5	27	0	0	0	0	**22**	79	**7**	108	10	**1**	**22**	**33**	168
07:30 AM	0	**29**	**6**	**35**	0	0	0	0	17	71	1	89	**12**	0	21	33	157
07:45 AM	0	21	5	26	0	0	0	0	19	**100**	0	**119**	12	0	20	32	**177**
08:00 AM	0	23	2	25	0	0	0	0	18	78	0	96	12	0	16	28	149
Total Volume	2	93	18	113	0	0	0	0	76	328	8	412	46	1	79	126	651
% App. Total	1.8	82.3	15.9		0	0	0		18.4	79.6	1.9		36.5	0.8	62.7		
PHF	.250	.802	.750	.807	.000	.000	.000	.000	.864	.820	.286	.866	.958	.250	.898	.955	.919

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**2**	20	5	27	0	0	0	0	**22**	79	**7**	108	10	**1**	**22**	**33**
+15 mins.	0	**29**	**6**	**35**	0	0	0	0	17	71	1	89	**12**	0	21	33
+30 mins.	0	21	5	26	0	0	0	0	19	**100**	0	**119**	12	0	20	32
+45 mins.	0	23	2	25	0	0	0	0	18	78	0	96	12	0	16	28
Total Volume	2	93	18	113	0	0	0	0	76	328	8	412	46	1	79	126
% App. Total	1.8	82.3	15.9		0	0	0		18.4	79.6	1.9		36.5	0.8	62.7	
PHF	.250	.802	.750	.807	.000	.000	.000	.000	.864	.820	.286	.866	.958	.250	.898	.955

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

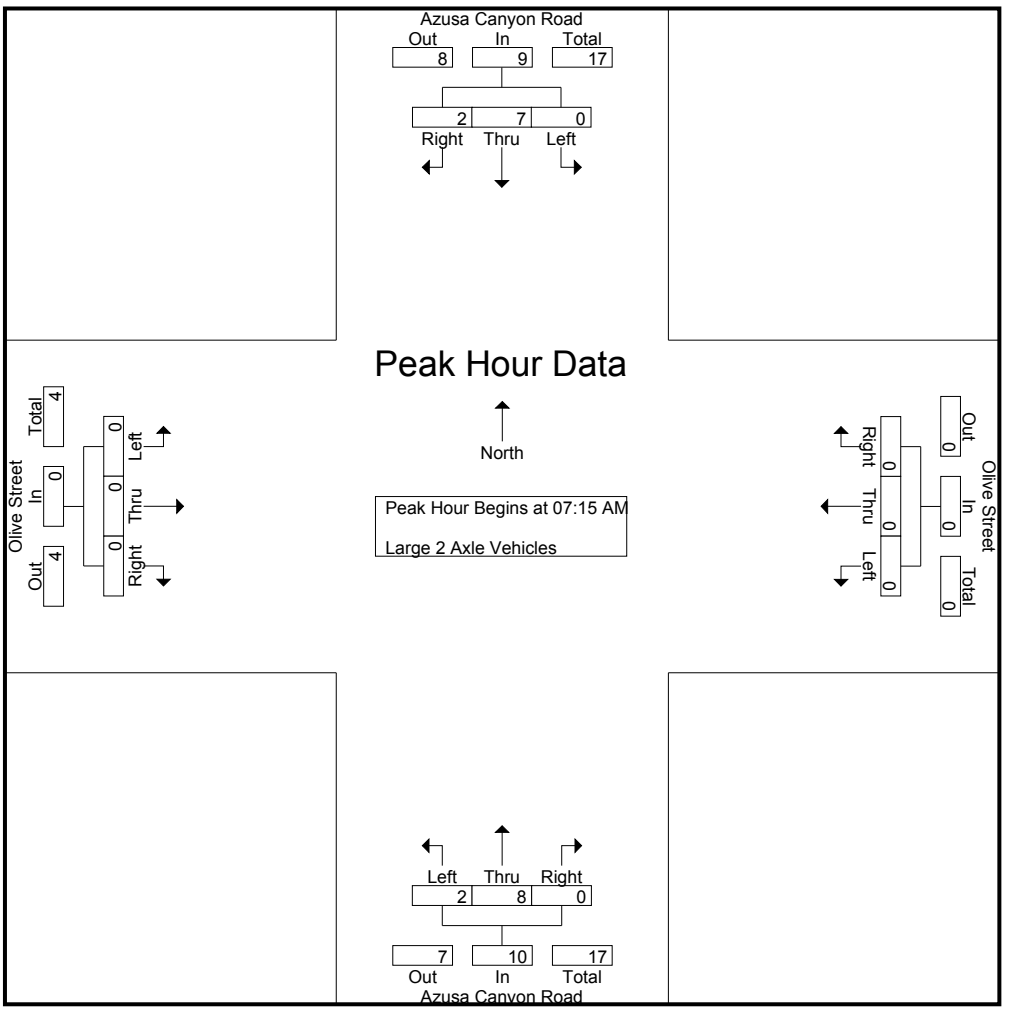
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	1	0	0	0	0	2	1	0	3	0	0	0	0	4
07:30 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	3	1	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Total	0	6	2	8	0	0	0	0	2	5	0	7	0	0	0	0	15
08:00 AM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	4	0	4	0	0	0	0	0	3	0	3	0	0	1	1	8
08:45 AM	0	3	0	3	0	0	0	0	1	0	0	1	0	0	0	0	4
Total	0	8	0	8	0	0	0	0	1	7	0	8	0	0	1	1	17
Grand Total	0	14	2	16	0	0	0	0	3	12	0	15	0	0	1	1	32
Apprch %	0	87.5	12.5		0	0	0		20	80	0		0	0	100		
Total %	0	43.8	6.2	50	0	0	0	0	9.4	37.5	0	46.9	0	0	3.1	3.1	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	1	0	0	0	0	**2**	1	0	**3**	0	0	0	0	4
07:30 AM	0	**3**	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	3	1	**4**	0	0	0	0	0	2	0	2	0	0	0	0	**6**
08:00 AM	0	1	0	1	0	0	0	0	0	**3**	0	3	0	0	0	0	4
Total Volume	0	7	2	9	0	0	0	0	2	8	0	10	0	0	0	0	19
% App. Total	0	77.8	22.2		0	0	0		20	80	0		0	0	0		
PHF	.000	.583	.500	.563	.000	.000	.000	.000	.250	.667	.000	.833	.000	.000	.000	.000	.792

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	1	0	0	0	0	**2**	1	0	**3**	0	0	0	0
+15 mins.	0	**3**	0	3	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	3	1	**4**	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	**3**	0	3	0	0	0	0
Total Volume	0	7	2	9	0	0	0	0	2	8	0	10	0	0	0	0
% App. Total	0	77.8	22.2		0	0	0		20	80	0		0	0	0	
PHF	.000	.583	.500	.563	.000	.000	.000	.000	.250	.667	.000	.833	.000	.000	.000	.000

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

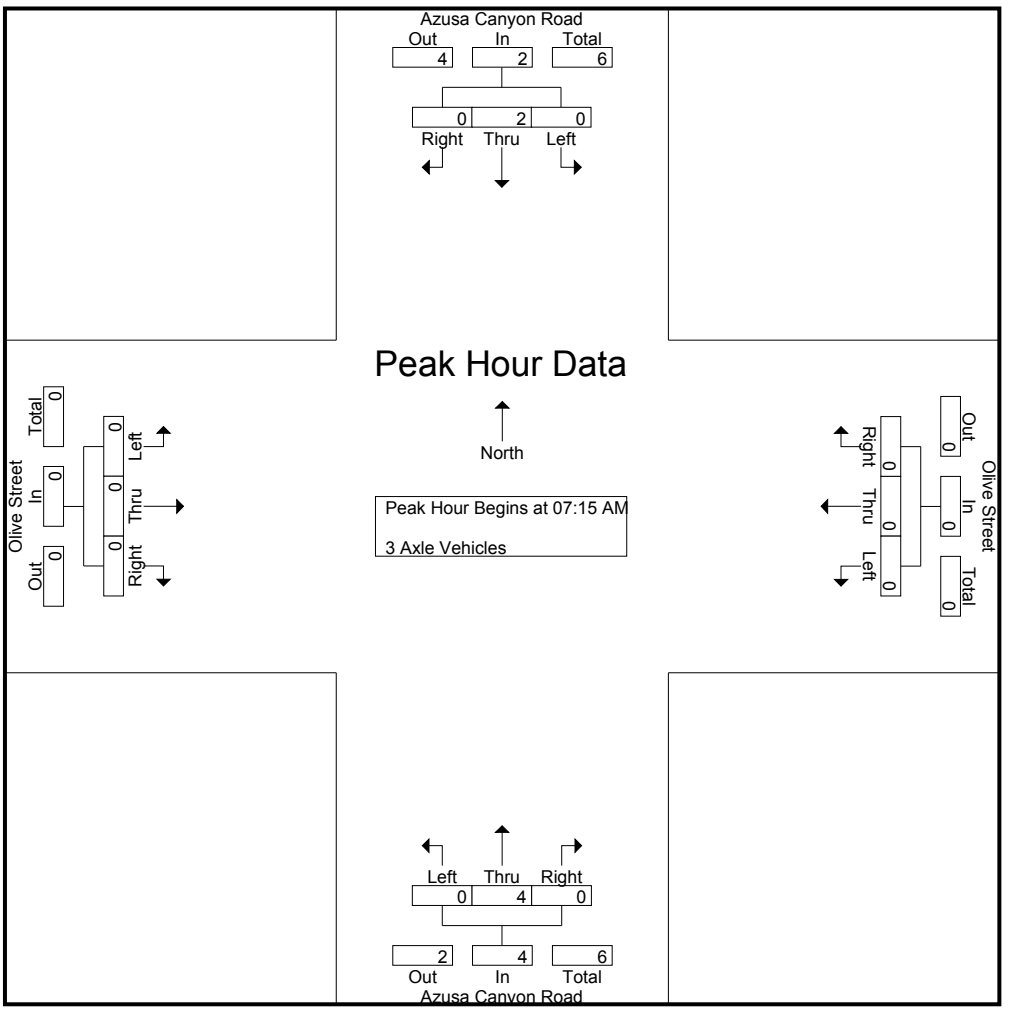
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
Grand Total	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	30	0	30	0	0	0	0	0	70	0	70	0	0	0	0	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.750

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

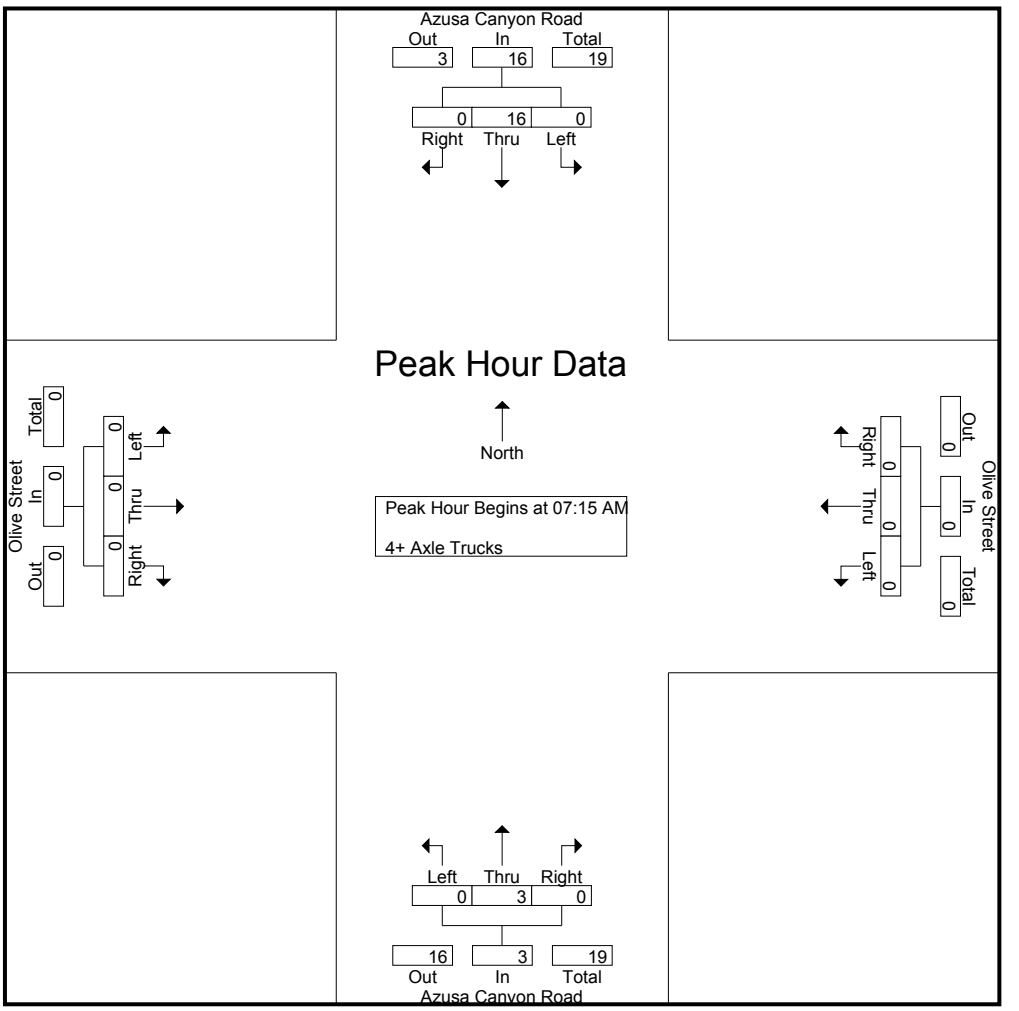
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	0	11	0	11	0	0	0	0	0	6	0	6	0	0	0	0	17
08:00 AM	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
08:15 AM	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
08:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	19	0	19	0	0	0	0	0	1	0	1	0	0	0	0	20
Grand Total	0	30	0	30	0	0	0	0	0	7	0	7	0	0	0	0	37
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	81.1	0	81.1	0	0	0	0	0	18.9	0	18.9	0	0	0	0	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	2
07:30 AM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
08:00 AM	0	**8**	0	**8**	0	0	0	0	0	0	0	0	0	0	0	0	**8**
Total Volume	0	16	0	16	0	0	0	0	0	3	0	3	0	0	0	0	19
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.594

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_AM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	**8**	0	**8**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	16	0	16	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

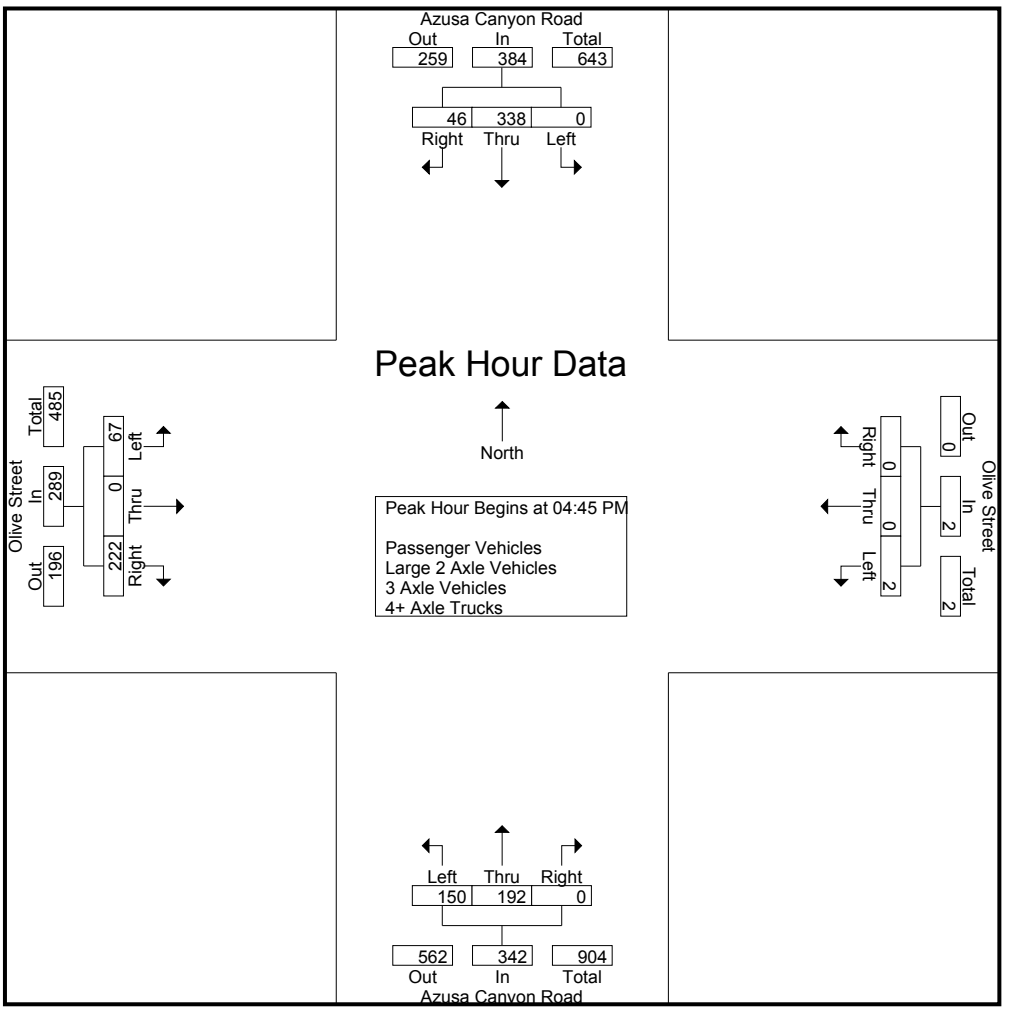
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	79	12	91	10	8	2	20	28	37	0	65	22	0	49	71	247
04:15 PM	0	71	5	76	2	1	0	3	33	51	0	84	19	0	50	69	232
04:30 PM	0	71	7	78	2	0	0	2	44	41	2	87	14	0	57	71	238
04:45 PM	0	80	10	90	0	0	0	0	32	45	0	77	12	0	50	62	229
Total	0	301	34	335	14	9	2	25	137	174	2	313	67	0	206	273	946
05:00 PM	0	90	16	106	0	0	0	0	37	42	0	79	19	0	61	80	265
05:15 PM	0	87	11	98	0	0	0	0	49	53	0	102	22	0	50	72	272
05:30 PM	0	81	9	90	2	0	0	2	32	52	0	84	14	0	61	75	251
05:45 PM	0	63	7	70	0	0	0	0	40	33	0	73	20	0	38	58	201
Total	0	321	43	364	2	0	0	2	158	180	0	338	75	0	210	285	989
Grand Total	0	622	77	699	16	9	2	27	295	354	2	651	142	0	416	558	1935
Apprch %	0	89	11		59.3	33.3	7.4		45.3	54.4	0.3		25.4	0	74.6		
Total %	0	32.1	4	36.1	0.8	0.5	0.1	1.4	15.2	18.3	0.1	33.6	7.3	0	21.5	28.8	
Passenger Vehicles	0	607	76	683	16	9	2	27	293	343	2	638	140	0	414	554	1902
% Passenger Vehicles	0	97.6	98.7	97.7	100	100	100	100	99.3	96.9	100	98	98.6	0	99.5	99.3	98.3
Large 2 Axle Vehicles	0	12	1	13	0	0	0	0	2	8	0	10	2	0	1	3	26
% Large 2 Axle Vehicles	0	1.9	1.3	1.9	0	0	0	0	0.7	2.3	0	1.5	1.4	0	0.2	0.5	1.3
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	2	0	2	0	0	1	1	5
% 3 Axle Vehicles	0	0.3	0	0.3	0	0	0	0	0	0.6	0	0.3	0	0	0.2	0.2	0.3
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% 4+ Axle Trucks	0	0.2	0	0.1	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0.1

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	80	10	90	0	0	0	0	32	45	0	77	12	0	50	62	229
05:00 PM	0	**90**	**16**	**106**	0	0	0	0	37	42	0	79	19	0	**61**	**80**	265
05:15 PM	0	87	11	98	0	0	0	0	**49**	**53**	0	**102**	**22**	0	50	72	**272**
05:30 PM	0	81	9	90	**2**	0	0	**2**	32	52	0	84	14	0	61	75	251
Total Volume	0	338	46	384	2	0	0	2	150	192	0	342	67	0	222	289	1017
% App. Total	0	88	12		100	0	0		43.9	56.1	0		23.2	0	76.8		
PHF	.000	.939	.719	.906	.250	.000	.000	.250	.765	.906	.000	.838	.761	.000	.910	.903	.935

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:30 PM				04:45 PM			
+0 mins.	0	80	10	90	**10**	**8**	**2**	**20**	44	41	**2**	87	12	0	50	62
+15 mins.	0	**90**	**16**	**106**	2	1	0	3	32	45	0	77	19	0	**61**	**80**
+30 mins.	0	87	11	98	2	0	0	2	37	42	0	79	**22**	0	50	72
+45 mins.	0	81	9	90	0	0	0	0	**49**	**53**	0	**102**	14	0	61	75
Total Volume	0	338	46	384	14	9	2	25	162	181	2	345	67	0	222	289
% App. Total	0	88	12		56	36	8		47	52.5	0.6		23.2	0	76.8	
PHF	.000	.939	.719	.906	.350	.281	.250	.313	.827	.854	.250	.846	.761	.000	.910	.903

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File Name : 05_IRW_Azusa Canyon_Olive_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Passenger Vehicles

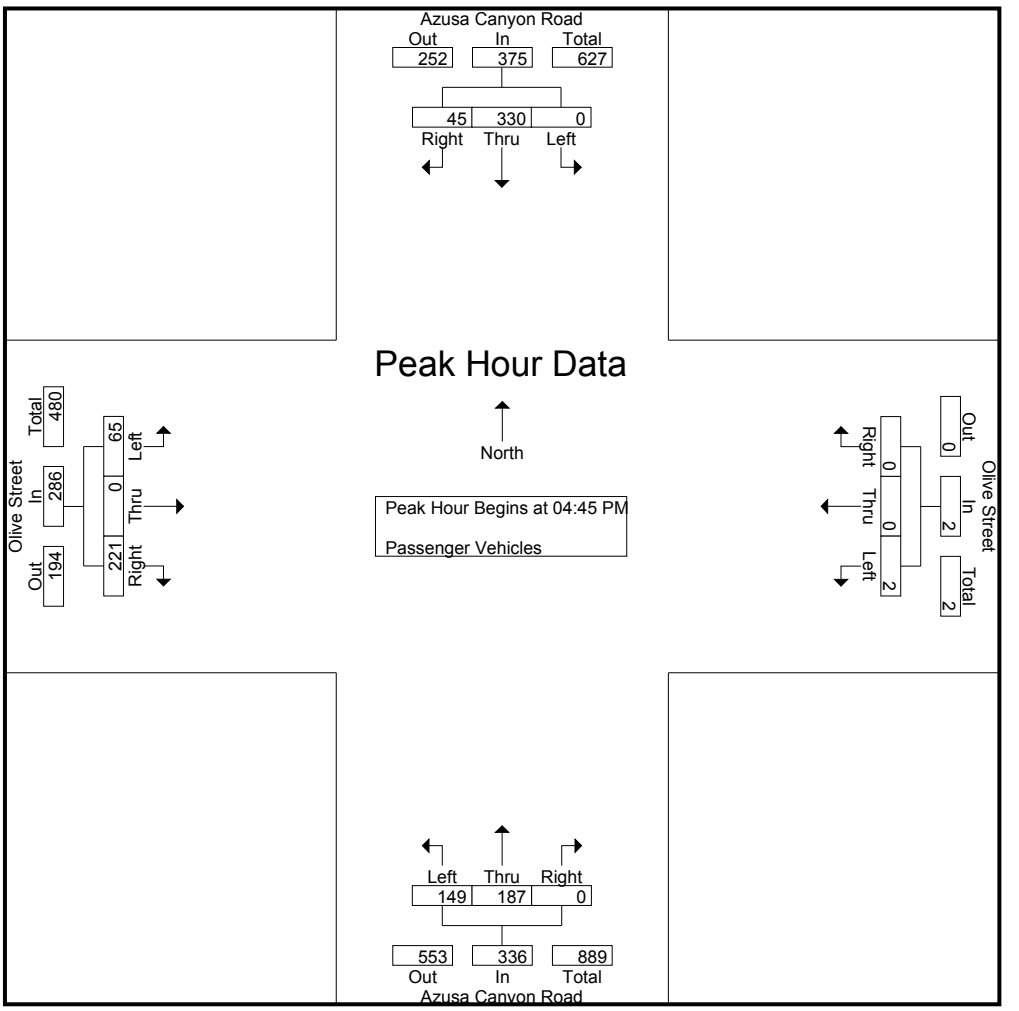
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	76	12	88	10	8	2	20	28	36	0	64	22	0	49	71	243
04:15 PM	0	69	5	74	2	1	0	3	33	50	0	83	19	0	50	69	229
04:30 PM	0	69	7	76	2	0	0	2	43	39	2	84	14	0	57	71	233
04:45 PM	0	78	10	88	0	0	0	0	31	44	0	75	12	0	50	62	225
Total	0	292	34	326	14	9	2	25	135	169	2	306	67	0	206	273	930
05:00 PM	0	87	16	103	0	0	0	0	37	41	0	78	19	0	61	80	261
05:15 PM	0	84	11	95	0	0	0	0	49	50	0	99	20	0	50	70	264
05:30 PM	0	81	8	89	2	0	0	2	32	52	0	84	14	0	60	74	249
05:45 PM	0	63	7	70	0	0	0	0	40	31	0	71	20	0	37	57	198
Total	0	315	42	357	2	0	0	2	158	174	0	332	73	0	208	281	972
Grand Total	0	607	76	683	16	9	2	27	293	343	2	638	140	0	414	554	1902
Apprch %	0	88.9	11.1		59.3	33.3	7.4		45.9	53.8	0.3		25.3	0	74.7		
Total %	0	31.9	4	35.9	0.8	0.5	0.1	1.4	15.4	18	0.1	33.5	7.4	0	21.8	29.1	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	78	10	88	0	0	0	0	31	44	0	75	12	0	50	62	225
05:00 PM	0	**87**	**16**	**103**	0	0	0	0	37	41	0	78	19	0	**61**	**80**	261
05:15 PM	0	84	11	95	0	0	0	0	**49**	50	0	**99**	**20**	0	50	70	**264**
05:30 PM	0	81	8	89	**2**	0	0	**2**	32	**52**	0	84	14	0	60	74	249
Total Volume	0	330	45	375	2	0	0	2	149	187	0	336	65	0	221	286	999
% App. Total	0	88	12		100	0	0		44.3	55.7	0		22.7	0	77.3		
PHF	.000	.948	.703	.910	.250	.000	.000	.250	.760	.899	.000	.848	.813	.000	.906	.894	.946

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Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	78	10	88	0	0	0	0	31	44	0	75	12	0	50	62
+15 mins.	0	**87**	**16**	**103**	0	0	0	0	37	41	0	78	19	0	**61**	**80**
+30 mins.	0	84	11	95	0	0	0	0	**49**	50	0	**99**	**20**	0	50	70
+45 mins.	0	81	8	89	**2**	0	0	**2**	32	**52**	0	84	14	0	60	74
Total Volume	0	330	45	375	2	0	0	2	149	187	0	336	65	0	221	286
% App. Total	0	88	12		100	0	0		44.3	55.7	0		22.7	0	77.3	
PHF	.000	.948	.703	.910	.250	.000	.000	.250	.760	.899	.000	.848	.813	.000	.906	.894

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Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

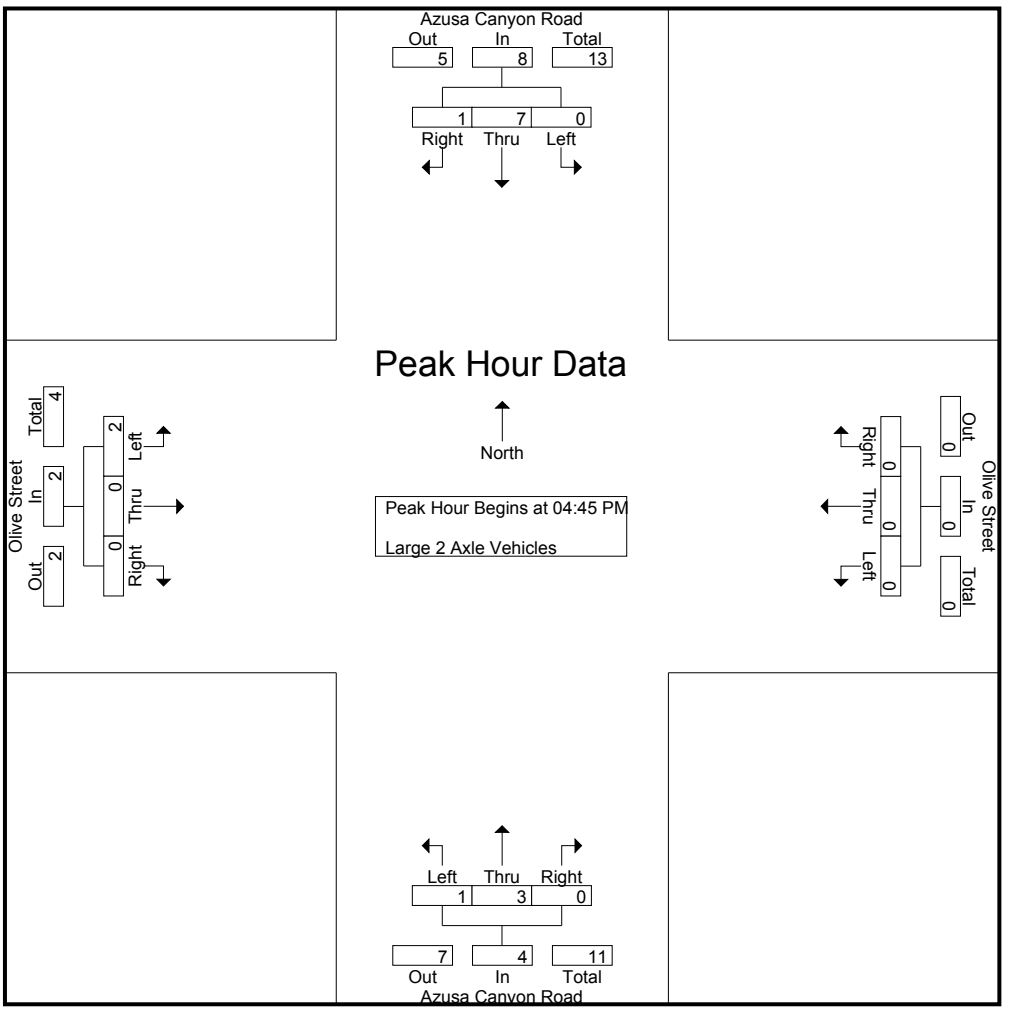
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3
Total	0	6	0	6	0	0	0	0	2	4	0	6	0	0	0	0	12
05:00 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
05:15 PM	0	3	0	3	0	0	0	0	0	1	0	1	2	0	0	2	6
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	3
Total	0	6	1	7	0	0	0	0	0	4	0	4	2	0	1	3	14
Grand Total	0	12	1	13	0	0	0	0	2	8	0	10	2	0	1	3	26
Apprch %	0	92.3	7.7		0	0	0		20	80	0		66.7	0	33.3		
Total %	0	46.2	3.8	50	0	0	0	0	7.7	30.8	0	38.5	7.7	0	3.8	11.5	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0	3
05:00 PM	0	**3**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0	4
05:15 PM	0	3	0	3	0	0	0	0	0	1	0	1	**2**	0	0	**2**	**6**
05:30 PM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	7	1	8	0	0	0	0	1	3	0	4	2	0	0	2	14
% App. Total	0	87.5	12.5		0	0	0		25	75	0		100	0	0		
PHF	.000	.583	.250	.667	.000	.000	.000	.000	.250	.750	.000	.500	.250	.000	.000	.250	.583

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File Name : 05_IRW_Azusa Canyon_Olive_PM
Site Code : 05121286
Start Date : 6/17/2021
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0
+15 mins.	0	**3**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	3	0	3	0	0	0	0	0	1	0	1	**2**	0	0	**2**
+45 mins.	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	7	1	8	0	0	0	0	1	3	0	4	2	0	0	2
% App. Total	0	87.5	12.5		0	0	0		25	75	0		100	0	0	
PHF	.000	.583	.250	.667	.000	.000	.000	.000	.250	.750	.000	.500	.250	.000	.000	.250

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File Name : 05_IRW_Azusa Canyon_Olive_PM
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Start Date : 6/17/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

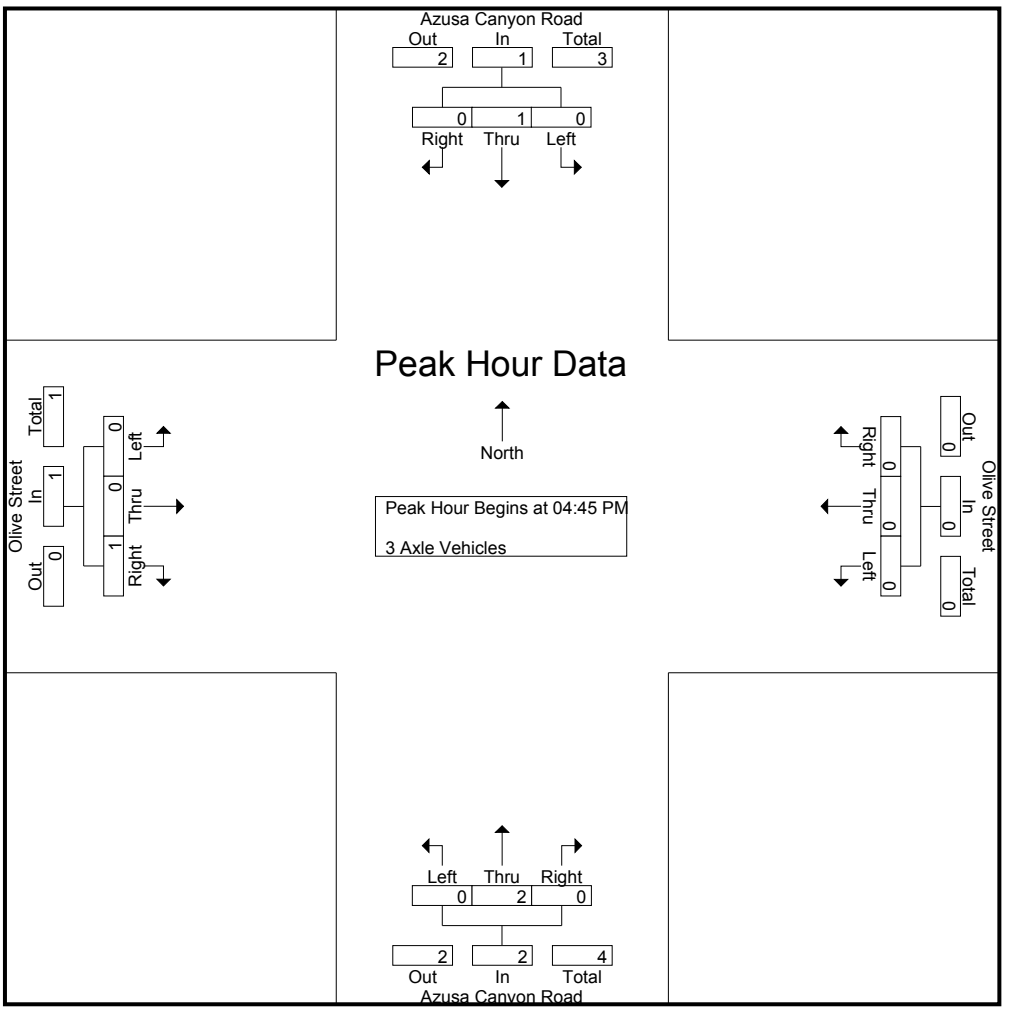
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	3
Grand Total	0	2	0	2	0	0	0	0	0	2	0	2	0	0	1	1	5
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	40	0	40	0	0	0	0	0	40	0	40	0	0	20	20	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	1
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	4
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250	.500

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250

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File Name : 05_IRW_Azusa Canyon_Olive_PM
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Start Date : 6/17/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

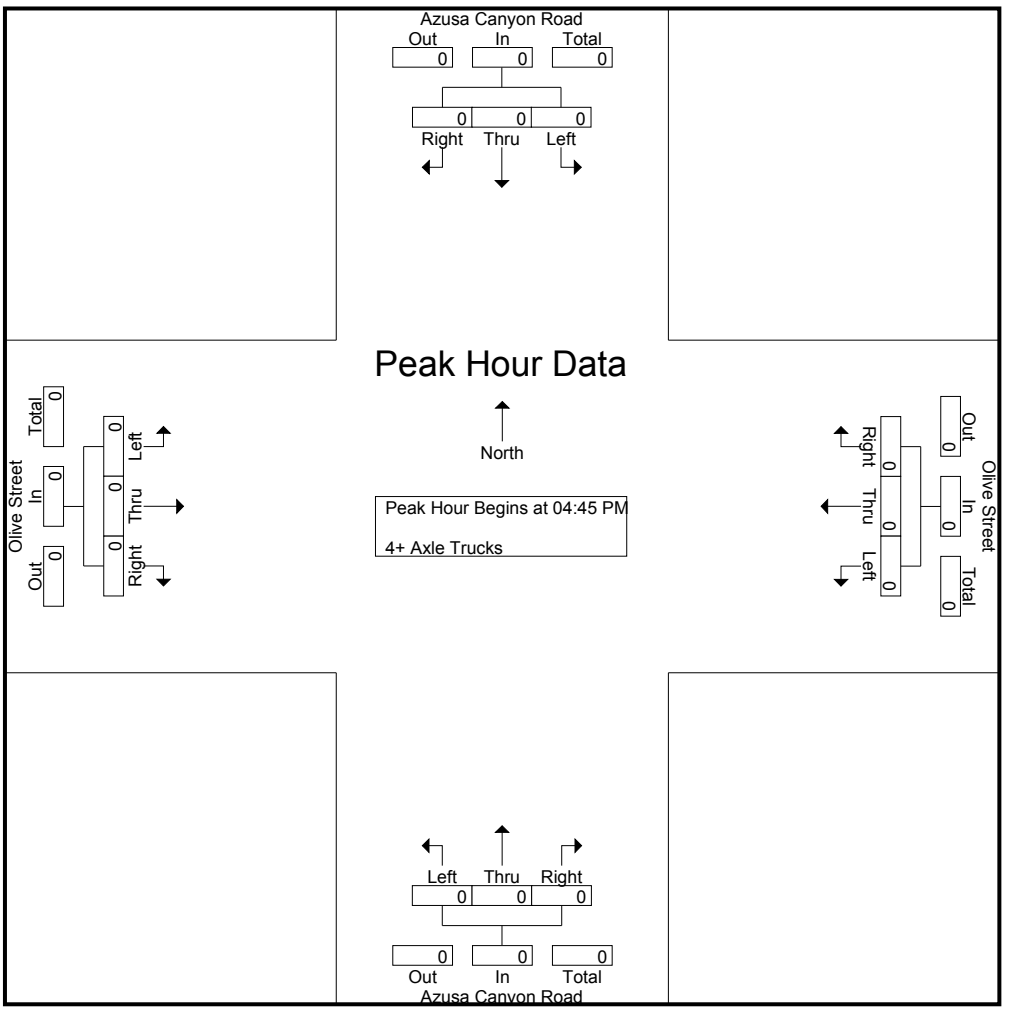
	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	50	0	50	0	0	0	0	0	50	0	50	0	0	0	0	

	Azusa Canyon Road Southbound				Olive Street Westbound				Azusa Canyon Road Northbound				Olive Street Eastbound				
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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Irwindale
N/S: Azusa Canyon Road
E/W: Olive Street
Weather: Clear

File Name : 05_IRW_Azusa Canyon_Olive_PM
Site Code : 05121286
Start Date : 6/17/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Irwindale
Azusa Canyon Road
N/ Los Angeles Street
24 Hour Directional Classification Count

IRW002
Site Code: 051-21286

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	27	5	0	0	0	0	0	0	0	0	0	0	32
01:00	0	11	0	0	2	0	0	0	1	0	0	0	0	14
02:00	0	23	1	0	1	0	0	0	1	0	0	0	0	26
03:00	0	48	5	0	0	0	0	0	0	0	0	0	0	53
04:00	0	82	10	0	1	0	0	0	0	0	0	0	0	93
05:00	0	144	30	0	4	0	0	0	1	0	**2**	0	0	181
06:00	**2**	154	38	0	7	0	0	2	0	0	0	0	0	203
07:00	0	**214**	**47**	**3**	6	2	**1**	0	1	0	0	0	0	274
08:00	1	212	46	0	13	**4**	0	1	1	0	1	0	0	**279**
09:00	0	166	31	1	**20**	2	0	**3**	**51**	0	0	0	0	274
10:00	0	152	45	0	17	4	1	2	37	0	0	0	0	258
11:00	2	173	46	0	14	0	0	2	36	0	0	0	0	273
12 PM	**2**	196	44	0	12	**3**	**1**	**3**	35	0	0	0	0	296
13:00	2	239	59	**1**	11	3	0	0	**37**	0	0	0	0	352
14:00	1	272	67	0	8	3	0	2	37	0	0	0	0	390
15:00	1	388	75	0	**17**	0	0	0	4	0	0	0	0	485
16:00	0	**445**	**82**	0	10	1	0	1	0	0	0	0	0	**539**
17:00	2	405	77	0	6	3	0	1	0	0	0	0	0	494
18:00	1	291	60	0	6	1	0	1	0	0	0	0	0	360
19:00	0	196	23	0	1	0	0	0	0	0	0	0	0	220
20:00	0	152	20	0	2	0	0	1	0	0	0	0	0	175
21:00	0	104	19	0	2	0	0	0	1	0	0	0	0	126
22:00	0	86	8	0	0	0	0	0	0	0	0	0	0	94
23:00	0	63	4	0	2	0	0	0	1	0	0	0	0	70
Total	14	4243	842	5	162	26	3	19	244	0	3	0	0	5561
Percent	0.3%	76.3%	15.1%	0.1%	2.9%	0.5%	0.1%	0.3%	4.4%	0.0%	0.1%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	07:00	09:00	08:00	07:00	09:00	09:00		05:00			08:00
Vol.	2	214	47	3	20	4	1	3	51		2			279
PM Peak	12:00	16:00	16:00	13:00	15:00	12:00	12:00	12:00	13:00					16:00
Vol.	2	445	82	1	17	3	1	3	37					539
Grand Total	14	4243	842	5	162	26	3	19	244	0	3	0	0	5561
Percent	0.3%	76.3%	15.1%	0.1%	2.9%	0.5%	0.1%	0.3%	4.4%	0.0%	0.1%	0.0%	0.0%	

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City of Irwindale
Azusa Canyon Road
N/ Los Angeles Street
24 Hour Directional Classification Count

IRW002
Site Code: 051-21286

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	24	4	0	0	0	0	0	0	0	0	0	0	28
01:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	11	1	0	1	0	0	0	0	0	0	0	0	13
03:00	0	73	12	0	0	0	0	0	1	0	0	0	0	86
04:00	0	55	11	0	0	0	0	0	1	0	0	0	0	67
05:00	1	124	28	0	2	0	0	0	1	0	**1**	0	0	157
06:00	1	137	42	0	12	2	0	**1**	1	0	0	0	0	196
07:00	0	**209**	34	0	4	1	**1**	0	9	0	0	0	0	**258**
08:00	1	177	41	0	8	0	0	0	18	0	0	0	0	245
09:00	1	154	40	0	**14**	**3**	0	0	24	0	0	0	0	236
10:00	0	143	33	**1**	14	2	0	0	**38**	0	0	0	0	231
11:00	**2**	147	**43**	1	10	3	0	1	38	0	0	0	0	245
12 PM	2	199	42	0	13	3	0	0	**36**	0	**4**	0	0	299
13:00	0	195	53	0	11	4	0	1	36	0	2	0	0	302
14:00	1	238	58	0	11	**8**	0	**4**	29	0	4	0	0	353
15:00	1	262	**75**	0	**15**	0	0	1	2	0	2	0	0	358
16:00	0	295	65	0	15	0	0	0	0	0	0	0	0	**375**
17:00	1	**311**	50	0	8	1	0	1	0	0	0	0	0	372
18:00	**3**	265	44	0	3	0	0	1	0	0	0	0	0	316
19:00	0	193	31	0	2	0	0	0	1	0	0	0	0	227
20:00	0	184	18	0	3	1	0	1	2	0	0	0	0	209
21:00	1	118	14	**1**	1	1	0	0	0	0	0	0	0	136
22:00	0	81	9	0	0	0	0	0	0	0	0	0	0	90
23:00	0	53	2	0	3	0	0	0	0	0	0	0	0	58
Total	15	3656	750	3	150	29	1	11	237	0	13	0	0	4865
Percent	0.3%	75.1%	15.4%	0.1%	3.1%	0.6%	0.0%	0.2%	4.9%	0.0%	0.3%	0.0%	0.0%	
AM Peak	11:00	07:00	11:00	10:00	09:00	09:00	07:00	06:00	10:00		05:00			07:00
Vol.	2	209	43	1	14	3	1	1	38		1			258
PM Peak	18:00	17:00	15:00	21:00	15:00	14:00		14:00	12:00		12:00			16:00
Vol.	3	311	75	1	15	8		4	36		4			375
Grand Total	15	3656	750	3	150	29	1	11	237	0	13	0	0	4865
Percent	0.3%	75.1%	15.4%	0.1%	3.1%	0.6%	0.0%	0.2%	4.9%	0.0%	0.3%	0.0%	0.0%	

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City of Irwindale
Azusa Canyon Road
N/ Los Angeles Street
24 Hour Directional Classification Count

IRW002
Site Code: 051-21286

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	51	9	0	0	0	0	0	0	0	0	0	0	60
01:00	0	19	0	0	2	0	0	0	1	0	0	0	0	22
02:00	0	34	2	0	2	0	0	0	1	0	0	0	0	39
03:00	0	121	17	0	0	0	0	0	1	0	0	0	0	139
04:00	0	137	21	0	1	0	0	0	1	0	0	0	0	160
05:00	1	268	58	0	6	0	0	0	2	0	**3**	0	0	338
06:00	3	291	80	0	19	2	0	**3**	1	0	0	0	0	399
07:00	0	**423**	81	**3**	10	3	**2**	0	10	0	0	0	0	**532**
08:00	2	389	87	0	21	4	0	1	19	0	1	0	0	524
09:00	1	320	71	1	**34**	5	0	3	**75**	0	0	0	0	510
10:00	0	295	78	1	31	**6**	1	2	75	0	0	0	0	489
11:00	**4**	320	**89**	1	24	3	0	3	74	0	0	0	0	518
12 PM	**4**	395	86	0	25	6	**1**	3	71	0	**4**	0	0	595
13:00	2	434	112	**1**	22	7	0	1	**73**	0	2	0	0	654
14:00	2	510	125	0	19	**11**	0	**6**	66	0	4	0	0	743
15:00	2	650	**150**	0	**32**	0	0	1	6	0	2	0	0	843
16:00	0	**740**	147	0	25	1	0	1	0	0	0	0	0	**914**
17:00	3	716	127	0	14	4	0	2	0	0	0	0	0	866
18:00	4	556	104	0	9	1	0	2	0	0	0	0	0	676
19:00	0	389	54	0	3	0	0	0	1	0	0	0	0	447
20:00	0	336	38	0	5	1	0	2	2	0	0	0	0	384
21:00	1	222	33	1	3	1	0	0	1	0	0	0	0	262
22:00	0	167	17	0	0	0	0	0	0	0	0	0	0	184
23:00	0	116	6	0	5	0	0	0	1	0	0	0	0	128
Total	29	7899	1592	8	312	55	4	30	481	0	16	0	0	10426
Percent	0.3%	75.8%	15.3%	0.1%	3.0%	0.5%	0.0%	0.3%	4.6%	0.0%	0.2%	0.0%	0.0%	
AM Peak	11:00	07:00	11:00	07:00	09:00	10:00	07:00	06:00	09:00		05:00			07:00
Vol.	4	423	89	3	34	6	2	3	75		3			532
PM Peak	12:00	16:00	15:00	13:00	15:00	14:00	12:00	14:00	13:00		12:00			16:00
Vol.	4	740	150	1	32	11	1	6	73		4			914
Grand Total	29	7899	1592	8	312	55	4	30	481	0	16	0	0	10426
Percent	0.3%	75.8%	15.3%	0.1%	3.0%	0.5%	0.0%	0.3%	4.6%	0.0%	0.2%	0.0%	0.0%	

PCE = 1.0 | PCE = 1.5 | PCE = 2.0 | PCE = 3.0

PCE TOTAL = 11,699

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City of Irwindale
Azusa Canyon Road
N/ San Bernardino Road
24 Hour Directional Classification Count

IRW003
Site Code: 051-21286

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	23	3	0	0	0	0	0	0	0	0	0	0	26
01:00	0	12	0	0	2	0	0	0	0	0	0	0	0	14
02:00	0	20	1	0	0	0	0	0	0	0	3	0	0	24
03:00	0	84	18	0	1	0	0	0	0	0	1	0	0	104
04:00	0	44	10	0	1	0	0	0	0	0	1	0	0	56
05:00	0	120	24	0	3	0	0	0	1	0	**7**	0	0	155
06:00	1	138	**47**	0	6	0	0	1	0	0	0	0	0	193
07:00	0	**248**	40	**1**	1	2	0	1	**2**	0	0	0	0	**295**
08:00	1	224	46	0	**10**	**3**	0	0	0	0	0	0	0	284
09:00	0	131	28	1	9	2	0	0	2	0	0	0	0	173
10:00	0	119	38	0	10	0	0	0	0	0	0	0	0	167
11:00	**2**	150	43	0	5	0	0	**2**	1	0	0	0	0	203
12 PM	2	177	31	0	8	**1**	**1**	**3**	**1**	0	0	0	0	224
13:00	1	205	38	0	3	1	0	0	0	0	0	0	0	248
14:00	1	189	39	0	7	1	0	1	1	0	0	0	0	239
15:00	0	195	29	0	6	1	0	0	1	0	0	0	0	232
16:00	0	**262**	**46**	0	**10**	0	0	0	0	0	0	0	0	**318**
17:00	**4**	230	45	0	4	1	0	0	0	0	0	0	0	284
18:00	0	185	30	0	3	1	0	0	0	0	0	0	0	219
19:00	0	159	29	0	2	0	0	0	0	0	0	0	0	190
20:00	0	152	11	0	1	0	0	0	0	0	0	0	0	164
21:00	0	100	12	0	1	0	0	0	0	0	0	0	0	113
22:00	0	71	9	0	1	1	0	0	0	0	0	0	0	82
23:00	0	50	4	0	0	0	0	0	1	0	**1**	0	0	56
Total	12	3288	621	2	94	14	1	8	10	0	13	0	0	4063
Percent	0.3%	80.9%	15.3%	0.0%	2.3%	0.3%	0.0%	0.2%	0.2%	0.0%	0.3%	0.0%	0.0%	
AM Peak	11:00	07:00	06:00	07:00	08:00	08:00		11:00	07:00		05:00			07:00
Vol.	2	248	47	1	10	3		2	2		7			295
PM Peak	17:00	16:00	16:00		16:00	12:00	12:00	12:00	12:00		23:00			16:00
Vol.	4	262	46		10	1	1	3	1		1			318
Grand Total	12	3288	621	2	94	14	1	8	10	0	13	0	0	4063
Percent	0.3%	80.9%	15.3%	0.0%	2.3%	0.3%	0.0%	0.2%	0.2%	0.0%	0.3%	0.0%	0.0%	

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City of Irwindale
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24 Hour Directional Classification Count

IRW003
Site Code: 051-21286

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	27	4	0	0	0	0	0	1	0	0	0	0	32
01:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
02:00	0	13	1	0	0	0	0	0	0	0	0	0	0	14
03:00	0	43	6	0	0	0	0	0	0	0	0	0	0	49
04:00	0	54	12	0	0	0	0	0	1	0	0	0	0	67
05:00	**1**	109	19	0	2	0	0	0	0	0	0	0	0	131
06:00	1	105	33	**1**	9	**1**	0	0	0	0	0	0	0	150
07:00	0	169	29	1	3	0	**1**	0	1	0	0	0	0	204
08:00	0	**172**	41	0	7	0	0	0	**2**	0	0	0	0	222
09:00	0	134	31	0	**10**	1	0	0	1	0	0	0	0	177
10:00	0	154	36	0	6	0	0	**1**	1	0	0	0	0	198
11:00	1	171	**44**	1	7	1	0	0	1	0	**1**	0	0	**227**
12 PM	1	194	37	0	4	1	0	0	1	0	**5**	0	0	243
13:00	0	232	54	0	10	2	0	0	2	0	3	0	0	303
14:00	1	261	71	0	8	**4**	0	**3**	1	0	3	0	0	352
15:00	1	371	**101**	0	**12**	0	0	0	1	0	2	0	0	488
16:00	0	**450**	88	0	9	2	0	0	0	0	0	0	0	**549**
17:00	1	424	63	0	5	1	0	0	0	0	1	0	0	495
18:00	**4**	290	47	0	2	1	0	1	1	0	0	0	0	346
19:00	0	194	33	0	2	1	0	0	1	0	0	0	0	231
20:00	0	170	21	0	0	1	0	0	**3**	0	0	0	0	195
21:00	4	108	21	**1**	1	1	0	0	0	0	0	0	0	136
22:00	0	94	5	0	0	0	0	0	1	0	0	0	0	100
23:00	0	44	4	0	2	0	0	0	1	0	0	0	0	51
Total	15	3992	801	4	99	17	1	5	20	0	15	0	0	4969
Percent	0.3%	80.3%	16.1%	0.1%	2.0%	0.3%	0.0%	0.1%	0.4%	0.0%	0.3%	0.0%	0.0%	
AM Peak	05:00	08:00	11:00	06:00	09:00	06:00	07:00	10:00	08:00		11:00			11:00
Vol.	1	172	44	1	10	1	1	1	2		1			227
PM Peak	18:00	16:00	15:00	21:00	15:00	14:00		14:00	20:00		12:00			16:00
Vol.	4	450	101	1	12	4		3	3		5			549
Grand Total	15	3992	801	4	99	17	1	5	20	0	15	0	0	4969
Percent	0.3%	80.3%	16.1%	0.1%	2.0%	0.3%	0.0%	0.1%	0.4%	0.0%	0.3%	0.0%	0.0%	

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24 Hour Directional Classification Count

IRW003
Site Code: 051-21286

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	50	7	0	0	0	0	0	1	0	0	0	0	58
01:00	0	21	0	0	2	0	0	0	0	0	0	0	0	23
02:00	0	33	2	0	0	0	0	0	0	0	3	0	0	38
03:00	0	127	24	0	1	0	0	0	0	0	1	0	0	153
04:00	0	98	22	0	1	0	0	0	1	0	1	0	0	123
05:00	1	229	43	0	5	0	0	0	1	0	**7**	0	0	286
06:00	2	243	80	1	15	1	0	1	0	0	0	0	0	343
07:00	0	**417**	69	**2**	4	2	**1**	1	**3**	0	0	0	0	499
08:00	1	396	**87**	0	17	**3**	0	0	2	0	0	0	0	**506**
09:00	0	265	59	1	**19**	3	0	0	3	0	0	0	0	350
10:00	0	273	74	0	16	0	0	1	1	0	0	0	0	365
11:00	**3**	321	87	1	12	1	0	**2**	2	0	1	0	0	430
12 PM	3	371	68	0	12	2	**1**	3	2	0	**5**	0	0	467
13:00	1	437	92	0	13	3	0	0	2	0	3	0	0	551
14:00	2	450	110	0	15	**5**	0	**4**	2	0	3	0	0	591
15:00	1	566	130	0	18	1	0	0	2	0	2	0	0	720
16:00	0	**712**	**134**	0	**19**	2	0	0	0	0	0	0	0	**867**
17:00	**5**	654	108	0	9	2	0	0	0	0	1	0	0	779
18:00	4	475	77	0	5	2	0	1	1	0	0	0	0	565
19:00	0	353	62	0	4	1	0	0	1	0	0	0	0	421
20:00	0	322	32	0	1	1	0	0	**3**	0	0	0	0	359
21:00	4	208	33	**1**	2	1	0	0	0	0	0	0	0	249
22:00	0	165	14	0	1	1	0	0	1	0	0	0	0	182
23:00	0	94	8	0	2	0	0	0	2	0	1	0	0	107
Total	27	7280	1422	6	193	31	2	13	30	0	28	0	0	9032
Percent	0.3%	80.6%	15.7%	0.1%	2.1%	0.3%	0.0%	0.1%	0.3%	0.0%	0.3%	0.0%	0.0%	
AM Peak	11:00	07:00	08:00	07:00	09:00	08:00	07:00	11:00	07:00		05:00			08:00
Vol.	3	417	87	2	19	3	1	2	3		7			506
PM Peak	17:00	16:00	16:00	21:00	16:00	14:00	12:00	14:00	20:00		12:00			16:00
Vol.	5	712	134	1	19	5	1	4	3		5			867
Grand Total	27	7280	1422	6	193	31	2	13	30	0	28	0	0	9032
Percent	0.3%	80.6%	15.7%	0.1%	2.1%	0.3%	0.0%	0.1%	0.3%	0.0%	0.3%	0.0%	0.0%	

PCE = 1.0

PCE = 1.5

PCE = 2.0

PCE = 3.0

PCE TOTAL = 10,144

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City of Irwindale
Los Angeles Street
W/ Azusa Canyon Road
24 Hour Directional Classification Count

IRW001
Site Code: 051-21286

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	23	5	0	0	0	0	0	1	0	0	0	0	29
01:00	0	11	0	0	0	0	0	0	1	0	0	0	0	12
02:00	0	20	3	0	0	0	0	0	1	0	0	0	0	24
03:00	0	77	9	0	0	0	0	0	0	0	0	0	0	86
04:00	0	83	4	0	0	0	0	0	0	0	0	0	0	87
05:00	0	106	18	0	0	0	0	0	0	0	0	0	0	124
06:00	**1**	111	24	1	1	0	0	0	0	0	1	0	0	139
07:00	0	178	**37**	**3**	2	1	**1**	1	0	0	0	0	0	223
08:00	0	**179**	34	0	9	1	0	0	0	0	0	0	0	223
09:00	0	133	19	0	**19**	0	0	**3**	**51**	0	0	0	0	225
10:00	0	133	28	0	13	**4**	1	3	37	0	0	0	0	219
11:00	0	155	26	0	9	0	0	0	35	0	**2**	0	0	**227**
12 PM	0	186	27	0	6	3	0	**2**	35	0	1	0	0	260
13:00	1	221	45	**1**	12	**4**	0	0	**37**	0	1	0	0	322
14:00	0	288	61	0	10	2	0	1	35	0	1	0	0	398
15:00	1	362	83	0	**15**	0	0	0	3	0	1	0	0	465
16:00	0	**497**	**94**	0	6	3	0	1	0	0	0	0	0	**601**
17:00	0	459	65	0	5	2	0	1	0	0	**2**	0	0	534
18:00	2	330	51	0	4	1	0	1	1	0	2	0	0	392
19:00	0	186	22	0	0	1	0	0	0	0	0	0	0	209
20:00	0	153	25	0	1	1	0	1	1	0	0	0	0	182
21:00	**3**	84	19	0	1	0	0	0	0	0	0	0	0	107
22:00	0	95	5	0	0	0	0	0	1	0	0	0	0	101
23:00	0	53	5	0	1	0	0	0	1	0	0	0	0	60
Total	8	4123	709	5	114	23	2	14	240	0	11	0	0	5249
Percent	0.2%	78.5%	13.5%	0.1%	2.2%	0.4%	0.0%	0.3%	4.6%	0.0%	0.2%	0.0%	0.0%	
AM Peak	06:00	08:00	07:00	07:00	09:00	10:00	07:00	09:00	09:00		11:00			11:00
Vol.	1	179	37	3	19	4	1	3	51		2			227
PM Peak	21:00	16:00	16:00	13:00	15:00	13:00		12:00	13:00		17:00			16:00
Vol.	3	497	94	1	15	4		2	37		2			601
Grand Total	8	4123	709	5	114	23	2	14	240	0	11	0	0	5249
Percent	0.2%	78.5%	13.5%	0.1%	2.2%	0.4%	0.0%	0.3%	4.6%	0.0%	0.2%	0.0%	0.0%	

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City of Irwindale
Los Angeles Street
W/ Azusa Canyon Road
24 Hour Directional Classification Count

IRW001
Site Code: 051-21286

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	17	3	0	0	0	0	0	0	0	0	0	0	20
01:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
02:00	0	8	2	0	0	0	0	0	0	0	3	0	0	13
03:00	0	24	4	0	1	0	0	0	1	0	1	0	0	31
04:00	0	27	3	0	0	0	0	0	0	0	1	0	0	31
05:00	0	86	21	0	1	0	0	0	0	0	**6**	0	0	114
06:00	0	122	**36**	0	4	1	0	0	1	0	0	0	0	164
07:00	0	**243**	35	0	3	**2**	0	**1**	8	0	0	0	0	**292**
08:00	**1**	195	34	0	7	0	0	0	16	0	0	0	0	253
09:00	1	119	24	0	11	2	0	0	24	0	0	0	0	181
10:00	0	90	17	**1**	**14**	2	0	0	**38**	0	0	0	0	162
11:00	1	108	24	0	4	2	0	0	37	0	0	0	0	176
12 PM	1	172	22	0	**10**	2	0	0	**37**	0	1	0	0	245
13:00	0	150	21	0	6	**4**	0	**1**	34	0	0	0	0	216
14:00	0	195	24	0	8	4	0	1	28	0	1	0	0	261
15:00	0	**208**	**45**	0	6	0	0	1	1	0	1	0	0	**262**
16:00	0	191	36	0	10	0	0	0	0	0	0	0	0	237
17:00	**2**	197	25	0	5	0	0	1	0	0	0	0	0	230
18:00	0	201	19	0	2	0	0	0	0	0	0	0	0	222
19:00	0	148	25	0	1	0	0	0	0	0	**3**	0	0	177
20:00	0	167	13	0	3	1	0	1	0	0	0	0	0	185
21:00	0	91	5	0	0	0	0	0	0	0	0	0	0	96
22:00	0	67	10	0	1	1	0	0	0	0	0	0	0	79
23:00	0	51	3	0	0	0	0	0	0	0	1	0	0	55
Total	6	2888	451	1	97	21	0	6	225	0	18	0	0	3713
Percent	0.2%	77.8%	12.1%	0.0%	2.6%	0.6%	0.0%	0.2%	6.1%	0.0%	0.5%	0.0%	0.0%	
AM Peak	08:00	07:00	06:00	10:00	10:00	07:00		07:00	10:00		05:00			07:00
Vol.	1	243	36	1	14	2		1	38		6			292
PM Peak	17:00	15:00	15:00		12:00	13:00		13:00	12:00		19:00			15:00
Vol.	2	208	45		10	4		1	37		3			262
Grand Total	6	2888	451	1	97	21	0	6	225	0	18	0	0	3713
Percent	0.2%	77.8%	12.1%	0.0%	2.6%	0.6%	0.0%	0.2%	6.1%	0.0%	0.5%	0.0%	0.0%	

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IRW001
Site Code: 051-21286

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/17/21	0	40	8	0	0	0	0	0	1	0	0	0	0	49
01:00	0	22	0	0	0	0	0	0	1	0	0	0	0	23
02:00	0	28	5	0	0	0	0	0	1	0	3	0	0	37
03:00	0	101	13	0	1	0	0	0	1	0	1	0	0	117
04:00	0	110	7	0	0	0	0	0	0	0	1	0	0	118
05:00	0	192	39	0	1	0	0	0	0	0	**6**	0	0	238
06:00	**1**	233	60	1	5	1	0	0	1	0	1	0	0	303
07:00	0	**421**	**72**	**3**	5	3	**1**	2	8	0	0	0	0	**515**
08:00	1	374	68	0	16	1	0	0	16	0	0	0	0	476
09:00	1	252	43	0	**30**	2	0	**3**	**75**	0	0	0	0	406
10:00	0	223	45	1	27	**6**	1	3	75	0	0	0	0	381
11:00	1	263	50	0	13	2	0	0	72	0	2	0	0	403
12 PM	1	358	49	0	16	5	0	**2**	**72**	0	2	0	0	505
13:00	1	371	66	**1**	18	**8**	0	1	71	0	1	0	0	538
14:00	0	483	85	0	18	6	0	2	63	0	2	0	0	659
15:00	1	570	128	0	**21**	0	0	1	4	0	2	0	0	727
16:00	0	**688**	**130**	0	16	3	0	1	0	0	0	0	0	**838**
17:00	2	656	90	0	10	2	0	2	0	0	2	0	0	764
18:00	2	531	70	0	6	1	0	1	1	0	2	0	0	614
19:00	0	334	47	0	1	1	0	0	0	0	**3**	0	0	386
20:00	0	320	38	0	4	2	0	2	1	0	0	0	0	367
21:00	**3**	175	24	0	1	0	0	0	0	0	0	0	0	203
22:00	0	162	15	0	1	1	0	0	1	0	0	0	0	180
23:00	0	104	8	0	1	0	0	0	1	0	1	0	0	115
Total	14	7011	1160	6	211	44	2	20	465	0	29	0	0	8962
Percent	0.2%	78.2%	12.9%	0.1%	2.4%	0.5%	0.0%	0.2%	5.2%	0.0%	0.3%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	07:00	09:00	10:00	07:00	09:00	09:00		05:00			07:00
Vol.	1	421	72	3	30	6	1	3	75		6			515
PM Peak	21:00	16:00	16:00	13:00	15:00	13:00		12:00	12:00		19:00			16:00
Vol.	3	688	130	1	21	8		2	72		3			838
Grand Total	14	7011	1160	6	211	44	2	20	465	0	29	0	0	8962
Percent	0.2%	78.2%	12.9%	0.1%	2.4%	0.5%	0.0%	0.2%	5.2%	0.0%	0.3%	0.0%	0.0%	

PCE = 1.0 PCE = 1.5 PCE = 2.0 PCE = 3.0

PCE TOTAL = 10,762

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APPENDIX 3.2:

EXISTING (HYPOTHETICAL "NON-COVID" 2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	236	379	305	168	146	216
Future Volume (vph)	236	379	305	168	146	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	37.0	37.0	41.0		22.0	63.0
Total Split (%)	37.0%	37.0%	41.0%		22.0%	63.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 82 (82%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	236	379	305	168	146	216
Future Volume (veh/h)	236	379	305	168	146	216
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	228	458	339	187	162	240
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	326	580	1466	793	686	2653
Arrive On Green	0.18	0.18	0.65	0.65	0.10	1.00
Sat Flow, veh/h	1810	3220	2357	1223	1810	3705
Grp Volume(v), veh/h	228	458	269	257	162	240
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1680	1810	1805
Q Serve(g_s), s	11.8	13.6	6.2	6.3	2.9	0.0
Cycle Q Clear(g_c), s	11.8	13.6	6.2	6.3	2.9	0.0
Prop In Lane	1.00	1.00		0.73	1.00	
Lane Grp Cap(c), veh/h	326	580	1170	1089	686	2653
V/C Ratio(X)	0.70	0.79	0.23	0.24	0.24	0.09
Avail Cap(c_a), veh/h	606	1079	1170	1089	928	2653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.5	39.2	7.3	7.3	4.5	0.0
Incr Delay (d2), s/veh	2.7	2.5	0.5	0.5	0.2	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	5.4	5.4	2.3	2.2	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.2	41.6	7.7	7.8	4.7	0.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	686		526			402
Approach Delay, s/veh	41.5		7.8			1.9
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.7	69.8			78.5	21.5
Change Period (Y+Rc), s	3.5	5.0			5.0	3.5
Max Green Setting (Gmax), s	18.5	36.0			58.0	33.5
Max Q Clear Time (g_c+I1), s	4.9	8.3			2.0	15.6
Green Ext Time (p_c), s	0.3	3.5			1.7	2.4

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

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	9	186	6	5	18	225	257	8	14	151	274
Future Volume (vph)	194	9	186	6	5	18	225	257	8	14	151	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	31.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	194	9	186	6	5	18	225	257	8	14	151	274
Future Vol, veh/h	194	9	186	6	5	18	225	257	8	14	151	274
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	206	10	198	6	5	19	239	273	9	15	161	291
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

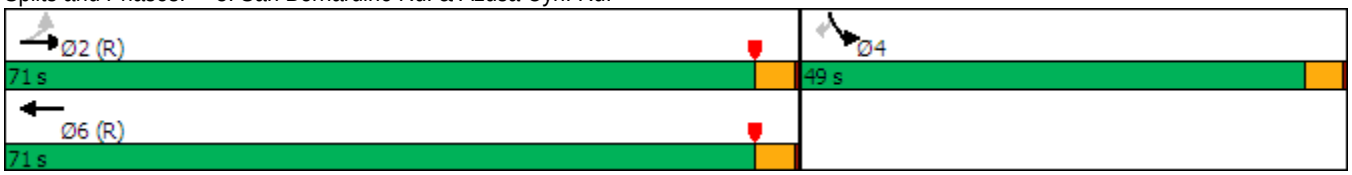
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	15.6	11.3	61.4	14.6
HCM LOS	C	B	F	B

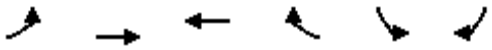
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	46%	96%	0%	55%	0%	8%	0%
Vol Thru, %	52%	4%	0%	45%	0%	92%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	490	203	186	11	18	165	274
LT Vol	225	194	0	6	0	14	0
Through Vol	257	9	0	5	0	151	0
RT Vol	8	0	186	0	18	0	274
Lane Flow Rate	521	216	198	12	19	176	291
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.985	0.476	0.369	0.029	0.042	0.342	0.507
Departure Headway (Hd)	6.802	7.927	6.714	8.839	7.825	7.023	6.263
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	537	456	536	405	457	513	574
Service Time	4.802	5.669	4.455	6.603	5.589	4.766	4.006
HCM Lane V/C Ratio	0.97	0.474	0.369	0.03	0.042	0.343	0.507
HCM Control Delay	61.4	17.7	13.4	11.9	10.9	13.4	15.3
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	13.5	2.5	1.7	0.1	0.1	1.5	2.9

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	77	145	341	427	259	76
Future Volume (vph)	77	145	341	427	259	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	71.0	71.0	71.0		49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%		40.8%	40.8%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	77	145	341	427	259	76
Future Volume (veh/h)	77	145	341	427	259	76
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	163	383	480	291	85
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	301	2016	1008	899	679	604
Arrive On Green	0.56	0.56	0.56	0.56	0.38	0.38
Sat Flow, veh/h	651	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	87	163	383	480	291	85
Grp Sat Flow(s),veh/h/ln	651	1805	1805	1610	1810	1610
Q Serve(g_s), s	11.6	2.5	14.3	22.5	14.4	4.2
Cycle Q Clear(g_c), s	34.2	2.5	14.3	22.5	14.4	4.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	301	2016	1008	899	679	604
V/C Ratio(X)	0.29	0.08	0.38	0.53	0.43	0.14
Avail Cap(c_a), veh/h	301	2016	1008	899	679	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	12.3	14.9	16.7	27.9	24.7
Incr Delay (d2), s/veh	2.4	0.1	1.1	2.3	2.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.0	5.8	8.3	6.6	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.8	12.3	15.9	18.9	29.9	25.2
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		250	863		376	
Approach Delay, s/veh		18.4	17.6		28.8	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		71.0		49.0		71.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		67.0		45.0		67.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

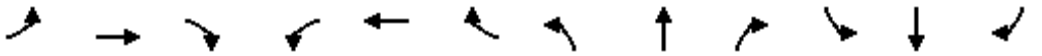
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	199	140	2178	42	432	17	137	20	12	40
Future Volume (vph)	25	945	199	140	2178	42	432	17	137	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	60.2		21.8	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	50.2%		18.2%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	945	199	140	2178	42	432	17	137	20	12	40
Future Volume (veh/h)	25	945	199	140	2178	42	432	17	137	20	12	40
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	1038	219	154	2393	46	489	0	151	22	13	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	2334	492	183	2252	954	543	0	242	151	32	107
Arrive On Green	0.02	0.51	0.51	0.10	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4565	962	1810	3800	1610	3619	0	1610	1810	380	1288
Grp Volume(v), veh/h	27	864	393	154	2393	46	489	0	151	22	0	57
Grp Sat Flow(s),veh/h/ln	1810	1900	1727	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	1.8	17.3	17.3	10.0	71.1	1.4	15.9	0.0	10.6	1.4	0.0	3.9
Cycle Q Clear(g_c), s	1.8	17.3	17.3	10.0	71.1	1.4	15.9	0.0	10.6	1.4	0.0	3.9
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	36	1943	883	183	2252	954	543	0	242	151	0	139
V/C Ratio(X)	0.75	0.44	0.45	0.84	1.06	0.05	0.90	0.00	0.63	0.15	0.00	0.41
Avail Cap(c_a), veh/h	60	1943	883	276	2252	954	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	18.5	18.6	53.0	24.4	10.2	50.1	0.0	47.8	51.0	0.0	52.2
Incr Delay (d2), s/veh	26.8	0.7	1.6	13.4	38.1	0.1	20.3	0.0	11.4	2.0	0.0	8.7
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	1.1	7.3	6.9	5.1	39.6	0.5	8.7	0.0	5.0	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	19.3	20.2	66.4	62.6	10.3	70.4	0.0	59.2	53.1	0.0	60.9
LnGrp LOS	F	B	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1284			2593			640			79	
Approach Delay, s/veh		20.9			61.9			67.8			58.7	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	66.4		15.0	5.9	76.1		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	18.3	55.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	12.0	19.3		5.9	3.8	73.1		17.9				
Green Ext Time (p_c), s	0.2	9.8		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		51.2
HCM 6th LOS		D

Notes

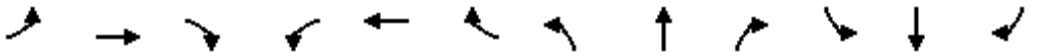
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	2	122	1	1	1	122	550	12	3	240	32
Future Volume (vph)	71	2	122	1	1	1	122	550	12	3	240	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	31.0	54.0		11.0	34.0	34.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	31.0%	54.0%		11.0%	34.0%	34.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	2	122	1	1	1	122	550	12	3	240	32
Future Volume (veh/h)	71	2	122	1	1	1	122	550	12	3	240	32
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	2	133	1	1	1	133	598	13	3	261	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	201	171	206	201	171	165	2730	59	6	2411	1075
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.18	1.00	1.00	0.00	0.67	0.67
Sat Flow, veh/h	1437	1900	1610	1274	1900	1610	1810	3612	78	1810	3610	1610
Grp Volume(v), veh/h	77	2	133	1	1	1	133	299	312	3	261	35
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1274	1900	1610	1810	1805	1886	1810	1805	1610
Q Serve(g_s), s	5.1	0.1	8.0	0.1	0.0	0.1	7.0	0.0	0.0	0.2	2.6	0.7
Cycle Q Clear(g_c), s	5.1	0.1	8.0	0.2	0.0	0.1	7.0	0.0	0.0	0.2	2.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	224	201	171	206	201	171	165	1364	1425	6	2411	1075
V/C Ratio(X)	0.34	0.01	0.78	0.00	0.00	0.01	0.81	0.22	0.22	0.52	0.11	0.03
Avail Cap(c_a), veh/h	503	570	483	453	570	483	498	1364	1425	136	2411	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	0.80	0.80	0.80
Uniform Delay (d), s/veh	42.3	40.0	43.6	40.1	40.0	40.0	40.0	0.0	0.0	49.8	5.9	5.6
Incr Delay (d2), s/veh	0.9	0.0	7.5	0.0	0.0	0.0	8.6	0.4	0.3	47.5	0.1	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	1.8	0.0	3.5	0.0	0.0	0.0	3.3	0.1	0.1	0.2	0.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	40.0	51.1	40.1	40.0	40.0	48.6	0.4	0.3	97.2	6.0	5.7
LnGrp LOS	D	D	D	D	D	D	D	A	A	F	A	A
Approach Vol, veh/h		212			3			744			299	
Approach Delay, s/veh		48.1			40.0			9.0			6.9	
Approach LOS		D			D			A			A	

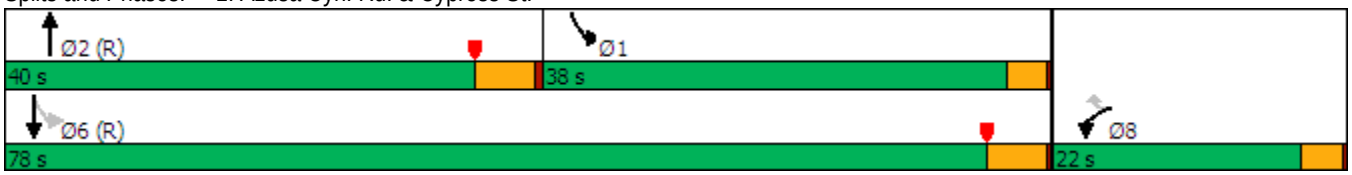
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	80.6		15.6	12.6	71.8		15.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	49.0		30.0	27.5	29.0		30.0				
Max Q Clear Time (g_c+I1), s	2.2	2.0		10.0	9.0	4.6		2.2				
Green Ext Time (p_c), s	0.0	4.2		0.6	0.3	1.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	177	202	336	523	445	431
Future Volume (vph)	177	202	336	523	445	431
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	40.0		38.0	78.0
Total Split (%)	22.0%	22.0%	40.0%		38.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	177	202	336	523	445	431
Future Volume (veh/h)	177	202	336	523	445	431
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	133	354	551	468	454
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	395	176	632	564	806	2909
Arrive On Green	0.11	0.11	0.35	0.35	0.68	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	261	133	354	551	468	454
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	6.9	8.0	15.9	33.8	7.7	0.0
Cycle Q Clear(g_c), s	6.9	8.0	15.9	33.8	7.7	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	395	176	632	564	806	2909
V/C Ratio(X)	0.66	0.76	0.56	0.98	0.58	0.16
Avail Cap(c_a), veh/h	670	298	632	564	806	2909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.90	0.90
Uniform Delay (d), s/veh	42.8	43.2	26.3	32.1	10.2	0.0
Incr Delay (d2), s/veh	1.9	6.5	3.6	32.8	0.9	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	3.1	3.5	7.3	17.8	3.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.6	49.7	29.8	64.9	11.2	0.1
LnGrp LOS	D	D	C	E	B	A
Approach Vol, veh/h	394		905			922
Approach Delay, s/veh	46.4		51.2			5.7
Approach LOS	D		D			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.6	40.0			85.6	14.4
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	34.5	* 35			73.0	18.5
Max Q Clear Time (g_c+I1), s	9.7	35.8			2.0	10.0
Green Ext Time (p_c), s	1.5	0.0			3.5	0.9

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	6	396	37	20	17	173	316	11	9	424	190
Future Volume (vph)	512	6	396	37	20	17	173	316	11	9	424	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	94.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	512	6	396	37	20	17	173	316	11	9	424	190
Future Vol, veh/h	512	6	396	37	20	17	173	316	11	9	424	190
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	528	6	408	38	21	18	178	326	11	9	437	196
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

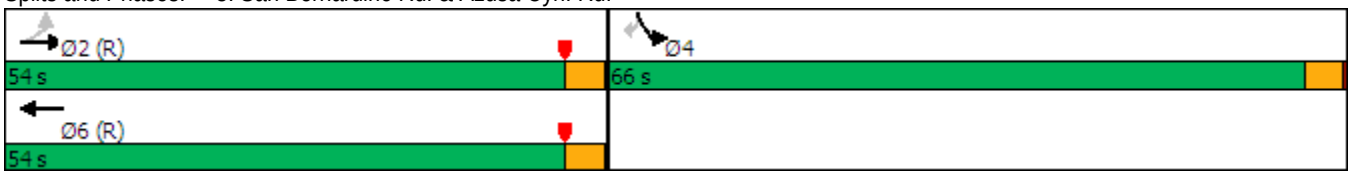
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	110.3	15	124.1	57.8
HCM LOS	F	B	F	F

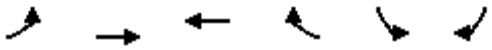
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	35%	99%	0%	65%	0%	2%	0%
Vol Thru, %	63%	1%	0%	35%	0%	98%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	500	518	396	57	17	433	190
LT Vol	173	512	0	37	0	9	0
Through Vol	316	6	0	20	0	424	0
RT Vol	11	0	396	0	17	0	190
Lane Flow Rate	515	534	408	59	18	446	196
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.163	1.267	0.833	0.165	0.044	1.01	0.404
Departure Headway (Hd)	8.449	8.996	7.75	10.823	9.736	8.633	7.895
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	433	406	469	334	370	424	458
Service Time	6.449	6.696	5.45	8.523	7.436	6.333	5.595
HCM Lane V/C Ratio	1.189	1.315	0.87	0.177	0.049	1.052	0.428
HCM Control Delay	124.1	165.2	38.6	15.6	12.9	76.3	15.8
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	18.6	22	8.1	0.6	0.1	12.8	1.9

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	126	339	348	365	748	151
Future Volume (vph)	126	339	348	365	748	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	126	339	348	365	748	151
Future Volume (veh/h)	126	339	348	365	748	151
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	133	357	366	384	787	159
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	229	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	723	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	133	357	366	384	787	159
Grp Sat Flow(s),veh/h/ln	723	1805	1805	1610	1810	1610
Q Serve(g_s), s	20.7	7.7	17.8	21.9	44.6	6.4
Cycle Q Clear(g_c), s	42.6	7.7	17.8	21.9	44.6	6.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	229	1504	752	671	935	832
V/C Ratio(X)	0.58	0.24	0.49	0.57	0.84	0.19
Avail Cap(c_a), veh/h	229	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	22.7	25.6	26.8	24.8	15.6
Incr Delay (d2), s/veh	10.3	0.4	2.2	3.5	9.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	3.3	7.9	8.8	20.8	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.4	23.0	27.9	30.3	33.9	16.1
LnGrp LOS	D	C	C	C	C	B
Approach Vol, veh/h		490	750		946	
Approach Delay, s/veh		31.3	29.1		30.9	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

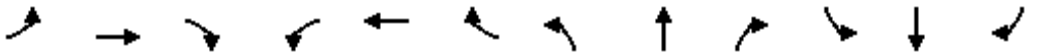
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	339	217	1315	35	160	14	265	32	11	46
Future Volume (vph)	39	2408	339	217	1315	35	160	14	265	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							46%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.4	65.0		17.0	71.6	71.6	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	8.7%	54.2%		14.2%	59.7%	59.7%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	2408	339	217	1315	35	160	14	265	32	11	46
Future Volume (veh/h)	39	2408	339	217	1315	35	160	14	265	32	11	46
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	2535	357	228	1384	37	179	0	279	34	12	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	2460	330	204	2216	939	543	0	242	151	28	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4920	661	1810	3800	1610	3619	0	1610	1810	332	1329
Grp Volume(v), veh/h	41	1930	962	228	1384	37	179	0	279	34	0	60
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1661
Q Serve(g_s), s	2.7	60.0	60.0	13.5	28.6	1.2	5.3	0.0	18.0	2.1	0.0	4.1
Cycle Q Clear(g_c), s	2.7	60.0	60.0	13.5	28.6	1.2	5.3	0.0	18.0	2.1	0.0	4.1
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	53	1900	891	204	2216	939	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.02	1.08	1.12	0.62	0.04	0.33	0.00	1.16	0.23	0.00	0.43
Avail Cap(c_a), veh/h	104	1900	891	204	2216	939	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	30.0	30.0	53.3	16.4	10.7	45.6	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	21.0	24.6	54.4	99.0	1.3	0.1	1.6	0.0	105.7	3.4	0.0	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	31.4	36.8	11.6	11.7	0.4	2.5	0.0	14.3	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.8	54.6	84.4	152.3	17.7	10.7	47.2	0.0	156.7	54.8	0.0	61.9
LnGrp LOS	E	F	F	F	B	B	D	A	F	D	A	E
Approach Vol, veh/h		2933			1649			458			94	
Approach Delay, s/veh		64.7			36.2			113.9			59.3	
Approach LOS		E			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.0	75.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	6.9	66.6		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.1	4.7	30.6		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	12.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		59.8	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

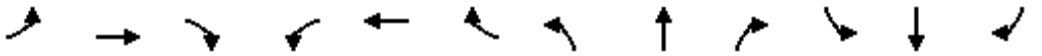
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1	344	3	1	1	233	305	1	1	529	72
Future Volume (vph)	105	1	344	3	1	1	233	305	1	1	529	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	32.0	58.0		8.0	34.0	34.0
Total Split (%)	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	32.0%	58.0%		8.0%	34.0%	34.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1	344	3	1	1	233	305	1	1	529	72
Future Volume (veh/h)	105	1	344	3	1	1	233	305	1	1	529	72
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	112	1	366	3	1	1	248	324	1	1	563	77
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	429	473	401	328	473	401	282	2271	7	2	1662	741
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.31	1.00	1.00	0.00	0.46	0.46
Sat Flow, veh/h	1437	1900	1610	1031	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	112	1	366	3	1	1	248	158	167	1	563	77
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1031	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.4	0.0	22.1	0.2	0.0	0.0	13.0	0.0	0.0	0.1	10.0	2.7
Cycle Q Clear(g_c), s	6.4	0.0	22.1	0.3	0.0	0.0	13.0	0.0	0.0	0.1	10.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	429	473	401	328	473	401	282	1110	1167	2	1662	741
V/C Ratio(X)	0.26	0.00	0.91	0.01	0.00	0.00	0.88	0.14	0.14	0.50	0.34	0.10
Avail Cap(c_a), veh/h	488	551	467	371	551	467	516	1110	1167	81	1662	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	0.29	0.29	0.29
Uniform Delay (d), s/veh	30.6	28.2	36.5	28.3	28.2	28.2	33.5	0.0	0.0	49.9	17.2	15.3
Incr Delay (d2), s/veh	0.3	0.0	20.5	0.0	0.0	0.0	7.3	0.2	0.2	47.7	0.2	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	2.2	0.0	10.8	0.1	0.0	0.0	5.3	0.1	0.1	0.1	4.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	28.2	57.0	28.3	28.2	28.2	40.9	0.2	0.2	97.6	17.4	15.4
LnGrp LOS	C	C	E	C	C	C	D	A	A	F	B	B
Approach Vol, veh/h		479			5			573			641	
Approach Delay, s/veh		50.9			28.3			17.8			17.3	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	66.5		29.9	19.1	51.0		29.9				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	53.0		29.0	28.5	29.0		29.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		24.1	15.0	12.0		2.3				
Green Ext Time (p_c), s	0.0	2.0		0.8	0.6	3.8		0.0				

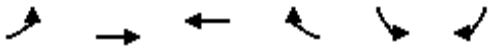
Intersection Summary			
HCM 6th Ctrl Delay		27.0	
HCM 6th LOS		C	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	236	379	305	168	146	216
Future Volume (vph)	236	379	305	168	146	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3417		1805	3610
Flt Permitted	0.97	1.00	1.00		0.43	1.00
Satd. Flow (perm)	3351	1470	3417		811	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	262	421	339	187	162	240
RTOR Reduction (vph)	174	188	39	0	0	0
Lane Group Flow (vph)	290	31	487	0	162	240
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.0	14.0	66.3		77.5	77.5
Effective Green, g (s)	14.0	14.0	66.3		77.5	77.5
Actuated g/C Ratio	0.14	0.14	0.66		0.78	0.78
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	469	205	2265		705	2797
v/s Ratio Prot	c0.09		0.14		c0.02	0.07
v/s Ratio Perm		0.02			c0.16	
v/c Ratio	0.62	0.15	0.21		0.23	0.09
Uniform Delay, d1	40.5	37.8	6.6		2.9	2.7
Progression Factor	1.00	1.00	1.00		1.82	1.43
Incremental Delay, d2	2.4	0.3	0.2		0.2	0.1
Delay (s)	42.9	38.1	6.8		5.5	3.9
Level of Service	D	D	A		A	A
Approach Delay (s)	41.4		6.8			4.5
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

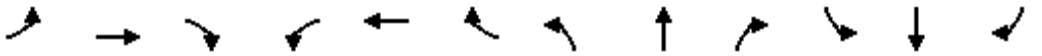
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	77	145	341	427	259	76
Future Volume (vph)	77	145	341	427	259	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3309		1805	1615
Flt Permitted	0.26	1.00	1.00		0.95	1.00
Satd. Flow (perm)	489	3610	3309		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	87	163	383	480	291	85
RTOR Reduction (vph)	0	0	189	0	0	27
Lane Group Flow (vph)	87	163	674	0	291	58
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	66.0	66.0	66.0		46.0	46.0
Effective Green, g (s)	66.0	66.0	66.0		46.0	46.0
Actuated g/C Ratio	0.55	0.55	0.55		0.38	0.38
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	268	1985	1819		691	619
v/s Ratio Prot		0.05	c0.20		c0.16	
v/s Ratio Perm	0.18					0.04
v/c Ratio	0.32	0.08	0.37		0.42	0.09
Uniform Delay, d1	14.8	12.7	15.3		27.2	23.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.2	0.1	0.6		1.9	0.3
Delay (s)	18.0	12.8	15.8		29.1	24.0
Level of Service	B	B	B		C	C
Approach Delay (s)		14.6	15.8		27.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

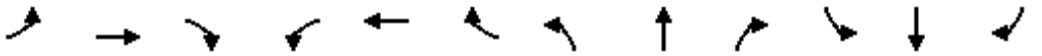
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	199	140	2178	42	432	17	137	20	12	40
Future Volume (vph)	25	945	199	140	2178	42	432	17	137	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	27	1038	219	154	2393	46	475	19	151	22	13	44
RTOR Reduction (vph)	0	30	0	0	0	19	0	0	128	0	40	0
Lane Group Flow (vph)	27	1227	0	154	2393	27	247	247	23	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	58.9		14.6	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	58.9		14.6	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.49		0.12	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2797		231	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.01	0.22		c0.08	c0.63		c0.13	0.13		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.71	0.44		0.67	1.06	0.02	0.87	0.87	0.08	0.14	0.11	
Uniform Delay, d1	58.5	19.8		50.4	24.5	10.1	49.8	49.8	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	47.3	0.5		7.1	38.4	0.0	28.0	28.0	0.5	1.8	1.3	
Delay (s)	105.7	20.3		57.5	62.8	10.1	77.8	77.8	44.4	52.8	52.2	
Level of Service	F	C		E	E	B	E	E	D	D	D	
Approach Delay (s)		22.1			61.6			70.0			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	51.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	2	122	1	1	1	122	550	12	3	240	32
Future Volume (vph)	71	2	122	1	1	1	122	550	12	3	240	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3598		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3598		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	2	133	1	1	1	133	598	13	3	261	35
RTOR Reduction (vph)	0	0	117	0	0	1	0	1	0	0	0	13
Lane Group Flow (vph)	77	2	16	1	1	0	133	610	0	3	261	22
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.3	12.3	12.3	12.3	12.3	12.3	12.7	72.9		1.3	61.5	61.5
Effective Green, g (s)	12.3	12.3	12.3	12.3	12.3	12.3	12.7	72.9		1.3	61.5	61.5
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.73		0.01	0.62	0.62
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	176	233	198	176	233	198	229	2622		23	2220	993
v/s Ratio Prot		0.00			0.00		c0.07	c0.17		0.00	0.07	
v/s Ratio Perm	c0.05		0.01	0.00		0.00						0.01
v/c Ratio	0.44	0.01	0.08	0.01	0.00	0.00	0.58	0.23		0.13	0.12	0.02
Uniform Delay, d1	40.6	38.5	38.9	38.5	38.5	38.5	41.1	4.4		48.8	8.0	7.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.06		1.00	1.00	1.00
Incremental Delay, d2	1.7	0.0	0.2	0.0	0.0	0.0	3.6	0.2		2.6	0.1	0.0
Delay (s)	42.4	38.5	39.0	38.5	38.5	38.5	44.4	4.9		51.4	8.1	7.6
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.2			38.5			12.0			8.5	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

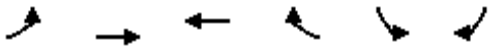
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	177	202	336	523	445	431
Future Volume (vph)	177	202	336	523	445	431
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3280		1805	3610
Flt Permitted	0.97	1.00	1.00		0.21	1.00
Satd. Flow (perm)	3394	1470	3280		392	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	186	213	354	551	468	454
RTOR Reduction (vph)	62	111	255	0	0	0
Lane Group Flow (vph)	211	15	650	0	468	454
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.0	12.0	41.5		81.0	79.5
Effective Green, g (s)	12.0	12.0	41.5		81.0	79.5
Actuated g/C Ratio	0.12	0.12	0.42		0.81	0.80
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	407	176	1361		805	2869
v/s Ratio Prot	c0.06		0.20		c0.20	0.13
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.52	0.09	0.48		0.58	0.16
Uniform Delay, d1	41.3	39.1	21.3		12.9	2.4
Progression Factor	1.00	1.00	1.00		0.88	1.35
Incremental Delay, d2	1.1	0.2	1.2		1.0	0.1
Delay (s)	42.4	39.3	22.5		12.3	3.4
Level of Service	D	D	C		B	A
Approach Delay (s)	41.4		22.5			7.9
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	126	339	348	365	748	151
Future Volume (vph)	126	339	348	365	748	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3333		1805	1615
Flt Permitted	0.25	1.00	1.00		0.95	1.00
Satd. Flow (perm)	479	3610	3333		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	133	357	366	384	787	159
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	133	357	592	0	787	141
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	199	1504	1388		932	834
v/s Ratio Prot		0.10	0.18		c0.44	
v/s Ratio Perm	c0.28					0.09
v/c Ratio	0.67	0.24	0.43		0.84	0.17
Uniform Delay, d1	28.3	22.7	24.8		24.9	15.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	16.4	0.4	1.0		9.3	0.4
Delay (s)	44.7	23.0	25.8		34.1	15.8
Level of Service	D	C	C		C	B
Approach Delay (s)		28.9	25.8		31.0	
Approach LOS		C	C		C	

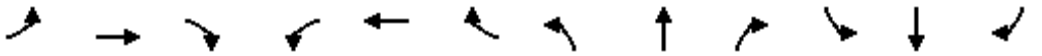
Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	339	217	1315	35	160	14	265	32	11	46
Future Volume (vph)	39	2408	339	217	1315	35	160	14	265	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	2535	357	228	1384	37	168	15	279	34	12	48
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	185	0	44	0
Lane Group Flow (vph)	41	2875	0	228	1384	21	91	92	94	34	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	5.5	60.0		13.5	68.0	68.0	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	5.5	60.0		13.5	68.0	68.0	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.05	0.50		0.11	0.57	0.57	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	87	2850		213	2153	1076	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.50		c0.12	0.36		0.05	0.05		c0.02	0.01	
v/s Ratio Perm						0.01			c0.05			
v/c Ratio	0.47	1.01		1.07	0.64	0.02	0.32	0.32	0.33	0.22	0.10	
Uniform Delay, d1	55.8	30.0		53.2	17.7	11.4	45.5	45.6	45.6	51.3	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	19.0		81.6	1.5	0.0	2.9	3.0	3.1	3.1	1.3	
Delay (s)	59.8	49.0		134.8	19.2	11.4	48.5	48.5	48.7	54.4	52.1	
Level of Service	E	D		F	B	B	D	D	D	D	D	
Approach Delay (s)		49.1			35.0			48.6			53.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1	344	3	1	1	233	305	1	1	529	72
Future Volume (vph)	105	1	344	3	1	1	233	305	1	1	529	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	112	1	366	3	1	1	248	324	1	1	563	77
RTOR Reduction (vph)	0	0	314	0	0	1	0	0	0	0	0	36
Lane Group Flow (vph)	112	1	52	3	1	0	248	325	0	1	563	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.1	14.1	14.1	14.1	14.1	14.1	19.0	71.2		1.2	53.4	53.4
Effective Green, g (s)	14.1	14.1	14.1	14.1	14.1	14.1	19.0	71.2		1.2	53.4	53.4
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.19	0.71		0.01	0.53	0.53
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	202	267	227	202	267	227	342	2568		21	1927	862
v/s Ratio Prot		0.00			0.00		c0.14	0.09		0.00	c0.16	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.03
v/c Ratio	0.55	0.00	0.23	0.01	0.00	0.00	0.73	0.13		0.05	0.29	0.05
Uniform Delay, d1	40.0	36.9	38.1	37.0	36.9	36.9	38.0	4.6		48.8	12.9	11.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.17	0.51		1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0	0.5	0.0	0.0	0.0	6.7	0.1		0.9	0.4	0.1
Delay (s)	43.3	36.9	38.6	37.0	36.9	36.9	51.3	2.4		49.8	13.3	11.2
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.7			37.0			23.6			13.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 3.3:

EXISTING (HYPOTHETICAL "NON-COVID" 2021) TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

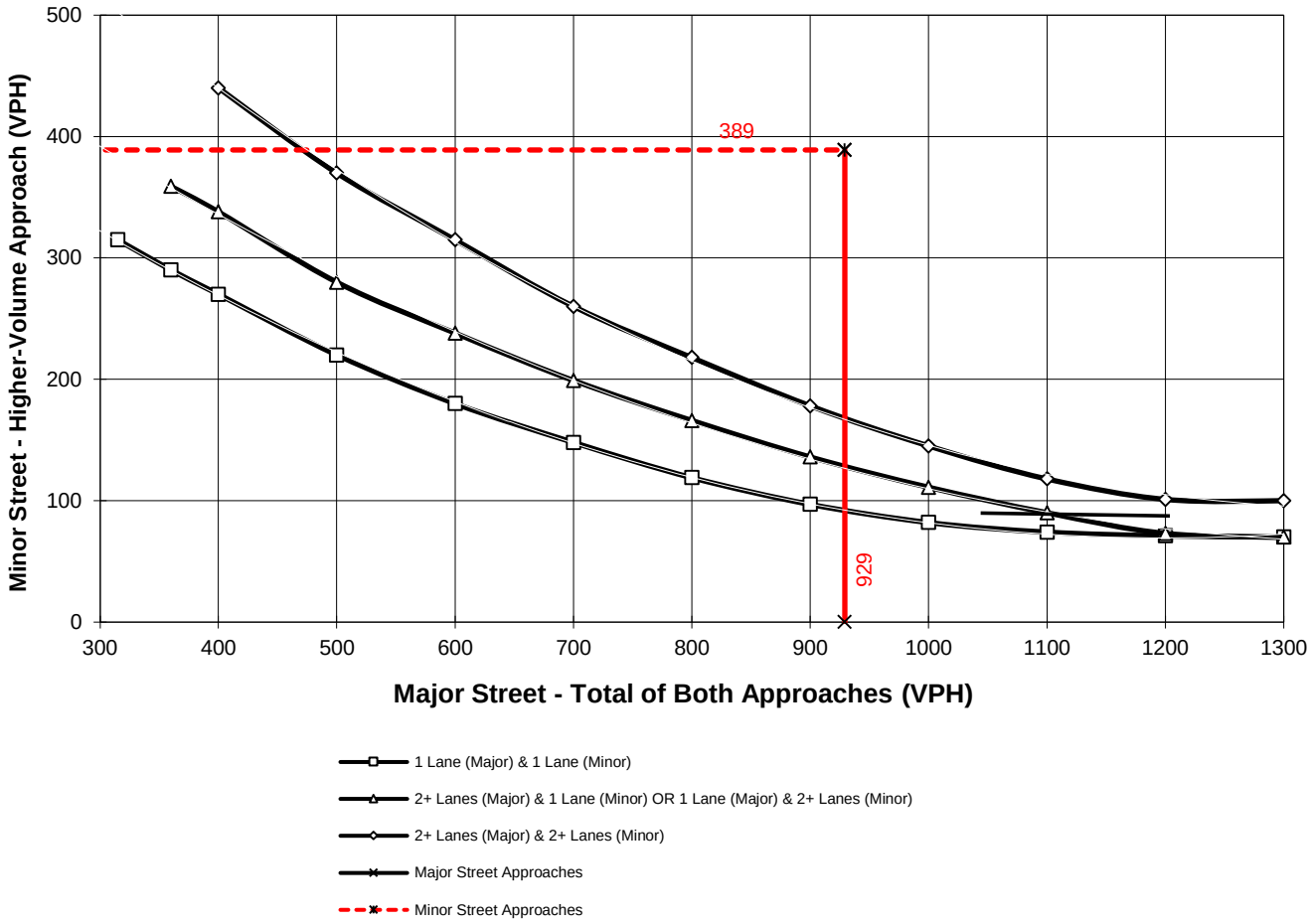
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2021) AM PEAK HOUR WARRANTS**

Major Street Name = **Azusa Canyon Rd.** Total of Both Approaches (VPH) = **929**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Los Angeles St.** High Volume Approach (VPH) = **389**
Number of Approach Lanes Minor Street = **2**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #2

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

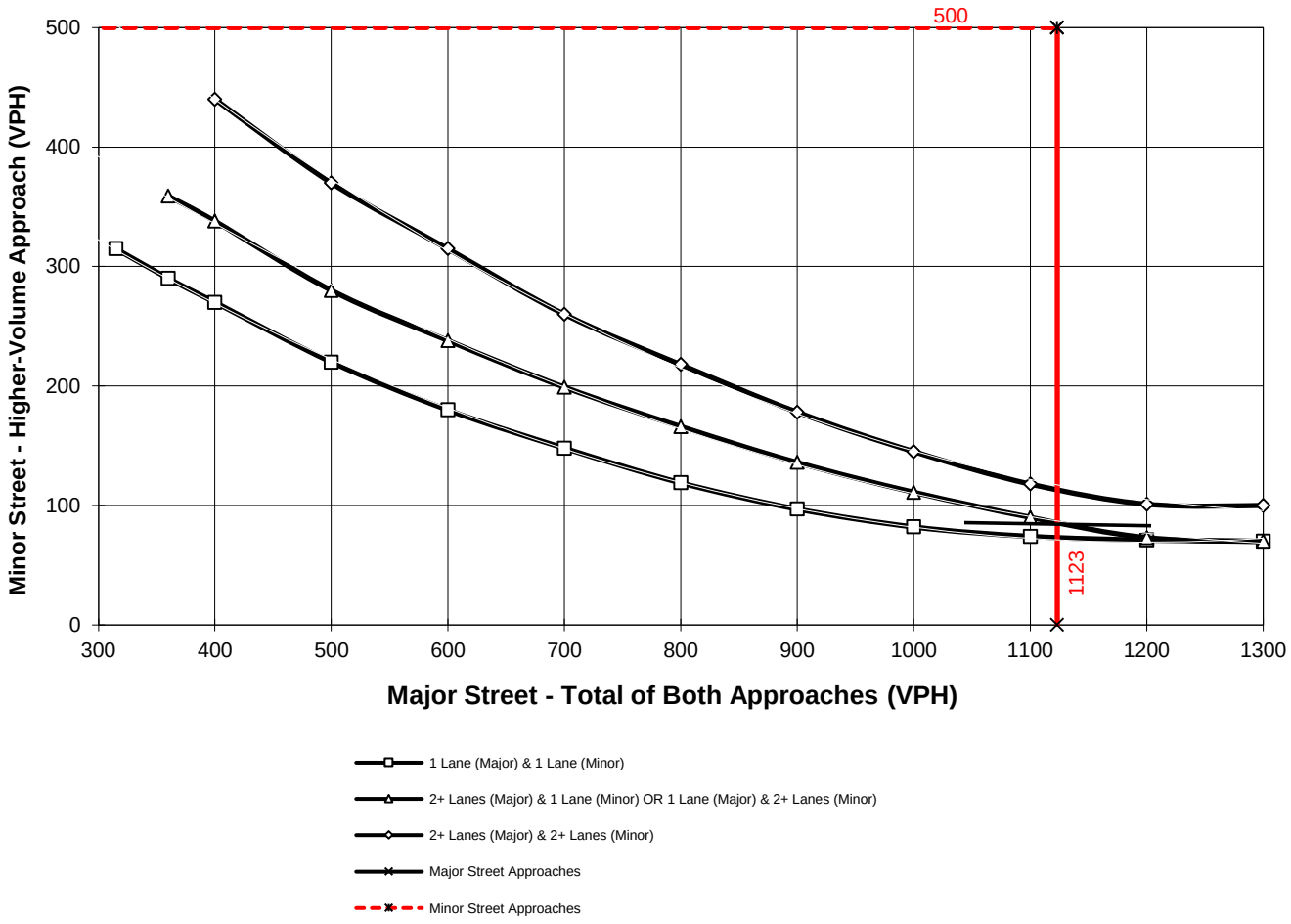
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2021) PM PEAK HOUR WARRANTS**

Major Street Name = **Azusa Canyon Rd.** Total of Both Approaches (VPH) = **1,123**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Los Angeles St.** High Volume Approach (VPH) = **914**
Number of Approach Lanes Minor Street = **2**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #2

APPENDIX 5.1:

EXISTING (HYPOTHETICAL "NON-COVID" 2021) PLUS SITE BASELINE LAND USE CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	237	379	308	168	146	223
Future Volume (vph)	237	379	308	168	146	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	32.0	32.0	46.0		22.0	68.0
Total Split (%)	32.0%	32.0%	46.0%		22.0%	68.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	237	379	308	168	146	223
Future Volume (veh/h)	237	379	308	168	146	223
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	228	458	342	187	162	248
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	322	573	1476	792	687	2660
Arrive On Green	0.18	0.18	0.65	0.65	0.10	1.00
Sat Flow, veh/h	1810	3220	2364	1217	1810	3705
Grp Volume(v), veh/h	228	458	271	258	162	248
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1681	1810	1805
Q Serve(g_s), s	11.8	13.6	6.2	6.3	2.9	0.0
Cycle Q Clear(g_c), s	11.8	13.6	6.2	6.3	2.9	0.0
Prop In Lane	1.00	1.00		0.72	1.00	
Lane Grp Cap(c), veh/h	322	573	1174	1093	687	2660
V/C Ratio(X)	0.71	0.80	0.23	0.24	0.24	0.09
Avail Cap(c_a), veh/h	516	918	1174	1093	928	2660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.6	39.4	7.2	7.2	4.4	0.0
Incr Delay (d2), s/veh	2.9	2.6	0.5	0.5	0.2	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	5.4	5.5	2.3	2.2	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.5	42.0	7.6	7.7	4.6	0.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	686		529			410
Approach Delay, s/veh	41.8		7.7			1.9
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.6	70.0			78.7	21.3
Change Period (Y+Rc), s	3.5	5.0			5.0	3.5
Max Green Setting (Gmax), s	18.5	41.0			63.0	28.5
Max Q Clear Time (g_c+I1), s	4.9	8.3			2.0	15.6
Green Ext Time (p_c), s	0.3	3.6			1.8	2.2

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

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	12	186	7	6	19	225	257	11	15	151	274
Future Volume (vph)	194	12	186	7	6	19	225	257	11	15	151	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	32.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	194	12	186	7	6	19	225	257	11	15	151	274
Future Vol, veh/h	194	12	186	7	6	19	225	257	11	15	151	274
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	206	13	198	7	6	20	239	273	12	16	161	291
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

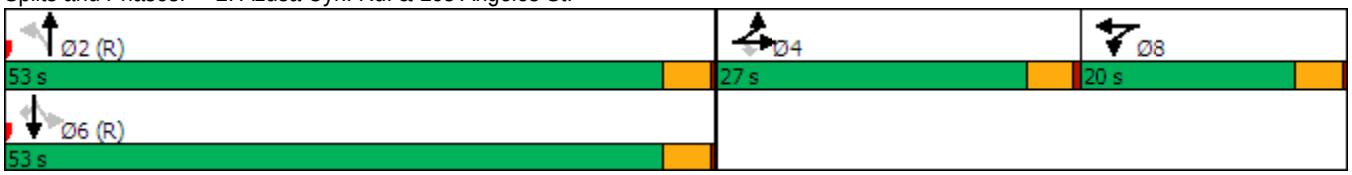
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	15.8	11.4	64	14.7
HCM LOS	C	B	F	B

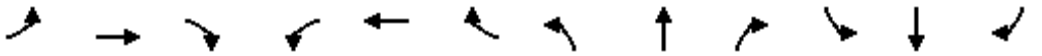
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	46%	94%	0%	54%	0%	9%	0%
Vol Thru, %	52%	6%	0%	46%	0%	91%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	493	206	186	13	19	166	274
LT Vol	225	194	0	7	0	15	0
Through Vol	257	12	0	6	0	151	0
RT Vol	11	0	186	0	19	0	274
Lane Flow Rate	524	219	198	14	20	177	291
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.995	0.484	0.371	0.034	0.044	0.347	0.511
Departure Headway (Hd)	6.832	7.952	6.746	8.874	7.864	7.07	6.306
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	535	454	532	403	454	509	571
Service Time	4.832	5.697	4.49	6.641	5.63	4.812	4.048
HCM Lane V/C Ratio	0.979	0.482	0.372	0.035	0.044	0.348	0.51
HCM Control Delay	64	18	13.4	12	11	13.5	15.5
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	13.9	2.6	1.7	0.1	0.1	1.5	2.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	12	186	7	6	19	225	257	11	15	151	274
Future Volume (vph)	194	12	186	7	6	19	225	257	11	15	151	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	47%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	27.0	27.0	27.0	20.0	20.0		53.0	53.0		53.0	53.0	53.0
Total Split (%)	27.0%	27.0%	27.0%	20.0%	20.0%		53.0%	53.0%		53.0%	53.0%	53.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	12	186	7	6	19	225	257	11	15	151	274
Future Volume (veh/h)	194	12	186	7	6	19	225	257	11	15	151	274
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	215	0	198	7	6	20	239	273	12	16	161	291
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	539	0	240	43	9	31	455	500	21	122	1202	1139
Arrive On Green	0.15	0.00	0.15	0.02	0.02	0.02	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	3619	0	1610	1810	385	1284	570	708	30	117	1700	1610
Grp Volume(v), veh/h	215	0	198	7	0	26	524	0	0	177	0	291
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1669	1307	0	0	1817	0	1610
Q Serve(g_s), s	5.4	0.0	11.9	0.4	0.0	1.5	16.4	0.0	0.0	0.0	0.0	6.5
Cycle Q Clear(g_c), s	5.4	0.0	11.9	0.4	0.0	1.5	19.4	0.0	0.0	3.0	0.0	6.5
Prop In Lane	1.00		1.00	1.00		0.77	0.46		0.02	0.09		1.00
Lane Grp Cap(c), veh/h	539	0	240	43	0	40	977	0	0	1324	0	1139
V/C Ratio(X)	0.40	0.00	0.83	0.16	0.00	0.65	0.54	0.00	0.00	0.13	0.00	0.26
Avail Cap(c_a), veh/h	832	0	370	290	0	267	977	0	0	1324	0	1139
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	1.00	1.00	0.00	1.00	0.95	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	41.3	47.8	0.0	48.4	7.1	0.0	0.0	4.7	0.0	5.2
Incr Delay (d2), s/veh	0.5	0.0	8.7	1.7	0.0	16.3	2.0	0.0	0.0	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	5.1	0.2	0.0	0.8	5.1	0.0	0.0	1.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	50.0	49.5	0.0	64.7	9.1	0.0	0.0	4.9	0.0	5.8
LnGrp LOS	D	A	D	D	A	E	A	A	A	A	A	A
Approach Vol, veh/h		413			33			524			468	
Approach Delay, s/veh		44.2			61.4			9.1			5.5	
Approach LOS		D			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.7		18.9		74.7		6.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		49.0		23.0		49.0		16.0				
Max Q Clear Time (g_c+I1), s		21.4		13.9		8.5		3.5				
Green Ext Time (p_c), s		4.6		1.0		2.2		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									

Notes

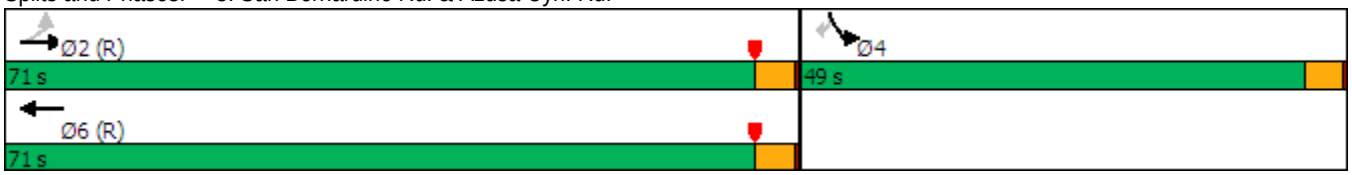
User approved volume balancing among the lanes for turning movement.

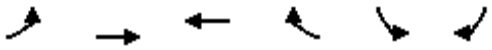
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	78	145	341	429	260	76
Future Volume (vph)	78	145	341	429	260	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	71.0	71.0	71.0		49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%		40.8%	40.8%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	78	145	341	429	260	76
Future Volume (veh/h)	78	145	341	429	260	76
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	88	163	383	482	292	85
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	300	2016	1008	899	679	604
Arrive On Green	0.56	0.56	0.56	0.56	0.38	0.38
Sat Flow, veh/h	650	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	88	163	383	482	292	85
Grp Sat Flow(s),veh/h/ln	650	1805	1805	1610	1810	1610
Q Serve(g_s), s	11.9	2.5	14.3	22.6	14.4	4.2
Cycle Q Clear(g_c), s	34.5	2.5	14.3	22.6	14.4	4.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	300	2016	1008	899	679	604
V/C Ratio(X)	0.29	0.08	0.38	0.54	0.43	0.14
Avail Cap(c_a), veh/h	300	2016	1008	899	679	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	12.3	14.9	16.7	27.9	24.7
Incr Delay (d2), s/veh	2.5	0.1	1.1	2.3	2.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.0	5.8	8.4	6.6	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.0	12.3	15.9	19.0	29.9	25.2
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		251	865		377	
Approach Delay, s/veh		18.5	17.6		28.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		71.0		49.0		71.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		67.0		45.0		67.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

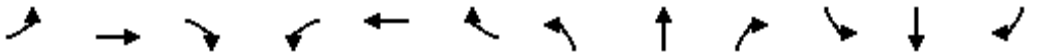
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Future Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	60.0		22.0	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	50.0%		18.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	945	202	143	2178	42	433	17	138	20	12	40
Future Volume (veh/h)	25	945	202	143	2178	42	433	17	138	20	12	40
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	1038	222	157	2393	46	490	0	152	22	13	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	2320	495	186	2252	954	543	0	242	151	32	107
Arrive On Green	0.02	0.51	0.51	0.10	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4553	972	1810	3800	1610	3619	0	1610	1810	380	1288
Grp Volume(v), veh/h	27	866	394	157	2393	46	490	0	152	22	0	57
Grp Sat Flow(s),veh/h/ln	1810	1900	1725	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	1.8	17.4	17.4	10.2	71.1	1.4	16.0	0.0	10.6	1.4	0.0	3.9
Cycle Q Clear(g_c), s	1.8	17.4	17.4	10.2	71.1	1.4	16.0	0.0	10.6	1.4	0.0	3.9
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	36	1936	879	186	2252	954	543	0	242	151	0	139
V/C Ratio(X)	0.75	0.45	0.45	0.84	1.06	0.05	0.90	0.00	0.63	0.15	0.00	0.41
Avail Cap(c_a), veh/h	60	1936	879	279	2252	954	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	18.7	18.7	52.9	24.4	10.2	50.1	0.0	47.9	51.0	0.0	52.2
Incr Delay (d2), s/veh	26.8	0.7	1.7	13.7	38.1	0.1	20.5	0.0	11.6	2.0	0.0	8.7
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	1.1	7.4	6.9	5.2	39.6	0.5	8.8	0.0	5.0	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	19.4	20.4	66.6	62.6	10.3	70.7	0.0	59.5	53.1	0.0	60.9
LnGrp LOS	F	B	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1287			2596			642			79	
Approach Delay, s/veh		21.1			61.9			68.0			58.7	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.8	66.2		15.0	5.9	76.1		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	18.5	55.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	12.2	19.4		5.9	3.8	73.1		18.0				
Green Ext Time (p_c), s	0.2	9.8		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		51.3	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

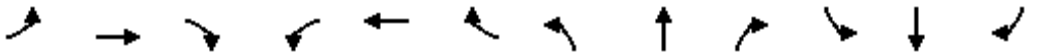
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Future Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	60.0		22.0	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	50.0%		18.3%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	945	202	143	2178	42	433	17	138	20	12	40
Future Volume (veh/h)	25	945	202	143	2178	42	433	17	138	20	12	40
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	1038	222	157	2393	46	490	0	152	22	13	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	2320	495	186	3304	63	543	0	242	151	32	107
Arrive On Green	0.02	0.51	0.51	0.10	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4553	972	1810	5574	107	3619	0	1610	1810	380	1288
Grp Volume(v), veh/h	27	866	394	157	1629	810	490	0	152	22	0	57
Grp Sat Flow(s),veh/h/ln	1810	1900	1725	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	1.8	17.4	17.4	10.2	36.7	37.0	16.0	0.0	10.6	1.4	0.0	3.9
Cycle Q Clear(g_c), s	1.8	17.4	17.4	10.2	36.7	37.0	16.0	0.0	10.6	1.4	0.0	3.9
Prop In Lane	1.00		0.56	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	36	1936	879	186	2252	1115	543	0	242	151	0	139
V/C Ratio(X)	0.75	0.45	0.45	0.84	0.72	0.73	0.90	0.00	0.63	0.15	0.00	0.41
Avail Cap(c_a), veh/h	60	1936	879	279	2252	1115	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	18.7	18.7	52.9	17.4	17.5	50.1	0.0	47.9	51.0	0.0	52.2
Incr Delay (d2), s/veh	26.8	0.7	1.7	13.7	2.1	4.2	20.5	0.0	11.6	2.0	0.0	8.7
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	1.1	7.4	6.9	5.2	14.9	15.5	8.8	0.0	5.0	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	19.4	20.4	66.6	19.5	21.6	70.7	0.0	59.5	53.1	0.0	60.9
LnGrp LOS	F	B	C	E	B	C	E	A	E	D	A	E
Approach Vol, veh/h		1287			2596			642			79	
Approach Delay, s/veh		21.1			23.0			68.0			58.7	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.8	66.2		15.0	5.9	76.1		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	18.5	55.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	12.2	19.4		5.9	3.8	39.0		18.0				
Green Ext Time (p_c), s	0.2	9.8		0.1	0.0	22.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		29.4
HCM 6th LOS		C

Notes

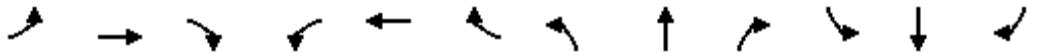
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	2	123	1	1	1	122	552	12	3	246	32
Future Volume (vph)	71	2	123	1	1	1	122	552	12	3	246	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	31.0	55.0		11.0	35.0	35.0
Total Split (%)	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	31.0%	55.0%		11.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 11 (11%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	2	123	1	1	1	122	552	12	3	246	32
Future Volume (veh/h)	71	2	123	1	1	1	122	552	12	3	246	32
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	2	134	1	1	1	133	600	13	3	267	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	202	171	206	202	171	165	2729	59	6	2409	1075
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.18	1.00	1.00	0.00	0.67	0.67
Sat Flow, veh/h	1437	1900	1610	1273	1900	1610	1810	3613	78	1810	3610	1610
Grp Volume(v), veh/h	77	2	134	1	1	1	133	300	313	3	267	35
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1273	1900	1610	1810	1805	1886	1810	1805	1610
Q Serve(g_s), s	5.1	0.1	8.1	0.1	0.0	0.1	7.0	0.0	0.0	0.2	2.7	0.7
Cycle Q Clear(g_c), s	5.1	0.1	8.1	0.2	0.0	0.1	7.0	0.0	0.0	0.2	2.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	224	202	171	206	202	171	165	1363	1424	6	2409	1075
V/C Ratio(X)	0.34	0.01	0.78	0.00	0.00	0.01	0.81	0.22	0.22	0.52	0.11	0.03
Avail Cap(c_a), veh/h	488	551	467	440	551	467	498	1363	1424	136	2409	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	0.80	0.80	0.80
Uniform Delay (d), s/veh	42.2	40.0	43.5	40.0	39.9	39.9	40.0	0.0	0.0	49.8	6.0	5.7
Incr Delay (d2), s/veh	0.9	0.0	7.5	0.0	0.0	0.0	8.6	0.4	0.3	47.5	0.1	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	1.8	0.0	3.6	0.0	0.0	0.0	3.3	0.1	0.1	0.2	0.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	40.0	51.1	40.0	39.9	40.0	48.6	0.4	0.3	97.2	6.0	5.7
LnGrp LOS	D	D	D	D	D	D	D	A	A	F	A	A
Approach Vol, veh/h		213			3			746			305	
Approach Delay, s/veh		48.1			40.0			9.0			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	80.5		15.6	12.6	71.7		15.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	50.0		29.0	27.5	30.0		29.0				
Max Q Clear Time (g_c+I1), s	2.2	2.0		10.1	9.0	4.7		2.2				
Green Ext Time (p_c), s	0.0	4.2		0.6	0.3	1.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.1	
HCM 6th LOS		B	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	470	0	6	440
Future Volume (vph)	0	2	470	0	6	440
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

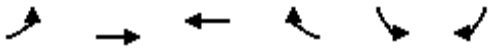
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	470	0	6	440
Future Vol, veh/h	0	2	470	0	6	440
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	495	0	6	463

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	248	0	0	495	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	758	-	-	1079	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	758	-	-	1079	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	758	1079	-
HCM Lane V/C Ratio	-	-	0.003	0.006	-
HCM Control Delay (s)	-	-	9.8	8.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	33	30	0	0	2
Future Volume (vph)	5	33	30	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

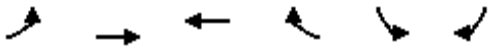
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	33	30	0	0	2
Future Vol, veh/h	5	33	30	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	35	32	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	77	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	931	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	928	1048
Mov Cap-2 Maneuver	-	-	-	-	928	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	983	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	1048
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	31	29	0	0	1
Future Volume (vph)	2	31	29	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	31	29	0	0	1
Future Vol, veh/h	2	31	29	0	0	1
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	33	31	0	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	31	0	-	0	68	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1595	-	-	-	942	1049
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1595	-	-	-	941	1049
Mov Cap-2 Maneuver	-	-	-	-	941	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	991	-

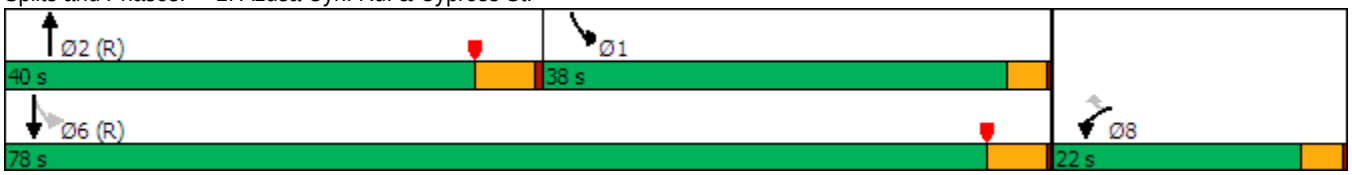
Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1595	-	-	-	1049
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	177	202	342	524	445	433
Future Volume (vph)	177	202	342	524	445	433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	40.0		38.0	78.0
Total Split (%)	22.0%	22.0%	40.0%		38.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	177	202	342	524	445	433
Future Volume (veh/h)	177	202	342	524	445	433
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	133	360	552	468	456
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	395	176	632	564	806	2909
Arrive On Green	0.11	0.11	0.35	0.35	0.68	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	261	133	360	552	468	456
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	6.9	8.0	16.2	33.9	7.7	0.0
Cycle Q Clear(g_c), s	6.9	8.0	16.2	33.9	7.7	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	395	176	632	564	806	2909
V/C Ratio(X)	0.66	0.76	0.57	0.98	0.58	0.16
Avail Cap(c_a), veh/h	670	298	632	564	806	2909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.90	0.90
Uniform Delay (d), s/veh	42.8	43.2	26.4	32.1	10.2	0.0
Incr Delay (d2), s/veh	1.9	6.5	3.7	33.2	0.9	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	3.1	3.5	7.5	17.9	3.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.6	49.7	30.1	65.3	11.2	0.1
LnGrp LOS	D	D	C	E	B	A
Approach Vol, veh/h	394		912			924
Approach Delay, s/veh	46.4		51.4			5.7
Approach LOS	D		D			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.6	40.0			85.6	14.4
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	34.5	* 35			73.0	18.5
Max Q Clear Time (g_c+I1), s	9.7	35.9			2.0	10.0
Green Ext Time (p_c), s	1.5	0.0			3.5	0.9

Intersection Summary	
HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	7	396	39	23	18	173	316	12	9	424	190
Future Volume (vph)	512	7	396	39	23	18	173	316	12	9	424	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	96.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	512	7	396	39	23	18	173	316	12	9	424	190
Future Vol, veh/h	512	7	396	39	23	18	173	316	12	9	424	190
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	528	7	408	40	24	19	178	326	12	9	437	196
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

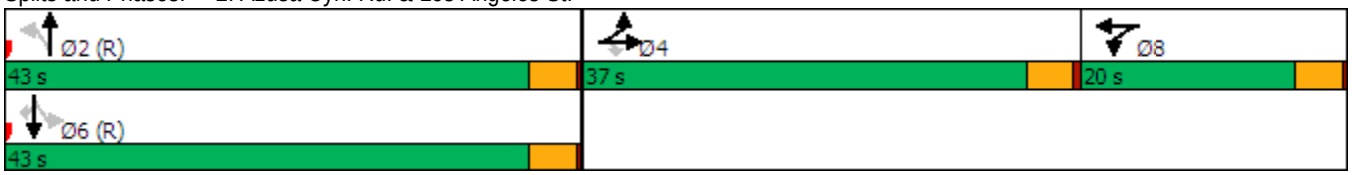
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	112.4	15.2	127.2	58.7
HCM LOS	F	C	F	F

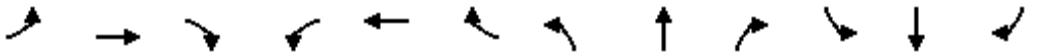
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	35%	99%	0%	63%	0%	2%	0%
Vol Thru, %	63%	1%	0%	37%	0%	98%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	501	519	396	62	18	433	190
LT Vol	173	512	0	39	0	9	0
Through Vol	316	7	0	23	0	424	0
RT Vol	12	0	396	0	18	0	190
Lane Flow Rate	516	535	408	64	19	446	196
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.171	1.274	0.837	0.179	0.047	1.014	0.406
Departure Headway (Hd)	8.495	9.046	7.8	10.832	9.755	8.677	7.938
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	434	407	469	333	369	420	456
Service Time	6.495	6.746	5.5	8.532	7.455	6.377	5.638
HCM Lane V/C Ratio	1.189	1.314	0.87	0.192	0.051	1.062	0.43
HCM Control Delay	127.2	168.2	39.3	15.9	12.9	77.5	16
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	18.9	22.2	8.2	0.6	0.1	12.9	1.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	7	396	39	23	18	173	316	12	9	424	190
Future Volume (vph)	512	7	396	39	23	18	173	316	12	9	424	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	37.0	37.0	37.0	20.0	20.0		43.0	43.0		43.0	43.0	43.0
Total Split (%)	37.0%	37.0%	37.0%	20.0%	20.0%		43.0%	43.0%		43.0%	43.0%	43.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	512	7	396	39	23	18	173	316	12	9	424	190
Future Volume (veh/h)	512	7	396	39	23	18	173	316	12	9	424	190
Initial Q (Qb), veh	0	2	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	533	0	408	40	24	19	178	326	12	9	437	196
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1027	0	457	75	41	32	281	487	17	43	1042	893
Arrive On Green	0.28	0.00	0.28	0.04	0.04	0.04	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	982	778	419	877	31	12	1879	1610
Grp Volume(v), veh/h	533	0	408	40	0	43	516	0	0	446	0	196
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1760	1327	0	0	1891	0	1610
Q Serve(g_s), s	12.4	0.0	24.3	2.2	0.0	2.4	23.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.4	0.0	24.3	2.2	0.0	2.4	27.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.44	0.34		0.02	0.02		1.00
Lane Grp Cap(c), veh/h	1027	0	457	75	0	73	785	0	0	1086	0	893
V/C Ratio(X)	0.52	0.00	0.89	0.54	0.00	0.59	0.66	0.00	0.00	0.41	0.00	0.22
Avail Cap(c_a), veh/h	1194	0	531	290	0	282	785	0	0	1086	0	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.69	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	34.3	47.0	0.0	47.1	15.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	15.7	5.9	0.0	7.5	3.0	0.0	0.0	1.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	10.9	1.1	0.0	1.2	8.4	0.0	0.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	50.1	52.9	0.0	54.6	18.5	0.0	0.0	1.2	0.0	0.6
LnGrp LOS	C	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		941			83			516			642	
Approach Delay, s/veh		39.0			53.8			18.5			1.0	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.5		32.4		59.5		8.1				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		33.0		39.0		16.0				
Max Q Clear Time (g_c+I1), s		29.1		26.3		2.0		4.4				
Green Ext Time (p_c), s		2.9		2.1		3.9		0.2				

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

Notes

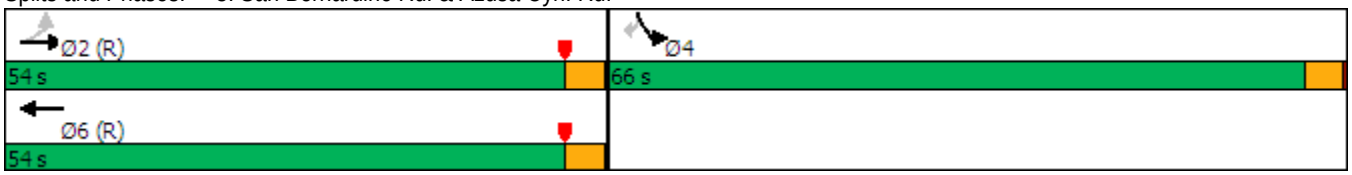
User approved volume balancing among the lanes for turning movement.

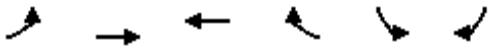
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	126	339	348	366	750	152
Future Volume (vph)	126	339	348	366	750	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	126	339	348	366	750	152
Future Volume (veh/h)	126	339	348	366	750	152
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	133	357	366	385	789	160
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	229	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	723	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	133	357	366	385	789	160
Grp Sat Flow(s),veh/h/ln	723	1805	1805	1610	1810	1610
Q Serve(g_s), s	20.7	7.7	17.8	22.0	44.8	6.4
Cycle Q Clear(g_c), s	42.7	7.7	17.8	22.0	44.8	6.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	229	1504	752	671	935	832
V/C Ratio(X)	0.58	0.24	0.49	0.57	0.84	0.19
Avail Cap(c_a), veh/h	229	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	22.7	25.6	26.8	24.9	15.6
Incr Delay (d2), s/veh	10.4	0.4	2.2	3.5	9.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	3.3	7.9	8.8	20.9	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.6	23.0	27.9	30.4	34.1	16.1
LnGrp LOS	D	C	C	C	C	B
Approach Vol, veh/h		490	751		949	
Approach Delay, s/veh		31.3	29.2		31.0	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

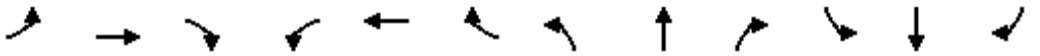
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Future Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							46%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.4	65.0		17.0	71.6	71.6	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	8.7%	54.2%		14.2%	59.7%	59.7%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	2408	340	218	1315	35	162	14	268	32	11	46
Future Volume (veh/h)	39	2408	340	218	1315	35	162	14	268	32	11	46
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	2535	358	229	1384	37	182	0	282	34	12	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	2459	331	204	2216	939	543	0	242	151	28	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4919	662	1810	3800	1610	3619	0	1610	1810	332	1329
Grp Volume(v), veh/h	41	1930	963	229	1384	37	182	0	282	34	0	60
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1661
Q Serve(g_s), s	2.7	60.0	60.0	13.5	28.6	1.2	5.4	0.0	18.0	2.1	0.0	4.1
Cycle Q Clear(g_c), s	2.7	60.0	60.0	13.5	28.6	1.2	5.4	0.0	18.0	2.1	0.0	4.1
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	53	1900	890	204	2216	939	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.02	1.08	1.12	0.62	0.04	0.34	0.00	1.17	0.23	0.00	0.43
Avail Cap(c_a), veh/h	104	1900	890	204	2216	939	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	30.0	30.0	53.3	16.4	10.7	45.6	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	21.0	24.7	54.6	100.7	1.3	0.1	1.6	0.0	110.2	3.4	0.0	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	31.4	36.8	11.7	11.7	0.4	2.6	0.0	14.6	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.8	54.7	84.6	153.9	17.7	10.7	47.3	0.0	161.2	54.8	0.0	61.9
LnGrp LOS	E	F	F	F	B	B	D	A	F	D	A	E
Approach Vol, veh/h		2934			1650			464			94	
Approach Delay, s/veh		64.8			36.5			116.5			59.3	
Approach LOS		E			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.0	75.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	6.9	66.6		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.1	4.7	30.6		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	12.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		60.3	
HCM 6th LOS		E	

Notes

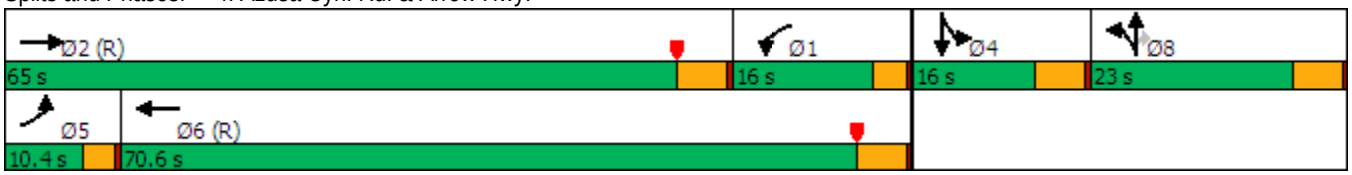
User approved volume balancing among the lanes for turning movement.

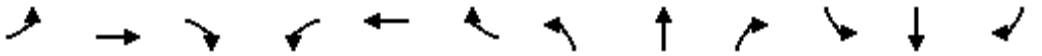
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Future Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							46%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.4	65.0		16.0	70.6		23.0	23.0	23.0	16.0	16.0	
Total Split (%)	8.7%	54.2%		13.3%	58.8%		19.2%	19.2%	19.2%	13.3%	13.3%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	2408	340	218	1315	35	162	14	268	32	11	46
Future Volume (veh/h)	39	2408	340	218	1315	35	162	14	268	32	11	46
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	2535	358	229	1384	37	182	0	282	34	12	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	2459	331	509	4224	113	543	0	242	166	30	122
Arrive On Green	0.06	1.00	1.00	0.56	1.00	1.00	0.15	0.00	0.15	0.09	0.09	0.09
Sat Flow, veh/h	1810	4919	662	1810	5526	148	3619	0	1610	1810	332	1329
Grp Volume(v), veh/h	41	1930	963	229	952	469	182	0	282	34	0	60
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1873	1810	0	1610	1810	0	1661
Q Serve(g_s), s	2.7	60.0	60.0	8.9	0.0	0.0	5.4	0.0	18.0	2.1	0.0	4.1
Cycle Q Clear(g_c), s	2.7	60.0	60.0	8.9	0.0	0.0	5.4	0.0	18.0	2.1	0.0	4.1
Prop In Lane	1.00		0.37	1.00		0.08	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	53	1900	890	509	2905	1432	543	0	242	166	0	152
V/C Ratio(X)	0.78	1.02	1.08	0.45	0.33	0.33	0.34	0.00	1.17	0.20	0.00	0.39
Avail Cap(c_a), veh/h	104	1900	890	509	2905	1432	543	0	242	166	0	152
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.1	0.0	0.0	20.8	0.0	0.0	45.6	0.0	51.0	50.5	0.0	51.4
Incr Delay (d2), s/veh	21.3	24.7	54.6	0.6	0.3	0.6	1.6	0.0	110.2	2.8	0.0	7.5
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	1.5	6.5	13.5	3.2	0.1	0.2	2.6	0.0	14.6	1.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	24.7	54.6	21.5	0.3	0.6	47.3	0.0	161.2	53.2	0.0	58.8
LnGrp LOS	E	F	F	C	A	A	D	A	F	D	A	E
Approach Vol, veh/h		2934			1650			464			94	
Approach Delay, s/veh		35.2			3.3			116.5			56.8	
Approach LOS		D			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.7	65.0		16.0	7.0	96.7		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	12.5	* 60		11.0	6.9	65.6		18.0				
Max Q Clear Time (g_c+I1), s	10.9	62.0		6.1	4.7	2.0		20.0				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	12.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		32.7
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

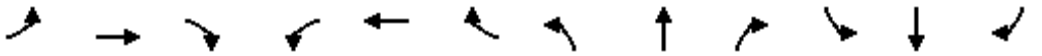
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1	344	3	1	1	234	310	1	1	531	72
Future Volume (vph)	105	1	344	3	1	1	234	310	1	1	531	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	32.0	59.0		8.0	35.0	35.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	32.0%	59.0%		8.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1	344	3	1	1	234	310	1	1	531	72
Future Volume (veh/h)	105	1	344	3	1	1	234	310	1	1	531	72
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	112	1	366	3	1	1	249	330	1	1	565	77
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	428	471	399	327	471	399	283	2274	7	2	1664	742
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.31	1.00	1.00	0.00	0.46	0.46
Sat Flow, veh/h	1437	1900	1610	1031	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	112	1	366	3	1	1	249	161	170	1	565	77
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1031	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.4	0.0	22.1	0.2	0.0	0.0	13.1	0.0	0.0	0.1	10.0	2.7
Cycle Q Clear(g_c), s	6.4	0.0	22.1	0.3	0.0	0.0	13.1	0.0	0.0	0.1	10.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	428	471	399	327	471	399	283	1112	1169	2	1664	742
V/C Ratio(X)	0.26	0.00	0.92	0.01	0.00	0.00	0.88	0.15	0.15	0.50	0.34	0.10
Avail Cap(c_a), veh/h	474	532	451	360	532	451	516	1112	1169	81	1664	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	0.29	0.29	0.29
Uniform Delay (d), s/veh	30.7	28.3	36.6	28.4	28.3	28.3	33.5	0.0	0.0	49.9	17.2	15.3
Incr Delay (d2), s/veh	0.3	0.0	22.1	0.0	0.0	0.0	7.3	0.2	0.2	47.7	0.2	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	2.2	0.0	11.0	0.1	0.0	0.0	5.3	0.1	0.1	0.1	4.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	28.3	58.7	28.4	28.3	28.3	40.8	0.2	0.2	97.6	17.4	15.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	F	B	B
Approach Vol, veh/h		479			5			580			643	
Approach Delay, s/veh		52.2			28.4			17.6			17.3	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	66.6		29.8	19.1	51.1		29.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	54.0		28.0	28.5	30.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		24.1	15.1	12.0		2.3				
Green Ext Time (p_c), s	0.0	2.1		0.7	0.6	3.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		27.2	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	846	0	2	623
Future Volume (vph)	0	5	846	0	2	623
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

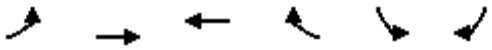
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	846	0	2	623
Future Vol, veh/h	0	5	846	0	2	623
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	891	0	2	656

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	446	0	0	891	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	565	-	-	769	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	565	-	-	769	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	565	769	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s)	-	-	11.4	9.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	27	76	0	0	5
Future Volume (vph)	2	27	76	0	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

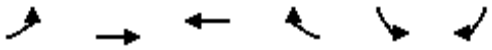
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	27	76	0	0	5
Future Vol, veh/h	2	27	76	0	0	5
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	28	80	0	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	80	0	-	0	112	80
Stage 1	-	-	-	-	80	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1531	-	-	-	890	986
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1531	-	-	-	889	986
Mov Cap-2 Maneuver	-	-	-	-	889	-
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1531	-	-	-	986
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	26	74	0	0	2
Future Volume (vph)	1	26	74	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	26	74	0	0	2
Future Vol, veh/h	1	26	74	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	27	78	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	78	0	-	0	107	78
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1533	-	-	-	895	988
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1533	-	-	-	894	988
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	8.7
HCM LOS			A

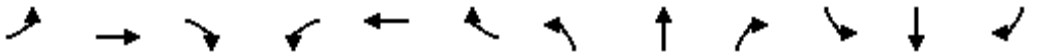
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1533	-	-	-	988
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	237	379	308	168	146	223
Future Volume (vph)	237	379	308	168	146	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3419		1805	3610
Flt Permitted	0.97	1.00	1.00		0.42	1.00
Satd. Flow (perm)	3351	1470	3419		807	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	263	421	342	187	162	248
RTOR Reduction (vph)	168	188	43	0	0	0
Lane Group Flow (vph)	297	31	487	0	162	248
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.2	14.2	66.0		77.3	77.3
Effective Green, g (s)	14.2	14.2	66.0		77.3	77.3
Actuated g/C Ratio	0.14	0.14	0.66		0.77	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	475	208	2256		701	2790
v/s Ratio Prot	c0.09		0.14		c0.02	0.07
v/s Ratio Perm		0.02			c0.16	
v/c Ratio	0.62	0.15	0.22		0.23	0.09
Uniform Delay, d1	40.4	37.6	6.7		3.0	2.8
Progression Factor	1.00	1.00	1.00		1.37	0.93
Incremental Delay, d2	2.6	0.3	0.2		0.2	0.1
Delay (s)	43.0	37.9	7.0		4.2	2.6
Level of Service	D	D	A		A	A
Approach Delay (s)	41.3		7.0			3.3
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

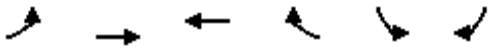
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	12	186	7	6	19	225	257	11	15	151	274
Future Volume (vph)	194	12	186	7	6	19	225	257	11	15	151	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.88			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1681			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.95	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1681			1463			1805	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	206	13	198	7	6	20	239	273	12	16	161	291
RTOR Reduction (vph)	0	0	175	0	19	0	0	1	0	0	0	81
Lane Group Flow (vph)	109	110	23	7	7	0	0	523	0	0	177	210
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	11.8	11.8	11.8	4.1	4.1			72.1			72.1	72.1
Effective Green, g (s)	11.8	11.8	11.8	4.1	4.1			72.1			72.1	72.1
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.72			0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	202	212	224	74	68			1054			1301	1369
v/s Ratio Prot	c0.06	0.06		0.00	c0.00							
v/s Ratio Perm			0.01					c0.36			0.10	0.11
v/c Ratio	0.54	0.52	0.10	0.09	0.10			0.50			0.14	0.15
Uniform Delay, d1	41.5	41.4	39.4	46.2	46.2			6.1			4.3	4.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.98	1.80
Incremental Delay, d2	2.8	2.1	0.2	0.6	0.6			1.7			0.2	0.2
Delay (s)	44.3	43.6	39.6	46.7	46.8			7.7			4.4	8.1
Level of Service	D	D	D	D	D			A			A	A
Approach Delay (s)		41.9			46.8			7.7			6.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

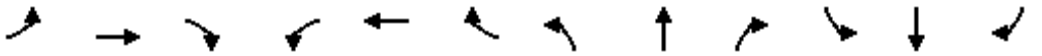
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	78	145	341	429	260	76
Future Volume (vph)	78	145	341	429	260	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3308		1805	1615
Flt Permitted	0.26	1.00	1.00		0.95	1.00
Satd. Flow (perm)	493	3610	3308		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	88	163	383	482	292	85
RTOR Reduction (vph)	0	0	190	0	0	26
Lane Group Flow (vph)	88	163	675	0	292	59
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	67.0	67.0	67.0		45.0	45.0
Effective Green, g (s)	67.0	67.0	67.0		45.0	45.0
Actuated g/C Ratio	0.56	0.56	0.56		0.38	0.38
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	275	2015	1846		676	605
v/s Ratio Prot		0.05	c0.20		c0.16	
v/s Ratio Perm	0.18					0.04
v/c Ratio	0.32	0.08	0.37		0.43	0.10
Uniform Delay, d1	14.3	12.3	14.7		28.0	24.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.0	0.1	0.6		2.0	0.3
Delay (s)	17.3	12.3	15.3		30.0	24.6
Level of Service	B	B	B		C	C
Approach Delay (s)		14.1	15.3		28.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

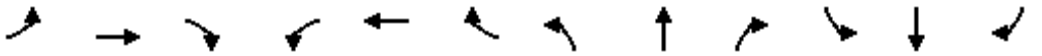
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Future Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	27	1038	222	157	2393	46	476	19	152	22	13	44
RTOR Reduction (vph)	0	30	0	0	0	19	0	0	129	0	40	0
Lane Group Flow (vph)	27	1230	0	157	2393	27	248	247	23	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	58.8		14.7	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	58.8		14.7	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.49		0.12	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2793		232	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.01	0.22		c0.08	c0.63		c0.13	0.13		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.71	0.44		0.68	1.06	0.02	0.87	0.87	0.08	0.14	0.11	
Uniform Delay, d1	58.5	19.9		50.4	24.5	10.1	49.9	49.8	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	47.3	0.5		7.6	38.4	0.0	28.5	28.0	0.5	1.8	1.3	
Delay (s)	105.7	20.4		58.0	62.8	10.1	78.3	77.8	44.4	52.8	52.2	
Level of Service	F	C		E	E	B	E	E	D	D	D	
Approach Delay (s)		22.2			61.6			70.2			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	51.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

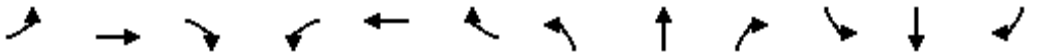
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Future Volume (vph)	25	945	202	143	2178	42	433	17	138	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	27	1038	222	157	2393	46	476	19	152	22	13	44
RTOR Reduction (vph)	0	30	0	0	2	0	0	0	129	0	40	0
Lane Group Flow (vph)	27	1230	0	157	2437	0	248	247	23	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	58.8		14.7	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	58.8		14.7	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.49		0.12	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2793		232	3377		285	285	285	158	158	
v/s Ratio Prot	0.01	0.22		c0.08	c0.43		c0.13	0.13		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.71	0.44		0.68	0.72		0.87	0.87	0.08	0.14	0.11	
Uniform Delay, d1	58.5	19.9		50.4	17.4		49.9	49.8	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	47.3	0.5		7.6	1.4		28.5	28.0	0.5	1.8	1.3	
Delay (s)	105.7	20.4		58.0	18.8		78.3	77.8	44.4	52.8	52.2	
Level of Service	F	C		E	B		E	E	D	D	D	
Approach Delay (s)		22.2			21.1			70.2			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	2	123	1	1	1	122	552	12	3	246	32
Future Volume (vph)	71	2	123	1	1	1	122	552	12	3	246	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	2	134	1	1	1	133	600	13	3	267	35
RTOR Reduction (vph)	0	0	118	0	0	1	0	1	0	0	0	13
Lane Group Flow (vph)	77	2	16	1	1	0	133	612	0	3	267	22
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.3	12.3	12.3	12.3	12.3	12.3	12.7	72.9		1.3	61.5	61.5
Effective Green, g (s)	12.3	12.3	12.3	12.3	12.3	12.3	12.7	72.9		1.3	61.5	61.5
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.73		0.01	0.62	0.62
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	176	233	198	176	233	198	229	2623		23	2220	993
v/s Ratio Prot		0.00			0.00		c0.07	c0.17		0.00	0.07	
v/s Ratio Perm	c0.05		0.01	0.00		0.00						0.01
v/c Ratio	0.44	0.01	0.08	0.01	0.00	0.00	0.58	0.23		0.13	0.12	0.02
Uniform Delay, d1	40.6	38.5	38.9	38.5	38.5	38.5	41.1	4.4		48.8	8.0	7.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.92		1.00	1.00	1.00
Incremental Delay, d2	1.7	0.0	0.2	0.0	0.0	0.0	3.6	0.2		2.6	0.1	0.0
Delay (s)	42.4	38.5	39.0	38.5	38.5	38.5	40.9	4.3		51.4	8.1	7.6
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.2			38.5			10.8			8.5	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	177	202	342	524	445	433
Future Volume (vph)	177	202	342	524	445	433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3282		1805	3610
Flt Permitted	0.97	1.00	1.00		0.20	1.00
Satd. Flow (perm)	3394	1470	3282		386	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	186	213	360	552	468	456
RTOR Reduction (vph)	62	111	249	0	0	0
Lane Group Flow (vph)	211	15	663	0	468	456
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.0	12.0	41.5		81.0	79.5
Effective Green, g (s)	12.0	12.0	41.5		81.0	79.5
Actuated g/C Ratio	0.12	0.12	0.42		0.81	0.80
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	407	176	1362		802	2869
v/s Ratio Prot	c0.06		0.20		c0.20	0.13
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.52	0.09	0.49		0.58	0.16
Uniform Delay, d1	41.3	39.1	21.4		13.0	2.4
Progression Factor	1.00	1.00	1.00		0.88	1.37
Incremental Delay, d2	1.1	0.2	1.2		1.0	0.1
Delay (s)	42.4	39.3	22.7		12.4	3.4
Level of Service	D	D	C		B	A
Approach Delay (s)	41.4		22.7			8.0
Approach LOS	D		C			A

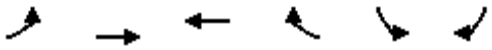
Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	7	396	39	23	18	173	316	12	9	424	190
Future Volume (vph)	512	7	396	39	23	18	173	316	12	9	424	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.93			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1774			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.62			0.99	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1774			1173			1882	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	528	7	408	40	24	19	178	326	12	9	437	196
RTOR Reduction (vph)	0	0	313	0	18	0	0	0	0	0	0	82
Lane Group Flow (vph)	269	266	95	40	25	0	0	516	0	0	446	114
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.3	23.3	23.3	6.6	6.6			58.1			58.1	58.1
Effective Green, g (s)	23.3	23.3	23.3	6.6	6.6			58.1			58.1	58.1
Actuated g/C Ratio	0.23	0.23	0.23	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	399	420	442	119	117			681			1093	1103
v/s Ratio Prot	c0.16	0.15		c0.02	0.01							
v/s Ratio Perm			0.05					c0.44			0.24	0.06
v/c Ratio	0.67	0.63	0.22	0.34	0.22			0.76			0.41	0.10
Uniform Delay, d1	34.9	34.5	31.0	44.6	44.2			15.7			11.5	9.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.02	2.08
Incremental Delay, d2	4.5	3.1	0.2	1.7	0.9			7.7			1.1	0.2
Delay (s)	39.4	37.6	31.2	46.3	45.2			23.4			12.8	19.6
Level of Service	D	D	C	D	D			C			B	B
Approach Delay (s)		35.3			45.7			23.4			14.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

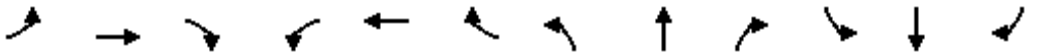
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	126	339	348	366	750	152
Future Volume (vph)	126	339	348	366	750	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.25	1.00	1.00		0.95	1.00
Satd. Flow (perm)	478	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	133	357	366	385	789	160
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	133	357	593	0	789	142
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	199	1504	1388		932	834
v/s Ratio Prot		0.10	0.18		c0.44	
v/s Ratio Perm	c0.28					0.09
v/c Ratio	0.67	0.24	0.43		0.85	0.17
Uniform Delay, d1	28.3	22.7	24.8		24.9	15.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	16.4	0.4	1.0		9.4	0.4
Delay (s)	44.7	23.0	25.8		34.3	15.8
Level of Service	D	C	C		C	B
Approach Delay (s)		28.9	25.8		31.2	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

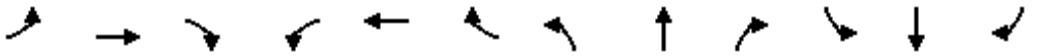
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Future Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	2535	358	229	1384	37	171	15	282	34	12	48
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	185	0	44	0
Lane Group Flow (vph)	41	2876	0	229	1384	21	92	94	97	34	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	5.5	60.0		13.5	68.0	68.0	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	5.5	60.0		13.5	68.0	68.0	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.05	0.50		0.11	0.57	0.57	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	87	2850		213	2153	1076	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.50		c0.12	0.36		0.05	0.05		c0.02	0.01	
v/s Ratio Perm						0.01			c0.05			
v/c Ratio	0.47	1.01		1.08	0.64	0.02	0.32	0.33	0.34	0.22	0.10	
Uniform Delay, d1	55.8	30.0		53.2	17.7	11.4	45.6	45.6	45.7	51.3	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	19.1		83.0	1.5	0.0	3.0	3.1	3.2	3.1	1.3	
Delay (s)	59.8	49.1		136.3	19.2	11.4	48.5	48.7	48.9	54.4	52.1	
Level of Service	E	D		F	B	B	D	D	D	D	D	
Approach Delay (s)		49.2			35.3			48.8			53.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

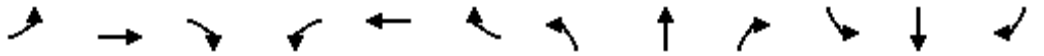
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Future Volume (vph)	39	2408	340	218	1315	35	162	14	268	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	2535	358	229	1384	37	171	15	282	34	12	48
RTOR Reduction (vph)	0	18	0	0	3	0	0	0	212	0	44	0
Lane Group Flow (vph)	41	2875	0	229	1418	0	92	94	70	34	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.5	59.3		13.2	67.0		18.0	18.0	18.0	11.0	11.0	
Effective Green, g (s)	5.5	59.3		13.2	67.0		18.0	18.0	18.0	11.0	11.0	
Actuated g/C Ratio	0.05	0.49		0.11	0.56		0.15	0.15	0.15	0.09	0.09	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	87	2816		209	3182		285	285	285	174	174	
v/s Ratio Prot	0.02	c0.50		c0.12	0.25		0.05	c0.05		c0.02	0.01	
v/s Ratio Perm									0.04			
v/c Ratio	0.47	1.02		1.10	0.45		0.32	0.33	0.25	0.20	0.09	
Uniform Delay, d1	55.8	30.4		53.4	15.6		45.6	45.6	45.0	50.4	49.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	22.5		90.2	0.5		3.0	3.1	2.1	2.5	1.1	
Delay (s)	59.8	52.9		143.6	16.0		48.5	48.7	47.1	52.9	51.0	
Level of Service	E	D		F	B		D	D	D	D	D	
Approach Delay (s)		53.0			33.7			47.7			51.7	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1	344	3	1	1	234	310	1	1	531	72
Future Volume (vph)	105	1	344	3	1	1	234	310	1	1	531	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	112	1	366	3	1	1	249	330	1	1	565	77
RTOR Reduction (vph)	0	0	314	0	0	1	0	0	0	0	0	36
Lane Group Flow (vph)	112	1	52	3	1	0	249	331	0	1	565	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.1	14.1	14.1	14.1	14.1	14.1	19.0	71.2		1.2	53.4	53.4
Effective Green, g (s)	14.1	14.1	14.1	14.1	14.1	14.1	19.0	71.2		1.2	53.4	53.4
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.19	0.71		0.01	0.53	0.53
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	202	267	227	202	267	227	342	2568		21	1927	862
v/s Ratio Prot		0.00			0.00		c0.14	0.09		0.00	c0.16	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.03
v/c Ratio	0.55	0.00	0.23	0.01	0.00	0.00	0.73	0.13		0.05	0.29	0.05
Uniform Delay, d1	40.0	36.9	38.1	37.0	36.9	36.9	38.1	4.6		48.8	12.9	11.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.18	0.50		1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0	0.5	0.0	0.0	0.0	6.7	0.1		0.9	0.4	0.1
Delay (s)	43.3	36.9	38.6	37.0	36.9	36.9	51.8	2.4		49.8	13.3	11.2
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.7			37.0			23.6			13.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 5.2:

EXISTING (HYPOTHETICAL "NON-COVID" 2021) PLUS SITE BASELINE LAND USE WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	238	379	311	168	146	234
Future Volume (vph)	238	379	311	168	146	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	31.0	31.0	47.0		22.0	69.0
Total Split (%)	31.0%	31.0%	47.0%		22.0%	69.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





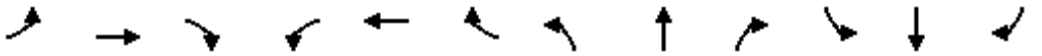
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	238	379	311	168	146	234
Future Volume (veh/h)	238	379	311	168	146	234
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	228	459	346	187	162	260
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	322	573	1483	787	684	2661
Arrive On Green	0.18	0.18	0.65	0.65	0.10	1.00
Sat Flow, veh/h	1810	3220	2374	1209	1810	3705
Grp Volume(v), veh/h	228	459	273	260	162	260
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1682	1810	1805
Q Serve(g_s), s	11.9	13.7	6.2	6.4	2.9	0.0
Cycle Q Clear(g_c), s	11.9	13.7	6.2	6.4	2.9	0.0
Prop In Lane	1.00	1.00		0.72	1.00	
Lane Grp Cap(c), veh/h	322	573	1175	1095	684	2661
V/C Ratio(X)	0.71	0.80	0.23	0.24	0.24	0.10
Avail Cap(c_a), veh/h	498	886	1175	1095	926	2661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.7	39.4	7.2	7.2	4.4	0.0
Incr Delay (d2), s/veh	2.9	3.0	0.5	0.5	0.2	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	5.4	5.5	2.3	2.3	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.6	42.4	7.6	7.7	4.6	0.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	687		533			422
Approach Delay, s/veh	42.1		7.7			1.8
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.6	70.1			78.7	21.3
Change Period (Y+Rc), s	3.5	5.0			5.0	3.5
Max Green Setting (Gmax), s	18.5	42.0			64.0	27.5
Max Q Clear Time (g_c+I1), s	4.9	8.4			2.0	15.7
Green Ext Time (p_c), s	0.3	3.7			1.9	2.1

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

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	17	186	8	8	20	225	257	15	17	151	274
Future Volume (vph)	194	17	186	8	8	20	225	257	15	17	151	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	34.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	194	17	186	8	8	20	225	257	15	17	151	274
Future Vol, veh/h	194	17	186	8	8	20	225	257	15	17	151	274
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	206	18	198	9	9	21	239	273	16	18	161	291
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

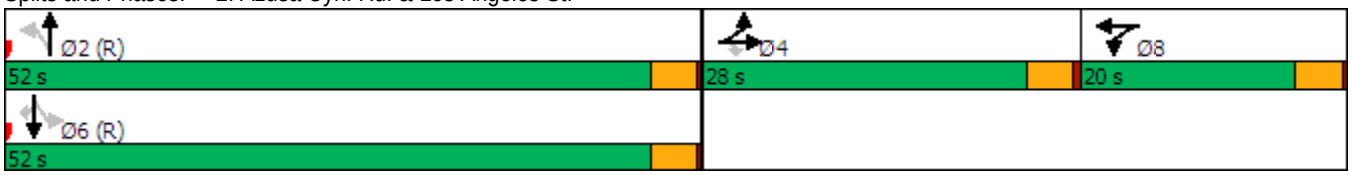
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	16.2	11.5	68.4	15
HCM LOS	C	B	F	B

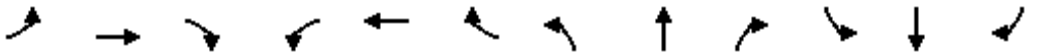
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	92%	0%	50%	0%	10%	0%
Vol Thru, %	52%	8%	0%	50%	0%	90%	0%
Vol Right, %	3%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	497	211	186	16	20	168	274
LT Vol	225	194	0	8	0	17	0
Through Vol	257	17	0	8	0	151	0
RT Vol	15	0	186	0	20	0	274
Lane Flow Rate	529	224	198	17	21	179	291
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.011	0.498	0.374	0.042	0.047	0.355	0.516
Departure Headway (Hd)	6.883	7.994	6.798	8.915	7.925	7.141	6.371
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	529	451	528	401	451	504	565
Service Time	4.883	5.74	4.544	6.687	5.695	4.887	4.117
HCM Lane V/C Ratio	1	0.497	0.375	0.042	0.047	0.355	0.515
HCM Control Delay	68.4	18.5	13.6	12.1	11.1	13.8	15.8
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	14.4	2.7	1.7	0.1	0.1	1.6	2.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	17	186	8	8	20	225	257	15	17	151	274
Future Volume (vph)	194	17	186	8	8	20	225	257	15	17	151	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	46%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	28.0	28.0	28.0	20.0	20.0		52.0	52.0		52.0	52.0	52.0
Total Split (%)	28.0%	28.0%	28.0%	20.0%	20.0%		52.0%	52.0%		52.0%	52.0%	52.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	17	186	8	8	20	225	257	15	17	151	274
Future Volume (veh/h)	194	17	186	8	8	20	225	257	15	17	151	274
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	219	0	198	9	9	21	239	273	16	18	161	291
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	541	0	241	48	13	31	450	494	28	134	1179	1134
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	3619	0	1610	1810	506	1181	565	702	40	134	1674	1610
Grp Volume(v), veh/h	219	0	198	9	0	30	528	0	0	179	0	291
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1687	1307	0	0	1808	0	1610
Q Serve(g_s), s	5.5	0.0	11.9	0.5	0.0	1.8	16.9	0.0	0.0	0.0	0.0	6.5
Cycle Q Clear(g_c), s	5.5	0.0	11.9	0.5	0.0	1.8	20.0	0.0	0.0	3.1	0.0	6.5
Prop In Lane	1.00		1.00	1.00		0.70	0.45		0.03	0.10		1.00
Lane Grp Cap(c), veh/h	541	0	241	48	0	45	973	0	0	1313	0	1134
V/C Ratio(X)	0.40	0.00	0.82	0.19	0.00	0.67	0.54	0.00	0.00	0.14	0.00	0.26
Avail Cap(c_a), veh/h	869	0	386	290	0	270	973	0	0	1313	0	1134
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	1.00	1.00	0.00	1.00	0.95	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	41.2	47.6	0.0	48.2	7.3	0.0	0.0	4.8	0.0	5.3
Incr Delay (d2), s/veh	0.5	0.0	7.5	1.9	0.0	16.1	2.1	0.0	0.0	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	5.0	0.2	0.0	0.9	5.3	0.0	0.0	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	48.7	49.5	0.0	64.3	9.4	0.0	0.0	5.1	0.0	5.9
LnGrp LOS	D	A	D	D	A	E	A	A	A	A	A	A
Approach Vol, veh/h		417			39			528			470	
Approach Delay, s/veh		43.6			60.9			9.4			5.6	
Approach LOS		D			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.4		18.9		74.4		6.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		48.0		24.0		48.0		16.0				
Max Q Clear Time (g_c+I1), s		22.0		13.9		8.5		3.8				
Green Ext Time (p_c), s		4.5		1.0		2.2		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			19.3									
HCM 6th LOS			B									

Notes

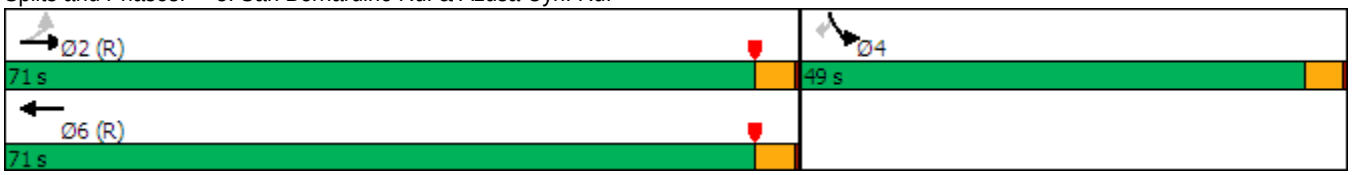
User approved volume balancing among the lanes for turning movement.

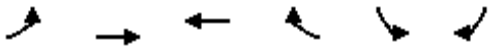
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	79	145	341	432	261	76
Future Volume (vph)	79	145	341	432	261	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	71.0	71.0	71.0		49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%		40.8%	40.8%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	79	145	341	432	261	76
Future Volume (veh/h)	79	145	341	432	261	76
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	89	163	383	485	293	85
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	298	2016	1008	899	679	604
Arrive On Green	0.56	0.56	0.56	0.56	0.38	0.38
Sat Flow, veh/h	648	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	89	163	383	485	293	85
Grp Sat Flow(s),veh/h/ln	648	1805	1805	1610	1810	1610
Q Serve(g_s), s	12.1	2.5	14.3	22.8	14.5	4.2
Cycle Q Clear(g_c), s	34.9	2.5	14.3	22.8	14.5	4.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	298	2016	1008	899	679	604
V/C Ratio(X)	0.30	0.08	0.38	0.54	0.43	0.14
Avail Cap(c_a), veh/h	298	2016	1008	899	679	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	12.3	14.9	16.7	28.0	24.7
Incr Delay (d2), s/veh	2.5	0.1	1.1	2.3	2.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.0	5.8	8.5	6.6	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.3	12.3	15.9	19.1	30.0	25.2
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		252	868		378	
Approach Delay, s/veh		18.7	17.7		28.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		71.0		49.0		71.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		67.0		45.0		67.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

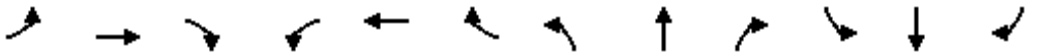
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Future Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	60.0		22.0	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	50.0%		18.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	945	206	148	2178	42	434	17	140	20	12	40
Future Volume (veh/h)	25	945	206	148	2178	42	434	17	140	20	12	40
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	1038	226	163	2393	46	491	0	154	22	13	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	2296	499	192	2252	954	543	0	242	151	32	107
Arrive On Green	0.02	0.51	0.51	0.11	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4536	986	1810	3800	1610	3619	0	1610	1810	380	1288
Grp Volume(v), veh/h	27	869	395	163	2393	46	491	0	154	22	0	57
Grp Sat Flow(s),veh/h/ln	1810	1900	1722	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	1.8	17.6	17.6	10.6	71.1	1.4	16.0	0.0	10.8	1.4	0.0	3.9
Cycle Q Clear(g_c), s	1.8	17.6	17.6	10.6	71.1	1.4	16.0	0.0	10.8	1.4	0.0	3.9
Prop In Lane	1.00		0.57	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	36	1924	872	192	2252	954	543	0	242	151	0	139
V/C Ratio(X)	0.75	0.45	0.45	0.85	1.06	0.05	0.90	0.00	0.64	0.15	0.00	0.41
Avail Cap(c_a), veh/h	60	1924	872	279	2252	954	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	19.0	19.0	52.7	24.4	10.2	50.2	0.0	47.9	51.0	0.0	52.2
Incr Delay (d2), s/veh	26.8	0.8	1.7	14.9	38.1	0.1	20.8	0.0	12.0	2.0	0.0	8.7
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	1.1	7.5	7.0	5.5	39.6	0.5	8.8	0.0	5.1	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	19.7	20.7	67.6	62.6	10.3	70.9	0.0	59.9	53.1	0.0	60.9
LnGrp LOS	F	B	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1291			2602			645			79	
Approach Delay, s/veh		21.4			62.0			68.3			58.7	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.2	65.8		15.0	5.9	76.1		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	18.5	55.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	12.6	19.6		5.9	3.8	73.1		18.0				
Green Ext Time (p_c), s	0.2	9.8		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		51.4	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

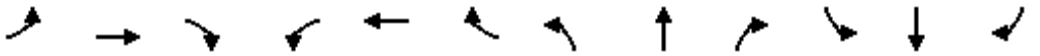
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Future Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	60.0		22.0	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	50.0%		18.3%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	945	206	148	2178	42	434	17	140	20	12	40
Future Volume (veh/h)	25	945	206	148	2178	42	434	17	140	20	12	40
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	1038	226	163	2393	46	491	0	154	22	13	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	2296	499	192	3304	63	543	0	242	151	32	107
Arrive On Green	0.02	0.51	0.51	0.11	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4536	986	1810	5574	107	3619	0	1610	1810	380	1288
Grp Volume(v), veh/h	27	869	395	163	1629	810	491	0	154	22	0	57
Grp Sat Flow(s),veh/h/ln	1810	1900	1722	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	1.8	17.6	17.6	10.6	36.7	37.0	16.0	0.0	10.8	1.4	0.0	3.9
Cycle Q Clear(g_c), s	1.8	17.6	17.6	10.6	36.7	37.0	16.0	0.0	10.8	1.4	0.0	3.9
Prop In Lane	1.00		0.57	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	36	1924	872	192	2252	1115	543	0	242	151	0	139
V/C Ratio(X)	0.75	0.45	0.45	0.85	0.72	0.73	0.90	0.00	0.64	0.15	0.00	0.41
Avail Cap(c_a), veh/h	60	1924	872	279	2252	1115	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	19.0	19.0	52.7	17.4	17.5	50.2	0.0	47.9	51.0	0.0	52.2
Incr Delay (d2), s/veh	26.8	0.8	1.7	14.9	2.1	4.2	20.8	0.0	12.0	2.0	0.0	8.7
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	1.1	7.5	7.0	5.5	14.9	15.5	8.8	0.0	5.1	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	19.7	20.7	67.6	19.5	21.6	70.9	0.0	59.9	53.1	0.0	60.9
LnGrp LOS	F	B	C	E	B	C	E	A	E	D	A	E
Approach Vol, veh/h		1291			2602			645			79	
Approach Delay, s/veh		21.4			23.2			68.3			58.7	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.2	65.8		15.0	5.9	76.1		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	18.5	55.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	12.6	19.6		5.9	3.8	39.0		18.0				
Green Ext Time (p_c), s	0.2	9.8		0.1	0.0	22.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			29.6									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

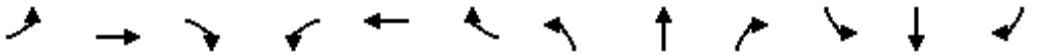
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	2	124	1	1	1	122	555	12	3	255	32
Future Volume (vph)	71	2	124	1	1	1	122	555	12	3	255	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	31.0	60.0		11.0	40.0	40.0
Total Split (%)	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	31.0%	60.0%		11.0%	40.0%	40.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	2	124	1	1	1	122	555	12	3	255	32
Future Volume (veh/h)	71	2	124	1	1	1	122	555	12	3	255	32
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	2	135	1	1	1	133	603	13	3	277	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	202	172	206	202	172	165	2729	59	6	2409	1074
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.18	1.00	1.00	0.00	0.67	0.67
Sat Flow, veh/h	1437	1900	1610	1272	1900	1610	1810	3613	78	1810	3610	1610
Grp Volume(v), veh/h	77	2	135	1	1	1	133	301	315	3	277	35
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1272	1900	1610	1810	1805	1886	1810	1805	1610
Q Serve(g_s), s	5.1	0.1	8.2	0.1	0.0	0.1	7.0	0.0	0.0	0.2	2.8	0.7
Cycle Q Clear(g_c), s	5.1	0.1	8.2	0.2	0.0	0.1	7.0	0.0	0.0	0.2	2.8	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	224	202	172	206	202	172	165	1363	1424	6	2409	1074
V/C Ratio(X)	0.34	0.01	0.79	0.00	0.00	0.01	0.81	0.22	0.22	0.52	0.11	0.03
Avail Cap(c_a), veh/h	416	456	386	376	456	386	498	1363	1424	136	2409	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	0.78	0.78	0.78
Uniform Delay (d), s/veh	42.2	40.0	43.6	40.0	39.9	39.9	40.0	0.0	0.0	49.8	6.0	5.7
Incr Delay (d2), s/veh	0.9	0.0	7.8	0.0	0.0	0.0	8.6	0.4	0.3	46.5	0.1	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	1.8	0.0	3.6	0.0	0.0	0.0	3.3	0.1	0.1	0.1	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	40.0	51.3	40.0	39.9	40.0	48.6	0.4	0.3	96.2	6.1	5.7
LnGrp LOS	D	D	D	D	D	D	D	A	A	F	A	A
Approach Vol, veh/h		214			3			749			315	
Approach Delay, s/veh		48.3			40.0			8.9			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	80.5		15.7	12.6	71.7		15.7				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	55.0		24.0	27.5	35.0		24.0				
Max Q Clear Time (g_c+I1), s	2.2	2.0		10.2	9.0	4.8		2.2				
Green Ext Time (p_c), s	0.0	4.3		0.5	0.3	2.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.1	
HCM 6th LOS		B	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	471	0	15	442
Future Volume (vph)	0	5	471	0	15	442
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

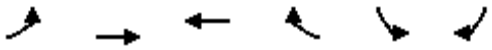
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	471	0	15	442
Future Vol, veh/h	0	5	471	0	15	442
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	496	0	16	465

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	248	0	0	496	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	758	-	-	1078	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	758	-	-	1078	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	758	1078	-
HCM Lane V/C Ratio	-	-	0.007	0.015	-
HCM Control Delay (s)	-	-	9.8	8.4	0.1
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	36	31	0	0	4
Future Volume (vph)	13	36	31	0	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

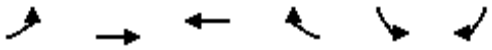
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	36	31	0	0	4
Future Vol, veh/h	13	36	31	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	38	33	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	99	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	66	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1592	-	-	-	905	1046
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1592	-	-	-	897	1046
Mov Cap-2 Maneuver	-	-	-	-	897	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1592	-	-	-	1046
HCM Lane V/C Ratio	0.009	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	31	29	0	0	2
Future Volume (vph)	5	31	29	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	31	29	0	0	2
Future Vol, veh/h	5	31	29	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	33	31	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	31	0	-	0	74	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1595	-	-	-	935	1049
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1595	-	-	-	932	1049
Mov Cap-2 Maneuver	-	-	-	-	932	-
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	985	-

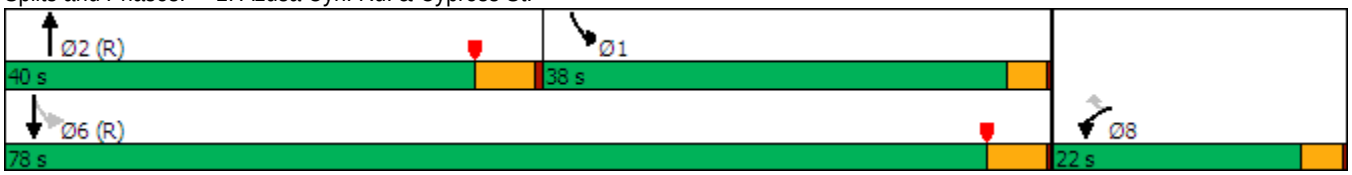
Approach	EB	WB	SB
HCM Control Delay, s	1	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1595	-	-	-	1049
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	177	202	353	525	445	437
Future Volume (vph)	177	202	353	525	445	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	40.0		38.0	78.0
Total Split (%)	22.0%	22.0%	40.0%		38.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	177	202	353	525	445	437
Future Volume (veh/h)	177	202	353	525	445	437
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	133	372	553	468	460
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	395	176	632	564	806	2909
Arrive On Green	0.11	0.11	0.35	0.35	0.68	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	261	133	372	553	468	460
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	6.9	8.0	16.9	34.0	7.7	0.0
Cycle Q Clear(g_c), s	6.9	8.0	16.9	34.0	7.7	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	395	176	632	564	806	2909
V/C Ratio(X)	0.66	0.76	0.59	0.98	0.58	0.16
Avail Cap(c_a), veh/h	670	298	632	564	806	2909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.90	0.90
Uniform Delay (d), s/veh	42.8	43.2	26.6	32.2	10.2	0.0
Incr Delay (d2), s/veh	1.9	6.5	4.0	33.6	0.9	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	3.1	3.5	7.8	18.0	3.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.6	49.7	30.6	65.8	11.2	0.1
LnGrp LOS	D	D	C	E	B	A
Approach Vol, veh/h	394		925			928
Approach Delay, s/veh	46.4		51.6			5.7
Approach LOS	D		D			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.6	40.0			85.6	14.4
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	34.5	* 35			73.0	18.5
Max Q Clear Time (g_c+I1), s	9.7	36.0			2.0	10.0
Green Ext Time (p_c), s	1.5	0.0			3.5	0.9

Intersection Summary	
HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	9	396	43	29	20	173	316	14	10	424	190
Future Volume (vph)	512	9	396	43	29	20	173	316	14	10	424	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	100.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	512	9	396	43	29	20	173	316	14	10	424	190
Future Vol, veh/h	512	9	396	43	29	20	173	316	14	10	424	190
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	528	9	408	44	30	21	178	326	14	10	437	196
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	116.9	15.7	133.8	61.1
HCM LOS	F	C	F	F

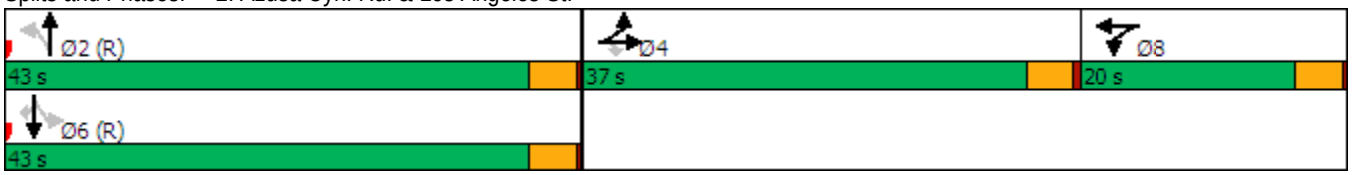
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	98%	0%	60%	0%	2%	0%
Vol Thru, %	63%	2%	0%	40%	0%	98%	0%
Vol Right, %	3%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	503	521	396	72	20	434	190
LT Vol	173	512	0	43	0	10	0
Through Vol	316	9	0	29	0	424	0
RT Vol	14	0	396	0	20	0	190
Lane Flow Rate	519	537	408	74	21	447	196
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.188	1.29	0.845	0.208	0.052	1.024	0.409
Departure Headway (Hd)	8.589	9.149	7.904	10.859	9.798	8.768	8.027
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	425	403	461	333	368	416	451
Service Time	6.589	6.849	5.604	8.559	7.498	6.468	5.727
HCM Lane V/C Ratio	1.221	1.333	0.885	0.222	0.057	1.075	0.435
HCM Control Delay	133.8	174.9	40.7	16.4	13	80.7	16.2
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	19.5	22.7	8.4	0.8	0.2	13.2	2

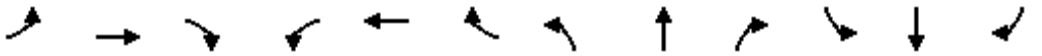
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	9	396	43	29	20	173	316	14	10	424	190
Future Volume (vph)	512	9	396	43	29	20	173	316	14	10	424	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	37.0	37.0	37.0	20.0	20.0		43.0	43.0		43.0	43.0	43.0
Total Split (%)	37.0%	37.0%	37.0%	20.0%	20.0%		43.0%	43.0%		43.0%	43.0%	43.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	512	9	396	43	29	20	173	316	14	10	424	190
Future Volume (veh/h)	512	9	396	43	29	20	173	316	14	10	424	190
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	534	0	408	44	30	21	178	326	14	10	437	196
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1027	0	457	85	49	34	278	480	20	44	1030	884
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1041	728	418	874	36	14	1875	1610
Grp Volume(v), veh/h	534	0	408	44	0	51	518	0	0	447	0	196
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1769	1327	0	0	1889	0	1610
Q Serve(g_s), s	12.4	0.0	24.3	2.4	0.0	2.8	24.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.4	0.0	24.3	2.4	0.0	2.8	27.7	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.41	0.34		0.03	0.02		1.00
Lane Grp Cap(c), veh/h	1027	0	457	85	0	83	777	0	0	1074	0	884
V/C Ratio(X)	0.52	0.00	0.89	0.52	0.00	0.62	0.67	0.00	0.00	0.42	0.00	0.22
Avail Cap(c_a), veh/h	1194	0	531	290	0	283	777	0	0	1074	0	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.69	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	34.3	46.6	0.0	46.8	15.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	15.7	4.8	0.0	7.2	3.1	0.0	0.0	1.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	10.9	1.2	0.0	1.4	8.6	0.0	0.0	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	50.0	51.4	0.0	54.0	19.1	0.0	0.0	1.2	0.0	0.6
LnGrp LOS	C	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		942			95			518			643	
Approach Delay, s/veh		39.0			52.8			19.1			1.0	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.9		32.4		58.9		8.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		33.0		39.0		16.0				
Max Q Clear Time (g_c+I1), s		29.7		26.3		2.0		4.8				
Green Ext Time (p_c), s		2.8		2.1		3.9		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			C									

Notes

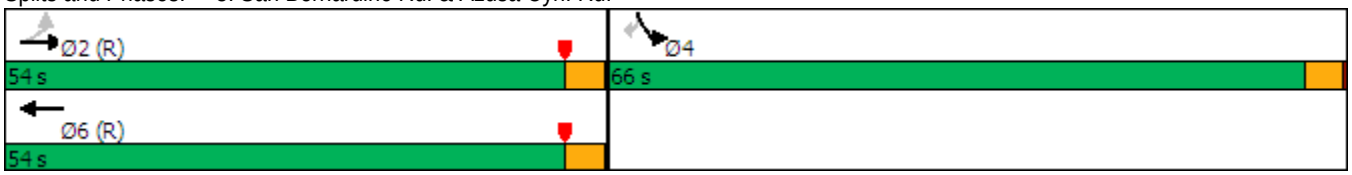
User approved volume balancing among the lanes for turning movement.

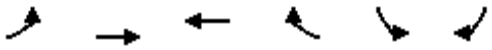
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	126	339	348	367	753	153
Future Volume (vph)	126	339	348	367	753	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	126	339	348	367	753	153
Future Volume (veh/h)	126	339	348	367	753	153
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	133	357	366	386	793	161
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	228	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	722	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	133	357	366	386	793	161
Grp Sat Flow(s),veh/h/ln	722	1805	1805	1610	1810	1610
Q Serve(g_s), s	20.8	7.7	17.8	22.1	45.2	6.4
Cycle Q Clear(g_c), s	42.9	7.7	17.8	22.1	45.2	6.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	228	1504	752	671	935	832
V/C Ratio(X)	0.58	0.24	0.49	0.58	0.85	0.19
Avail Cap(c_a), veh/h	228	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	22.7	25.6	26.9	25.0	15.6
Incr Delay (d2), s/veh	10.5	0.4	2.2	3.6	9.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	3.3	7.9	8.8	21.1	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.8	23.0	27.9	30.4	34.4	16.1
LnGrp LOS	D	C	C	C	C	B
Approach Vol, veh/h		490	752		954	
Approach Delay, s/veh		31.4	29.2		31.3	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

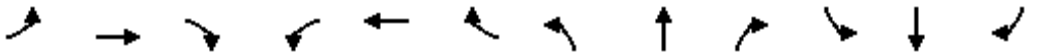
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Future Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							46%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.4	65.0		17.0	71.6	71.6	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	8.7%	54.2%		14.2%	59.7%	59.7%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	2408	342	220	1315	35	166	14	274	32	11	46
Future Volume (veh/h)	39	2408	342	220	1315	35	166	14	274	32	11	46
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	2535	360	232	1384	37	186	0	288	34	12	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	2458	333	204	2216	939	543	0	242	151	28	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4915	665	1810	3800	1610	3619	0	1610	1810	332	1329
Grp Volume(v), veh/h	41	1931	964	232	1384	37	186	0	288	34	0	60
Grp Sat Flow(s),veh/h/ln	1810	1900	1780	1810	1900	1610	1810	0	1610	1810	0	1661
Q Serve(g_s), s	2.7	60.0	60.0	13.5	28.6	1.2	5.5	0.0	18.0	2.1	0.0	4.1
Cycle Q Clear(g_c), s	2.7	60.0	60.0	13.5	28.6	1.2	5.5	0.0	18.0	2.1	0.0	4.1
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	53	1900	890	204	2216	939	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.02	1.08	1.14	0.62	0.04	0.34	0.00	1.19	0.23	0.00	0.43
Avail Cap(c_a), veh/h	104	1900	890	204	2216	939	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	30.0	30.0	53.3	16.4	10.7	45.7	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	21.0	24.9	55.0	105.7	1.3	0.1	1.7	0.0	119.4	3.4	0.0	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	31.4	36.9	11.9	11.7	0.4	2.6	0.0	15.2	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.8	54.9	85.0	159.0	17.7	10.7	47.4	0.0	170.4	54.8	0.0	61.9
LnGrp LOS	E	F	F	F	B	B	D	A	F	D	A	E
Approach Vol, veh/h		2936			1653			474			94	
Approach Delay, s/veh		65.1			37.4			122.1			59.3	
Approach LOS		E			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.0	75.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	6.9	66.6		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.1	4.7	30.6		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	12.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	61.4	
HCM 6th LOS	E	

Notes

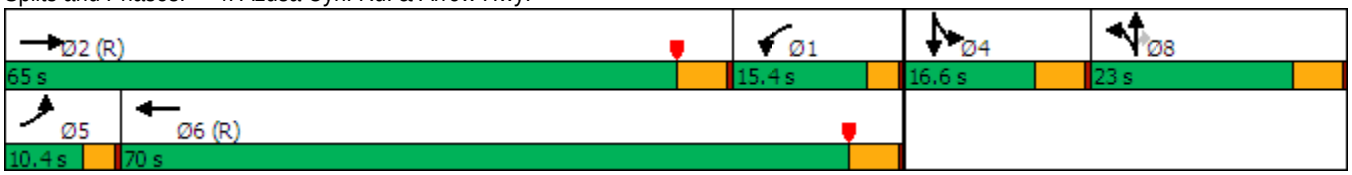
User approved volume balancing among the lanes for turning movement.

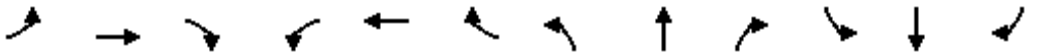
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Future Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							46%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.4	65.0		15.4	70.0		23.0	23.0	23.0	16.6	16.6	
Total Split (%)	8.7%	54.2%		12.8%	58.3%		19.2%	19.2%	19.2%	13.8%	13.8%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	2408	342	220	1315	35	166	14	274	32	11	46
Future Volume (veh/h)	39	2408	342	220	1315	35	166	14	274	32	11	46
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	2535	360	232	1384	37	186	0	288	34	12	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	2458	333	542	4325	116	543	0	242	175	32	128
Arrive On Green	0.06	1.00	1.00	0.60	1.00	1.00	0.15	0.00	0.15	0.10	0.10	0.10
Sat Flow, veh/h	1810	4915	665	1810	5526	148	3619	0	1610	1810	332	1329
Grp Volume(v), veh/h	41	1931	964	232	952	469	186	0	288	34	0	60
Grp Sat Flow(s),veh/h/ln	1810	1900	1780	1810	1900	1873	1810	0	1610	1810	0	1661
Q Serve(g_s), s	2.7	60.0	59.3	8.3	0.0	0.0	5.5	0.0	18.0	2.1	0.0	4.1
Cycle Q Clear(g_c), s	2.7	60.0	59.3	8.3	0.0	0.0	5.5	0.0	18.0	2.1	0.0	4.1
Prop In Lane	1.00		0.37	1.00		0.08	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	53	1900	890	542	2975	1467	543	0	242	175	0	161
V/C Ratio(X)	0.78	1.02	1.08	0.43	0.32	0.32	0.34	0.00	1.19	0.19	0.00	0.37
Avail Cap(c_a), veh/h	104	1900	890	542	2975	1467	543	0	242	175	0	161
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.1	0.0	0.0	18.5	0.0	0.0	45.7	0.0	51.0	49.9	0.0	50.8
Incr Delay (d2), s/veh	21.3	24.9	55.0	0.5	0.3	0.6	1.7	0.0	119.4	2.5	0.0	6.5
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	1.5	6.6	13.6	2.9	0.1	0.2	2.6	0.0	15.2	1.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	24.9	55.0	19.1	0.3	0.6	47.4	0.0	170.4	52.4	0.0	57.3
LnGrp LOS	E	F	F	B	A	A	D	A	F	D	A	E
Approach Vol, veh/h		2936			1653			474			94	
Approach Delay, s/veh		35.5			3.0			122.1			55.5	
Approach LOS		D			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.9	65.0		16.6	7.0	98.9		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.9	* 60		11.6	6.9	65.0		18.0				
Max Q Clear Time (g_c+I1), s	10.3	62.0		6.1	4.7	2.0		20.0				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	12.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	33.4	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1	344	3	1	1	235	320	1	1	535	72
Future Volume (vph)	105	1	344	3	1	1	235	320	1	1	535	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	32.0	60.0		8.0	36.0	36.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	60.0%		8.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1	344	3	1	1	235	320	1	1	535	72
Future Volume (veh/h)	105	1	344	3	1	1	235	320	1	1	535	72
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	112	1	366	3	1	1	250	340	1	1	569	77
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	426	469	397	326	469	397	284	2279	7	2	1666	743
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.31	1.00	1.00	0.00	0.46	0.46
Sat Flow, veh/h	1437	1900	1610	1031	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	112	1	366	3	1	1	250	166	175	1	569	77
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1031	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.4	0.0	22.2	0.2	0.0	0.0	13.1	0.0	0.0	0.1	10.1	2.7
Cycle Q Clear(g_c), s	6.4	0.0	22.2	0.3	0.0	0.0	13.1	0.0	0.0	0.1	10.1	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	426	469	397	326	469	397	284	1114	1171	2	1666	743
V/C Ratio(X)	0.26	0.00	0.92	0.01	0.00	0.00	0.88	0.15	0.15	0.50	0.34	0.10
Avail Cap(c_a), veh/h	460	513	435	350	513	435	516	1114	1171	81	1666	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81	0.26	0.26	0.26
Uniform Delay (d), s/veh	30.8	28.4	36.7	28.5	28.4	28.4	33.4	0.0	0.0	49.9	17.2	15.2
Incr Delay (d2), s/veh	0.3	0.0	23.8	0.0	0.0	0.0	7.2	0.2	0.2	43.4	0.1	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	2.2	0.0	11.2	0.1	0.0	0.0	5.3	0.1	0.1	0.0	4.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	28.4	60.5	28.5	28.4	28.4	40.7	0.2	0.2	93.3	17.4	15.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	F	B	B
Approach Vol, veh/h		479			5			591			647	
Approach Delay, s/veh		53.6			28.5			17.3			17.2	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	66.7		29.7	19.2	51.1		29.7				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	55.0		27.0	28.5	31.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		24.2	15.1	12.1		2.3				
Green Ext Time (p_c), s	0.0	2.2		0.5	0.6	4.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		27.4	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	15	848	0	6	624
Future Volume (vph)	0	15	848	0	6	624
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

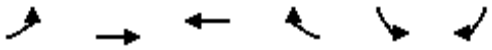
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	848	0	6	624
Future Vol, veh/h	0	15	848	0	6	624
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	16	893	0	6	657

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	447	0	0	893	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	564	-	-	768	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	564	-	-	768	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	564	768	-
HCM Lane V/C Ratio	-	-	0.028	0.008	-
HCM Control Delay (s)	-	-	11.6	9.7	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	28	79	0	0	14
Future Volume (vph)	5	28	79	0	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

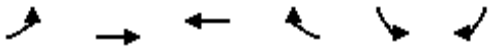
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	28	79	0	0	14
Future Vol, veh/h	5	28	79	0	0	14
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	29	83	0	0	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	83	0	-	0	122	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	39	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1527	-	-	-	878	982
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1527	-	-	-	875	982
Mov Cap-2 Maneuver	-	-	-	-	875	-
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1527	-	-	-	982
HCM Lane V/C Ratio	0.003	-	-	-	0.015
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	26	74	0	0	5
Future Volume (vph)	2	26	74	0	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	26	74	0	0	5
Future Vol, veh/h	2	26	74	0	0	5
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	27	78	0	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	78	0	-	0	109	78
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1533	-	-	-	893	988
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1533	-	-	-	892	988
Mov Cap-2 Maneuver	-	-	-	-	892	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A

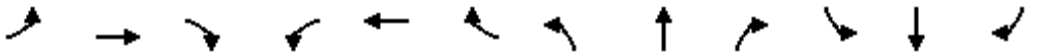
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1533	-	-	-	988
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	238	379	311	168	146	234
Future Volume (vph)	238	379	311	168	146	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3420		1805	3610
Flt Permitted	0.97	1.00	1.00		0.42	1.00
Satd. Flow (perm)	3351	1470	3420		803	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	264	421	346	187	162	260
RTOR Reduction (vph)	165	188	42	0	0	0
Lane Group Flow (vph)	301	31	491	0	162	260
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.3	14.3	65.9		77.2	77.2
Effective Green, g (s)	14.3	14.3	65.9		77.2	77.2
Actuated g/C Ratio	0.14	0.14	0.66		0.77	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	479	210	2253		698	2786
v/s Ratio Prot	c0.09		0.14		c0.02	0.07
v/s Ratio Perm		0.02			c0.16	
v/c Ratio	0.63	0.15	0.22		0.23	0.09
Uniform Delay, d1	40.3	37.5	6.8		3.0	2.8
Progression Factor	1.00	1.00	1.00		1.15	0.93
Incremental Delay, d2	2.6	0.3	0.2		0.2	0.1
Delay (s)	42.9	37.9	7.0		3.6	2.7
Level of Service	D	D	A		A	A
Approach Delay (s)	41.3		7.0			3.0
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

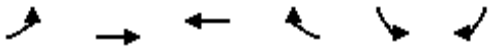
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	17	186	8	8	20	225	257	15	17	151	274
Future Volume (vph)	194	17	186	8	8	20	225	257	15	17	151	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1700			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.94	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1700			1464			1789	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	206	18	198	9	9	21	239	273	16	18	161	291
RTOR Reduction (vph)	0	0	174	0	20	0	0	1	0	0	0	82
Lane Group Flow (vph)	111	113	24	9	10	0	0	527	0	0	179	209
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.0	12.0	12.0	4.3	4.3			71.7			71.7	71.7
Effective Green, g (s)	12.0	12.0	12.0	4.3	4.3			71.7			71.7	71.7
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.72			0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	205	216	228	77	73			1049			1282	1362
v/s Ratio Prot	c0.06	0.06		0.00	c0.01							
v/s Ratio Perm			0.01					c0.36			0.10	0.11
v/c Ratio	0.54	0.52	0.10	0.12	0.14			0.50			0.14	0.15
Uniform Delay, d1	41.4	41.3	39.2	46.0	46.1			6.3			4.4	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.98	1.81
Incremental Delay, d2	2.9	2.3	0.2	0.7	0.8			1.7			0.2	0.2
Delay (s)	44.3	43.6	39.4	46.7	46.9			8.0			4.6	8.4
Level of Service	D	D	D	D	D			A			A	A
Approach Delay (s)		41.8			46.9			8.0			6.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	79	145	341	432	261	76
Future Volume (vph)	79	145	341	432	261	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3307		1805	1615
Flt Permitted	0.26	1.00	1.00		0.95	1.00
Satd. Flow (perm)	491	3610	3307		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	89	163	383	485	293	85
RTOR Reduction (vph)	0	0	191	0	0	26
Lane Group Flow (vph)	89	163	677	0	293	59
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	67.0	67.0	67.0		45.0	45.0
Effective Green, g (s)	67.0	67.0	67.0		45.0	45.0
Actuated g/C Ratio	0.56	0.56	0.56		0.38	0.38
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	274	2015	1846		676	605
v/s Ratio Prot		0.05	c0.20		c0.16	
v/s Ratio Perm	0.18					0.04
v/c Ratio	0.32	0.08	0.37		0.43	0.10
Uniform Delay, d1	14.3	12.3	14.7		28.0	24.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.1	0.1	0.6		2.0	0.3
Delay (s)	17.4	12.3	15.3		30.0	24.6
Level of Service	B	B	B		C	C
Approach Delay (s)		14.1	15.3		28.8	
Approach LOS		B	B		C	

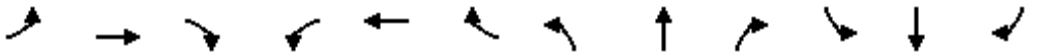
Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Future Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	27	1038	226	163	2393	46	477	19	154	22	13	44
RTOR Reduction (vph)	0	31	0	0	0	19	0	0	131	0	40	0
Lane Group Flow (vph)	27	1233	0	163	2393	27	248	248	23	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	58.5		15.0	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	58.5		15.0	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.49		0.12	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2778		237	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.01	0.22		c0.09	c0.63		c0.13	0.13		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.71	0.44		0.69	1.06	0.02	0.87	0.87	0.08	0.14	0.11	
Uniform Delay, d1	58.5	20.1		50.3	24.5	10.1	49.9	49.9	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	47.3	0.5		8.0	38.4	0.0	28.5	28.5	0.6	1.8	1.3	
Delay (s)	105.7	20.6		58.3	62.8	10.1	78.3	78.3	44.4	52.8	52.2	
Level of Service	F	C		E	E	B	E	E	D	D	D	
Approach Delay (s)		22.4			61.6			70.3			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

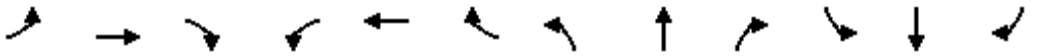
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Future Volume (vph)	25	945	206	148	2178	42	434	17	140	20	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	27	1038	226	163	2393	46	477	19	154	22	13	44
RTOR Reduction (vph)	0	31	0	0	2	0	0	0	131	0	40	0
Lane Group Flow (vph)	27	1233	0	163	2437	0	248	248	23	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	58.5		15.0	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	58.5		15.0	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.49		0.12	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2778		237	3377		285	285	285	158	158	
v/s Ratio Prot	0.01	0.22		c0.09	c0.43		c0.13	0.13		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.71	0.44		0.69	0.72		0.87	0.87	0.08	0.14	0.11	
Uniform Delay, d1	58.5	20.1		50.3	17.4		49.9	49.9	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	47.3	0.5		8.0	1.4		28.5	28.5	0.6	1.8	1.3	
Delay (s)	105.7	20.6		58.3	18.8		78.3	78.3	44.4	52.8	52.2	
Level of Service	F	C		E	B		E	E	D	D	D	
Approach Delay (s)		22.4			21.3			70.3			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	2	124	1	1	1	122	555	12	3	255	32
Future Volume (vph)	71	2	124	1	1	1	122	555	12	3	255	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	2	135	1	1	1	133	603	13	3	277	35
RTOR Reduction (vph)	0	0	118	0	0	1	0	1	0	0	0	13
Lane Group Flow (vph)	77	2	17	1	1	0	133	615	0	3	277	22
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.3	12.3	12.3	12.3	12.3	12.3	12.7	72.9		1.3	61.5	61.5
Effective Green, g (s)	12.3	12.3	12.3	12.3	12.3	12.3	12.7	72.9		1.3	61.5	61.5
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.73		0.01	0.62	0.62
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	176	233	198	176	233	198	229	2623		23	2220	993
v/s Ratio Prot		0.00			0.00		c0.07	c0.17		0.00	0.08	
v/s Ratio Perm	c0.05		0.01	0.00		0.00						0.01
v/c Ratio	0.44	0.01	0.08	0.01	0.00	0.00	0.58	0.23		0.13	0.12	0.02
Uniform Delay, d1	40.6	38.5	38.9	38.5	38.5	38.5	41.1	4.4		48.8	8.0	7.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.03	0.80		1.00	1.00	1.00
Incremental Delay, d2	1.7	0.0	0.2	0.0	0.0	0.0	3.6	0.2		2.6	0.1	0.0
Delay (s)	42.4	38.5	39.0	38.5	38.5	38.5	46.0	3.8		51.4	8.1	7.6
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.2			38.5			11.3			8.5	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

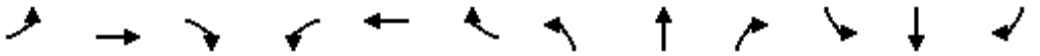
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	177	202	353	525	445	437
Future Volume (vph)	177	202	353	525	445	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3286		1805	3610
Flt Permitted	0.97	1.00	1.00		0.20	1.00
Satd. Flow (perm)	3394	1470	3286		376	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	186	213	372	553	468	460
RTOR Reduction (vph)	62	111	242	0	0	0
Lane Group Flow (vph)	211	15	683	0	468	460
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.0	12.0	41.5		81.0	79.5
Effective Green, g (s)	12.0	12.0	41.5		81.0	79.5
Actuated g/C Ratio	0.12	0.12	0.42		0.81	0.80
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	407	176	1363		797	2869
v/s Ratio Prot	c0.06		0.21		c0.20	0.13
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.52	0.09	0.50		0.59	0.16
Uniform Delay, d1	41.3	39.1	21.6		13.2	2.4
Progression Factor	1.00	1.00	1.00		0.87	1.37
Incremental Delay, d2	1.1	0.2	1.3		1.0	0.1
Delay (s)	42.4	39.3	22.9		12.6	3.4
Level of Service	D	D	C		B	A
Approach Delay (s)	41.4		22.9			8.0
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

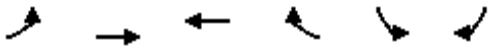
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	9	396	43	29	20	173	316	14	10	424	190
Future Volume (vph)	512	9	396	43	29	20	173	316	14	10	424	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.94			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1783			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.62			0.99	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1783			1170			1879	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	528	9	408	44	30	21	178	326	14	10	437	196
RTOR Reduction (vph)	0	0	309	0	20	0	0	1	0	0	0	83
Lane Group Flow (vph)	269	268	99	44	31	0	0	517	0	0	447	113
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.3	23.3	23.3	6.8	6.8			57.9			57.9	57.9
Effective Green, g (s)	23.3	23.3	23.3	6.8	6.8			57.9			57.9	57.9
Actuated g/C Ratio	0.23	0.23	0.23	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	399	420	442	122	121			677			1087	1100
v/s Ratio Prot	c0.16	0.15		c0.02	0.02							
v/s Ratio Perm			0.05					c0.44			0.24	0.06
v/c Ratio	0.67	0.64	0.22	0.36	0.26			0.76			0.41	0.10
Uniform Delay, d1	34.9	34.6	31.0	44.5	44.2			15.9			11.6	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.01	2.08
Incremental Delay, d2	4.5	3.2	0.3	1.8	1.1			8.0			1.1	0.2
Delay (s)	39.4	37.7	31.3	46.3	45.4			23.9			12.9	19.7
Level of Service	D	D	C	D	D			C			B	B
Approach Delay (s)		35.4			45.8			23.9			15.0	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

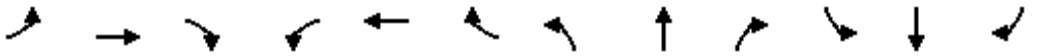
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	126	339	348	367	753	153
Future Volume (vph)	126	339	348	367	753	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.25	1.00	1.00		0.95	1.00
Satd. Flow (perm)	477	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	133	357	366	386	793	161
RTOR Reduction (vph)	0	0	159	0	0	18
Lane Group Flow (vph)	133	357	593	0	793	143
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	198	1504	1388		932	834
v/s Ratio Prot		0.10	0.18		c0.44	
v/s Ratio Perm	c0.28					0.09
v/c Ratio	0.67	0.24	0.43		0.85	0.17
Uniform Delay, d1	28.4	22.7	24.8		25.0	15.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	16.7	0.4	1.0		9.6	0.4
Delay (s)	45.1	23.0	25.8		34.6	15.8
Level of Service	D	C	C		C	B
Approach Delay (s)		29.0	25.8		31.5	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

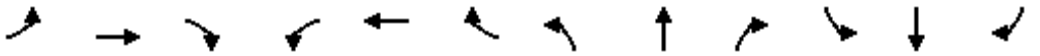
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Future Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	2535	360	232	1384	37	175	15	288	34	12	48
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	185	0	44	0
Lane Group Flow (vph)	41	2877	0	232	1384	21	94	96	103	34	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	5.5	60.0		13.5	68.0	68.0	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	5.5	60.0		13.5	68.0	68.0	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.05	0.50		0.11	0.57	0.57	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	87	2850		213	2153	1076	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.50		c0.12	0.36		0.05	0.05		c0.02	0.01	
v/s Ratio Perm						0.01			c0.05			
v/c Ratio	0.47	1.01		1.09	0.64	0.02	0.33	0.34	0.36	0.22	0.10	
Uniform Delay, d1	55.8	30.0		53.2	17.7	11.4	45.6	45.7	45.8	51.3	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	19.2		87.5	1.5	0.0	3.1	3.2	3.5	3.1	1.3	
Delay (s)	59.8	49.2		140.7	19.2	11.4	48.7	48.8	49.3	54.4	52.1	
Level of Service	E	D		F	B	B	D	D	D	D	D	
Approach Delay (s)		49.4			36.1			49.1			53.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

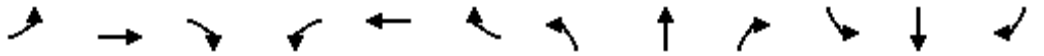
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Future Volume (vph)	39	2408	342	220	1315	35	166	14	274	32	11	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	2535	360	232	1384	37	175	15	288	34	12	48
RTOR Reduction (vph)	0	18	0	0	3	0	0	0	211	0	43	0
Lane Group Flow (vph)	41	2877	0	232	1418	0	94	96	77	34	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.5	59.3		12.6	66.4		18.0	18.0	18.0	11.6	11.6	
Effective Green, g (s)	5.5	59.3		12.6	66.4		18.0	18.0	18.0	11.6	11.6	
Actuated g/C Ratio	0.05	0.49		0.10	0.55		0.15	0.15	0.15	0.10	0.10	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	87	2816		199	3154		285	285	285	183	183	
v/s Ratio Prot	0.02	c0.50		c0.12	0.25		0.05	c0.05		c0.02	0.01	
v/s Ratio Perm									0.04			
v/c Ratio	0.47	1.02		1.17	0.45		0.33	0.34	0.27	0.19	0.09	
Uniform Delay, d1	55.8	30.4		53.7	15.9		45.6	45.7	45.2	49.9	49.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	22.7		115.7	0.5		3.1	3.2	2.3	2.2	1.0	
Delay (s)	59.8	53.0		169.4	16.4		48.7	48.8	47.5	52.1	50.4	
Level of Service	E	D		F	B		D	D	D	D	D	
Approach Delay (s)		53.1			37.9			48.0			51.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1	344	3	1	1	235	320	1	1	535	72
Future Volume (vph)	105	1	344	3	1	1	235	320	1	1	535	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	112	1	366	3	1	1	250	340	1	1	569	77
RTOR Reduction (vph)	0	0	314	0	0	1	0	0	0	0	0	36
Lane Group Flow (vph)	112	1	52	3	1	0	250	341	0	1	569	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.1	14.1	14.1	14.1	14.1	14.1	19.1	71.2		1.2	53.3	53.3
Effective Green, g (s)	14.1	14.1	14.1	14.1	14.1	14.1	19.1	71.2		1.2	53.3	53.3
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.19	0.71		0.01	0.53	0.53
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	202	267	227	202	267	227	344	2568		21	1924	860
v/s Ratio Prot		0.00			0.00		c0.14	0.09		0.00	c0.16	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.03
v/c Ratio	0.55	0.00	0.23	0.01	0.00	0.00	0.73	0.13		0.05	0.30	0.05
Uniform Delay, d1	40.0	36.9	38.1	37.0	36.9	36.9	38.0	4.6		48.8	12.9	11.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.20	0.48		1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0	0.5	0.0	0.0	0.0	6.6	0.1		0.9	0.4	0.1
Delay (s)	43.3	36.9	38.6	37.0	36.9	36.9	52.1	2.3		49.8	13.3	11.3
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.7			37.0			23.4			13.2	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 6.1:

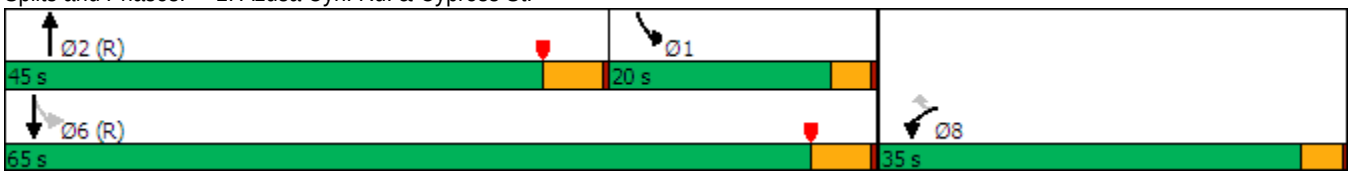
INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	242	397	359	171	151	238
Future Volume (vph)	242	397	359	171	151	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		49%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	35.0	35.0	45.0		20.0	65.0
Total Split (%)	35.0%	35.0%	45.0%		20.0%	65.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 81 (81%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	242	397	359	171	151	238
Future Volume (veh/h)	242	397	359	171	151	238
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	237	476	399	190	168	264
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	336	597	953	448	794	2633
Arrive On Green	0.19	0.19	0.40	0.40	0.56	1.00
Sat Flow, veh/h	1810	3220	2478	1120	1810	3705
Grp Volume(v), veh/h	237	476	301	288	168	264
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1698	1810	1805
Q Serve(g_s), s	12.3	14.1	12.0	12.3	0.0	0.0
Cycle Q Clear(g_c), s	12.3	14.1	12.0	12.3	0.0	0.0
Prop In Lane	1.00	1.00		0.66	1.00	
Lane Grp Cap(c), veh/h	336	597	722	679	794	2633
V/C Ratio(X)	0.71	0.80	0.42	0.42	0.21	0.10
Avail Cap(c_a), veh/h	570	1014	722	679	794	2633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.2	38.9	21.6	21.7	7.5	0.0
Incr Delay (d2), s/veh	2.7	2.5	1.8	1.9	0.1	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	5.6	5.7	5.3	5.1	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.9	41.4	23.4	23.6	7.6	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	713		589			432
Approach Delay, s/veh	41.2		23.5			3.0
Approach LOS	D		C			A

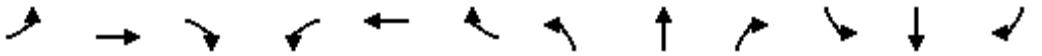
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	32.9	45.0			77.9	22.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	16.5	* 40			60.0	31.5
Max Q Clear Time (g_c+I1), s	2.0	14.3			2.0	16.1
Green Ext Time (p_c), s	0.4	3.9			1.9	2.4

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	12	190	7	6	19	231	294	11	15	161	283
Future Volume (vph)	211	12	190	7	6	19	231	294	11	15	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	43.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	211	12	190	7	6	19	231	294	11	15	161	283
Future Vol, veh/h	211	12	190	7	6	19	231	294	11	15	161	283
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	224	13	202	7	6	20	246	313	12	16	171	301
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	16.7	11.7	89.8	15.4
HCM LOS	C	B	F	C

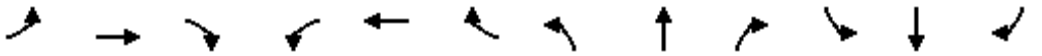
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	43%	95%	0%	54%	0%	9%	0%
Vol Thru, %	55%	5%	0%	46%	0%	91%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	536	223	190	13	19	176	283
LT Vol	231	211	0	7	0	15	0
Through Vol	294	12	0	6	0	161	0
RT Vol	11	0	190	0	19	0	283
Lane Flow Rate	570	237	202	14	20	187	301
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.084	0.517	0.374	0.034	0.044	0.365	0.525
Departure Headway (Hd)	6.842	8.156	6.945	9.193	8.179	7.263	6.5
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	446	521	392	440	498	557
Service Time	4.9	5.856	4.645	6.893	5.879	4.963	4.2
HCM Lane V/C Ratio	1.075	0.531	0.388	0.036	0.045	0.376	0.54
HCM Control Delay	89.8	19.3	13.7	12.2	11.3	14.1	16.2
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	17.6	2.9	1.7	0.1	0.1	1.7	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	12	190	7	6	19	231	294	11	15	161	283
Future Volume (vph)	211	12	190	7	6	19	231	294	11	15	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	47%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	12	190	7	6	19	231	294	11	15	161	283
Future Volume (veh/h)	211	12	190	7	6	19	231	294	11	15	161	283
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	233	0	202	7	6	20	246	313	12	16	171	301
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	527	0	234	43	9	31	442	534	20	116	1213	1144
Arrive On Green	0.15	0.00	0.15	0.02	0.02	0.02	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	385	1284	550	751	28	109	1708	1610
Grp Volume(v), veh/h	233	0	202	7	0	26	571	0	0	187	0	301
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1669	1329	0	0	1816	0	1610
Q Serve(g_s), s	5.9	0.0	12.3	0.4	0.0	1.5	18.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	12.3	0.4	0.0	1.5	20.7	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.77	0.43		0.02	0.09		1.00
Lane Grp Cap(c), veh/h	527	0	234	43	0	40	996	0	0	1330	0	1144
V/C Ratio(X)	0.44	0.00	0.86	0.16	0.00	0.65	0.57	0.00	0.00	0.14	0.00	0.26
Avail Cap(c_a), veh/h	579	0	258	290	0	267	996	0	0	1330	0	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	41.7	47.8	0.0	48.4	7.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	23.1	1.7	0.0	16.3	2.2	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.2	0.2	0.0	0.8	5.6	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	64.9	49.5	0.0	64.7	9.2	0.0	0.0	0.2	0.0	0.6
LnGrp LOS	D	A	E	D	A	E	A	A	A	A	A	A
Approach Vol, veh/h		435			33			571			488	
Approach Delay, s/veh		51.3			61.4			9.2			0.4	
Approach LOS		D			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.0		18.6		75.0		6.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		22.7		14.3		2.0		3.5				
Green Ext Time (p_c), s		5.4		0.3		2.3		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			19.5									
HCM 6th LOS			B									

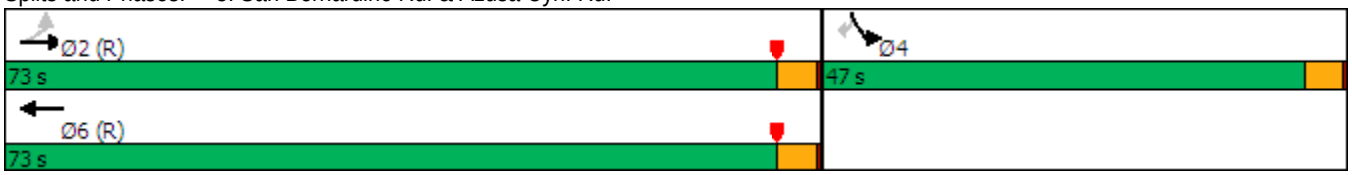
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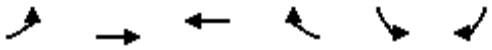
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	152	358	460	270	80
Future Volume (vph)	90	152	358	460	270	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	152	358	460	270	80
Future Volume (veh/h)	90	152	358	460	270	80
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	101	171	402	517	303	90
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	291	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	618	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	101	171	402	517	303	90
Grp Sat Flow(s),veh/h/ln	618	1805	1805	1610	1810	1610
Q Serve(g_s), s	14.7	2.5	14.6	24.1	15.5	4.6
Cycle Q Clear(g_c), s	38.8	2.5	14.6	24.1	15.5	4.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	291	2076	1038	926	648	577
V/C Ratio(X)	0.35	0.08	0.39	0.56	0.47	0.16
Avail Cap(c_a), veh/h	291	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	11.4	13.9	16.0	29.7	26.2
Incr Delay (d2), s/veh	3.3	0.1	1.1	2.4	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.0	5.9	8.9	7.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.4	11.5	15.0	18.4	32.1	26.7
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		272	919		393	
Approach Delay, s/veh		18.8	16.9		30.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

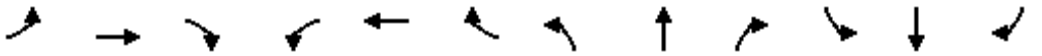
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Future Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	301	191	2276	43	457	17	154	20	12	41
Future Volume (veh/h)	26	1213	301	191	2276	43	457	17	154	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	331	210	2501	47	516	0	169	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2114	524	241	2249	953	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	3800	1610	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1148	516	210	2501	47	516	0	169	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1610	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.1	27.1	13.7	71.0	1.5	17.0	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.1	27.1	13.7	71.0	1.5	17.0	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1822	817	241	2249	953	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	1.11	0.05	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1822	817	351	2249	953	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.3	23.3	51.0	24.5	10.3	50.6	0.0	48.4	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.9	57.4	0.1	27.6	0.0	15.1	2.0	0.0	9.0
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	1.2	11.8	11.0	7.0	45.6	0.5	9.7	0.0	5.8	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.0	27.0	66.0	81.9	10.4	78.2	0.0	63.6	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1693			2758			685			80	
Approach Delay, s/veh		26.6			79.5			74.6			59.0	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	62.5		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.7	29.1		6.0	3.9	73.0		19.0				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	61.4	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.

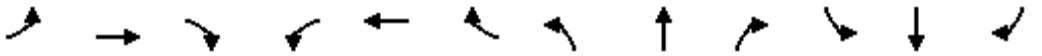
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Future Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	301	191	2276	43	457	17	154	20	12	41
Future Volume (veh/h)	26	1213	301	191	2276	43	457	17	154	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	331	210	2501	47	516	0	169	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2114	524	241	3301	62	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	5577	104	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1148	516	210	1701	847	516	0	169	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1881	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.1	27.1	13.7	39.7	40.1	17.0	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.1	27.1	13.7	39.7	40.1	17.0	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1822	817	241	2249	1113	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	0.76	0.76	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1822	817	351	2249	1113	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.3	23.3	51.0	18.1	18.2	50.6	0.0	48.4	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.9	2.4	4.9	27.6	0.0	15.1	2.0	0.0	9.0
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	1.2	11.8	11.0	7.0	16.2	17.0	9.7	0.0	5.8	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.0	27.0	66.0	20.5	23.1	78.2	0.0	63.6	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	C	C	E	A	E	D	A	E
Approach Vol, veh/h		1693			2758			685			80	
Approach Delay, s/veh		26.6			24.8			74.6			59.0	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	62.5		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.7	29.1		6.0	3.9	42.1		19.0				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	21.2		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	32.4	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

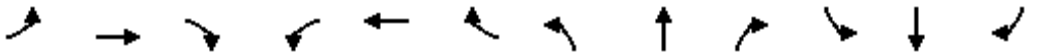
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	131	1	1	1	132	610	12	3	258	39
Future Volume (vph)	86	2	131	1	1	1	132	610	12	3	258	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	32.0	56.0		11.0	35.0	35.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	32.0%	56.0%		11.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 22 (22%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	131	1	1	1	132	610	12	3	258	39
Future Volume (veh/h)	86	2	131	1	1	1	132	610	12	3	258	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	142	1	1	1	143	663	13	3	280	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	232	213	180	212	213	180	176	2715	53	6	2368	1056
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.19	1.00	1.00	0.00	0.66	0.66
Sat Flow, veh/h	1437	1900	1610	1264	1900	1610	1810	3621	71	1810	3610	1610
Grp Volume(v), veh/h	93	2	142	1	1	1	143	330	346	3	280	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1264	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	8.6	0.1	0.0	0.1	7.6	0.0	0.0	0.2	2.9	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.6	0.2	0.0	0.1	7.6	0.0	0.0	0.2	2.9	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	232	213	180	212	213	180	176	1353	1415	6	2368	1056
V/C Ratio(X)	0.40	0.01	0.79	0.00	0.00	0.01	0.81	0.24	0.24	0.52	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	425	532	451	516	1353	1415	136	2368	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	0.73	0.73	0.73
Uniform Delay (d), s/veh	42.2	39.5	43.2	39.5	39.5	39.5	39.4	0.0	0.0	49.8	6.4	6.1
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.3	0.4	0.4	43.9	0.1	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	2.2	0.0	3.8	0.0	0.0	0.0	3.4	0.2	0.2	0.1	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	39.5	50.7	39.6	39.5	39.5	47.7	0.4	0.4	93.7	6.5	6.1
LnGrp LOS	D	D	D	D	D	D	D	A	A	F	A	A
Approach Vol, veh/h		237			3			819			325	
Approach Delay, s/veh		47.7			39.5			8.7			7.2	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	80.0		16.2	13.2	70.6		16.2				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	51.0		28.0	28.5	30.0		28.0				
Max Q Clear Time (g_c+I1), s	2.2	2.0		10.6	9.6	4.9		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.1	
HCM 6th LOS		B	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	524	0	6	460
Future Volume (vph)	0	2	524	0	6	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

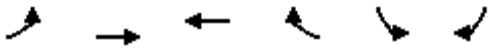
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	524	0	6	460
Future Vol, veh/h	0	2	524	0	6	460
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	552	0	6	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	276	0	0	552	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	727	-	-	1028	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	727	-	-	1028	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	727	1028	-
HCM Lane V/C Ratio	-	-	0.003	0.006	-
HCM Control Delay (s)	-	-	10	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	34	31	0	0	2
Future Volume (vph)	5	34	31	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

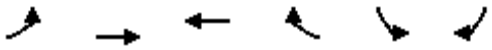
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	34	31	0	0	2
Future Vol, veh/h	5	34	31	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	36	33	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	79	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1592	-	-	-	929	1046
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1592	-	-	-	926	1046
Mov Cap-2 Maneuver	-	-	-	-	926	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	982	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1592	-	-	-	1046
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	32	30	0	0	1
Future Volume (vph)	2	32	30	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	32	30	0	0	1
Future Vol, veh/h	2	32	30	0	0	1
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	34	32	0	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	70	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	939	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	990	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	938	1048
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	990	-

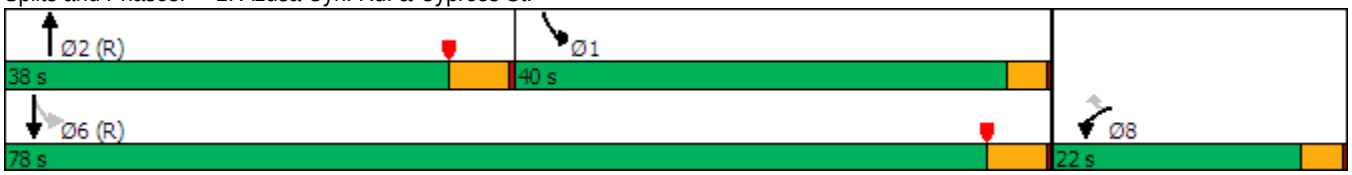
Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	1048
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	361	534	463	484
Future Volume (vph)	181	208	361	534	463	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	208	361	534	463	484
Future Volume (veh/h)	181	208	361	534	463	484
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	137	380	562	487	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	405	180	596	531	838	2900
Arrive On Green	0.11	0.11	0.33	0.33	0.85	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	268	137	380	562	487	509
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.1	8.3	17.9	33.0	0.3	0.0
Cycle Q Clear(g_c), s	7.1	8.3	17.9	33.0	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	405	180	596	531	838	2900
V/C Ratio(X)	0.66	0.76	0.64	1.06	0.58	0.18
Avail Cap(c_a), veh/h	670	298	596	531	838	2900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	42.6	43.1	28.4	33.5	4.4	0.0
Incr Delay (d2), s/veh	1.9	6.5	5.2	55.2	0.9	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	3.6	8.4	20.6	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	49.6	33.6	88.7	5.3	0.1
LnGrp LOS	D	D	C	F	A	A
Approach Vol, veh/h	405		942			996
Approach Delay, s/veh	46.2		66.5			2.7
Approach LOS	D		E			A

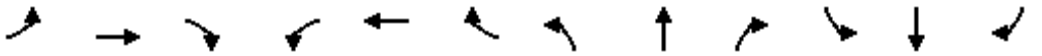
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	47.3	38.0			85.3	14.7
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	2.3	35.0			2.0	10.3
Green Ext Time (p_c), s	1.6	0.0			3.9	0.9

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	40	23	18	177	329	12	9	461	207
Future Volume (vph)	527	7	405	40	23	18	177	329	12	9	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	109.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	527	7	405	40	23	18	177	329	12	9	461	207
Future Vol, veh/h	527	7	405	40	23	18	177	329	12	9	461	207
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	543	7	418	41	24	19	182	339	12	9	475	213
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

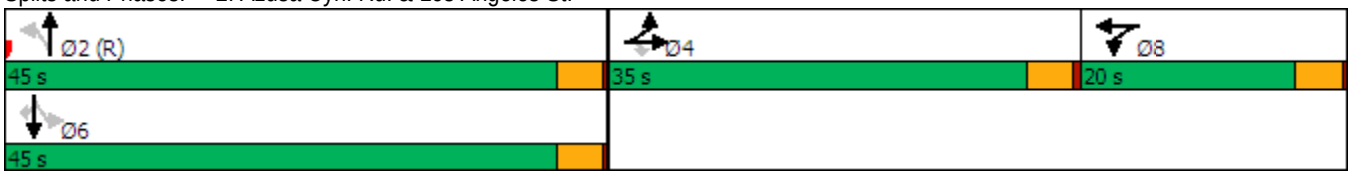
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	122.1	15.5	144.6	77.4
HCM LOS	F	C	F	F

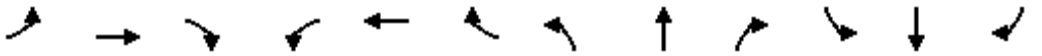
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	99%	0%	63%	0%	2%	0%
Vol Thru, %	64%	1%	0%	37%	0%	98%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	518	534	405	63	18	470	207
LT Vol	177	527	0	40	0	9	0
Through Vol	329	7	0	23	0	461	0
RT Vol	12	0	405	0	18	0	207
Lane Flow Rate	534	551	418	65	19	485	213
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.217	1.308	0.86	0.183	0.047	1.102	0.444
Departure Headway (Hd)	8.581	9.184	7.936	11.022	9.939	8.729	7.99
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	427	402	459	327	362	422	455
Service Time	6.581	6.884	5.636	8.722	7.639	6.429	5.69
HCM Lane V/C Ratio	1.251	1.371	0.911	0.199	0.052	1.149	0.468
HCM Control Delay	144.6	182.2	42.9	16.2	13.1	104.1	16.9
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	20.7	23.3	8.8	0.7	0.1	15.9	2.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	40	23	18	177	329	12	9	461	207
Future Volume (vph)	527	7	405	40	23	18	177	329	12	9	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	35.0	35.0	35.0	20.0	20.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	35.0%	35.0%	35.0%	20.0%	20.0%		45.0%	45.0%		45.0%	45.0%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	7	405	40	23	18	177	329	12	9	461	207
Future Volume (veh/h)	527	7	405	40	23	18	177	329	12	9	461	207
Initial Q (Qb), veh	0	1	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	548	0	418	41	24	19	182	339	12	9	475	213
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1033	0	459	75	41	32	273	476	16	43	1040	891
Arrive On Green	0.29	0.00	0.29	0.04	0.04	0.04	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	982	778	406	860	29	11	1880	1610
Grp Volume(v), veh/h	548	0	418	41	0	43	533	0	0	484	0	213
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1760	1295	0	0	1891	0	1610
Q Serve(g_s), s	12.8	0.0	25.1	2.2	0.0	2.4	27.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.8	0.0	25.1	2.2	0.0	2.4	30.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.44	0.34		0.02	0.02		1.00
Lane Grp Cap(c), veh/h	1033	0	459	75	0	73	765	0	0	1083	0	891
V/C Ratio(X)	0.53	0.00	0.91	0.55	0.00	0.59	0.70	0.00	0.00	0.45	0.00	0.24
Avail Cap(c_a), veh/h	1122	0	499	290	0	282	765	0	0	1083	0	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.60	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	34.5	47.0	0.0	47.1	16.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	19.8	6.1	0.0	7.4	3.2	0.0	0.0	1.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	11.7	1.1	0.0	1.2	9.1	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	54.3	53.1	0.0	54.5	19.4	0.0	0.0	1.3	0.0	0.6
LnGrp LOS	C	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		966			84			533			697	
Approach Delay, s/veh		40.8			53.8			19.4			1.1	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.3		32.5		59.3		8.1				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		41.0		31.0		41.0		16.0				
Max Q Clear Time (g_c+I1), s		32.1		27.1		2.0		4.4				
Green Ext Time (p_c), s		2.8		1.5		4.3		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		24.1
HCM 6th LOS		C

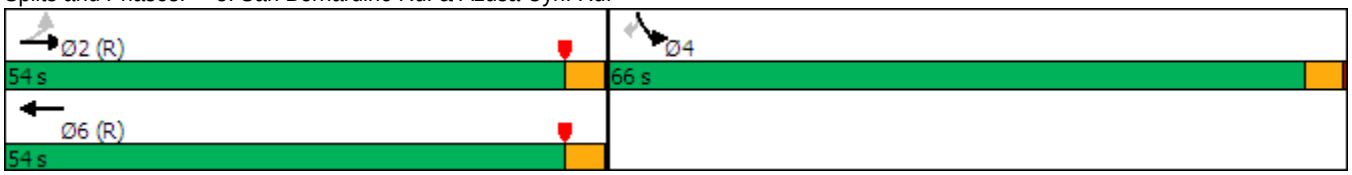
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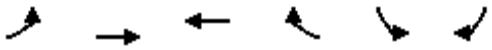
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	379	786	164
Future Volume (vph)	131	357	362	379	786	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	131	357	362	379	786	164
Future Volume (veh/h)	131	357	362	379	786	164
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	376	381	399	827	173
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	218	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	703	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	138	376	381	399	827	173
Grp Sat Flow(s),veh/h/ln	703	1805	1805	1610	1810	1610
Q Serve(g_s), s	22.7	8.1	18.7	23.1	48.8	7.0
Cycle Q Clear(g_c), s	45.8	8.1	18.7	23.1	48.8	7.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	218	1504	752	671	935	832
V/C Ratio(X)	0.63	0.25	0.51	0.59	0.88	0.21
Avail Cap(c_a), veh/h	218	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	22.8	25.9	27.1	25.8	15.7
Incr Delay (d2), s/veh	13.2	0.4	2.4	3.9	12.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.5	8.3	9.3	23.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.1	23.2	28.3	31.0	37.8	16.3
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		514	780		1000	
Approach Delay, s/veh		32.6	29.7		34.1	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

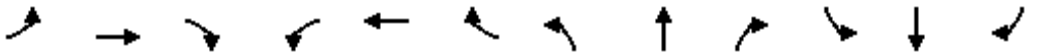
Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	8.6	65.0		17.0	73.4	73.4	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.2%	54.2%		14.2%	61.2%	61.2%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	362	234	1564	36	249	14	314	33	11	47
Future Volume (veh/h)	40	2510	362	234	1564	36	249	14	314	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	381	246	1646	38	273	0	331	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2453	336	204	2214	938	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4906	673	1810	3800	1610	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2015	1008	246	1646	38	273	0	331	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1610	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.8	60.0	60.0	13.5	38.3	1.2	8.3	0.0	18.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.8	60.0	60.0	13.5	38.3	1.2	8.3	0.0	18.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	204	2214	938	543	0	242	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	1.21	0.74	0.04	0.50	0.00	1.37	0.23	0.00	0.44
Avail Cap(c_a), veh/h	77	1900	889	204	2214	938	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	30.0	30.0	53.3	18.4	10.7	46.9	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	26.3	38.9	73.8	130.6	2.3	0.1	3.2	0.0	190.4	3.6	0.0	9.9
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	1.6	35.1	41.6	13.4	15.8	0.4	4.0	0.0	20.0	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	68.9	103.8	183.9	20.8	10.8	50.1	0.0	241.4	55.0	0.0	62.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	D	A	E
Approach Vol, veh/h		3065			1930			604			96	
Approach Delay, s/veh		80.6			41.3			154.9			59.6	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.1	74.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	5.1	68.4		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.2	4.8	40.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		74.8	
HCM 6th LOS		E	

Notes

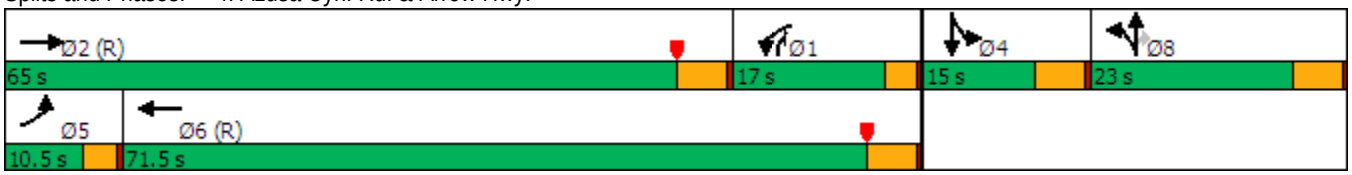
User approved volume balancing among the lanes for turning movement.

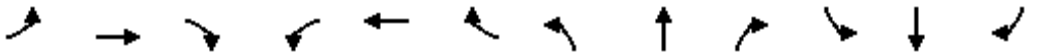
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	10.5	65.0		17.0	71.5		23.0	23.0	17.0	15.0	15.0	
Total Split (%)	8.8%	54.2%		14.2%	59.6%		19.2%	19.2%	14.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	362	234	1564	36	249	14	314	33	11	47
Future Volume (veh/h)	40	2510	362	234	1564	36	249	14	314	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	381	246	1646	38	273	0	331	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2453	336	505	4228	98	543	0	691	151	27	111
Arrive On Green	0.06	1.00	1.00	0.56	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4906	673	1810	5549	128	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2015	1008	246	1127	557	273	0	331	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1877	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.7	60.0	59.2	9.9	0.0	0.0	8.3	0.0	0.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.7	60.0	59.2	9.9	0.0	0.0	8.3	0.0	0.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		0.07	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	505	2896	1430	543	0	691	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	0.49	0.39	0.39	0.50	0.00	0.48	0.23	0.00	0.44
Avail Cap(c_a), veh/h	106	1900	889	505	2896	1430	543	0	691	151	0	138
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	0.0	21.3	0.0	0.0	46.9	0.0	24.6	51.4	0.0	52.3
Incr Delay (d2), s/veh	20.8	38.9	73.8	0.7	0.4	0.8	3.2	0.0	2.3	3.6	0.0	9.9
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	1.5	10.3	18.2	3.5	0.2	0.3	4.0	0.0	7.2	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.8	38.9	73.8	22.0	0.4	0.8	50.1	0.0	26.9	55.0	0.0	62.2
LnGrp LOS	E	F	F	C	A	A	D	A	C	D	A	E
Approach Vol, veh/h		3065			1930			604			96	
Approach Delay, s/veh		50.9			3.3			37.4			59.6	
Approach LOS		D			A			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.5	65.0		15.0	7.1	96.4		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	* 60		10.0	7.0	66.5		18.0				
Max Q Clear Time (g_c+I1), s	11.9	62.0		6.2	4.7	2.0		10.3				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	17.0		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		33.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	246	323	1	1	583	85
Future Volume (vph)	112	1	361	3	1	1	246	323	1	1	583	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	32.0	60.0		8.0	36.0	36.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	60.0%		8.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	361	3	1	1	246	323	1	1	583	85
Future Volume (veh/h)	112	1	361	3	1	1	246	323	1	1	583	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	1	384	3	1	1	262	344	1	1	620	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	440	487	413	332	487	413	295	2243	7	2	1608	717
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.33	1.00	1.00	0.00	0.45	0.45
Sat Flow, veh/h	1437	1900	1610	1014	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	119	1	384	3	1	1	262	168	177	1	620	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1014	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	23.3	0.2	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Cycle Q Clear(g_c), s	6.8	0.0	23.3	0.3	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	440	487	413	332	487	413	295	1097	1153	2	1608	717
V/C Ratio(X)	0.27	0.00	0.93	0.01	0.00	0.00	0.89	0.15	0.15	0.50	0.39	0.13
Avail Cap(c_a), veh/h	460	513	435	345	513	435	516	1097	1153	81	1608	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78	0.13	0.13	0.13
Uniform Delay (d), s/veh	30.2	27.7	36.3	27.8	27.7	27.7	32.8	0.0	0.0	49.9	18.6	16.3
Incr Delay (d2), s/veh	0.3	0.0	26.0	0.0	0.0	0.0	7.4	0.2	0.2	23.5	0.1	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	2.3	0.0	11.9	0.1	0.0	0.0	5.5	0.1	0.1	0.0	4.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	27.7	62.3	27.8	27.7	27.7	40.2	0.2	0.2	73.4	18.7	16.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	E	B	B
Approach Vol, veh/h		504			5			607			711	
Approach Delay, s/veh		54.7			27.7			17.5			18.4	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	65.7		30.6	19.8	49.5		30.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	55.0		27.0	28.5	31.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		25.3	15.7	13.5		2.3				
Green Ext Time (p_c), s	0.0	2.2		0.4	0.6	4.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.2	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	875	0	2	677
Future Volume (vph)	0	5	875	0	2	677
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

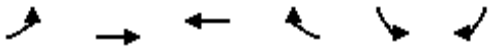
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	875	0	2	677
Future Vol, veh/h	0	5	875	0	2	677
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	921	0	2	713

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	461	0	0	921	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	553	-	-	750	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	553	-	-	750	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	553	750	-
HCM Lane V/C Ratio	-	-	0.01	0.003	-
HCM Control Delay (s)	-	-	11.6	9.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	28	77	0	0	5
Future Volume (vph)	2	28	77	0	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

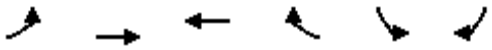
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	28	77	0	0	5
Future Vol, veh/h	2	28	77	0	0	5
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	29	81	0	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	81	0	-	0	114	81
Stage 1	-	-	-	-	81	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1529	-	-	-	887	985
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1529	-	-	-	886	985
Mov Cap-2 Maneuver	-	-	-	-	886	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	995	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1529	-	-	-	985
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	27	75	0	0	2
Future Volume (vph)	1	27	75	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	27	75	0	0	2
Future Vol, veh/h	1	27	75	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	28	79	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	109	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	30	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1532	-	-	-	893	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	998	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1532	-	-	-	892	987
Mov Cap-2 Maneuver	-	-	-	-	892	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	998	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	8.7
HCM LOS			A

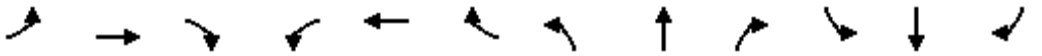
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	987
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	242	397	359	171	151	238
Future Volume (vph)	242	397	359	171	151	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3347	1470	3435		1805	3610
Flt Permitted	0.97	1.00	1.00		0.40	1.00
Satd. Flow (perm)	3347	1470	3435		765	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	441	399	190	168	264
RTOR Reduction (vph)	183	193	41	0	0	0
Lane Group Flow (vph)	302	32	548	0	168	264
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.3	14.3	57.2		78.7	77.2
Effective Green, g (s)	14.3	14.3	57.2		78.7	77.2
Actuated g/C Ratio	0.14	0.14	0.57		0.79	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	478	210	1964		773	2786
v/s Ratio Prot	c0.09		c0.16		c0.04	0.07
v/s Ratio Perm		0.02			0.14	
v/c Ratio	0.63	0.15	0.28		0.22	0.09
Uniform Delay, d1	40.4	37.5	10.9		4.0	2.8
Progression Factor	1.00	1.00	1.00		2.00	1.76
Incremental Delay, d2	2.7	0.3	0.4		0.1	0.1
Delay (s)	43.1	37.9	11.3		8.2	5.0
Level of Service	D	D	B		A	A
Approach Delay (s)	41.4		11.3			6.2
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

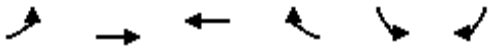
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	12	190	7	6	19	231	294	11	15	161	283
Future Volume (vph)	211	12	190	7	6	19	231	294	11	15	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.88			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1681			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.95	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1681			1472			1803	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	224	13	202	7	6	20	246	313	12	16	171	301
RTOR Reduction (vph)	0	0	177	0	19	0	0	1	0	0	0	85
Lane Group Flow (vph)	119	118	25	7	7	0	0	570	0	0	187	216
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.2	12.2	12.2	4.1	4.1			71.7			71.7	71.7
Effective Green, g (s)	12.2	12.2	12.2	4.1	4.1			71.7			71.7	71.7
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.72			0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	209	220	231	74	68			1055			1292	1362
v/s Ratio Prot	c0.07	0.07		0.00	c0.00							
v/s Ratio Perm			0.01					c0.39			0.10	0.11
v/c Ratio	0.57	0.54	0.11	0.09	0.10			0.54			0.14	0.16
Uniform Delay, d1	41.4	41.2	39.1	46.2	46.2			6.5			4.5	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.46	0.61
Incremental Delay, d2	3.5	2.5	0.2	0.6	0.6			2.0			0.2	0.2
Delay (s)	45.0	43.7	39.3	46.7	46.8			8.5			2.3	3.0
Level of Service	D	D	D	D	D			A			A	A
Approach Delay (s)		42.0			46.8			8.5			2.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

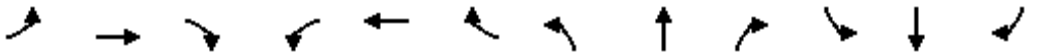
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	152	358	460	270	80
Future Volume (vph)	90	152	358	460	270	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3305		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	464	3610	3305		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	101	171	402	517	303	90
RTOR Reduction (vph)	0	0	194	0	0	27
Lane Group Flow (vph)	101	171	725	0	303	63
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	266	2075	1900		646	578
v/s Ratio Prot		0.05	c0.22		c0.17	
v/s Ratio Perm	0.22					0.04
v/c Ratio	0.38	0.08	0.38		0.47	0.11
Uniform Delay, d1	13.9	11.4	13.9		29.7	25.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.1	0.1	0.6		2.4	0.4
Delay (s)	17.9	11.5	14.5		32.1	26.1
Level of Service	B	B	B		C	C
Approach Delay (s)		13.9	14.5		30.7	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Future Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	331	210	2501	47	502	19	169	22	13	45
RTOR Reduction (vph)	0	35	0	0	0	19	0	0	144	0	41	0
Lane Group Flow (vph)	29	1629	0	210	2501	28	261	260	25	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.3		18.2	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.3		18.2	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2626		288	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.66		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.76	0.62		0.73	1.11	0.02	0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.4		48.5	24.5	10.1	50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		8.9	57.0	0.0	35.5	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.5		57.5	81.4	10.2	85.7	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.1			78.4			75.4			52.4	
Approach LOS		C			E			E			D	

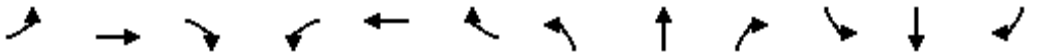
Intersection Summary			
HCM 2000 Control Delay	61.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Future Volume (vph)	26	1213	301	191	2276	43	457	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	331	210	2501	47	502	19	169	22	13	45
RTOR Reduction (vph)	0	35	0	0	2	0	0	0	144	0	41	0
Lane Group Flow (vph)	29	1629	0	210	2546	0	261	260	25	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.3		18.2	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.3		18.2	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2626		288	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.45		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.62		0.73	0.75		0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.4		48.5	18.0		50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		8.9	1.6		35.5	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.5		57.5	19.6		85.7	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	B		F	F	D	D	D	
Approach Delay (s)		27.1			22.5			75.4			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	131	1	1	1	132	610	12	3	258	39
Future Volume (vph)	86	2	131	1	1	1	132	610	12	3	258	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3600		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3600		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	142	1	1	1	143	663	13	3	280	42
RTOR Reduction (vph)	0	0	124	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	18	1	1	0	143	675	0	3	280	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.3	72.5		1.3	60.5	60.5
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.3	72.5		1.3	60.5	60.5
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.72		0.01	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	240	2610		23	2184	977
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.13	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.5	38.1	38.1	38.1	40.8	4.7		48.8	8.5	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.96		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	3.8	0.2		2.6	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	43.3	4.7		51.4	8.6	8.0
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.5			38.1			11.4			8.9	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

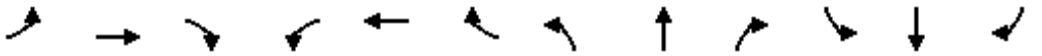
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	361	534	463	484
Future Volume (vph)	181	208	361	534	463	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3287		1805	3610
Flt Permitted	0.97	1.00	1.00		0.18	1.00
Satd. Flow (perm)	3394	1470	3287		343	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	219	380	562	487	509
RTOR Reduction (vph)	63	113	241	0	0	0
Lane Group Flow (vph)	218	16	701	0	487	509
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.1	12.1	39.4		80.9	79.4
Effective Green, g (s)	12.1	12.1	39.4		80.9	79.4
Actuated g/C Ratio	0.12	0.12	0.39		0.81	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	410	177	1295		811	2866
v/s Ratio Prot	c0.06		0.21		c0.22	0.14
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.53	0.09	0.54		0.60	0.18
Uniform Delay, d1	41.3	39.0	23.3		13.8	2.5
Progression Factor	1.00	1.00	1.00		0.86	1.40
Incremental Delay, d2	1.3	0.2	1.6		1.2	0.1
Delay (s)	42.6	39.3	25.0		13.0	3.6
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		25.0			8.2
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

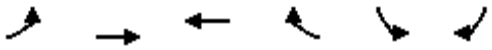
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	40	23	18	177	329	12	9	461	207
Future Volume (vph)	527	7	405	40	23	18	177	329	12	9	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.93			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1774			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.58			0.99	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1774			1107			1882	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	543	7	418	41	24	19	182	339	12	9	475	213
RTOR Reduction (vph)	0	0	301	0	18	0	0	0	0	0	0	90
Lane Group Flow (vph)	277	273	117	41	25	0	0	533	0	0	484	123
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.5	23.5	23.5	6.7	6.7			57.8			57.8	57.8
Effective Green, g (s)	23.5	23.5	23.5	6.7	6.7			57.8			57.8	57.8
Actuated g/C Ratio	0.24	0.24	0.24	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	403	424	446	120	118			639			1087	1098
v/s Ratio Prot	c0.16	0.15		c0.02	0.01							
v/s Ratio Perm			0.06					c0.48			0.26	0.06
v/c Ratio	0.69	0.64	0.26	0.34	0.21			0.83			0.45	0.11
Uniform Delay, d1	34.9	34.5	31.2	44.5	44.2			17.2			12.0	9.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	2.19
Incremental Delay, d2	4.8	3.3	0.3	1.7	0.9			12.1			1.3	0.2
Delay (s)	39.7	37.8	31.5	46.2	45.1			29.3			13.3	21.1
Level of Service	D	D	C	D	D			C			B	C
Approach Delay (s)		35.6			45.6			29.3			15.7	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

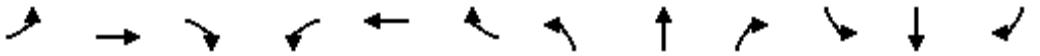
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	379	786	164
Future Volume (vph)	131	357	362	379	786	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3333		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	451	3610	3333		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	376	381	399	827	173
RTOR Reduction (vph)	0	0	158	0	0	19
Lane Group Flow (vph)	138	376	623	0	827	154
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	187	1504	1388		932	834
v/s Ratio Prot		0.10	0.19		c0.46	
v/s Ratio Perm	c0.31					0.10
v/c Ratio	0.74	0.25	0.45		0.89	0.18
Uniform Delay, d1	29.5	22.8	25.1		25.9	15.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	22.7	0.4	1.1		12.3	0.5
Delay (s)	52.2	23.2	26.2		38.1	16.0
Level of Service	D	C	C		D	B
Approach Delay (s)		31.0	26.2		34.3	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

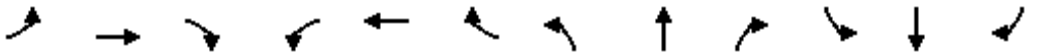
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	381	246	1646	38	262	15	331	35	12	49
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	184	0	45	0
Lane Group Flow (vph)	42	3005	0	246	1646	22	139	138	147	35	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.1	60.0		13.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.1	60.0		13.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.03	0.50		0.11	0.58	0.58	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	2850		213	2197	1098	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.43		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.66	1.05		1.15	0.75	0.02	0.49	0.48	0.52	0.22	0.10	
Uniform Delay, d1	57.3	30.0		53.2	18.8	10.8	46.8	46.7	47.0	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.7	33.4		109.7	2.4	0.0	5.9	5.8	6.6	3.2	1.3	
Delay (s)	78.9	63.4		163.0	21.2	10.8	52.6	52.5	53.6	54.6	52.1	
Level of Service	E	E		F	C	B	D	D	D	D	D	
Approach Delay (s)		63.6			39.1			53.1			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

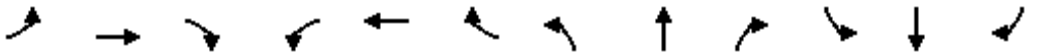
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	249	14	314	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	381	246	1646	38	262	15	331	35	12	49
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	70	0	45	0
Lane Group Flow (vph)	42	3005	0	246	1682	0	139	138	261	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.6	59.3		14.2	67.9		18.0	18.0	32.2	10.0	10.0	
Effective Green, g (s)	5.6	59.3		14.2	67.9		18.0	18.0	32.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.49		0.12	0.57		0.15	0.15	0.27	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	88	2816		224	3225		285	285	509	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.30		0.07	0.07	c0.06	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.48	1.07		1.10	0.52		0.49	0.48	0.51	0.22	0.10	
Uniform Delay, d1	55.8	30.4		52.9	16.0		46.8	46.7	37.2	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	38.2		88.9	0.6		5.9	5.8	0.9	3.2	1.3	
Delay (s)	59.8	68.6		141.8	16.7		52.6	52.5	38.1	54.6	52.1	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		68.4			32.6			44.7			53.0	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	246	323	1	1	583	85
Future Volume (vph)	112	1	361	3	1	1	246	323	1	1	583	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	119	1	384	3	1	1	262	344	1	1	620	90
RTOR Reduction (vph)	0	0	328	0	0	1	0	0	0	0	0	43
Lane Group Flow (vph)	119	1	56	3	1	0	262	345	0	1	620	47
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	70.8		1.2	52.3	52.3
Effective Green, g (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	70.8		1.2	52.3	52.3
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.20	0.71		0.01	0.52	0.52
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	208	275	234	208	275	234	355	2554		21	1888	844
v/s Ratio Prot		0.00			0.00		c0.15	0.10		0.00	c0.17	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.24	0.01	0.00	0.00	0.74	0.14		0.05	0.33	0.06
Uniform Delay, d1	39.9	36.6	37.9	36.6	36.6	36.6	37.7	4.7		48.8	13.7	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.21	0.45		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	0.5	0.0	0.0	0.0	6.8	0.1		0.9	0.5	0.1
Delay (s)	43.6	36.6	38.4	36.7	36.6	36.6	52.6	2.2		49.8	14.2	11.8
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.6			36.6			24.0			14.0	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 6.2:

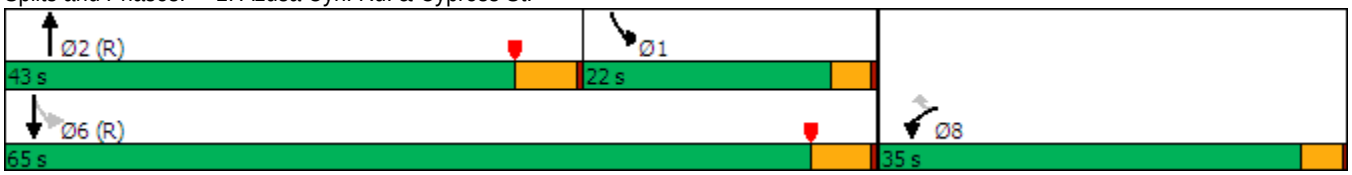
INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	243	397	362	171	151	249
Future Volume (vph)	243	397	362	171	151	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	35.0	35.0	43.0		22.0	65.0
Total Split (%)	35.0%	35.0%	43.0%		22.0%	65.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	243	397	362	171	151	249
Future Volume (veh/h)	243	397	362	171	151	249
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	237	476	402	190	168	277
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	336	597	908	424	809	2633
Arrive On Green	0.19	0.19	0.38	0.38	0.60	1.00
Sat Flow, veh/h	1810	3220	2484	1115	1810	3705
Grp Volume(v), veh/h	237	476	303	289	168	277
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1699	1810	1805
Q Serve(g_s), s	12.3	14.1	12.5	12.7	0.0	0.0
Cycle Q Clear(g_c), s	12.3	14.1	12.5	12.7	0.0	0.0
Prop In Lane	1.00	1.00		0.66	1.00	
Lane Grp Cap(c), veh/h	336	597	686	646	809	2633
V/C Ratio(X)	0.71	0.80	0.44	0.45	0.21	0.11
Avail Cap(c_a), veh/h	570	1014	686	646	809	2633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.2	38.9	23.1	23.2	7.1	0.0
Incr Delay (d2), s/veh	2.7	2.5	2.1	2.2	0.1	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	5.6	5.7	5.6	5.4	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.9	41.4	25.1	25.4	7.2	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	713		592			445
Approach Delay, s/veh	41.2		25.3			2.8
Approach LOS	D		C			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.9	43.0			77.9	22.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	18.5	* 38			60.0	31.5
Max Q Clear Time (g_c+I1), s	2.0	14.7			2.0	16.1
Green Ext Time (p_c), s	0.4	3.8			2.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	17	190	8	8	20	231	294	15	17	161	283
Future Volume (vph)	211	17	190	8	8	20	231	294	15	17	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	45.3
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	211	17	190	8	8	20	231	294	15	17	161	283
Future Vol, veh/h	211	17	190	8	8	20	231	294	15	17	161	283
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	224	18	202	9	9	21	246	313	16	18	171	301
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17	11.7	94.9	15.6
HCM LOS	C	B	F	C

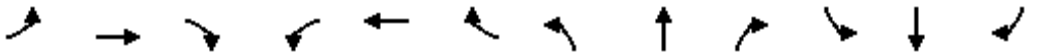
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	43%	93%	0%	50%	0%	10%	0%
Vol Thru, %	54%	7%	0%	50%	0%	90%	0%
Vol Right, %	3%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	540	228	190	16	20	178	283
LT Vol	231	211	0	8	0	17	0
Through Vol	294	17	0	8	0	161	0
RT Vol	15	0	190	0	20	0	283
Lane Flow Rate	574	243	202	17	21	189	301
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.099	0.529	0.376	0.041	0.046	0.372	0.529
Departure Headway (Hd)	6.887	8.193	6.992	9.23	8.236	7.329	6.56
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	529	444	517	390	437	494	554
Service Time	4.941	5.893	4.692	6.93	5.936	5.029	4.26
HCM Lane V/C Ratio	1.085	0.547	0.391	0.044	0.048	0.383	0.543
HCM Control Delay	94.9	19.7	13.8	12.3	11.3	14.3	16.4
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	18.2	3	1.7	0.1	0.1	1.7	3.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	17	190	8	8	20	231	294	15	17	161	283
Future Volume (vph)	211	17	190	8	8	20	231	294	15	17	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	46%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	17	190	8	8	20	231	294	15	17	161	283
Future Volume (veh/h)	211	17	190	8	8	20	231	294	15	17	161	283
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	237	0	202	9	9	21	246	313	16	18	171	301
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	527	0	234	48	13	31	431	520	26	128	1192	1140
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	3619	0	1610	1810	506	1181	537	734	36	125	1684	1610
Grp Volume(v), veh/h	237	0	202	9	0	30	575	0	0	189	0	301
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1687	1307	0	0	1809	0	1610
Q Serve(g_s), s	6.0	0.0	12.3	0.5	0.0	1.8	20.2	0.0	0.0	0.0	0.0	6.7
Cycle Q Clear(g_c), s	6.0	0.0	12.3	0.5	0.0	1.8	23.4	0.0	0.0	3.2	0.0	6.7
Prop In Lane	1.00		1.00	1.00		0.70	0.43		0.03	0.10		1.00
Lane Grp Cap(c), veh/h	527	0	234	48	0	45	977	0	0	1320	0	1140
V/C Ratio(X)	0.45	0.00	0.86	0.19	0.00	0.67	0.59	0.00	0.00	0.14	0.00	0.26
Avail Cap(c_a), veh/h	579	0	258	290	0	270	977	0	0	1320	0	1140
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	1.00	1.00	0.00	1.00	0.93	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	41.7	47.6	0.0	48.2	7.7	0.0	0.0	4.7	0.0	5.2
Incr Delay (d2), s/veh	0.6	0.0	23.1	1.9	0.0	16.1	2.4	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.2	0.2	0.0	0.9	6.2	0.0	0.0	1.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	0.0	64.8	49.5	0.0	64.3	10.2	0.0	0.0	5.0	0.0	5.8
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		439			39			575			490	
Approach Delay, s/veh		51.2			60.9			10.2			5.5	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.8		18.6		74.8		6.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		25.4		14.3		8.7		3.8				
Green Ext Time (p_c), s		5.3		0.3		2.3		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		21.6
HCM 6th LOS		C

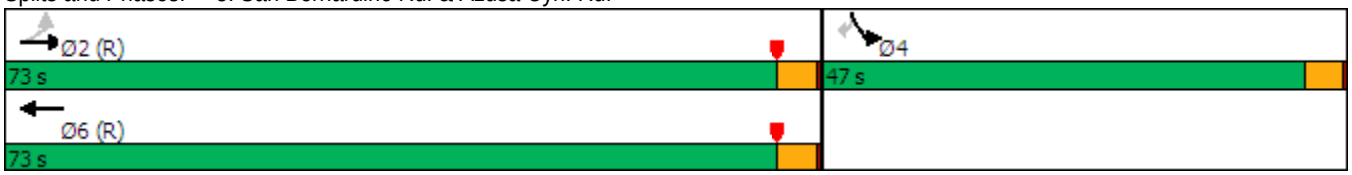
Notes

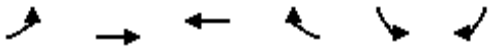
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	152	358	463	271	80
Future Volume (vph)	91	152	358	463	271	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	91	152	358	463	271	80
Future Volume (veh/h)	91	152	358	463	271	80
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	102	171	402	520	304	90
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	289	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	616	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	102	171	402	520	304	90
Grp Sat Flow(s),veh/h/ln	616	1805	1805	1610	1810	1610
Q Serve(g_s), s	15.0	2.5	14.6	24.3	15.5	4.6
Cycle Q Clear(g_c), s	39.3	2.5	14.6	24.3	15.5	4.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	289	2076	1038	926	648	577
V/C Ratio(X)	0.35	0.08	0.39	0.56	0.47	0.16
Avail Cap(c_a), veh/h	289	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	11.4	13.9	16.0	29.7	26.2
Incr Delay (d2), s/veh	3.4	0.1	1.1	2.5	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.0	5.9	8.9	7.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.7	11.5	15.0	18.5	32.1	26.7
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		273	922		394	
Approach Delay, s/veh		19.0	17.0		30.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

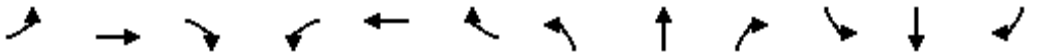
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Future Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	56.0		26.0	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.7%		21.7%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	305	196	2276	43	458	17	156	20	12	41
Future Volume (veh/h)	26	1213	305	196	2276	43	458	17	156	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	335	215	2501	47	517	0	171	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2097	526	245	2249	953	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.14	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4398	1103	1810	3800	1610	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1151	517	215	2501	47	517	0	171	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1701	1810	1900	1610	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.3	27.4	14.0	71.0	1.5	17.0	0.0	12.1	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.3	27.4	14.0	71.0	1.5	17.0	0.0	12.1	1.4	0.0	4.0
Prop In Lane	1.00		0.65	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1812	811	245	2249	953	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.64	0.64	0.88	1.11	0.05	0.95	0.00	0.71	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1812	811	339	2249	953	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.6	23.6	50.9	24.5	10.3	50.6	0.0	48.5	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.8	16.9	57.4	0.1	27.9	0.0	15.7	2.0	0.0	9.0
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	1.2	11.9	11.2	7.3	45.6	0.5	9.8	0.0	5.9	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.3	27.4	67.8	81.9	10.4	78.5	0.0	64.2	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1697			2763			688			80	
Approach Delay, s/veh		27.0			79.6			74.9			59.0	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	62.2		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	22.5	51.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	16.0	29.4		6.0	3.9	73.0		19.0				
Green Ext Time (p_c), s	0.3	11.6		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	61.6	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.

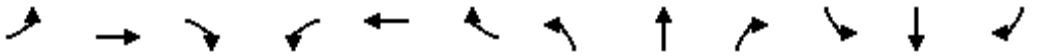
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Future Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	54.9		27.1	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.6%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	305	196	2276	43	458	17	156	20	12	41
Future Volume (veh/h)	26	1213	305	196	2276	43	458	17	156	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	335	215	2501	47	517	0	171	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2096	526	246	3301	62	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.14	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4398	1103	1810	5577	104	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1151	517	215	1701	847	517	0	171	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1701	1810	1900	1881	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.3	27.4	14.0	39.7	40.1	17.0	0.0	12.1	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.3	27.4	14.0	39.7	40.1	17.0	0.0	12.1	1.4	0.0	4.0
Prop In Lane	1.00		0.65	1.00		0.06	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1811	811	246	2249	1113	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.64	0.64	0.87	0.76	0.76	0.95	0.00	0.71	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1811	811	356	2249	1113	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.6	23.6	50.8	18.1	18.2	50.6	0.0	48.5	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.8	15.2	2.4	4.9	27.9	0.0	15.7	2.0	0.0	9.0
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	1.2	11.9	11.2	7.2	16.2	17.0	9.8	0.0	5.9	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.3	27.4	66.1	20.5	23.1	78.5	0.0	64.2	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	C	C	E	A	E	D	A	E
Approach Vol, veh/h		1697			2763			688			80	
Approach Delay, s/veh		27.0			24.9			74.9			59.0	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	62.2		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.6	49.9		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	16.0	29.4		6.0	3.9	42.1		19.0				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	21.2		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		32.7
HCM 6th LOS		C

Notes

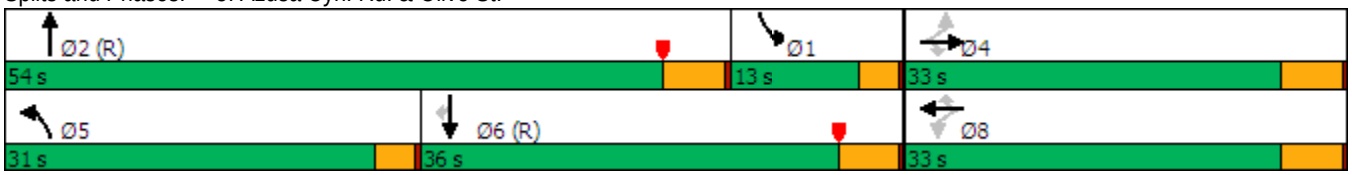
User approved volume balancing among the lanes for turning movement.

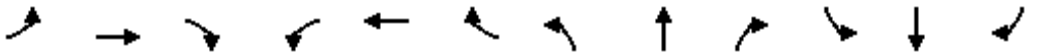
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	132	1	1	1	132	613	12	3	267	39
Future Volume (vph)	86	2	132	1	1	1	132	613	12	3	267	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	132	1	1	1	132	613	12	3	267	39
Future Volume (veh/h)	86	2	132	1	1	1	132	613	12	3	267	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	143	1	1	1	143	666	13	3	290	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	233	214	181	213	214	181	176	1775	35	448	2366	1055
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.19	0.98	0.98	0.25	0.66	0.66
Sat Flow, veh/h	1437	1900	1610	1263	1900	1610	1810	3622	71	1810	3610	1610
Grp Volume(v), veh/h	93	2	143	1	1	1	143	332	347	3	290	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1263	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	8.6	0.1	0.0	0.1	7.6	0.6	0.6	0.1	3.0	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.6	0.2	0.0	0.1	7.6	0.6	0.6	0.1	3.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	233	214	181	213	214	181	176	884	925	448	2366	1055
V/C Ratio(X)	0.40	0.01	0.79	0.00	0.00	0.01	0.81	0.38	0.38	0.01	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	424	532	451	498	884	925	448	2366	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.71	0.71	0.71
Uniform Delay (d), s/veh	42.1	39.4	43.2	39.5	39.4	39.4	39.4	0.5	0.5	28.4	6.5	6.1
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.2	1.1	1.1	0.0	0.1	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	2.2	0.0	3.8	0.0	0.0	0.0	3.4	0.4	0.4	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	39.4	50.6	39.5	39.4	39.4	47.6	1.6	1.6	28.4	6.5	6.1
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		238			3			822			335	
Approach Delay, s/veh		47.7			39.4			9.6			6.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.7	54.0		16.3	13.2	70.5		16.3				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		10.6	9.6	5.0		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	2.0		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	525	0	15	462
Future Volume (vph)	0	5	525	0	15	462
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

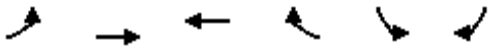
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	525	0	15	462
Future Vol, veh/h	0	5	525	0	15	462
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	553	0	16	486

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	277	0	0	553	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	726	-	-	1027	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	726	-	-	1027	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	726	1027	-
HCM Lane V/C Ratio	-	-	0.007	0.015	-
HCM Control Delay (s)	-	-	10	8.6	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	37	32	0	0	4
Future Volume (vph)	13	37	32	0	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

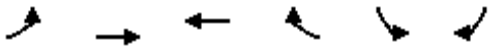
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	37	32	0	0	4
Future Vol, veh/h	13	37	32	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	39	34	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	34	0	-	0	101	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1591	-	-	-	902	1045
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1591	-	-	-	894	1045
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	961	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1045
HCM Lane V/C Ratio	0.009	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	32	30	0	0	2
Future Volume (vph)	5	32	30	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	32	30	0	0	2
Future Vol, veh/h	5	32	30	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	34	32	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	76	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	932	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	929	1048
Mov Cap-2 Maneuver	-	-	-	-	929	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	984	-

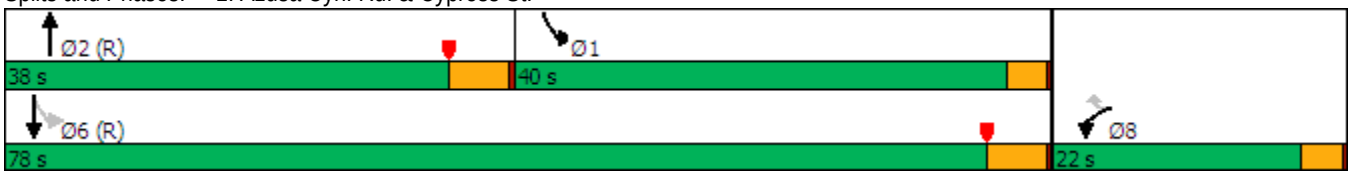
Approach	EB	WB	SB
HCM Control Delay, s	1	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	1048
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	372	535	463	488
Future Volume (vph)	181	208	372	535	463	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	208	372	535	463	488
Future Volume (veh/h)	181	208	372	535	463	488
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	137	392	563	487	514
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	405	180	596	531	838	2900
Arrive On Green	0.11	0.11	0.33	0.33	0.85	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	268	137	392	563	487	514
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.1	8.3	18.6	33.0	0.3	0.0
Cycle Q Clear(g_c), s	7.1	8.3	18.6	33.0	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	405	180	596	531	838	2900
V/C Ratio(X)	0.66	0.76	0.66	1.06	0.58	0.18
Avail Cap(c_a), veh/h	670	298	596	531	838	2900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	42.6	43.1	28.7	33.5	4.4	0.0
Incr Delay (d2), s/veh	1.9	6.5	5.6	55.8	0.9	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	3.6	8.8	20.7	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	49.6	34.3	89.3	5.3	0.1
LnGrp LOS	D	D	C	F	A	A
Approach Vol, veh/h	405		955			1001
Approach Delay, s/veh	46.2		66.7			2.7
Approach LOS	D		E			A

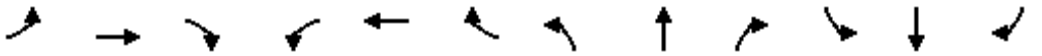
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	47.3	38.0			85.3	14.7
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	2.3	35.0			2.0	10.3
Green Ext Time (p_c), s	1.6	0.0			4.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	9	405	44	29	20	177	329	14	10	461	207
Future Volume (vph)	527	9	405	44	29	20	177	329	14	10	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	113.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	527	9	405	44	29	20	177	329	14	10	461	207
Future Vol, veh/h	527	9	405	44	29	20	177	329	14	10	461	207
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	543	9	418	45	30	21	182	339	14	10	475	213
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

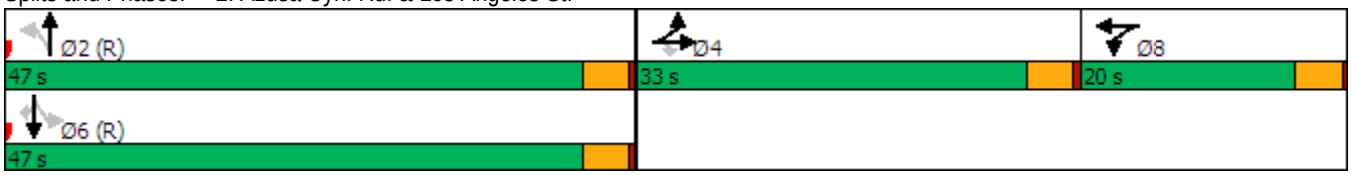
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	126.6	15.9	151	80.3
HCM LOS	F	C	F	F

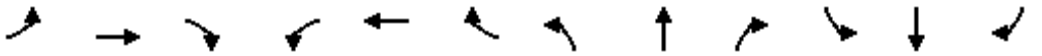
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	98%	0%	60%	0%	2%	0%
Vol Thru, %	63%	2%	0%	40%	0%	98%	0%
Vol Right, %	3%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	520	536	405	73	20	471	207
LT Vol	177	527	0	44	0	10	0
Through Vol	329	9	0	29	0	461	0
RT Vol	14	0	405	0	20	0	207
Lane Flow Rate	536	553	418	75	21	486	213
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.233	1.323	0.868	0.211	0.052	1.113	0.447
Departure Headway (Hd)	8.673	9.285	8.038	11.042	9.977	8.815	8.075
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	398	455	327	361	418	448
Service Time	6.673	6.985	5.738	8.742	7.677	6.515	5.775
HCM Lane V/C Ratio	1.264	1.389	0.919	0.229	0.058	1.163	0.475
HCM Control Delay	151	188.6	44.5	16.7	13.2	108.1	17.1
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	21.2	23.8	8.9	0.8	0.2	16.3	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	9	405	44	29	20	177	329	14	10	461	207
Future Volume (vph)	527	9	405	44	29	20	177	329	14	10	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	9	405	44	29	20	177	329	14	10	461	207
Future Volume (veh/h)	527	9	405	44	29	20	177	329	14	10	461	207
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	549	0	418	45	30	21	182	339	14	10	475	213
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1013	0	451	85	49	34	272	474	19	44	1038	891
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1041	728	405	857	34	13	1877	1610
Grp Volume(v), veh/h	549	0	418	45	0	51	535	0	0	485	0	213
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1769	1295	0	0	1889	0	1610
Q Serve(g_s), s	12.9	0.0	25.2	2.4	0.0	2.8	27.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.9	0.0	25.2	2.4	0.0	2.8	30.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.41	0.34		0.03	0.02		1.00
Lane Grp Cap(c), veh/h	1013	0	451	85	0	83	765	0	0	1082	0	891
V/C Ratio(X)	0.54	0.00	0.93	0.53	0.00	0.61	0.70	0.00	0.00	0.45	0.00	0.24
Avail Cap(c_a), veh/h	1050	0	467	290	0	283	765	0	0	1082	0	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.60	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	35.0	46.6	0.0	46.8	16.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	24.4	5.0	0.0	7.2	3.2	0.0	0.0	1.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	12.3	1.2	0.0	1.4	9.1	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	59.4	51.6	0.0	53.9	19.5	0.0	0.0	1.3	0.0	0.6
LnGrp LOS	C	A	E	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		967			96			535			698	
Approach Delay, s/veh		43.3			52.8			19.5			1.1	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.3		32.0		59.3		8.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		32.3		27.2		2.0		4.8				
Green Ext Time (p_c), s		3.2		0.8		4.3		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			25.3									
HCM 6th LOS			C									

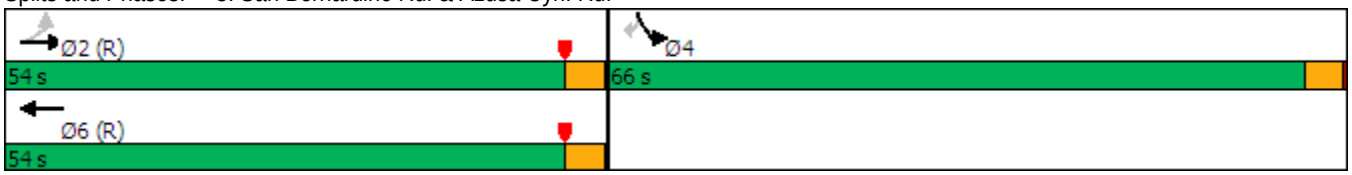
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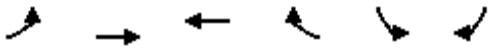
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	380	789	165
Future Volume (vph)	131	357	362	380	789	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	131	357	362	380	789	165
Future Volume (veh/h)	131	357	362	380	789	165
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	376	381	400	831	174
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	217	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	703	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	138	376	381	400	831	174
Grp Sat Flow(s),veh/h/ln	703	1805	1805	1610	1810	1610
Q Serve(g_s), s	22.8	8.1	18.7	23.1	49.3	7.0
Cycle Q Clear(g_c), s	45.9	8.1	18.7	23.1	49.3	7.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	217	1504	752	671	935	832
V/C Ratio(X)	0.63	0.25	0.51	0.60	0.89	0.21
Avail Cap(c_a), veh/h	217	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	22.8	25.9	27.2	25.9	15.7
Incr Delay (d2), s/veh	13.3	0.4	2.4	3.9	12.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.5	8.3	9.3	23.5	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.3	23.2	28.3	31.0	38.3	16.3
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		514	781		1005	
Approach Delay, s/veh		32.6	29.7		34.5	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

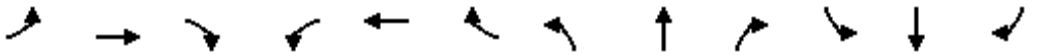
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Future Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	8.6	64.0		18.0	73.4	73.4	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.2%	53.3%		15.0%	61.2%	61.2%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	364	236	1564	36	253	14	320	33	11	47
Future Volume (veh/h)	40	2510	364	236	1564	36	253	14	320	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	383	248	1646	38	277	0	337	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2411	332	219	2214	938	543	0	242	151	27	111
Arrive On Green	0.03	0.49	0.49	0.12	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4903	676	1810	3800	1610	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2017	1008	248	1646	38	277	0	337	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1778	1810	1900	1610	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.8	59.0	59.0	14.5	38.3	1.2	8.5	0.0	18.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.8	59.0	59.0	14.5	38.3	1.2	8.5	0.0	18.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1868	874	219	2214	938	543	0	242	151	0	138
V/C Ratio(X)	0.78	1.08	1.15	1.13	0.74	0.04	0.51	0.00	1.40	0.23	0.00	0.44
Avail Cap(c_a), veh/h	77	1868	874	219	2214	938	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	30.5	30.5	52.8	18.4	10.7	46.9	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	26.3	45.9	82.0	101.7	2.3	0.1	3.3	0.0	200.7	3.6	0.0	9.9
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	1.6	36.5	42.9	12.6	15.8	0.4	4.1	0.0	20.7	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	76.4	112.5	154.5	20.8	10.8	50.3	0.0	251.7	55.0	0.0	62.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	D	A	E
Approach Vol, veh/h		3067			1932			614			96	
Approach Delay, s/veh		88.4			37.7			160.8			59.6	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	64.0		15.0	7.1	74.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	14.5	59.0		10.0	5.1	68.4		18.0				
Max Q Clear Time (g_c+I1), s	16.5	61.0		6.2	4.8	40.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		78.5	
HCM 6th LOS		E	

Notes

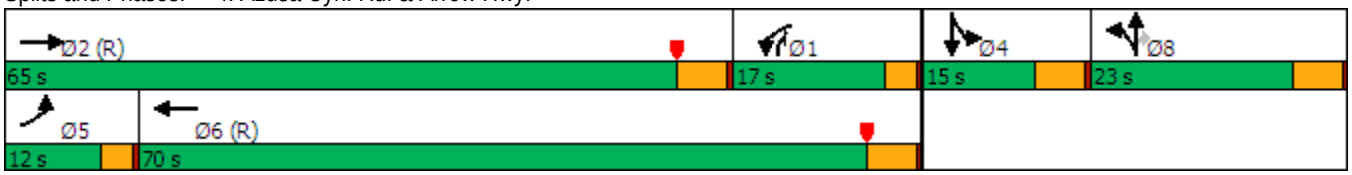
User approved volume balancing among the lanes for turning movement.

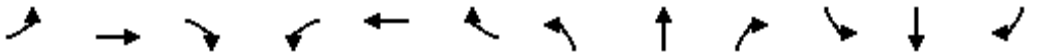
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Future Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	12.0	65.0		17.0	70.0		23.0	23.0	17.0	15.0	15.0	
Total Split (%)	10.0%	54.2%		14.2%	58.3%		19.2%	19.2%	14.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 16 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	364	236	1564	36	253	14	320	33	11	47
Future Volume (veh/h)	40	2510	364	236	1564	36	253	14	320	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	383	248	1646	38	277	0	337	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2451	338	510	4242	98	543	0	695	151	27	111
Arrive On Green	0.06	1.00	1.00	0.56	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4903	676	1810	5549	128	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2017	1008	248	1127	557	277	0	337	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1778	1810	1900	1877	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.7	60.0	60.0	9.9	0.0	0.0	8.5	0.0	0.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.7	60.0	60.0	9.9	0.0	0.0	8.5	0.0	0.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		0.07	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	510	2905	1435	543	0	695	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	0.49	0.39	0.39	0.51	0.00	0.48	0.23	0.00	0.44
Avail Cap(c_a), veh/h	128	1900	889	510	2905	1435	543	0	695	151	0	138
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	0.0	21.0	0.0	0.0	46.9	0.0	24.5	51.4	0.0	52.3
Incr Delay (d2), s/veh	20.7	39.2	74.2	0.7	0.4	0.8	3.3	0.0	2.4	3.6	0.0	9.9
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	1.5	10.3	18.3	3.4	0.2	0.3	4.1	0.0	7.3	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.7	39.2	74.2	21.7	0.4	0.8	50.3	0.0	26.9	55.0	0.0	62.2
LnGrp LOS	E	F	F	C	A	A	D	A	C	D	A	E
Approach Vol, veh/h		3067			1932			614			96	
Approach Delay, s/veh		51.2			3.2			37.4			59.6	
Approach LOS		D			A			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.8	65.0		15.0	7.1	96.7		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	* 60		10.0	8.5	65.0		18.0				
Max Q Clear Time (g_c+I1), s	11.9	62.0		6.2	4.7	2.0		10.5				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	16.9		1.5				

Intersection Summary		
HCM 6th Ctrl Delay		33.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

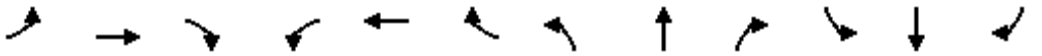
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	247	333	1	1	587	85
Future Volume (vph)	112	1	361	3	1	1	247	333	1	1	587	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	31.0	32.0	61.0		8.0	37.0	37.0
Total Split (%)	31.0%	31.0%	31.0%	31.0%	31.0%	31.0%	32.0%	61.0%		8.0%	37.0%	37.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	361	3	1	1	247	333	1	1	587	85
Future Volume (veh/h)	112	1	361	3	1	1	247	333	1	1	587	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	1	384	3	1	1	263	354	1	1	624	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	438	484	410	330	484	410	296	2068	6	64	1611	719
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.33	1.00	1.00	0.04	0.45	0.45
Sat Flow, veh/h	1437	1900	1610	1014	1900	1610	1810	3693	10	1810	3610	1610
Grp Volume(v), veh/h	119	1	384	3	1	1	263	173	182	1	624	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1014	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	23.3	0.2	0.0	0.0	13.8	0.0	0.0	0.1	11.6	3.3
Cycle Q Clear(g_c), s	6.8	0.0	23.3	0.3	0.0	0.0	13.8	0.0	0.0	0.1	11.6	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	438	484	410	330	484	410	296	1011	1063	64	1611	719
V/C Ratio(X)	0.27	0.00	0.94	0.01	0.00	0.00	0.89	0.17	0.17	0.02	0.39	0.13
Avail Cap(c_a), veh/h	445	494	419	335	494	419	516	1011	1063	81	1611	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.25	0.25	0.25
Uniform Delay (d), s/veh	30.3	27.8	36.5	27.9	27.8	27.8	32.7	0.0	0.0	46.6	18.5	16.2
Incr Delay (d2), s/veh	0.3	0.0	28.2	0.0	0.0	0.0	7.4	0.3	0.3	0.0	0.2	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	2.3	0.0	12.2	0.1	0.0	0.0	5.5	0.1	0.1	0.0	4.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	27.8	64.6	27.9	27.8	27.8	40.2	0.3	0.3	46.6	18.7	16.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	D	B	B
Approach Vol, veh/h		504			5			618			715	
Approach Delay, s/veh		56.5			27.8			17.3			18.4	
Approach LOS		E			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	61.0		30.5	19.9	49.6		30.5				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	* 56		26.0	28.5	32.0		26.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		25.3	15.8	13.6		2.3				
Green Ext Time (p_c), s	0.0	2.3		0.1	0.6	4.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.5	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	15	877	0	6	678
Future Volume (vph)	0	15	877	0	6	678
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

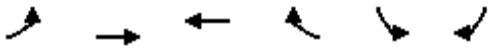
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	877	0	6	678
Future Vol, veh/h	0	15	877	0	6	678
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	16	923	0	6	714

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	462	0	0	923	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	552	-	-	748	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	552	-	-	748	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	552	748	-
HCM Lane V/C Ratio	-	-	0.029	0.008	-
HCM Control Delay (s)	-	-	11.7	9.9	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	29	80	0	0	14
Future Volume (vph)	5	29	80	0	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

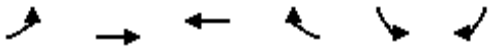
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	29	80	0	0	14
Future Vol, veh/h	5	29	80	0	0	14
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	31	84	0	0	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	84	0	-	0	125	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1526	-	-	-	875	981
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1526	-	-	-	872	981
Mov Cap-2 Maneuver	-	-	-	-	872	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	987	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1526	-	-	-	981
HCM Lane V/C Ratio	0.003	-	-	-	0.015
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	27	75	0	0	5
Future Volume (vph)	2	27	75	0	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	27	75	0	0	5
Future Vol, veh/h	2	27	75	0	0	5
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	28	79	0	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	111	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1532	-	-	-	891	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1532	-	-	-	890	987
Mov Cap-2 Maneuver	-	-	-	-	890	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A

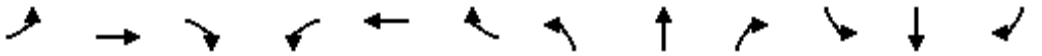
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	987
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	243	397	362	171	151	249
Future Volume (vph)	243	397	362	171	151	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3349	1470	3436		1805	3610
Flt Permitted	0.97	1.00	1.00		0.40	1.00
Satd. Flow (perm)	3349	1470	3436		754	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	270	441	402	190	168	277
RTOR Reduction (vph)	176	196	41	0	0	0
Lane Group Flow (vph)	306	33	552	0	168	277
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.5	14.5	55.0		78.5	77.0
Effective Green, g (s)	14.5	14.5	55.0		78.5	77.0
Actuated g/C Ratio	0.14	0.14	0.55		0.78	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	485	213	1889		786	2779
v/s Ratio Prot	c0.09		c0.16		c0.04	0.08
v/s Ratio Perm		0.02			0.13	
v/c Ratio	0.63	0.16	0.29		0.21	0.10
Uniform Delay, d1	40.2	37.4	12.1		4.2	2.9
Progression Factor	1.00	1.00	1.00		1.10	0.92
Incremental Delay, d2	2.7	0.3	0.4		0.1	0.1
Delay (s)	42.9	37.7	12.5		4.8	2.7
Level of Service	D	D	B		A	A
Approach Delay (s)	41.2		12.5			3.5
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

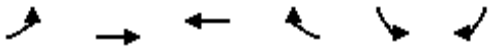
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	17	190	8	8	20	231	294	15	17	161	283
Future Volume (vph)	211	17	190	8	8	20	231	294	15	17	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1700			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.94	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1700			1472			1787	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	224	18	202	9	9	21	246	313	16	18	171	301
RTOR Reduction (vph)	0	0	177	0	20	0	0	1	0	0	0	86
Lane Group Flow (vph)	121	121	25	9	10	0	0	574	0	0	189	215
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.3	12.3	12.3	4.3	4.3			71.4			71.4	71.4
Effective Green, g (s)	12.3	12.3	12.3	4.3	4.3			71.4			71.4	71.4
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.71			0.71	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	210	222	233	77	73			1051			1275	1356
v/s Ratio Prot	c0.07	0.07		0.00	c0.01							
v/s Ratio Perm			0.01					c0.39			0.11	0.11
v/c Ratio	0.58	0.55	0.11	0.12	0.14			0.55			0.15	0.16
Uniform Delay, d1	41.4	41.2	39.0	46.0	46.1			6.7			4.6	4.6
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.95	6.61
Incremental Delay, d2	3.8	2.7	0.2	0.7	0.8			2.0			0.2	0.2
Delay (s)	45.2	43.9	39.2	46.7	46.9			8.8			9.2	30.7
Level of Service	D	D	D	D	D			A			A	C
Approach Delay (s)		42.1			46.9			8.8			22.4	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

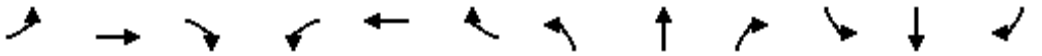
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	152	358	463	271	80
Future Volume (vph)	91	152	358	463	271	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3305		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	462	3610	3305		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	102	171	402	520	304	90
RTOR Reduction (vph)	0	0	195	0	0	27
Lane Group Flow (vph)	102	171	727	0	304	63
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	265	2075	1900		646	578
v/s Ratio Prot		0.05	0.22		c0.17	
v/s Ratio Perm	c0.22					0.04
v/c Ratio	0.38	0.08	0.38		0.47	0.11
Uniform Delay, d1	13.9	11.4	13.9		29.7	25.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.2	0.1	0.6		2.5	0.4
Delay (s)	18.1	11.5	14.5		32.2	26.1
Level of Service	B	B	B		C	C
Approach Delay (s)		13.9	14.5		30.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

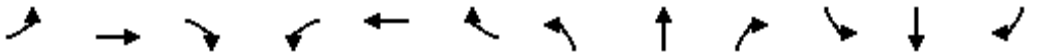
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Future Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	335	215	2501	47	503	19	171	22	13	45
RTOR Reduction (vph)	0	36	0	0	0	19	0	0	145	0	41	0
Lane Group Flow (vph)	29	1632	0	215	2501	28	262	260	26	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.3		18.2	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.3		18.2	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2626		288	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.66		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.76	0.62		0.75	1.11	0.02	0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.4		48.7	24.5	10.1	50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		10.1	57.0	0.0	36.1	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.6		58.8	81.4	10.2	86.4	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.2			78.5			75.6			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	61.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

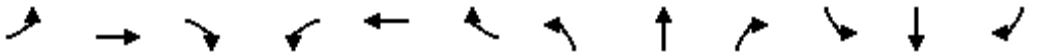
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Future Volume (vph)	26	1213	305	196	2276	43	458	17	156	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	335	215	2501	47	503	19	171	22	13	45
RTOR Reduction (vph)	0	35	0	0	2	0	0	0	145	0	41	0
Lane Group Flow (vph)	29	1633	0	215	2546	0	262	260	26	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.0		18.5	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.0		18.5	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2612		292	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.45		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.63		0.74	0.75		0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.7		48.4	18.0		50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.3	1.6		36.1	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.8		57.7	19.6		86.4	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	B		F	F	D	D	D	
Approach Delay (s)		27.4			22.6			75.6			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	132	1	1	1	132	613	12	3	267	39
Future Volume (vph)	86	2	132	1	1	1	132	613	12	3	267	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3600		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3600		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	143	1	1	1	143	666	13	3	290	42
RTOR Reduction (vph)	0	0	125	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	18	1	1	0	143	678	0	3	290	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.2	71.9		1.9	60.6	60.6
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.2	71.9		1.9	60.6	60.6
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.72		0.02	0.61	0.61
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	238	2588		34	2187	978
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.09	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.5	38.1	38.1	38.1	40.9	4.9		48.2	8.4	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.25	0.69		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	55.2	3.6		49.3	8.6	7.9
Level of Service	D	D	D	D	D	D	E	A		D	A	A
Approach Delay (s)		40.5			38.1			12.6			8.9	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

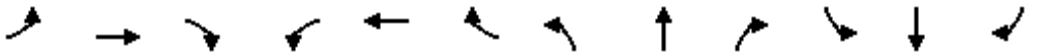
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	372	535	463	488
Future Volume (vph)	181	208	372	535	463	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3291		1805	3610
Flt Permitted	0.97	1.00	1.00		0.17	1.00
Satd. Flow (perm)	3394	1470	3291		332	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	219	392	563	487	514
RTOR Reduction (vph)	63	113	235	0	0	0
Lane Group Flow (vph)	218	16	720	0	487	514
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.1	12.1	39.4		80.9	79.4
Effective Green, g (s)	12.1	12.1	39.4		80.9	79.4
Actuated g/C Ratio	0.12	0.12	0.39		0.81	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	410	177	1296		806	2866
v/s Ratio Prot	c0.06		0.22		c0.22	0.14
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.53	0.09	0.56		0.60	0.18
Uniform Delay, d1	41.3	39.0	23.5		14.1	2.5
Progression Factor	1.00	1.00	1.00		0.63	0.56
Incremental Delay, d2	1.3	0.2	1.7		1.2	0.1
Delay (s)	42.6	39.3	25.2		10.1	1.5
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		25.2			5.7
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

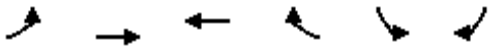
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	9	405	44	29	20	177	329	14	10	461	207
Future Volume (vph)	527	9	405	44	29	20	177	329	14	10	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.94			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1783			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.58			0.99	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1783			1111			1880	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	543	9	418	45	30	21	182	339	14	10	475	213
RTOR Reduction (vph)	0	0	304	0	20	0	0	1	0	0	0	89
Lane Group Flow (vph)	277	275	114	45	31	0	0	534	0	0	485	124
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.0	23.0	23.0	6.9	6.9			58.1			58.1	58.1
Effective Green, g (s)	23.0	23.0	23.0	6.9	6.9			58.1			58.1	58.1
Actuated g/C Ratio	0.23	0.23	0.23	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	394	415	437	124	123			645			1092	1103
v/s Ratio Prot	c0.16	0.15		c0.02	0.02							
v/s Ratio Perm			0.06					c0.48			0.26	0.07
v/c Ratio	0.70	0.66	0.26	0.36	0.26			0.83			0.44	0.11
Uniform Delay, d1	35.4	35.0	31.5	44.5	44.1			16.9			11.8	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.89	1.05
Incremental Delay, d2	5.6	4.0	0.3	1.8	1.1			11.7			1.3	0.2
Delay (s)	41.0	38.9	31.9	46.3	45.2			28.6			11.8	10.0
Level of Service	D	D	C	D	D			C			B	B
Approach Delay (s)		36.5			45.7			28.6			11.3	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

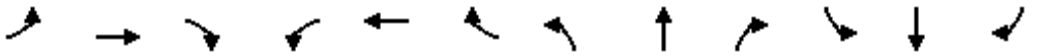
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	380	789	165
Future Volume (vph)	131	357	362	380	789	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3333		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	450	3610	3333		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	376	381	400	831	174
RTOR Reduction (vph)	0	0	158	0	0	19
Lane Group Flow (vph)	138	376	623	0	831	155
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	187	1504	1388		932	834
v/s Ratio Prot		0.10	0.19		c0.46	
v/s Ratio Perm	c0.31					0.10
v/c Ratio	0.74	0.25	0.45		0.89	0.19
Uniform Delay, d1	29.5	22.8	25.1		26.0	15.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	22.7	0.4	1.1		12.6	0.5
Delay (s)	52.2	23.2	26.2		38.6	16.0
Level of Service	D	C	C		D	B
Approach Delay (s)		31.0	26.2		34.7	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

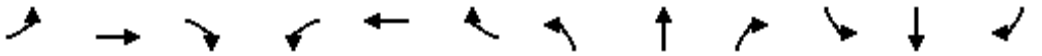
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Future Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	383	248	1646	38	266	15	337	35	12	49
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	196	0	45	0
Lane Group Flow (vph)	42	3007	0	248	1646	22	141	140	142	35	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.1	59.0		14.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.1	59.0		14.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.03	0.49		0.12	0.58	0.58	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	2802		229	2197	1098	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.43		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.07			
v/c Ratio	0.66	1.07		1.08	0.75	0.02	0.49	0.49	0.50	0.22	0.10	
Uniform Delay, d1	57.3	30.5		52.8	18.8	10.8	46.8	46.8	46.8	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.7	40.5		83.3	2.4	0.0	6.0	5.9	6.1	3.2	1.3	
Delay (s)	78.9	71.0		136.1	21.2	10.8	52.8	52.7	52.9	54.6	52.1	
Level of Service	E	E		F	C	B	D	D	D	D	D	
Approach Delay (s)		71.1			35.8			52.9			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	56.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

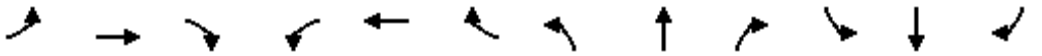
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Future Volume (vph)	40	2510	364	236	1564	36	253	14	320	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	383	248	1646	38	266	15	337	35	12	49
RTOR Reduction (vph)	0	19	0	0	2	0	0	0	70	0	45	0
Lane Group Flow (vph)	42	3006	0	248	1682	0	141	140	267	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	6.4	59.3		14.2	67.1		18.0	18.0	32.2	10.0	10.0	
Effective Green, g (s)	6.4	59.3		14.2	67.1		18.0	18.0	32.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.49		0.12	0.56		0.15	0.15	0.27	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	101	2816		224	3187		285	285	509	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.30		0.07	0.07	c0.06	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.42	1.07		1.11	0.53		0.49	0.49	0.52	0.22	0.10	
Uniform Delay, d1	55.0	30.4		52.9	16.5		46.8	46.8	37.4	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.8	38.4		91.8	0.6		6.0	5.9	1.0	3.2	1.3	
Delay (s)	57.8	68.8		144.7	17.2		52.8	52.7	38.4	54.6	52.1	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		68.6			33.5			44.9			53.0	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	247	333	1	1	587	85
Future Volume (vph)	112	1	361	3	1	1	247	333	1	1	587	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	119	1	384	3	1	1	263	354	1	1	624	90
RTOR Reduction (vph)	0	0	328	0	0	1	0	0	0	0	0	29
Lane Group Flow (vph)	119	1	56	3	1	0	263	355	0	1	624	61
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.8	71.1		0.9	52.2	52.2
Effective Green, g (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.8	71.1		0.9	52.2	52.2
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.20	0.71		0.01	0.52	0.52
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	208	275	234	208	275	234	357	2565		16	1884	843
v/s Ratio Prot		0.00			0.00		c0.15	0.10		c0.00	c0.17	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.04
v/c Ratio	0.57	0.00	0.24	0.01	0.00	0.00	0.74	0.14		0.06	0.33	0.07
Uniform Delay, d1	39.9	36.6	37.9	36.6	36.6	36.6	37.7	4.6		49.1	13.8	11.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.12	1.33		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	0.5	0.0	0.0	0.0	6.7	0.1		1.6	0.5	0.2
Delay (s)	43.6	36.6	38.4	36.7	36.6	36.6	48.8	6.3		50.8	14.3	12.0
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.6			36.6			24.4			14.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 7.1:

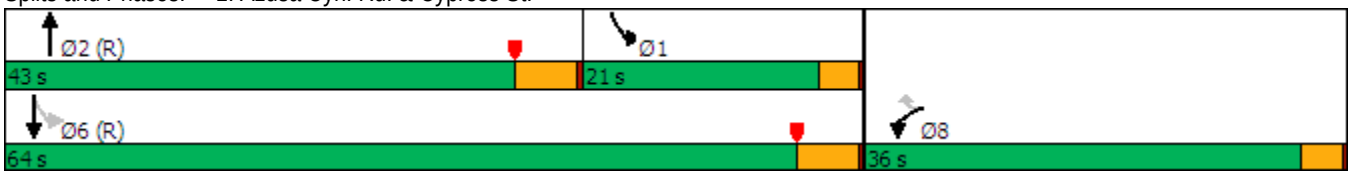
2040 PLUS SITE BASELINE LAND USE CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	419	359	186	161	247
Future Volume (vph)	262	419	359	186	161	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	36.0	36.0	43.0		21.0	64.0
Total Split (%)	36.0%	36.0%	43.0%		21.0%	64.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	262	419	359	186	161	247
Future Volume (veh/h)	262	419	359	186	161	247
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	252	507	399	207	179	274
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	355	632	877	450	783	2595
Arrive On Green	0.20	0.20	0.38	0.38	0.58	1.00
Sat Flow, veh/h	1810	3220	2404	1183	1810	3705
Grp Volume(v), veh/h	252	507	311	295	179	274
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1687	1810	1805
Q Serve(g_s), s	13.0	15.0	12.9	13.1	0.0	0.0
Cycle Q Clear(g_c), s	13.0	15.0	12.9	13.1	0.0	0.0
Prop In Lane	1.00	1.00		0.70	1.00	
Lane Grp Cap(c), veh/h	355	632	686	641	783	2595
V/C Ratio(X)	0.71	0.80	0.45	0.46	0.23	0.11
Avail Cap(c_a), veh/h	588	1047	686	641	783	2595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	37.5	38.3	23.2	23.3	7.9	0.0
Incr Delay (d2), s/veh	2.6	2.4	2.2	2.4	0.1	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	5.9	6.0	5.8	5.5	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	40.8	25.4	25.7	8.1	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	759		606			453
Approach Delay, s/veh	40.6		25.5			3.2
Approach LOS	D		C			A

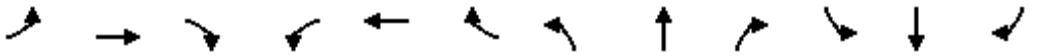
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.9	43.0			76.9	23.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	17.5	* 38			59.0	32.5
Max Q Clear Time (g_c+I1), s	2.0	15.1			2.0	17.0
Green Ext Time (p_c), s	0.4	3.9			2.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	13	206	8	7	23	249	294	12	18	167	303
Future Volume (vph)	215	13	206	8	7	23	249	294	12	18	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	52
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	215	13	206	8	7	23	249	294	12	18	167	303
Future Vol, veh/h	215	13	206	8	7	23	249	294	12	18	167	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	229	14	219	9	7	24	265	313	13	19	178	322
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.6	12	112.7	16.8
HCM LOS	C	B	F	C

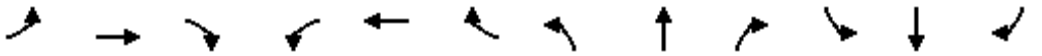
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	94%	0%	53%	0%	10%	0%
Vol Thru, %	53%	6%	0%	47%	0%	90%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	228	206	15	23	185	303
LT Vol	249	215	0	8	0	18	0
Through Vol	294	13	0	7	0	167	0
RT Vol	12	0	206	0	23	0	303
Lane Flow Rate	590	243	219	16	24	197	322
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.149	0.536	0.411	0.039	0.054	0.391	0.573
Departure Headway (Hd)	7.006	8.336	7.123	9.456	8.442	7.455	6.685
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	437	508	381	427	486	545
Service Time	5.055	6.036	4.823	7.156	6.142	5.155	4.385
HCM Lane V/C Ratio	1.135	0.556	0.431	0.042	0.056	0.405	0.591
HCM Control Delay	112.7	20.3	14.7	12.5	11.6	14.9	18
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	20.3	3.1	2	0.1	0.2	1.8	3.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	13	206	8	7	23	249	294	12	18	167	303
Future Volume (vph)	215	13	206	8	7	23	249	294	12	18	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	47%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	13	206	8	7	23	249	294	12	18	167	303
Future Volume (veh/h)	215	13	206	8	7	23	249	294	12	18	167	303
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	239	0	219	9	7	24	265	313	13	19	178	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	559	0	249	49	10	35	432	475	19	127	1170	1125
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	3619	0	1610	1810	377	1291	543	679	28	126	1675	1610
Grp Volume(v), veh/h	239	0	219	9	0	31	591	0	0	197	0	322
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1668	1250	0	0	1801	0	1610
Q Serve(g_s), s	6.0	0.0	13.3	0.5	0.0	1.8	25.1	0.0	0.0	0.0	0.0	7.5
Cycle Q Clear(g_c), s	6.0	0.0	13.3	0.5	0.0	1.8	28.6	0.0	0.0	3.5	0.0	7.5
Prop In Lane	1.00		1.00	1.00		0.77	0.45		0.02	0.10		1.00
Lane Grp Cap(c), veh/h	559	0	249	49	0	45	926	0	0	1298	0	1125
V/C Ratio(X)	0.43	0.00	0.88	0.19	0.00	0.69	0.64	0.00	0.00	0.15	0.00	0.29
Avail Cap(c_a), veh/h	579	0	258	290	0	267	926	0	0	1298	0	1125
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	1.00	1.00	0.00	1.00	0.92	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	41.4	47.6	0.0	48.2	9.2	0.0	0.0	5.1	0.0	5.7
Incr Delay (d2), s/veh	0.5	0.0	27.1	1.8	0.0	17.4	3.1	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.9	0.2	0.0	1.0	7.3	0.0	0.0	1.3	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.0	68.5	49.4	0.0	65.7	12.3	0.0	0.0	5.3	0.0	6.3
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		458			40			591			519	
Approach Delay, s/veh		53.0			62.0			12.3			5.9	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.9		19.4		73.9		6.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		30.6		15.3		9.5		3.8				
Green Ext Time (p_c), s		5.4		0.1		2.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

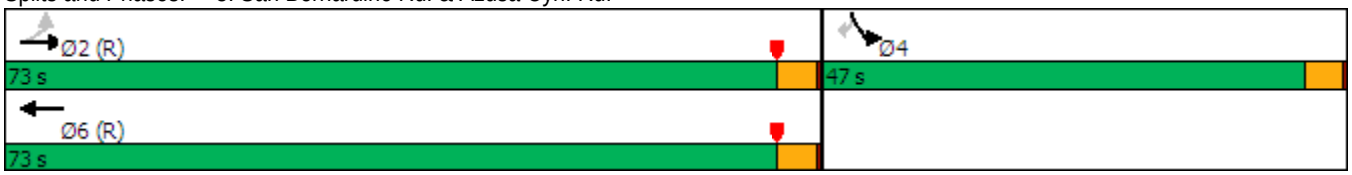
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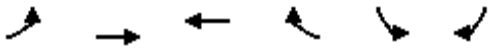
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	160	377	474	287	84
Future Volume (vph)	90	160	377	474	287	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	160	377	474	287	84
Future Volume (veh/h)	90	160	377	474	287	84
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	101	180	424	533	322	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	277	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	596	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	101	180	424	533	322	94
Grp Sat Flow(s),veh/h/ln	596	1805	1805	1610	1810	1610
Q Serve(g_s), s	15.6	2.7	15.7	25.2	16.7	4.8
Cycle Q Clear(g_c), s	40.8	2.7	15.7	25.2	16.7	4.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	277	2076	1038	926	648	577
V/C Ratio(X)	0.36	0.09	0.41	0.58	0.50	0.16
Avail Cap(c_a), veh/h	277	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	11.4	14.2	16.2	30.1	26.2
Incr Delay (d2), s/veh	3.7	0.1	1.2	2.6	2.7	0.6
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	1.0	6.3	9.3	7.7	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.8	11.5	15.4	18.8	32.8	26.8
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		281	957		416	
Approach Delay, s/veh		19.2	17.3		31.4	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

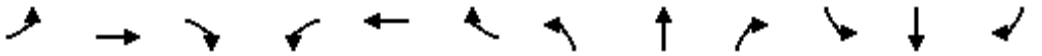
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Future Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	301	191	2409	46	479	19	154	22	13	44
Future Volume (veh/h)	28	1213	301	191	2409	46	479	19	154	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	331	210	2647	51	541	0	169	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2114	524	241	2245	951	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	3800	1610	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1148	516	210	2647	51	541	0	169	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.1	27.1	13.7	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.1	27.1	13.7	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1822	817	241	2245	951	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	1.18	0.05	1.00	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1822	817	351	2245	951	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.3	23.3	51.0	24.6	10.4	51.0	0.0	48.4	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	14.9	85.6	0.1	37.2	0.0	15.1	2.2	0.0	10.0
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	1.3	11.8	11.0	7.0	54.4	0.6	10.9	0.0	5.8	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.0	27.0	66.0	110.1	10.5	88.2	0.0	63.6	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	F	B	F	A	E	D	A	E
Approach Vol, veh/h		1695			2908			710			86	
Approach Delay, s/veh		26.8			105.2			82.3			59.9	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	62.5		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.7	29.1		6.2	4.0	72.9		19.9				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		76.8	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

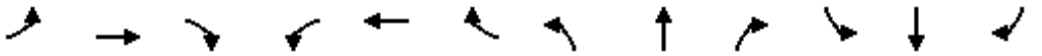
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Future Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.4		26.6	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.2%		22.2%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	301	191	2409	46	479	19	154	22	13	44
Future Volume (veh/h)	28	1213	301	191	2409	46	479	19	154	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	331	210	2647	51	541	0	169	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2115	524	241	3293	63	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	5574	107	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1148	516	210	1800	898	541	0	169	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.0	27.1	13.7	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.0	27.1	13.7	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1822	817	241	2245	1111	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	0.80	0.81	1.00	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1822	817	348	2245	1111	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.3	23.3	51.0	19.1	19.2	51.0	0.0	48.4	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	15.2	3.1	6.3	37.2	0.0	15.1	2.2	0.0	10.0
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	1.3	11.8	11.0	7.0	18.3	19.3	10.9	0.0	5.8	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.0	27.0	66.3	22.2	25.6	88.2	0.0	63.6	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	C	C	F	A	E	D	A	E
Approach Vol, veh/h		1695			2908			710			86	
Approach Delay, s/veh		26.8			26.4			82.3			59.9	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	62.5		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.1	50.4		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.7	29.1		6.2	4.0	46.8		19.9				
Green Ext Time (p_c), s	0.3	11.5		0.1	0.0	19.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		34.4	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	136	1	1	1	135	611	13	3	271	39
Future Volume (vph)	86	2	136	1	1	1	135	611	13	3	271	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 100

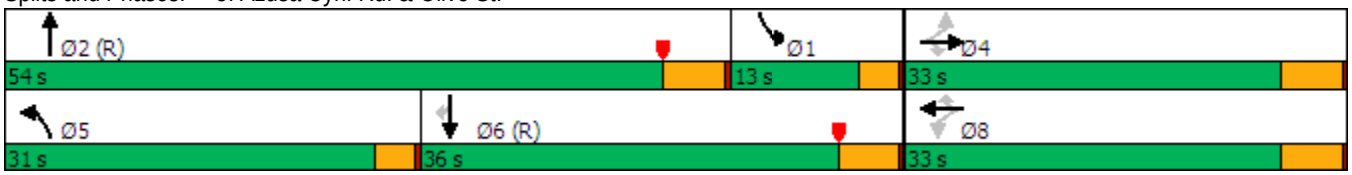
Actuated Cycle Length: 100

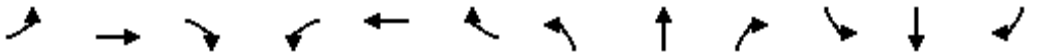
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	136	1	1	1	135	611	13	3	271	39
Future Volume (veh/h)	86	2	136	1	1	1	135	611	13	3	271	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	148	1	1	1	147	664	14	3	295	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	238	220	186	216	220	186	180	1771	37	442	2346	1046
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.20	0.98	0.98	0.24	0.65	0.65
Sat Flow, veh/h	1437	1900	1610	1257	1900	1610	1810	3615	76	1810	3610	1610
Grp Volume(v), veh/h	93	2	148	1	1	1	147	331	347	3	295	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1257	1900	1610	1810	1805	1886	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	9.0	0.1	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Cycle Q Clear(g_c), s	6.2	0.1	9.0	0.2	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	238	220	186	216	220	186	180	884	924	442	2346	1046
V/C Ratio(X)	0.39	0.01	0.79	0.00	0.00	0.01	0.82	0.37	0.37	0.01	0.13	0.04
Avail Cap(c_a), veh/h	474	532	451	423	532	451	498	884	924	442	2346	1046
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.73	0.73	0.73
Uniform Delay (d), s/veh	41.8	39.1	43.1	39.2	39.1	39.1	39.2	0.5	0.5	28.6	6.7	6.3
Incr Delay (d2), s/veh	1.0	0.0	7.5	0.0	0.0	0.0	8.2	1.1	1.1	0.0	0.1	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	2.2	0.0	3.9	0.0	0.0	0.0	3.5	0.4	0.4	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	39.2	50.5	39.2	39.1	39.1	47.4	1.6	1.6	28.6	6.8	6.3
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		243			3			825			340	
Approach Delay, s/veh		47.5			39.2			9.8			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.4	54.0		16.6	13.4	70.0		16.6				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		11.0	9.8	5.1		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	2.1		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	532	0	6	488
Future Volume (vph)	0	2	532	0	6	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

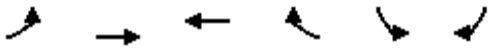
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	532	0	6	488
Future Vol, veh/h	0	2	532	0	6	488
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	560	0	6	514

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	280	0	0	560	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	723	-	-	1021	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	723	-	-	1021	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	723	1021	-
HCM Lane V/C Ratio	-	-	0.003	0.006	-
HCM Control Delay (s)	-	-	10	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	38	36	0	0	2
Future Volume (vph)	5	38	36	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

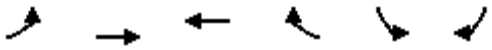
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	38	36	0	0	2
Future Vol, veh/h	5	38	36	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	40	38	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	88	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1585	-	-	-	918	1040
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	915	1040
Mov Cap-2 Maneuver	-	-	-	-	915	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1585	-	-	-	1040
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	36	35	0	0	1
Future Volume (vph)	2	36	35	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	36	35	0	0	1
Future Vol, veh/h	2	36	35	0	0	1
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	38	37	0	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	79	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	929	1041
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	986	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	928	1041
Mov Cap-2 Maneuver	-	-	-	-	928	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	986	-

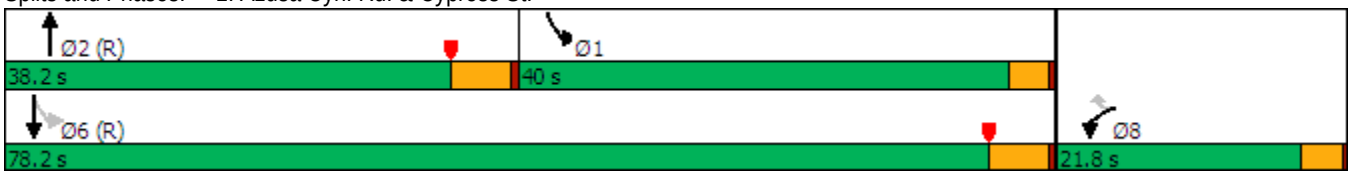
Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1041
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	379	579	492	484
Future Volume (vph)	196	223	379	579	492	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	21.8	21.8	38.2		40.0	78.2
Total Split (%)	21.8%	21.8%	38.2%		40.0%	78.2%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	196	223	379	579	492	484
Future Volume (veh/h)	196	223	379	579	492	484
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	288	147	399	609	518	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	427	190	599	535	823	2877
Arrive On Green	0.12	0.12	0.33	0.33	0.69	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	288	147	399	609	518	509
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.6	8.9	19.0	33.2	9.2	0.0
Cycle Q Clear(g_c), s	7.6	8.9	19.0	33.2	9.2	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	427	190	599	535	823	2877
V/C Ratio(X)	0.67	0.77	0.67	1.14	0.63	0.18
Avail Cap(c_a), veh/h	662	295	599	535	823	2877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.87	0.87
Uniform Delay (d), s/veh	42.3	42.8	28.6	33.4	9.8	0.0
Incr Delay (d2), s/veh	1.9	6.6	5.8	83.4	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	3.5	3.8	9.0	24.9	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	49.4	34.4	116.8	11.1	0.1
LnGrp LOS	D	D	C	F	B	A
Approach Vol, veh/h	435		1008			1027
Approach Delay, s/veh	45.9		84.2			5.7
Approach LOS	D		F			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.5	38.2			84.7	15.3
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.2	18.3
Max Q Clear Time (g_c+I1), s	11.2	35.2			2.0	10.9
Green Ext Time (p_c), s	1.7	0.0			3.9	0.9

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	43	25	22	191	349	13	12	469	210
Future Volume (vph)	566	8	438	43	25	22	191	349	13	12	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	135.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	566	8	438	43	25	22	191	349	13	12	469	210
Future Vol, veh/h	566	8	438	43	25	22	191	349	13	12	469	210
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	584	8	452	44	26	23	197	360	13	12	484	216
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

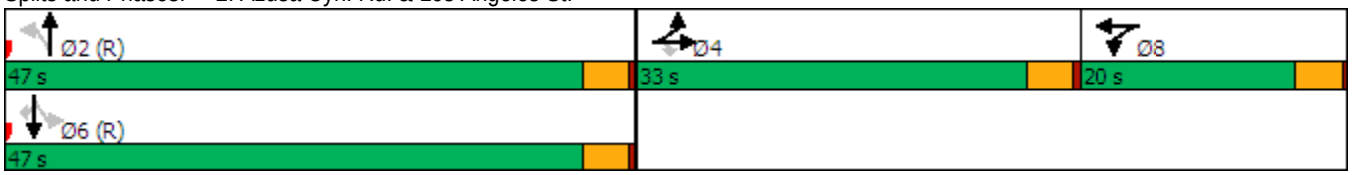
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	155	15.8	180.3	85.9
HCM LOS	F	C	F	F

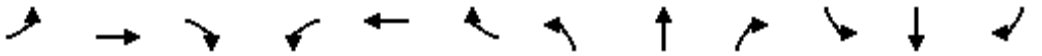
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	35%	99%	0%	63%	0%	2%	0%
Vol Thru, %	63%	1%	0%	37%	0%	98%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	553	574	438	68	22	481	210
LT Vol	191	566	0	43	0	12	0
Through Vol	349	8	0	25	0	469	0
RT Vol	13	0	438	0	22	0	210
Lane Flow Rate	570	592	452	70	23	496	216
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.308	1.423	0.936	0.197	0.057	1.136	0.453
Departure Headway (Hd)	8.63	9.372	8.122	11.16	10.077	8.825	8.082
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	428	391	452	324	358	417	448
Service Time	6.63	7.072	5.822	8.86	7.777	6.525	5.782
HCM Lane V/C Ratio	1.332	1.514	1	0.216	0.064	1.189	0.482
HCM Control Delay	180.3	230	56.7	16.6	13.4	115.9	17.3
HCM Lane LOS	F	F	F	C	B	F	C
HCM 95th-tile Q	24.4	27.7	10.8	0.7	0.2	17.1	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	43	25	22	191	349	13	12	469	210
Future Volume (vph)	566	8	438	43	25	22	191	349	13	12	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	33.0	33.0	33.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	8	438	43	25	22	191	349	13	12	469	210
Future Volume (veh/h)	566	8	438	43	25	22	191	349	13	12	469	210
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	590	0	452	44	26	23	197	360	13	12	484	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1050	0	467	83	43	38	272	454	16	46	1018	876
Arrive On Green	0.29	0.00	0.29	0.05	0.05	0.05	0.54	0.54	0.54	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	930	822	411	835	29	17	1870	1610
Grp Volume(v), veh/h	590	0	452	44	0	49	570	0	0	496	0	216
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1752	1275	0	0	1887	0	1610
Q Serve(g_s), s	13.8	0.0	27.7	2.4	0.0	2.7	33.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.8	0.0	27.7	2.4	0.0	2.7	36.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.47	0.35		0.02	0.02		1.00
Lane Grp Cap(c), veh/h	1050	0	467	83	0	80	742	0	0	1064	0	876
V/C Ratio(X)	0.56	0.00	0.97	0.53	0.00	0.61	0.77	0.00	0.00	0.47	0.00	0.25
Avail Cap(c_a), veh/h	1050	0	467	290	0	280	742	0	0	1064	0	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.44	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	35.0	46.7	0.0	46.8	18.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	33.4	5.2	0.0	7.3	3.4	0.0	0.0	1.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	14.5	1.2	0.0	1.4	10.6	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	68.4	51.8	0.0	54.1	21.6	0.0	0.0	1.5	0.0	0.7
LnGrp LOS	C	A	E	D	A	D	C	A	A	A	A	A
Approach Vol, veh/h		1042			93			570			712	
Approach Delay, s/veh		47.1			53.0			21.6			1.2	
Approach LOS		D			D			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.4		33.0		58.4		8.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		38.1		29.7		2.0		4.7				
Green Ext Time (p_c), s		2.0		0.0		4.5		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			27.8									
HCM 6th LOS			C									

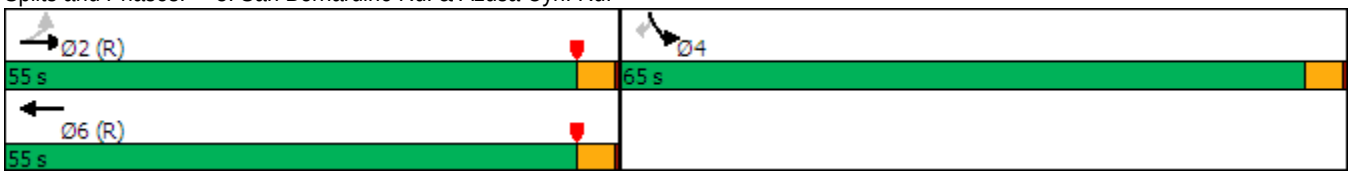
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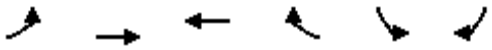
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	405	829	168
Future Volume (vph)	139	375	385	405	829	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	55.0	55.0	55.0		65.0	65.0
Total Split (%)	45.8%	45.8%	45.8%		54.2%	54.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	139	375	385	405	829	168
Future Volume (veh/h)	139	375	385	405	829	168
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	395	405	426	873	177
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	206	1534	767	684	920	819
Arrive On Green	0.43	0.43	0.43	0.43	0.51	0.51
Sat Flow, veh/h	671	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	146	395	405	426	873	177
Grp Sat Flow(s),veh/h/ln	671	1805	1805	1610	1810	1610
Q Serve(g_s), s	26.1	8.5	20.0	24.8	55.0	7.3
Cycle Q Clear(g_c), s	50.9	8.5	20.0	24.8	55.0	7.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	206	1534	767	684	920	819
V/C Ratio(X)	0.71	0.26	0.53	0.62	0.95	0.22
Avail Cap(c_a), veh/h	206	1534	767	684	920	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	22.3	25.6	27.0	28.0	16.3
Incr Delay (d2), s/veh	18.5	0.4	2.6	4.2	19.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.6	8.8	10.0	27.8	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.4	22.7	28.2	31.2	47.7	16.9
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		541	831		1050	
Approach Delay, s/veh		34.2	29.7		42.5	
Approach LOS		C	C		D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		65.0		55.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		51.0		61.0		51.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

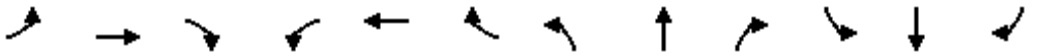
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.8	65.0		17.0	71.2	71.2	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	9.0%	54.2%		14.2%	59.3%	59.3%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 18 (15%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	376	241	1564	39	249	15	314	35	12	51
Future Volume (veh/h)	43	2663	376	241	1564	39	249	15	314	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	2833	400	256	1664	41	276	0	334	37	13	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	2460	331	204	2202	933	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4920	661	1810	3800	1610	3619	0	1610	1810	322	1337
Grp Volume(v), veh/h	46	2155	1078	256	1664	41	276	0	334	37	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1659
Q Serve(g_s), s	3.0	60.0	60.0	13.5	39.3	1.3	8.4	0.0	18.0	2.3	0.0	4.6
Cycle Q Clear(g_c), s	3.0	60.0	60.0	13.5	39.3	1.3	8.4	0.0	18.0	2.3	0.0	4.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	60	1900	891	204	2202	933	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.13	1.21	1.26	0.76	0.04	0.51	0.00	1.38	0.25	0.00	0.48
Avail Cap(c_a), veh/h	110	1900	891	204	2202	933	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.6	30.0	30.0	53.3	18.9	10.9	46.9	0.0	51.0	51.5	0.0	52.5
Incr Delay (d2), s/veh	18.7	67.6	105.1	149.4	2.5	0.1	3.3	0.0	195.5	3.8	0.0	11.7
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	1.7	42.7	49.3	14.4	16.2	0.5	4.0	0.0	20.3	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.3	97.6	135.1	202.6	21.3	11.0	50.2	0.0	246.5	55.3	0.0	64.2
LnGrp LOS	E	F	F	F	C	B	D	A	F	E	A	E
Approach Vol, veh/h		3279			1961			610			104	
Approach Delay, s/veh		109.6			44.8			157.7			61.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.5	74.5		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	7.3	66.2		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.6	5.0	41.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	13.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		92.4	
HCM 6th LOS		F	

Notes

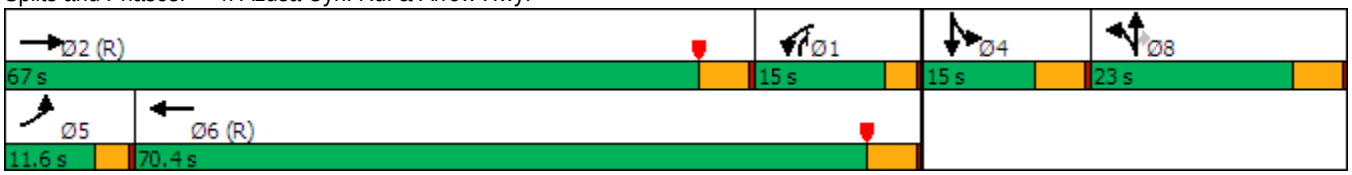
User approved volume balancing among the lanes for turning movement.

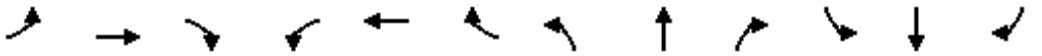
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	11.6	67.0		15.0	70.4		23.0	23.0	15.0	15.0	15.0	
Total Split (%)	9.7%	55.8%		12.5%	58.7%		19.2%	19.2%	12.5%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	376	241	1564	39	249	15	314	35	12	51
Future Volume (veh/h)	43	2663	376	241	1564	39	249	15	314	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	2663	376	241	1564	39	260	0	314	35	12	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	2542	342	726	4983	124	543	0	888	151	26	112
Arrive On Green	0.05	0.77	0.77	0.60	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4920	661	1810	5537	138	3619	0	1610	1810	316	1342
Grp Volume(v), veh/h	43	2026	1013	241	1073	530	260	0	314	35	0	63
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1875	1810	0	1610	1810	0	1658
Q Serve(g_s), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Cycle Q Clear(g_c), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Prop In Lane	1.00		0.37	1.00		0.07	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	56	1963	920	726	3420	1687	543	0	888	151	0	138
V/C Ratio(X)	0.77	1.03	1.10	0.33	0.31	0.31	0.48	0.00	0.35	0.23	0.00	0.46
Avail Cap(c_a), veh/h	122	1963	920	726	3420	1687	543	0	888	151	0	138
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.8	13.5	13.5	15.9	0.0	0.0	46.7	0.0	15.0	51.4	0.0	52.4
Incr Delay (d2), s/veh	20.1	29.0	61.2	0.3	0.2	0.5	2.9	0.0	1.1	3.6	0.0	10.5
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	1.6	17.4	24.5	2.9	0.1	0.2	3.8	0.0	5.0	1.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	42.5	74.7	16.1	0.2	0.5	49.7	0.0	16.1	55.0	0.0	62.9
LnGrp LOS	E	F	F	B	A	A	D	A	B	D	A	E
Approach Vol, veh/h		3082			1844			574			98	
Approach Delay, s/veh		53.6			2.4			31.3			60.1	
Approach LOS		D			A			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.2	67.0		15.0	7.2	113.0		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	* 62		10.0	8.1	65.4		18.0				
Max Q Clear Time (g_c+I1), s	9.9	64.0		6.3	4.8	2.0		9.9				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	15.5		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		34.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

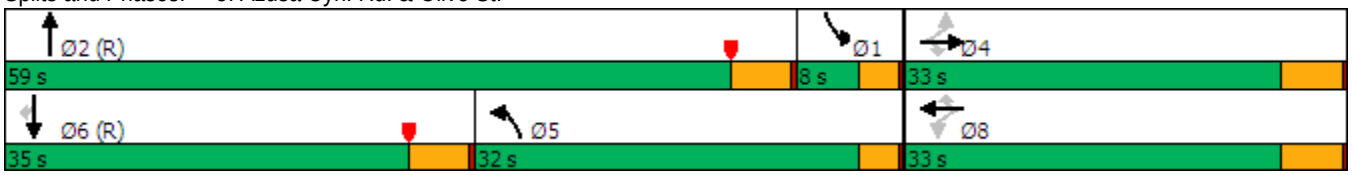
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	259	342	1	1	587	85
Future Volume (vph)	116	1	380	3	1	1	259	342	1	1	587	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	32.0	59.0		8.0	35.0	35.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	32.0%	59.0%		8.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1	380	3	1	1	259	342	1	1	587	85
Future Volume (veh/h)	116	1	380	3	1	1	259	342	1	1	587	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	1	404	3	1	1	276	364	1	1	624	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	457	510	432	339	510	432	537	1994	5	102	1083	483
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.59	1.00	1.00	0.06	0.30	0.30
Sat Flow, veh/h	1437	1900	1610	996	1900	1610	1810	3693	10	1810	3610	1610
Grp Volume(v), veh/h	123	1	404	3	1	1	276	178	187	1	624	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	996	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.8	0.0	24.5	0.2	0.0	0.0	8.9	0.0	0.0	0.1	14.6	4.1
Cycle Q Clear(g_c), s	6.9	0.0	24.5	0.3	0.0	0.0	8.9	0.0	0.0	0.1	14.6	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	457	510	432	339	510	432	537	975	1025	102	1083	483
V/C Ratio(X)	0.27	0.00	0.93	0.01	0.00	0.00	0.51	0.18	0.18	0.01	0.58	0.19
Avail Cap(c_a), veh/h	474	532	451	350	532	451	537	975	1025	102	1083	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.09	0.09	0.09
Uniform Delay (d), s/veh	29.3	26.8	35.7	26.9	26.8	26.8	16.1	0.0	0.0	44.5	29.6	26.0
Incr Delay (d2), s/veh	0.3	0.0	26.3	0.0	0.0	0.0	0.6	0.3	0.3	0.0	0.2	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	2.4	0.0	12.6	0.1	0.0	0.0	3.0	0.1	0.1	0.0	6.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	26.8	62.1	26.9	26.8	26.8	16.7	0.3	0.3	44.5	29.8	26.0
LnGrp LOS	C	C	E	C	C	C	B	A	A	D	C	C
Approach Vol, veh/h		528			5			641			715	
Approach Delay, s/veh		54.4			26.8			7.4			29.4	
Approach LOS		D			C			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	59.0		31.8	33.2	35.0		31.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	54.0		28.0	28.5	30.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		26.5	10.9	16.6		2.3				
Green Ext Time (p_c), s	0.0	2.3		0.3	0.7	3.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	937	0	2	691
Future Volume (vph)	0	5	937	0	2	691
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

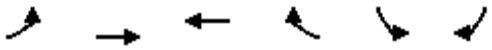
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	937	0	2	691
Future Vol, veh/h	0	5	937	0	2	691
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	986	0	2	727

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	493	0	0	986	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	527	-	-	709	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	527	-	-	709	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	527	709	-
HCM Lane V/C Ratio	-	-	0.01	0.003	-
HCM Control Delay (s)	-	-	11.9	10.1	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	32	86	0	0	5
Future Volume (vph)	2	32	86	0	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

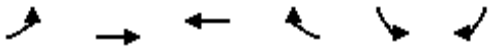
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	32	86	0	0	5
Future Vol, veh/h	2	32	86	0	0	5
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	34	91	0	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	91	0	-	0	129	91
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1517	-	-	-	870	972
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	990	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1517	-	-	-	869	972
Mov Cap-2 Maneuver	-	-	-	-	869	-
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	990	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1517	-	-	-	972
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	31	84	0	0	2
Future Volume (vph)	1	31	84	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	31	84	0	0	2
Future Vol, veh/h	1	31	84	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	33	88	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	123	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	877	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	876	976
Mov Cap-2 Maneuver	-	-	-	-	876	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	993	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	8.7
HCM LOS			A

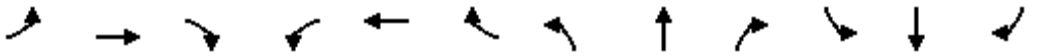
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	976
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	419	359	186	161	247
Future Volume (vph)	262	419	359	186	161	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3425		1805	3610
Flt Permitted	0.97	1.00	1.00		0.39	1.00
Satd. Flow (perm)	3351	1470	3425		739	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	291	466	399	207	179	274
RTOR Reduction (vph)	173	204	49	0	0	0
Lane Group Flow (vph)	342	38	557	0	179	274
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	15.9	15.9	54.6		77.1	75.6
Effective Green, g (s)	15.9	15.9	54.6		77.1	75.6
Actuated g/C Ratio	0.16	0.16	0.55		0.77	0.76
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	532	233	1870		756	2729
v/s Ratio Prot	c0.10		c0.16		c0.04	0.08
v/s Ratio Perm		0.03			0.14	
v/c Ratio	0.64	0.17	0.30		0.24	0.10
Uniform Delay, d1	39.4	36.3	12.3		4.9	3.2
Progression Factor	1.00	1.00	1.00		1.08	0.92
Incremental Delay, d2	2.7	0.3	0.4		0.2	0.1
Delay (s)	42.0	36.7	12.7		5.5	3.0
Level of Service	D	D	B		A	A
Approach Delay (s)	40.3		12.7			4.0
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

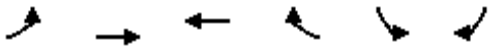
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	13	206	8	7	23	249	294	12	18	167	303
Future Volume (vph)	215	13	206	8	7	23	249	294	12	18	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.88			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1679			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.76			0.94	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1679			1450			1780	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	229	14	219	9	7	24	265	313	13	19	178	322
RTOR Reduction (vph)	0	0	192	0	23	0	0	1	0	0	0	92
Lane Group Flow (vph)	121	122	27	9	8	0	0	590	0	0	197	230
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.3	12.3	12.3	4.2	4.2			71.5			71.5	71.5
Effective Green, g (s)	12.3	12.3	12.3	4.2	4.2			71.5			71.5	71.5
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.72			0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	210	222	233	75	70			1036			1272	1358
v/s Ratio Prot	c0.07	0.07		c0.00	0.00							
v/s Ratio Perm			0.01					c0.41			0.11	0.12
v/c Ratio	0.58	0.55	0.12	0.12	0.11			0.57			0.15	0.17
Uniform Delay, d1	41.4	41.2	39.0	46.1	46.1			6.9			4.6	4.6
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			2.08	7.28
Incremental Delay, d2	3.8	2.8	0.2	0.7	0.7			2.3			0.3	0.3
Delay (s)	45.2	44.0	39.2	46.8	46.8			9.1			9.7	33.9
Level of Service	D	D	D	D	D			A			A	C
Approach Delay (s)		42.1			46.8			9.1			24.7	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	160	377	474	287	84
Future Volume (vph)	90	160	377	474	287	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3308		1805	1615
Flt Permitted	0.23	1.00	1.00		0.95	1.00
Satd. Flow (perm)	438	3610	3308		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	101	180	424	533	322	94
RTOR Reduction (vph)	0	0	190	0	0	26
Lane Group Flow (vph)	101	180	767	0	322	68
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	251	2075	1902		646	578
v/s Ratio Prot		0.05	c0.23		c0.18	
v/s Ratio Perm	0.23					0.04
v/c Ratio	0.40	0.09	0.40		0.50	0.12
Uniform Delay, d1	14.1	11.4	14.1		30.1	25.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	0.1	0.6		2.7	0.4
Delay (s)	18.8	11.5	14.7		32.8	26.2
Level of Service	B	B	B		C	C
Approach Delay (s)		14.1	14.7		31.3	
Approach LOS		B	B		C	

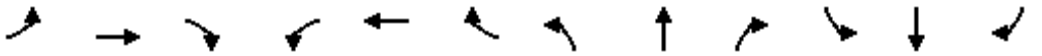
Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Future Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	331	210	2647	51	526	21	169	24	14	48
RTOR Reduction (vph)	0	35	0	0	0	21	0	0	144	0	44	0
Lane Group Flow (vph)	31	1629	0	210	2647	30	274	273	25	24	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.3		18.2	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.3		18.2	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2626		288	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.70		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.82	0.62		0.73	1.18	0.03	0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.4		48.5	24.5	10.1	50.7	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		8.9	84.2	0.0	44.3	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.5		57.5	108.6	10.2	95.0	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.5			103.2			82.8			52.6	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	76.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

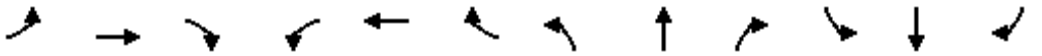
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Future Volume (vph)	28	1213	301	191	2409	46	479	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	331	210	2647	51	526	21	169	24	14	48
RTOR Reduction (vph)	0	34	0	0	2	0	0	0	144	0	44	0
Lane Group Flow (vph)	31	1630	0	210	2696	0	274	273	25	24	18	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.47		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.82	0.62		0.73	0.80		0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.4		48.7	18.9		50.7	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.4	2.1		44.3	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.5		58.0	21.0		95.0	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	C		F	F	D	D	D	
Approach Delay (s)		27.5			23.7			82.8			52.6	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	136	1	1	1	135	611	13	3	271	39
Future Volume (vph)	86	2	136	1	1	1	135	611	13	3	271	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	148	1	1	1	147	664	14	3	295	42
RTOR Reduction (vph)	0	0	129	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	19	1	1	0	147	677	0	3	295	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.72		0.02	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	243	2587		34	2176	973
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.09	0.14	0.03
Uniform Delay, d1	40.8	38.1	38.6	38.1	38.1	38.1	40.7	4.9		48.2	8.6	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.23	0.67		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.8	38.1	38.1	38.1	54.3	3.5		49.3	8.7	8.1
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.4			38.1			12.6			9.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

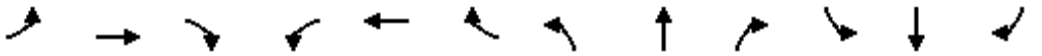
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	379	579	492	484
Future Volume (vph)	196	223	379	579	492	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3283		1805	3610
Flt Permitted	0.97	1.00	1.00		0.15	1.00
Satd. Flow (perm)	3394	1470	3283		288	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	235	399	609	518	509
RTOR Reduction (vph)	62	121	254	0	0	0
Lane Group Flow (vph)	240	18	754	0	518	509
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.6	12.6	38.9		80.4	78.9
Effective Green, g (s)	12.6	12.6	38.9		80.4	78.9
Actuated g/C Ratio	0.13	0.13	0.39		0.80	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	427	185	1277		785	2848
v/s Ratio Prot	c0.07		0.23		c0.24	0.14
v/s Ratio Perm		0.01			c0.29	
v/c Ratio	0.56	0.09	0.59		0.66	0.18
Uniform Delay, d1	41.1	38.7	24.2		15.9	2.6
Progression Factor	1.00	1.00	1.00		0.80	0.30
Incremental Delay, d2	1.7	0.2	2.0		1.9	0.1
Delay (s)	42.8	38.9	26.2		14.7	0.9
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		26.2			7.8
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

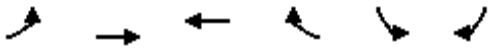
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	43	25	22	191	349	13	12	469	210
Future Volume (vph)	566	8	438	43	25	22	191	349	13	12	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.93			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1766			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.55			0.99	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1766			1036			1873	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	584	8	452	44	26	23	197	360	13	12	484	216
RTOR Reduction (vph)	0	0	297	0	21	0	0	0	0	0	0	95
Lane Group Flow (vph)	298	294	155	44	28	0	0	570	0	0	496	121
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	24.0	24.0	24.0	7.9	7.9			56.1			56.1	56.1
Effective Green, g (s)	24.0	24.0	24.0	7.9	7.9			56.1			56.1	56.1
Actuated g/C Ratio	0.24	0.24	0.24	0.08	0.08			0.56			0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	411	433	456	142	139			581			1050	1065
v/s Ratio Prot	c0.17	0.16		c0.02	0.02							
v/s Ratio Perm			0.08					c0.55			0.26	0.06
v/c Ratio	0.73	0.68	0.34	0.31	0.20			0.98			0.47	0.11
Uniform Delay, d1	35.0	34.5	31.4	43.5	43.1			21.4			13.1	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.73	0.82
Incremental Delay, d2	6.2	4.2	0.4	1.2	0.7			32.8			1.5	0.2
Delay (s)	41.2	38.7	31.9	44.7	43.8			54.2			11.0	8.6
Level of Service	D	D	C	D	D			D			B	A
Approach Delay (s)		36.5			44.2			54.2			10.3	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

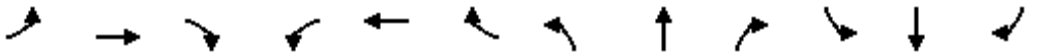
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	405	829	168
Future Volume (vph)	139	375	385	405	829	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.22	1.00	1.00		0.95	1.00
Satd. Flow (perm)	415	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	395	405	426	873	177
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	146	395	673	0	873	159
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	51.0	51.0	51.0		61.0	61.0
Effective Green, g (s)	51.0	51.0	51.0		61.0	61.0
Actuated g/C Ratio	0.42	0.42	0.42		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	176	1534	1416		917	820
v/s Ratio Prot		0.11	0.20		c0.48	
v/s Ratio Perm	c0.35					0.10
v/c Ratio	0.83	0.26	0.48		0.95	0.19
Uniform Delay, d1	30.6	22.3	24.9		28.1	16.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	34.4	0.4	1.1		20.1	0.5
Delay (s)	65.0	22.7	26.0		48.3	16.6
Level of Service	E	C	C		D	B
Approach Delay (s)		34.1	26.0		42.9	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

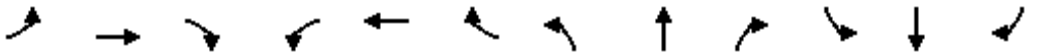
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	46	2833	400	256	1664	41	265	16	334	37	13	54
RTOR Reduction (vph)	0	18	0	0	0	18	0	0	182	0	50	0
Lane Group Flow (vph)	46	3216	0	256	1664	23	140	141	152	37	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	5.8	60.0		13.5	67.7	67.7	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	5.8	60.0		13.5	67.7	67.7	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.05	0.50		0.11	0.56	0.56	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	91	2850		213	2143	1071	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.56		c0.13	0.44		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.51	1.13		1.20	0.78	0.02	0.49	0.49	0.53	0.23	0.11	
Uniform Delay, d1	55.7	30.0		53.2	20.3	11.5	46.8	46.8	47.1	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.4	62.8		126.9	2.8	0.0	5.9	6.0	7.0	3.4	1.4	
Delay (s)	60.1	92.8		180.1	23.1	11.6	52.7	52.8	54.1	54.9	52.3	
Level of Service	E	F		F	C	B	D	D	D	D	D	
Approach Delay (s)		92.4			43.4			53.5			53.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		

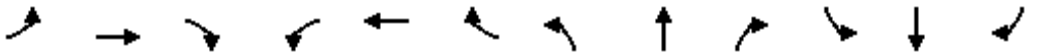
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	2663	376	241	1564	39	249	15	314	35	12	51
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	71	0	47	0
Lane Group Flow (vph)	43	3021	0	241	1601	0	132	132	243	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	6.2	61.3		12.2	67.3		18.0	18.0	30.2	10.0	10.0	
Effective Green, g (s)	6.2	61.3		12.2	67.3		18.0	18.0	30.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.51		0.10	0.56		0.15	0.15	0.25	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	98	2911		193	3196		285	285	478	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.28		0.07	0.07	c0.05	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	1.04		1.25	0.50		0.46	0.46	0.51	0.22	0.10	
Uniform Delay, d1	55.2	29.4		53.9	16.1		46.6	46.6	38.5	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	27.5		147.5	0.6		5.3	5.3	0.9	3.2	1.3	
Delay (s)	58.3	56.8		201.4	16.7		51.9	51.9	39.4	54.6	52.2	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		56.9			40.8			45.1			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	259	342	1	1	587	85
Future Volume (vph)	116	1	380	3	1	1	259	342	1	1	587	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3609		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3609		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	123	1	404	3	1	1	276	364	1	1	624	90
RTOR Reduction (vph)	0	0	343	0	0	1	0	0	0	0	0	49
Lane Group Flow (vph)	123	1	61	3	1	0	276	365	0	1	624	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.25	0.71		0.01	0.46	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	215	285	242	215	285	242	458	2547		16	1664	744
v/s Ratio Prot		0.00			0.00		c0.15	0.10		0.00	c0.17	
v/s Ratio Perm	c0.09		0.04	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.25	0.01	0.00	0.00	0.60	0.14		0.06	0.38	0.06
Uniform Delay, d1	39.5	36.1	37.5	36.2	36.1	36.1	32.9	4.8		49.1	17.6	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.53		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	0.5	0.0	0.0	0.0	1.9	0.1		1.6	0.6	0.1
Delay (s)	43.2	36.1	38.1	36.2	36.1	36.1	26.2	2.7		50.8	18.2	15.1
Level of Service	D	D	D	D	D	D	C	A		D	B	B
Approach Delay (s)		39.3			36.2			12.8			17.9	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 7.2:

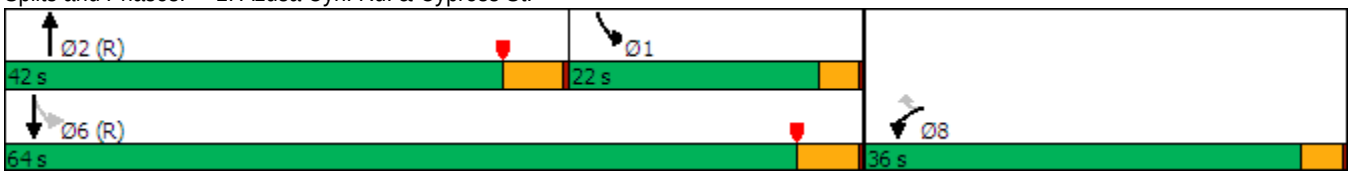
2040 PLUS SITE BASELINE LAND USE WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	263	419	362	186	161	258
Future Volume (vph)	263	419	362	186	161	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	36.0	36.0	42.0		22.0	64.0
Total Split (%)	36.0%	36.0%	42.0%		22.0%	64.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	263	419	362	186	161	258
Future Volume (veh/h)	263	419	362	186	161	258
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	253	508	402	207	179	287
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	356	633	857	436	790	2593
Arrive On Green	0.20	0.20	0.37	0.37	0.60	1.00
Sat Flow, veh/h	1810	3220	2410	1178	1810	3705
Grp Volume(v), veh/h	253	508	312	297	179	287
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1688	1810	1805
Q Serve(g_s), s	13.1	15.0	13.2	13.4	0.0	0.0
Cycle Q Clear(g_c), s	13.1	15.0	13.2	13.4	0.0	0.0
Prop In Lane	1.00	1.00		0.70	1.00	
Lane Grp Cap(c), veh/h	356	633	668	625	790	2593
V/C Ratio(X)	0.71	0.80	0.47	0.48	0.23	0.11
Avail Cap(c_a), veh/h	588	1047	668	625	790	2593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	37.5	38.3	24.0	24.1	7.8	0.0
Incr Delay (d2), s/veh	2.6	2.4	2.3	2.6	0.1	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	5.9	6.0	6.0	5.7	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.2	40.7	26.3	26.7	7.9	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	761		609			466
Approach Delay, s/veh	40.5		26.5			3.1
Approach LOS	D		C			A

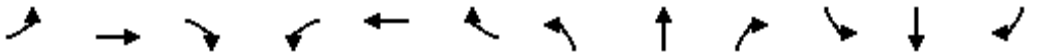
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.8	42.0			76.8	23.2
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	18.5	* 37			59.0	32.5
Max Q Clear Time (g_c+I1), s	2.0	15.4			2.0	17.0
Green Ext Time (p_c), s	0.4	3.9			2.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	18	206	9	9	24	249	294	16	20	167	303
Future Volume (vph)	215	18	206	9	9	24	249	294	16	20	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	54.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	215	18	206	9	9	24	249	294	16	20	167	303
Future Vol, veh/h	215	18	206	9	9	24	249	294	16	20	167	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	229	19	219	10	10	26	265	313	17	21	178	322
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	18	12.1	118.6	17
HCM LOS	C	B	F	C

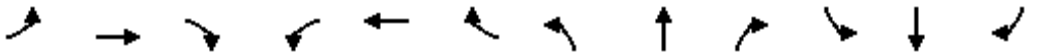
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	92%	0%	50%	0%	11%	0%
Vol Thru, %	53%	8%	0%	50%	0%	89%	0%
Vol Right, %	3%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	559	233	206	18	24	187	303
LT Vol	249	215	0	9	0	20	0
Through Vol	294	18	0	9	0	167	0
RT Vol	16	0	206	0	24	0	303
Lane Flow Rate	595	248	219	19	26	199	322
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.165	0.549	0.413	0.047	0.056	0.398	0.577
Departure Headway (Hd)	7.052	8.376	7.173	9.498	8.501	7.525	6.749
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	517	434	506	379	424	481	538
Service Time	5.098	6.076	4.873	7.198	6.201	5.225	4.449
HCM Lane V/C Ratio	1.151	0.571	0.433	0.05	0.061	0.414	0.599
HCM Control Delay	118.6	20.8	14.8	12.7	11.7	15.1	18.2
HCM Lane LOS	F	C	B	B	B	C	C
HCM 95th-tile Q	21	3.2	2	0.1	0.2	1.9	3.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	18	206	9	9	24	249	294	16	20	167	303
Future Volume (vph)	215	18	206	9	9	24	249	294	16	20	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	46%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	18	206	9	9	24	249	294	16	20	167	303
Future Volume (veh/h)	215	18	206	9	9	24	249	294	16	20	167	303
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	243	0	219	10	10	26	265	313	17	21	178	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	559	0	249	55	14	37	427	469	25	137	1143	1119
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	3619	0	1610	1810	467	1214	540	674	36	140	1644	1610
Grp Volume(v), veh/h	243	0	219	10	0	36	595	0	0	199	0	322
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1681	1250	0	0	1784	0	1610
Q Serve(g_s), s	6.1	0.0	13.3	0.5	0.0	2.1	25.8	0.0	0.0	0.0	0.0	7.6
Cycle Q Clear(g_c), s	6.1	0.0	13.3	0.5	0.0	2.1	29.4	0.0	0.0	3.6	0.0	7.6
Prop In Lane	1.00		1.00	1.00		0.72	0.45		0.03	0.11		1.00
Lane Grp Cap(c), veh/h	559	0	249	55	0	51	921	0	0	1280	0	1119
V/C Ratio(X)	0.43	0.00	0.88	0.18	0.00	0.70	0.65	0.00	0.00	0.16	0.00	0.29
Avail Cap(c_a), veh/h	579	0	258	290	0	269	921	0	0	1280	0	1119
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	1.00	1.00	0.00	1.00	0.91	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	41.4	47.3	0.0	48.0	9.5	0.0	0.0	5.2	0.0	5.8
Incr Delay (d2), s/veh	0.5	0.0	27.1	1.6	0.0	16.2	3.2	0.0	0.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.9	0.3	0.0	1.1	7.5	0.0	0.0	1.3	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	68.5	48.8	0.0	64.2	12.7	0.0	0.0	5.4	0.0	6.5
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		462			46			595			521	
Approach Delay, s/veh		52.9			60.9			12.7			6.1	
Approach LOS		D			E			B			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	73.5	19.4	73.5	7.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	56.0	16.0	56.0	16.0
Max Q Clear Time (g_c+I1), s	31.4	15.3	9.6	4.1
Green Ext Time (p_c), s	5.4	0.1	2.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

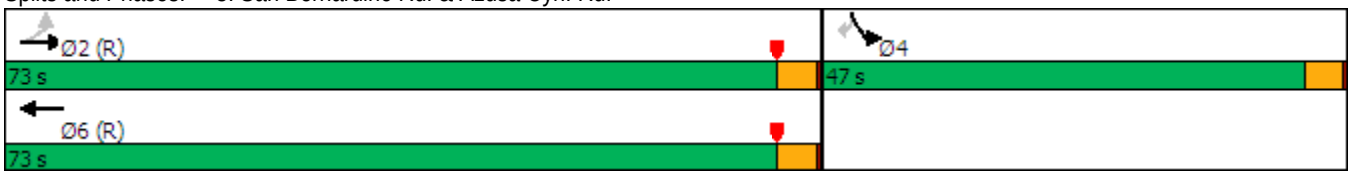
User approved pedestrian interval to be less than phase max green.

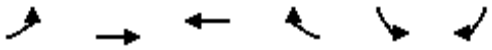
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	160	377	477	288	84
Future Volume (vph)	91	160	377	477	288	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	91	160	377	477	288	84
Future Volume (veh/h)	91	160	377	477	288	84
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	102	180	424	536	324	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	276	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	594	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	102	180	424	536	324	94
Grp Sat Flow(s),veh/h/ln	594	1805	1805	1610	1810	1610
Q Serve(g_s), s	15.8	2.7	15.7	25.4	16.8	4.8
Cycle Q Clear(g_c), s	41.3	2.7	15.7	25.4	16.8	4.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	276	2076	1038	926	648	577
V/C Ratio(X)	0.37	0.09	0.41	0.58	0.50	0.16
Avail Cap(c_a), veh/h	276	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	11.4	14.2	16.2	30.1	26.2
Incr Delay (d2), s/veh	3.8	0.1	1.2	2.6	2.7	0.6
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	1.0	6.3	9.4	7.8	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.2	11.5	15.4	18.9	32.8	26.8
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		282	960		418	
Approach Delay, s/veh		19.3	17.3		31.5	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		21.2
HCM 6th LOS		C

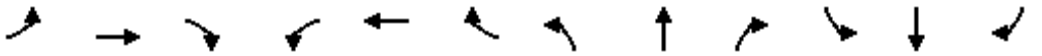
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Future Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	54.9		27.1	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.6%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	305	196	2409	46	480	19	156	22	13	44
Future Volume (veh/h)	28	1213	305	196	2409	46	480	19	156	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	335	215	2647	51	542	0	171	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2096	526	246	2245	951	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.14	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4398	1103	1810	3800	1610	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1151	517	215	2647	51	542	0	171	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1701	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.3	27.4	14.0	70.9	1.6	18.0	0.0	12.1	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.3	27.4	14.0	70.9	1.6	18.0	0.0	12.1	1.5	0.0	4.2
Prop In Lane	1.00		0.65	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1811	811	246	2245	951	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.64	0.64	0.87	1.18	0.05	1.00	0.00	0.71	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1811	811	356	2245	951	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.6	23.6	50.8	24.6	10.4	51.0	0.0	48.5	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.8	15.2	85.6	0.1	37.7	0.0	15.7	2.2	0.0	10.0
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	1.3	11.9	11.2	7.2	54.4	0.6	10.9	0.0	5.9	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.3	27.4	66.1	110.1	10.5	88.6	0.0	64.2	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	F	B	F	A	E	D	A	E
Approach Vol, veh/h		1699			2913			713			86	
Approach Delay, s/veh		27.1			105.1			82.8			59.9	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	62.2		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.6	49.9		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	16.0	29.4		6.2	4.0	72.9		20.0				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		77.0	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

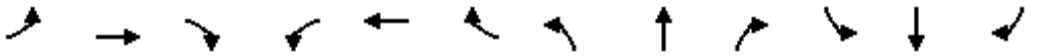
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Future Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.0		27.0	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.5%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	305	196	2409	46	480	19	156	22	13	44
Future Volume (veh/h)	28	1213	305	196	2409	46	480	19	156	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	335	215	2647	51	542	0	171	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2096	526	246	3293	63	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.14	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4398	1103	1810	5574	107	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1151	517	215	1800	898	542	0	171	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1701	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.3	27.4	14.0	44.2	44.8	18.0	0.0	12.1	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.3	27.4	14.0	44.2	44.8	18.0	0.0	12.1	1.5	0.0	4.2
Prop In Lane	1.00		0.65	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1811	811	246	2245	1111	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.64	0.64	0.87	0.80	0.81	1.00	0.00	0.71	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1811	811	354	2245	1111	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.6	23.6	50.8	19.1	19.2	51.0	0.0	48.5	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.8	15.4	3.1	6.3	37.7	0.0	15.7	2.2	0.0	10.0
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	1.3	11.9	11.2	7.2	18.3	19.3	10.9	0.0	5.9	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.3	27.4	66.2	22.2	25.6	88.6	0.0	64.2	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	C	C	F	A	E	D	A	E
Approach Vol, veh/h		1699			2913			713			86	
Approach Delay, s/veh		27.1			26.5			82.8			59.9	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	62.2		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.5	50.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	16.0	29.4		6.2	4.0	46.8		20.0				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	19.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		34.6
HCM 6th LOS		C

Notes

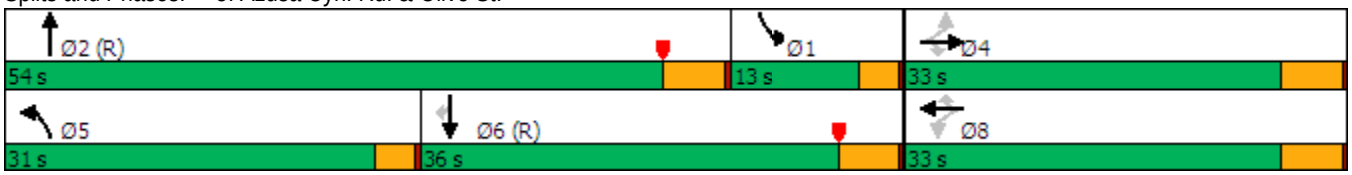
User approved volume balancing among the lanes for turning movement.

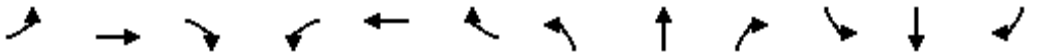
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	137	1	1	1	135	614	13	3	280	39
Future Volume (vph)	86	2	137	1	1	1	135	614	13	3	280	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	137	1	1	1	135	614	13	3	280	39
Future Volume (veh/h)	86	2	137	1	1	1	135	614	13	3	280	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	149	1	1	1	147	667	14	3	304	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	239	221	187	217	221	187	180	1772	37	441	2344	1045
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.20	0.98	0.98	0.24	0.65	0.65
Sat Flow, veh/h	1437	1900	1610	1256	1900	1610	1810	3615	76	1810	3610	1610
Grp Volume(v), veh/h	93	2	149	1	1	1	147	333	348	3	304	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1256	1900	1610	1810	1805	1886	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	9.0	0.1	0.0	0.1	7.8	0.6	0.6	0.1	3.2	0.9
Cycle Q Clear(g_c), s	6.2	0.1	9.0	0.2	0.0	0.1	7.8	0.6	0.6	0.1	3.2	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	239	221	187	217	221	187	180	884	924	441	2344	1045
V/C Ratio(X)	0.39	0.01	0.80	0.00	0.00	0.01	0.82	0.38	0.38	0.01	0.13	0.04
Avail Cap(c_a), veh/h	474	532	451	422	532	451	498	884	924	441	2344	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.72	0.72	0.72
Uniform Delay (d), s/veh	41.8	39.1	43.0	39.2	39.1	39.1	39.2	0.5	0.5	28.7	6.7	6.3
Incr Delay (d2), s/veh	1.0	0.0	7.5	0.0	0.0	0.0	8.2	1.1	1.1	0.0	0.1	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	2.2	0.0	3.9	0.0	0.0	0.0	3.5	0.4	0.4	0.1	1.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	39.1	50.5	39.2	39.1	39.1	47.4	1.7	1.6	28.7	6.8	6.4
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		244			3			828			349	
Approach Delay, s/veh		47.5			39.1			9.8			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.4	54.0		16.6	13.4	69.9		16.6				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		11.0	9.8	5.2		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	2.1		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	533	0	15	490
Future Volume (vph)	0	5	533	0	15	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

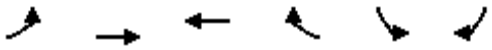
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	533	0	15	490
Future Vol, veh/h	0	5	533	0	15	490
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	561	0	16	516

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	281	0	0	561	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	722	-	-	1020	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	722	-	-	1020	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	722	1020	-
HCM Lane V/C Ratio	-	-	0.007	0.015	-
HCM Control Delay (s)	-	-	10	8.6	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	41	37	0	0	4
Future Volume (vph)	13	41	37	0	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

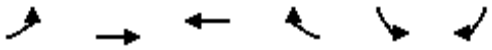
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	41	37	0	0	4
Future Vol, veh/h	13	41	37	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	43	39	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	39	0	-	0	110	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	71	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1584	-	-	-	892	1038
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1584	-	-	-	884	1038
Mov Cap-2 Maneuver	-	-	-	-	884	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	957	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1584	-	-	-	1038
HCM Lane V/C Ratio	0.009	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	36	35	0	0	2
Future Volume (vph)	5	36	35	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	36	35	0	0	2
Future Vol, veh/h	5	36	35	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	38	37	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	85	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	48	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	921	1041
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	918	1041
Mov Cap-2 Maneuver	-	-	-	-	918	-
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	980	-

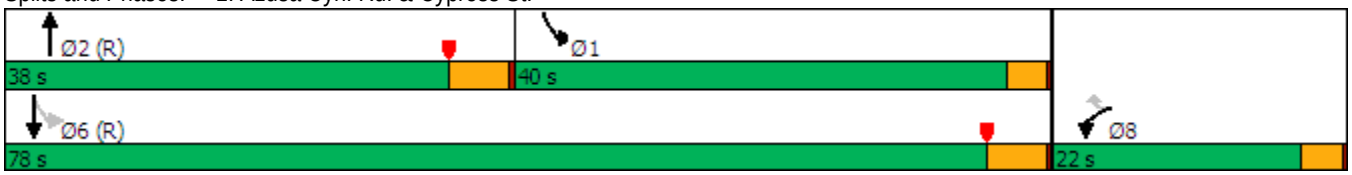
Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1041
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	390	580	492	488
Future Volume (vph)	196	223	390	580	492	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





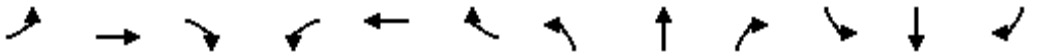
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	196	223	390	580	492	488
Future Volume (veh/h)	196	223	390	580	492	488
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	288	147	411	611	518	514
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	428	190	596	531	826	2877
Arrive On Green	0.12	0.12	0.33	0.33	0.70	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	288	147	411	611	518	514
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.6	8.9	19.8	33.0	9.0	0.0
Cycle Q Clear(g_c), s	7.6	8.9	19.8	33.0	9.0	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	428	190	596	531	826	2877
V/C Ratio(X)	0.67	0.77	0.69	1.15	0.63	0.18
Avail Cap(c_a), veh/h	670	298	596	531	826	2877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.87	0.87
Uniform Delay (d), s/veh	42.2	42.8	29.1	33.5	9.6	0.0
Incr Delay (d2), s/veh	1.9	6.5	6.4	87.5	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	3.5	3.8	9.4	25.4	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	49.3	35.5	121.0	10.9	0.1
LnGrp LOS	D	D	D	F	B	A
Approach Vol, veh/h	435		1022			1032
Approach Delay, s/veh	45.9		86.6			5.5
Approach LOS	D		F			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.7	38.0			84.7	15.3
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	11.0	35.0			2.0	10.9
Green Ext Time (p_c), s	1.7	0.0			4.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	45.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	10	438	47	31	24	191	349	15	13	469	210
Future Volume (vph)	566	10	438	47	31	24	191	349	15	13	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	139.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	566	10	438	47	31	24	191	349	15	13	469	210
Future Vol, veh/h	566	10	438	47	31	24	191	349	15	13	469	210
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	584	10	452	48	32	25	197	360	15	13	484	216
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

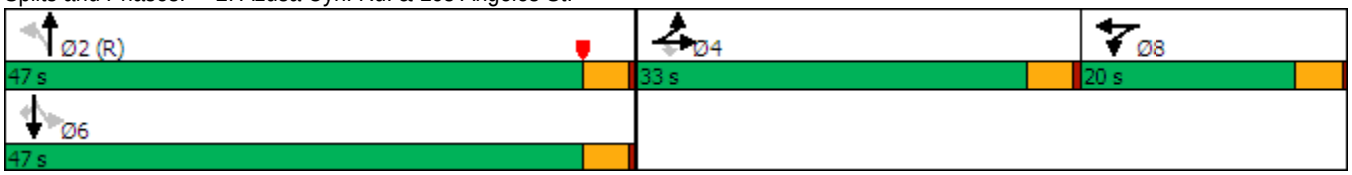
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	159.8	16.3	187.5	89
HCM LOS	F	C	F	F

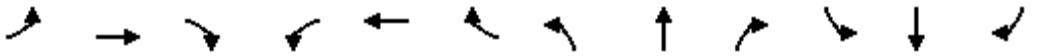
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	98%	0%	60%	0%	3%	0%
Vol Thru, %	63%	2%	0%	40%	0%	97%	0%
Vol Right, %	3%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	576	438	78	24	482	210
LT Vol	191	566	0	47	0	13	0
Through Vol	349	10	0	31	0	469	0
RT Vol	15	0	438	0	24	0	210
Lane Flow Rate	572	594	452	80	25	497	216
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.325	1.438	0.944	0.226	0.063	1.147	0.457
Departure Headway (Hd)	8.721	9.481	8.23	11.173	10.106	8.91	8.165
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	423	386	443	323	357	412	444
Service Time	6.721	7.181	5.93	8.873	7.806	6.61	5.865
HCM Lane V/C Ratio	1.352	1.539	1.02	0.248	0.07	1.206	0.486
HCM Control Delay	187.5	236.6	58.8	17.1	13.5	120.1	17.6
HCM Lane LOS	F	F	F	C	B	F	C
HCM 95th-tile Q	25	28.1	11	0.9	0.2	17.4	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	10	438	47	31	24	191	349	15	13	469	210
Future Volume (vph)	566	10	438	47	31	24	191	349	15	13	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	33.0	33.0	33.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 10 (10%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	10	438	47	31	24	191	349	15	13	469	210
Future Volume (veh/h)	566	10	438	47	31	24	191	349	15	13	469	210
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	591	0	452	48	32	25	197	360	15	13	484	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1050	0	467	93	51	40	269	448	18	47	1006	867
Arrive On Green	0.29	0.00	0.29	0.05	0.05	0.05	0.54	0.54	0.54	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	989	772	410	832	33	19	1868	1610
Grp Volume(v), veh/h	591	0	452	48	0	57	572	0	0	497	0	216
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1761	1276	0	0	1887	0	1610
Q Serve(g_s), s	13.9	0.0	27.7	2.6	0.0	3.2	34.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.9	0.0	27.7	2.6	0.0	3.2	36.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.44	0.34		0.03	0.03		1.00
Lane Grp Cap(c), veh/h	1050	0	467	93	0	90	736	0	0	1053	0	867
V/C Ratio(X)	0.56	0.00	0.97	0.52	0.00	0.63	0.78	0.00	0.00	0.47	0.00	0.25
Avail Cap(c_a), veh/h	1050	0	467	290	0	282	736	0	0	1053	0	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.44	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	35.0	46.2	0.0	46.5	18.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	33.4	4.4	0.0	7.1	3.6	0.0	0.0	1.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	14.5	1.3	0.0	1.6	10.9	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	68.4	50.6	0.0	53.6	22.3	0.0	0.0	1.5	0.0	0.7
LnGrp LOS	C	A	E	D	A	D	C	A	A	A	A	A
Approach Vol, veh/h		1043			105			572			713	
Approach Delay, s/veh		47.1			52.3			22.3			1.3	
Approach LOS		D			D			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.9		33.0		57.9		9.1				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		38.8		29.7		2.0		5.2				
Green Ext Time (p_c), s		1.7		0.0		4.5		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			28.1									
HCM 6th LOS			C									

Notes

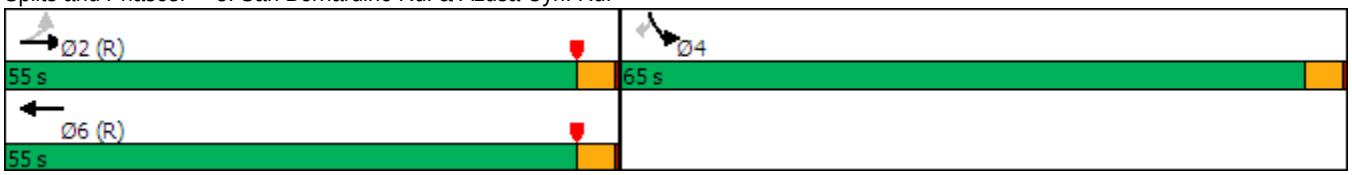
User approved volume balancing among the lanes for turning movement.

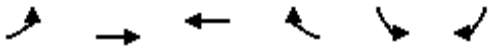
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	406	832	169
Future Volume (vph)	139	375	385	406	832	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	55.0	55.0	55.0		65.0	65.0
Total Split (%)	45.8%	45.8%	45.8%		54.2%	54.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	139	375	385	406	832	169
Future Volume (veh/h)	139	375	385	406	832	169
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	395	405	427	876	178
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	206	1534	767	684	920	819
Arrive On Green	0.43	0.43	0.43	0.43	0.51	0.51
Sat Flow, veh/h	670	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	146	395	405	427	876	178
Grp Sat Flow(s),veh/h/ln	670	1805	1805	1610	1810	1610
Q Serve(g_s), s	26.1	8.5	20.0	24.9	55.4	7.3
Cycle Q Clear(g_c), s	51.0	8.5	20.0	24.9	55.4	7.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	206	1534	767	684	920	819
V/C Ratio(X)	0.71	0.26	0.53	0.62	0.95	0.22
Avail Cap(c_a), veh/h	206	1534	767	684	920	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	22.3	25.6	27.0	28.1	16.3
Incr Delay (d2), s/veh	18.7	0.4	2.6	4.3	20.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.6	8.8	10.0	28.1	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.7	22.7	28.2	31.3	48.3	16.9
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		541	832		1054	
Approach Delay, s/veh		34.3	29.8		43.0	
Approach LOS		C	C		D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		65.0		55.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		51.0		61.0		51.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

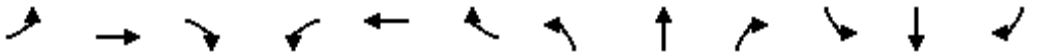
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Future Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	9.2	65.0		17.0	72.8	72.8	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.7%	54.2%		14.2%	60.7%	60.7%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	378	243	1564	39	253	15	320	35	12	51
Future Volume (veh/h)	43	2663	378	243	1564	39	253	15	320	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	2833	402	259	1664	41	280	0	340	37	13	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	2458	332	204	2203	933	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4917	664	1810	3800	1610	3619	0	1610	1810	322	1337
Grp Volume(v), veh/h	46	2157	1078	259	1664	41	280	0	340	37	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1659
Q Serve(g_s), s	3.0	60.0	60.0	13.5	39.3	1.3	8.6	0.0	18.0	2.3	0.0	4.6
Cycle Q Clear(g_c), s	3.0	60.0	60.0	13.5	39.3	1.3	8.6	0.0	18.0	2.3	0.0	4.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	59	1900	890	204	2203	933	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.14	1.21	1.27	0.76	0.04	0.52	0.00	1.41	0.25	0.00	0.48
Avail Cap(c_a), veh/h	86	1900	890	204	2203	933	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.6	30.0	30.0	53.3	18.9	10.9	47.0	0.0	51.0	51.5	0.0	52.5
Incr Delay (d2), s/veh	22.9	67.9	105.5	155.2	2.5	0.1	3.4	0.0	205.9	3.8	0.0	11.7
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	1.7	42.8	49.4	14.7	16.2	0.5	4.1	0.0	21.0	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.4	97.9	135.5	208.4	21.3	11.0	50.4	0.0	256.9	55.3	0.0	64.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	E	A	E
Approach Vol, veh/h		3281			1964			620			104	
Approach Delay, s/veh		110.0			45.8			163.7			61.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.4	74.6		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	5.7	67.8		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.6	5.0	41.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		93.6	
HCM 6th LOS		F	

Notes

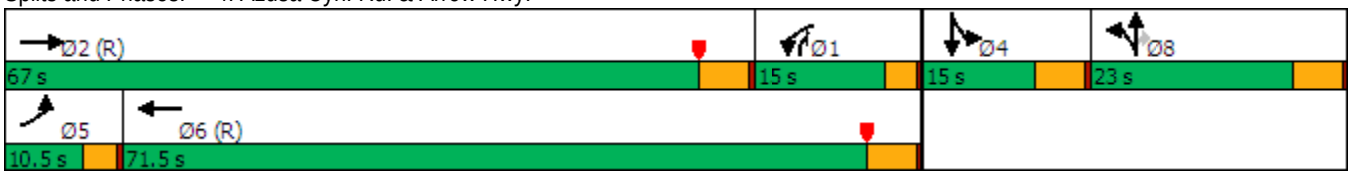
User approved volume balancing among the lanes for turning movement.

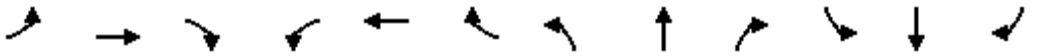
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Future Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	10.5	67.0		15.0	71.5		23.0	23.0	15.0	15.0	15.0	
Total Split (%)	8.8%	55.8%		12.5%	59.6%		19.2%	19.2%	12.5%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 6.7 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	378	243	1564	39	253	15	320	35	12	51
Future Volume (veh/h)	43	2663	378	243	1564	39	253	15	320	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	2833	402	259	1664	41	280	0	340	37	13	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	2540	343	768	5099	126	543	0	925	151	27	111
Arrive On Green	0.05	0.77	0.77	0.64	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4917	664	1810	5539	136	3619	0	1610	1810	322	1337
Grp Volume(v), veh/h	46	2157	1078	259	1141	564	280	0	340	37	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1875	1810	0	1610	1810	0	1659
Q Serve(g_s), s	3.0	62.0	62.0	8.0	0.0	0.0	8.6	0.0	0.0	2.3	0.0	4.6
Cycle Q Clear(g_c), s	3.0	62.0	62.0	8.0	0.0	0.0	8.6	0.0	0.0	2.3	0.0	4.6
Prop In Lane	1.00		0.37	1.00		0.07	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	59	1963	920	768	3498	1727	543	0	925	151	0	138
V/C Ratio(X)	0.77	1.10	1.17	0.34	0.33	0.33	0.52	0.00	0.37	0.25	0.00	0.48
Avail Cap(c_a), veh/h	106	1963	920	768	3498	1727	543	0	925	151	0	138
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.6	13.5	13.5	14.0	0.0	0.0	47.0	0.0	13.8	51.5	0.0	52.5
Incr Delay (d2), s/veh	18.9	52.9	89.1	0.3	0.2	0.5	3.4	0.0	1.1	3.8	0.0	11.7
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	1.6	23.9	31.6	2.9	0.1	0.2	4.1	0.0	5.1	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.5	66.4	102.6	14.3	0.2	0.5	50.4	0.0	14.9	55.3	0.0	64.2
LnGrp LOS	E	F	F	B	A	A	D	A	B	E	A	E
Approach Vol, veh/h		3281			1964			620			104	
Approach Delay, s/veh		78.4			2.2			30.9			61.0	
Approach LOS		E			A			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	56.0	67.0		15.0	7.4	115.5		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	* 62		10.0	7.0	66.5		18.0				
Max Q Clear Time (g_c+I1), s	10.0	64.0		6.6	5.0	2.0		10.6				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	17.4		1.5				

Intersection Summary		
HCM 6th Ctrl Delay	48.1	
HCM 6th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

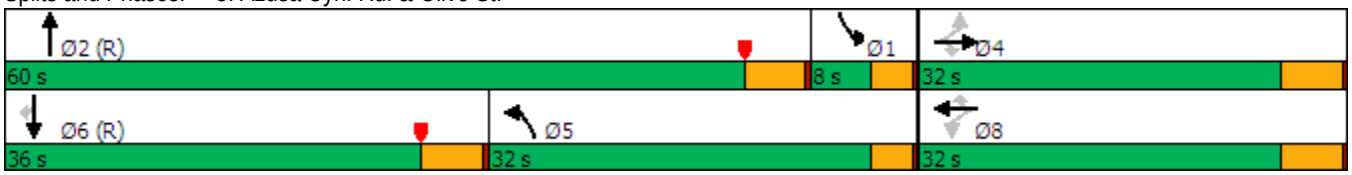
User approved volume balancing among the lanes for turning movement.

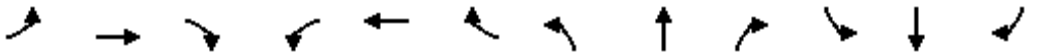
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	260	352	1	1	591	85
Future Volume (vph)	116	1	380	3	1	1	260	352	1	1	591	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	32.0	60.0		8.0	36.0	36.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	60.0%		8.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1	380	3	1	1	260	352	1	1	591	85
Future Volume (veh/h)	116	1	380	3	1	1	260	352	1	1	591	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	1	404	3	1	1	277	374	1	1	629	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	455	507	429	337	507	429	522	2031	5	87	1119	499
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.38	0.73	0.73	0.05	0.31	0.31
Sat Flow, veh/h	1437	1900	1610	996	1900	1610	1810	3693	10	1810	3610	1610
Grp Volume(v), veh/h	123	1	404	3	1	1	277	183	192	1	629	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	996	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.9	0.0	24.6	0.2	0.0	0.0	11.9	3.1	3.1	0.1	14.6	4.1
Cycle Q Clear(g_c), s	6.9	0.0	24.6	0.3	0.0	0.0	11.9	3.1	3.1	0.1	14.6	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	455	507	429	337	507	429	522	993	1044	87	1119	499
V/C Ratio(X)	0.27	0.00	0.94	0.01	0.00	0.00	0.53	0.18	0.18	0.01	0.56	0.18
Avail Cap(c_a), veh/h	460	513	435	340	513	435	522	993	1044	87	1119	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72	0.09	0.09	0.09
Uniform Delay (d), s/veh	29.4	26.9	35.9	27.0	26.9	26.9	25.6	6.5	6.5	45.3	28.8	25.2
Incr Delay (d2), s/veh	0.3	0.0	28.6	0.0	0.0	0.0	0.7	0.3	0.3	0.0	0.2	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	2.4	0.0	12.8	0.1	0.0	0.0	4.8	1.2	1.3	0.0	6.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	26.9	64.5	27.0	26.9	26.9	26.3	6.8	6.7	45.3	29.0	25.3
LnGrp LOS	C	C	E	C	C	C	C	A	A	D	C	C
Approach Vol, veh/h		528			5			652			720	
Approach Delay, s/veh		56.3			27.0			15.1			28.6	
Approach LOS		E			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	60.0		31.7	32.3	36.0		31.7				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	55.0		27.0	28.5	31.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	5.1		26.6	13.9	16.6		2.3				
Green Ext Time (p_c), s	0.0	2.4		0.1	0.7	4.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.6	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	15	939	0	6	692
Future Volume (vph)	0	15	939	0	6	692
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

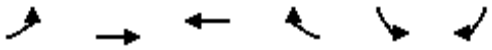
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	939	0	6	692
Future Vol, veh/h	0	15	939	0	6	692
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	16	988	0	6	728

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	494	0	0	988	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	526	-	-	708	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	526	-	-	708	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	526	708	-
HCM Lane V/C Ratio	-	-	0.03	0.009	-
HCM Control Delay (s)	-	-	12.1	10.1	0.1
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	33	89	0	0	14
Future Volume (vph)	5	33	89	0	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

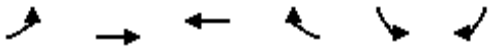
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	33	89	0	0	14
Future Vol, veh/h	5	33	89	0	0	14
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	35	94	0	0	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	94	0	-	0	139	94
Stage 1	-	-	-	-	94	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1513	-	-	-	859	968
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1513	-	-	-	856	968
Mov Cap-2 Maneuver	-	-	-	-	856	-
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	983	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1513	-	-	-	968
HCM Lane V/C Ratio	0.003	-	-	-	0.015
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	31	84	0	0	5
Future Volume (vph)	2	31	84	0	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	31	84	0	0	5
Future Vol, veh/h	2	31	84	0	0	5
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	33	88	0	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	125	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	875	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	874	976
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.7
HCM LOS			A

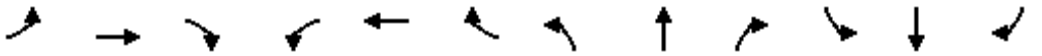
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	976
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	263	419	362	186	161	258
Future Volume (vph)	263	419	362	186	161	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3426		1805	3610
Flt Permitted	0.97	1.00	1.00		0.39	1.00
Satd. Flow (perm)	3351	1470	3426		732	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	292	466	402	207	179	287
RTOR Reduction (vph)	173	204	48	0	0	0
Lane Group Flow (vph)	343	38	561	0	179	287
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	15.9	15.9	53.6		77.1	75.6
Effective Green, g (s)	15.9	15.9	53.6		77.1	75.6
Actuated g/C Ratio	0.16	0.16	0.54		0.77	0.76
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	532	233	1836		762	2729
v/s Ratio Prot	c0.10		c0.16		c0.04	0.08
v/s Ratio Perm		0.03			0.14	
v/c Ratio	0.64	0.17	0.31		0.23	0.11
Uniform Delay, d1	39.4	36.3	12.9		5.0	3.2
Progression Factor	1.00	1.00	1.00		2.25	1.99
Incremental Delay, d2	2.7	0.3	0.4		0.2	0.1
Delay (s)	42.1	36.7	13.3		11.5	6.5
Level of Service	D	D	B		B	A
Approach Delay (s)	40.3		13.3			8.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

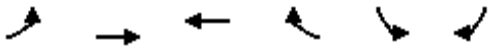
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	18	206	9	9	24	249	294	16	20	167	303
Future Volume (vph)	215	18	206	9	9	24	249	294	16	20	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.89			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1694			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.76			0.93	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1694			1450			1764	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	229	19	219	10	10	26	265	313	17	21	178	322
RTOR Reduction (vph)	0	0	192	0	24	0	0	1	0	0	0	97
Lane Group Flow (vph)	124	124	27	10	12	0	0	594	0	0	199	225
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.4	12.4	12.4	5.8	5.8			69.8			69.8	69.8
Effective Green, g (s)	12.4	12.4	12.4	5.8	5.8			69.8			69.8	69.8
Actuated g/C Ratio	0.12	0.12	0.12	0.06	0.06			0.70			0.70	0.70
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	212	223	235	104	98			1012			1231	1326
v/s Ratio Prot	c0.07	0.07		0.01	c0.01							
v/s Ratio Perm			0.01					c0.41			0.11	0.12
v/c Ratio	0.58	0.56	0.12	0.10	0.12			0.59			0.16	0.17
Uniform Delay, d1	41.4	41.2	38.9	44.6	44.7			7.7			5.1	5.2
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.72			0.87	2.27
Incremental Delay, d2	4.1	3.0	0.2	0.4	0.5			2.3			0.3	0.3
Delay (s)	45.4	44.2	39.1	45.0	45.2			7.8			4.8	12.0
Level of Service	D	D	D	D	D			A			A	B
Approach Delay (s)		42.2			45.2			7.8			9.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

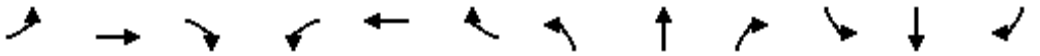
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	160	377	477	288	84
Future Volume (vph)	91	160	377	477	288	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3308		1805	1615
Flt Permitted	0.23	1.00	1.00		0.95	1.00
Satd. Flow (perm)	436	3610	3308		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	102	180	424	536	324	94
RTOR Reduction (vph)	0	0	191	0	0	26
Lane Group Flow (vph)	102	180	769	0	324	68
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	250	2075	1902		646	578
v/s Ratio Prot		0.05	0.23		c0.18	
v/s Ratio Perm	c0.23					0.04
v/c Ratio	0.41	0.09	0.40		0.50	0.12
Uniform Delay, d1	14.2	11.4	14.1		30.1	25.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.9	0.1	0.6		2.8	0.4
Delay (s)	19.0	11.5	14.8		32.9	26.2
Level of Service	B	B	B		C	C
Approach Delay (s)		14.2	14.8		31.4	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

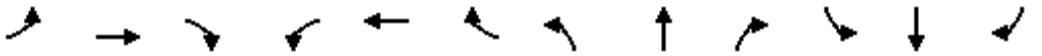
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Future Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	335	215	2647	51	527	21	171	24	14	48
RTOR Reduction (vph)	0	35	0	0	0	21	0	0	145	0	44	0
Lane Group Flow (vph)	31	1633	0	215	2647	30	274	274	26	24	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.0		18.5	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.0		18.5	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2612		292	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.70		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.82	0.63		0.74	1.18	0.03	0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.7		48.4	24.5	10.1	50.7	50.7	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.3	84.2	0.0	44.3	44.3	0.6	2.0	1.5	
Delay (s)	134.7	25.8		57.7	108.6	10.2	95.0	95.0	44.6	53.1	52.4	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.8			103.2			83.0			52.6	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	76.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Future Volume (vph)	28	1213	305	196	2409	46	480	19	156	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	335	215	2647	51	527	21	171	24	14	48
RTOR Reduction (vph)	0	35	0	0	2	0	0	0	145	0	44	0
Lane Group Flow (vph)	31	1633	0	215	2696	0	274	274	26	24	18	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.1		18.4	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.1		18.4	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2617		291	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.47		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.82	0.62		0.74	0.80		0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.6		48.5	18.9		50.7	50.7	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.4	2.1		44.3	44.3	0.6	2.0	1.5	
Delay (s)	134.7	25.7		57.9	21.0		95.0	95.0	44.6	53.1	52.4	
Level of Service	F	C		E	C		F	F	D	D	D	
Approach Delay (s)		27.7			23.7			83.0			52.6	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	137	1	1	1	135	614	13	3	280	39
Future Volume (vph)	86	2	137	1	1	1	135	614	13	3	280	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	149	1	1	1	147	667	14	3	304	42
RTOR Reduction (vph)	0	0	130	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	19	1	1	0	147	680	0	3	304	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.72		0.02	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	243	2587		34	2176	973
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.09	0.14	0.03
Uniform Delay, d1	40.8	38.1	38.6	38.1	38.1	38.1	40.7	4.9		48.2	8.6	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	1.11		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.8	38.1	38.1	38.1	35.1	5.7		49.3	8.7	8.1
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.4			38.1			10.9			9.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

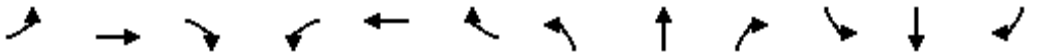
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	390	580	492	488
Future Volume (vph)	196	223	390	580	492	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3286		1805	3610
Flt Permitted	0.97	1.00	1.00		0.15	1.00
Satd. Flow (perm)	3394	1470	3286		277	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	235	411	611	518	514
RTOR Reduction (vph)	62	121	244	0	0	0
Lane Group Flow (vph)	240	18	778	0	518	514
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.6	12.6	38.9		80.4	78.9
Effective Green, g (s)	12.6	12.6	38.9		80.4	78.9
Actuated g/C Ratio	0.13	0.13	0.39		0.80	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	427	185	1278		780	2848
v/s Ratio Prot	c0.07		0.24		c0.24	0.14
v/s Ratio Perm		0.01			c0.29	
v/c Ratio	0.56	0.09	0.61		0.66	0.18
Uniform Delay, d1	41.1	38.7	24.5		16.2	2.6
Progression Factor	1.00	1.00	1.00		0.85	1.55
Incremental Delay, d2	1.7	0.2	2.2		2.0	0.1
Delay (s)	42.8	38.9	26.6		15.7	4.1
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		26.6			9.9
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

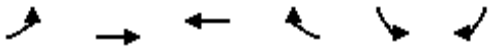
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	10	438	47	31	24	191	349	15	13	469	210
Future Volume (vph)	566	10	438	47	31	24	191	349	15	13	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.93			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1775			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.54			0.98	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1775			1034			1869	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	584	10	452	48	32	25	197	360	15	13	484	216
RTOR Reduction (vph)	0	0	293	0	23	0	0	1	0	0	0	95
Lane Group Flow (vph)	298	296	159	48	34	0	0	571	0	0	497	121
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	24.0	24.0	24.0	8.0	8.0			56.0			56.0	56.0
Effective Green, g (s)	24.0	24.0	24.0	8.0	8.0			56.0			56.0	56.0
Actuated g/C Ratio	0.24	0.24	0.24	0.08	0.08			0.56			0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	411	433	456	144	142			579			1046	1064
v/s Ratio Prot	c0.17	0.16		c0.03	0.02							
v/s Ratio Perm			0.08					c0.55			0.27	0.06
v/c Ratio	0.73	0.68	0.35	0.33	0.24			0.99			0.48	0.11
Uniform Delay, d1	35.0	34.5	31.5	43.5	43.1			21.6			13.2	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.47	3.37
Incremental Delay, d2	6.2	4.4	0.5	1.4	0.9			34.2			1.5	0.2
Delay (s)	41.2	39.0	32.0	44.8	44.0			55.8			20.9	35.0
Level of Service	D	D	C	D	D			E			C	D
Approach Delay (s)		36.6			44.4			55.8			25.2	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

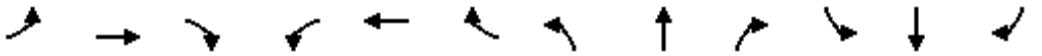
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	406	832	169
Future Volume (vph)	139	375	385	406	832	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.22	1.00	1.00		0.95	1.00
Satd. Flow (perm)	414	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	395	405	427	876	178
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	146	395	674	0	876	160
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	51.0	51.0	51.0		61.0	61.0
Effective Green, g (s)	51.0	51.0	51.0		61.0	61.0
Actuated g/C Ratio	0.42	0.42	0.42		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	175	1534	1416		917	820
v/s Ratio Prot		0.11	0.20		c0.49	
v/s Ratio Perm	c0.35					0.10
v/c Ratio	0.83	0.26	0.48		0.96	0.19
Uniform Delay, d1	30.7	22.3	24.9		28.2	16.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	35.2	0.4	1.1		20.7	0.5
Delay (s)	65.9	22.7	26.0		48.9	16.6
Level of Service	E	C	C		D	B
Approach Delay (s)		34.4	26.0		43.4	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

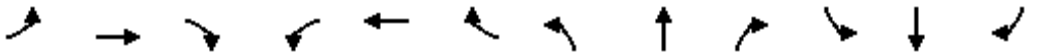
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Future Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	46	2833	402	259	1664	41	269	16	340	37	13	54
RTOR Reduction (vph)	0	18	0	0	0	17	0	0	182	0	50	0
Lane Group Flow (vph)	46	3217	0	259	1664	24	143	142	158	37	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.6	60.0		13.5	68.9	68.9	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.6	60.0		13.5	68.9	68.9	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.04	0.50		0.11	0.57	0.57	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	72	2850		213	2181	1090	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.56		c0.14	0.44		0.08	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.64	1.13		1.22	0.76	0.02	0.50	0.50	0.55	0.23	0.11	
Uniform Delay, d1	56.9	30.0		53.2	19.4	11.0	46.9	46.9	47.3	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	17.1	63.0		132.2	2.6	0.0	6.2	6.1	7.6	3.4	1.4	
Delay (s)	74.0	93.0		185.4	22.0	11.1	53.1	53.0	54.9	54.9	52.3	
Level of Service	E	F		F	C	B	D	D	D	D	D	
Approach Delay (s)		92.8			43.3			54.0			53.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	71.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Future Volume (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	2663	378	243	1564	39	253	15	320	35	12	51
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	71	0	47	0
Lane Group Flow (vph)	43	3023	0	243	1601	0	134	134	249	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.6	61.3		12.2	67.9		18.0	18.0	30.2	10.0	10.0	
Effective Green, g (s)	5.6	61.3		12.2	67.9		18.0	18.0	30.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.51		0.10	0.57		0.15	0.15	0.25	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	88	2911		193	3225		285	285	478	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.28		0.07	0.07	c0.05	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.49	1.04		1.26	0.50		0.47	0.47	0.52	0.22	0.10	
Uniform Delay, d1	55.8	29.4		53.9	15.7		46.6	46.6	38.7	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	27.7		151.5	0.5		5.5	5.5	1.0	3.2	1.3	
Delay (s)	60.0	57.1		205.4	16.3		52.1	52.1	39.7	54.6	52.2	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		57.1			41.2			45.4			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	99.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	260	352	1	1	591	85
Future Volume (vph)	116	1	380	3	1	1	260	352	1	1	591	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3609		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3609		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	123	1	404	3	1	1	277	374	1	1	629	90
RTOR Reduction (vph)	0	0	343	0	0	1	0	0	0	0	0	49
Lane Group Flow (vph)	123	1	61	3	1	0	277	375	0	1	629	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.5	70.6		0.9	46.0	46.0
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.5	70.6		0.9	46.0	46.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.26	0.71		0.01	0.46	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	215	285	242	215	285	242	460	2547		16	1660	742
v/s Ratio Prot		0.00			0.00		c0.15	0.10		0.00	c0.17	
v/s Ratio Perm	c0.09		0.04	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.25	0.01	0.00	0.00	0.60	0.15		0.06	0.38	0.06
Uniform Delay, d1	39.5	36.1	37.5	36.2	36.1	36.1	32.8	4.8		49.1	17.7	15.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.29	0.99		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	0.5	0.0	0.0	0.0	1.9	0.1		1.6	0.7	0.1
Delay (s)	43.2	36.1	38.1	36.2	36.1	36.1	44.2	4.9		50.8	18.3	15.1
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.3			36.2			21.6			18.0	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Appendices

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Appendix 6B Site Access Sensitivity Analysis

November 10, 2022

Ms. JoAnn Hadfield
PLACEWORKS
3 MacArthur Place, Suite 1100
Santa Ana, CA 92707

AZUSA CANYON ROAD WAREHOUSE ACCESS SENSITIVITY EVALUATION

Ms. JoAnn Hadfield,

Urban Crossroads, Inc. is pleased to provide the following Access Sensitivity Evaluation for the Azusa Canyon Road Warehouse development which is located at 4416 Azusa Canyon Road in the City of Irwindale. The purpose of this evaluation is to assess revised project access, specifically limiting Driveway 1 access to Azusa Canyon Road to right turn in/out only access.

PROPOSED PROJECT

The proposed Project land use is unchanged from the land use evaluated in the primary traffic study report previously prepared and consists of a 129,830 square foot building that includes 112,830 square feet of warehouse use and 17,000 square feet of manufacturing use. The project trip generation is consistent with the trip generation presented in the primary project traffic study. The Project is anticipated to generate 262 trip-ends per day with 29 AM peak hour trips and 35 PM peak hour trips. As described in the primary project traffic study report, when truck trips are converted to passenger car equivalents, the project generates 362 daily PCE trips with 45 AM PCE peak hour trips and 46 PM PCE peak hour trips.

SITE ACCESS

The key change being explored in this access sensitivity evaluation is a change to the project access. Driveway 1 provides access to / from Azusa Canyon Road and is assumed to provide right turn in / out only access for purposes of this sensitivity evaluation. Driveway 2 and Driveway 3 provide full access to the project site from the Private Road that is the extension of Los Angeles Street east of Azusa Canyon Road.

Separate passenger car and large truck trip distributions have been developed for purposes of this sensitivity evaluation. The passenger car trip distribution is presented on Exhibit 1. The inbound vehicles that were previously assumed to be traveling southbound on Azusa Canyon Road and making an inbound left turn at Driveway 1 are now assumed to continue south to Los Angeles Street / Private Road and turn left at this intersection. They then use either Driveway 2 or Driveway 3 to access the project site.

The revised large truck trip distribution assumptions are presented on Exhibit 2. The large truck trip distribution assumptions have been carefully considered in light of the revised Driveway 1 access,

EXHIBIT 1: REVISED PROJECT PASSENGER CAR TRIP DISTRIBUTION

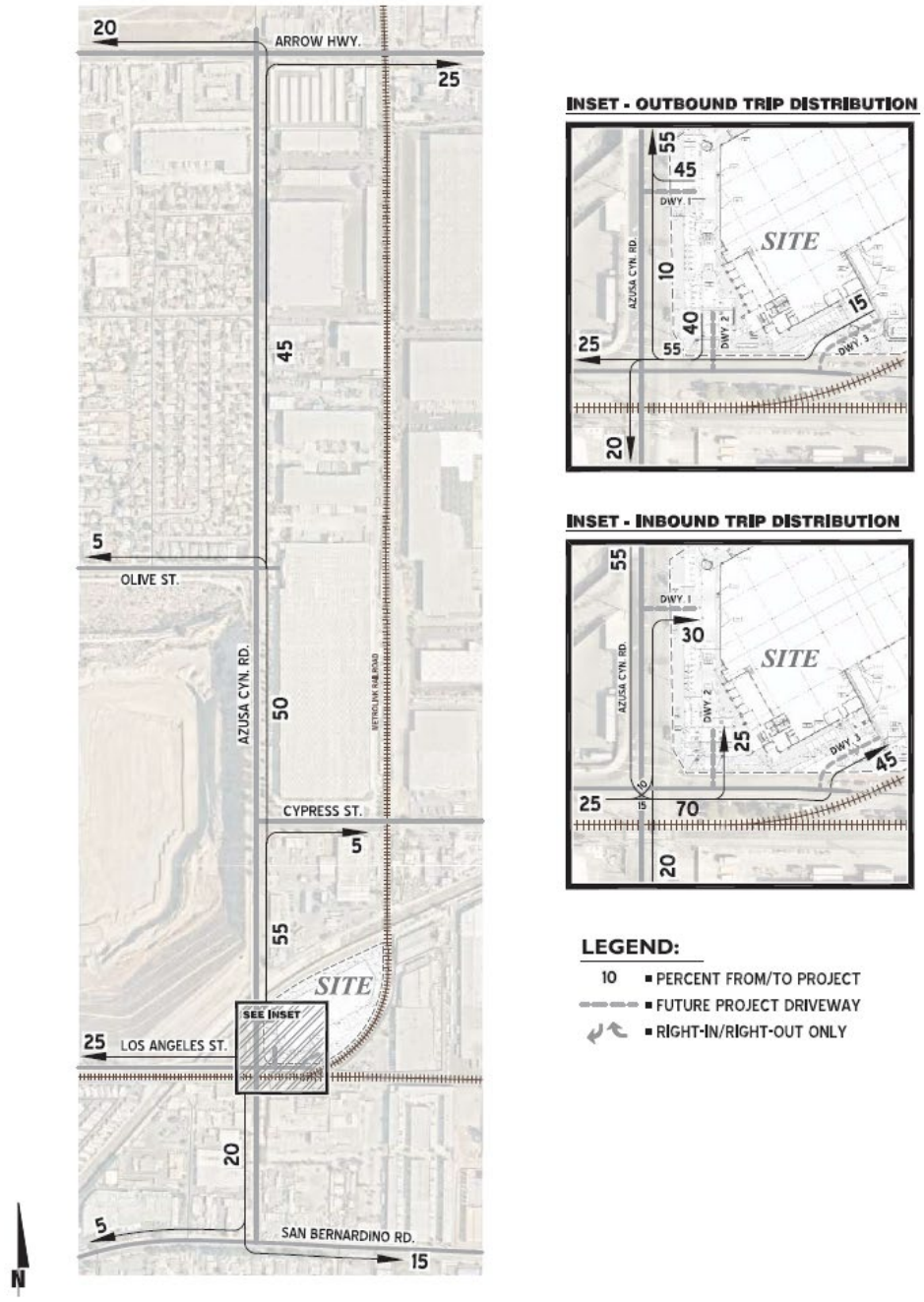
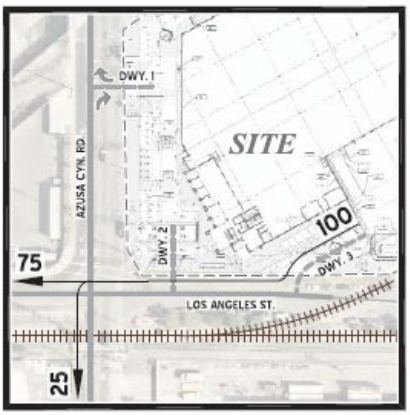


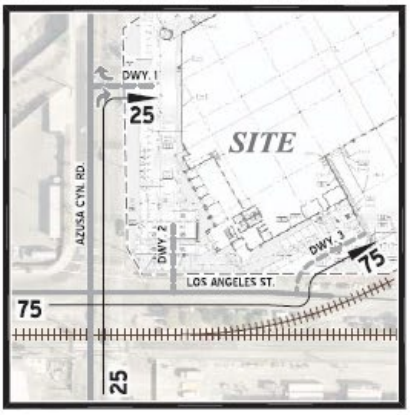
EXHIBIT 2: REVISED PROJECT LARGE TRUCK TRIP DISTRIBUTION



INSET - OUTBOUND TRIP DISTRIBUTION



INSET - INBOUND TRIP DISTRIBUTION



LEGEND:

10 ▪ PERCENT FROM/TO PROJECT

▪ FUTURE PROJECT DRIVEWAY

▪ RIGHT-IN/RIGHT-OUT ONLY

further consideration of the geometric constraints and existing parking present on the Private Road, and likely regional access routes that will be used by trucks traveling to and from the project site. The most direct route for trucks is to use the I-605 Freeway / Los Angeles Street interchange and travel directly east-west to / from the project site, using Driveway 3 to access the loading dock area. It is estimated that 75% of trucks will use this route. Exhibit 3 and Exhibit 4 present the inbound and outbound truck movements at Driveway 3. These exhibits show that trucks can make the necessary turning maneuvers at Driveway 3.

EXHIBIT 3: DRIVEWAY 3 INBOUND TRUCK TURNS

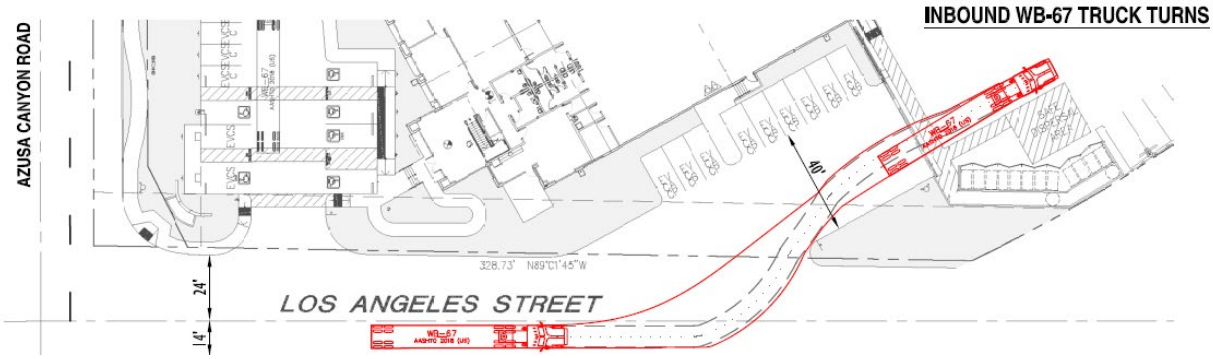
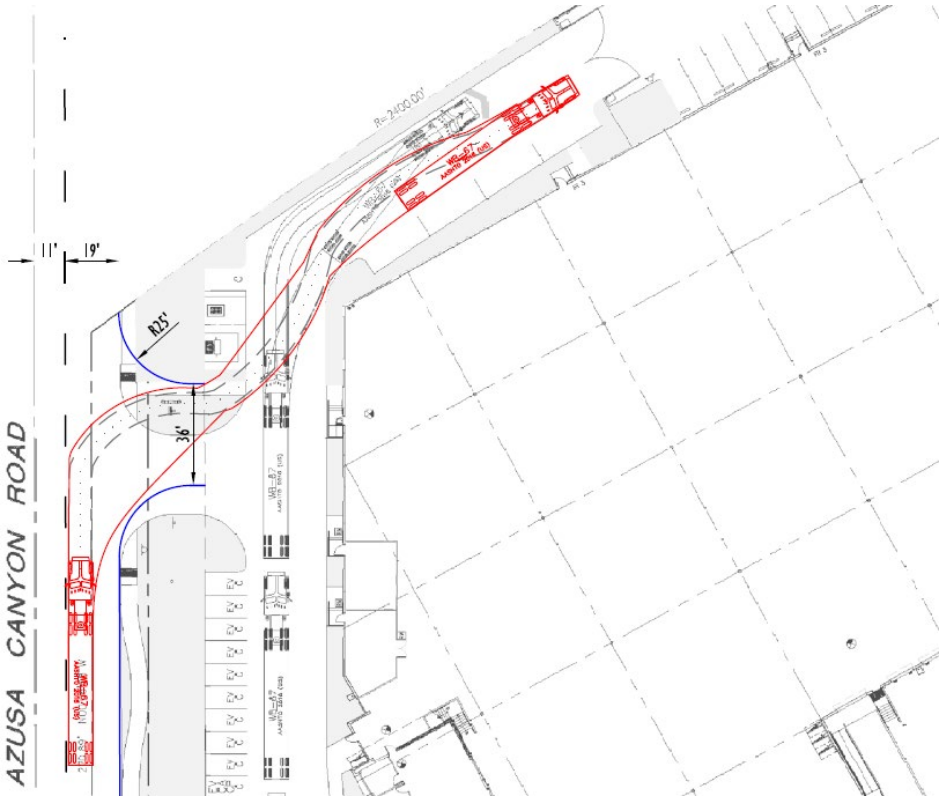


EXHIBIT 4: DRIVEWAY 3 OUTBOUND TRUCK TURNS



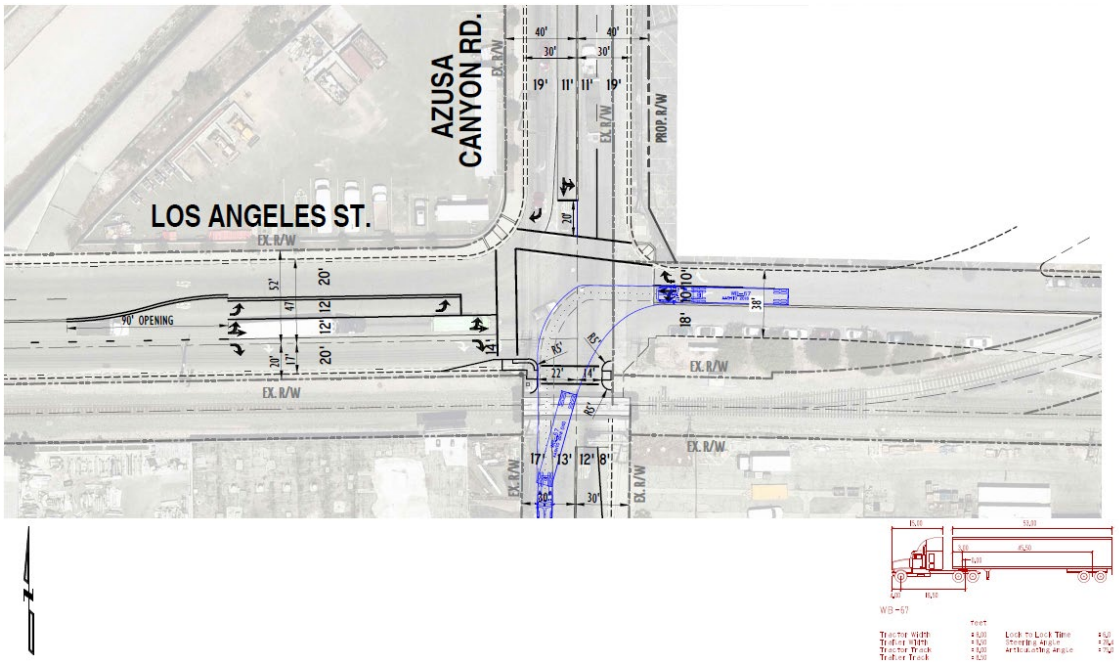
The I-10 Freeway provides the next most direct route to access the proposed project site. As shown on Exhibit 2, inbound trucks would be expected to travel northbound to Driveway 1, enter the site at this location, and travel along the perimeter of the building to access the loading dock area. Exhibit 5 depicts the northbound truck turn at Driveway 1 and presents a recommended widening and relocation of Driveway 1 to facilitate this movement.

EXHIBIT 5: DRIVEWAY 1 INBOUND TRUCK TURNS



Trucks existing the site and returning towards the I-10 Freeway would do so by using Driveway 3 (the same movement previously shown on Exhibit 4), then making a westbound left turn from the Private Road onto Azusa Canyon Road southbound. Exhibit 6 presents this turning movement and demonstrates that this is a feasible travel path.

EXHIBIT 6: PRIVATE ROAD AT AZUSA CANYON ROAD WESTBOUND TRUCK TURNS



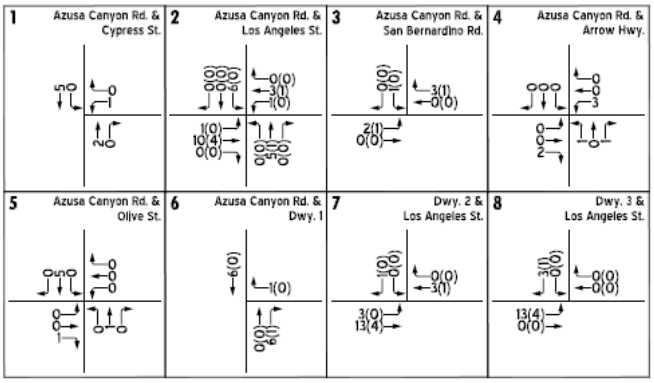
Given the existing constraints along the Private Road (parking and lane configurations), it is not feasible for trucks to make a southbound left turn from Azusa Canyon Road onto the Private Road. Similarly, it is not feasible for northbound trucks to make a right turn from Azusa Canyon Road onto the Private Road. Should a truck approach the site from the north, they would be forced to find an alternate route (such as to make a series of right turns onto San Bernardino Road / Ramona Boulevard, Alderson Avenue, and Los Angeles Street) to access the project site.

REVISED PROJECT ONLY VOLUMES

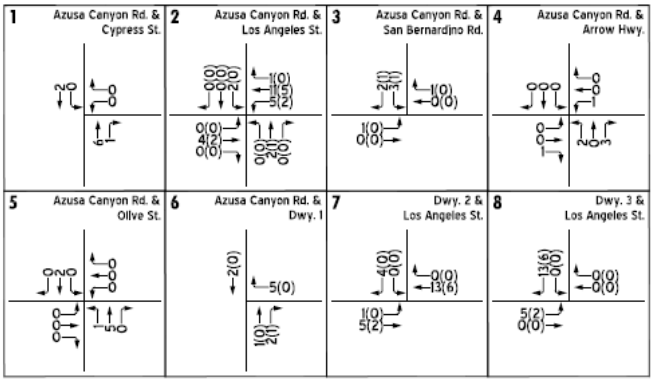
Revised project only volumes have been developed based on the revised project access configuration. Exhibit 7 presents the revised proposed project added volumes, and Exhibit 8 summarizes the revised site existing baseline traffic volumes.

EXHIBIT 7: REVISED PROPOSED PROJECT ADDED VOLUMES

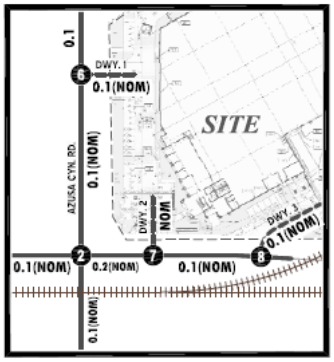
AM PEAK HOUR



PM PEAK HOUR



INSET





LEGEND:

#	= INTERSECTION ID
------	= FUTURE PROJECT DRIVEWAY
10(10)	= PCE PEAK HOUR VOLUME (LARGE TRUCK ACTUAL PEAK HOUR VOLUME)
10.0 (10.0)	= PCE VEHICLES PER DAY (LARGE TRUCK ACTUAL VEHICLE PER DAY) IN 1000'S
NOM	= NOMINAL, LESS THAN 50 VEHICLES PER DAY

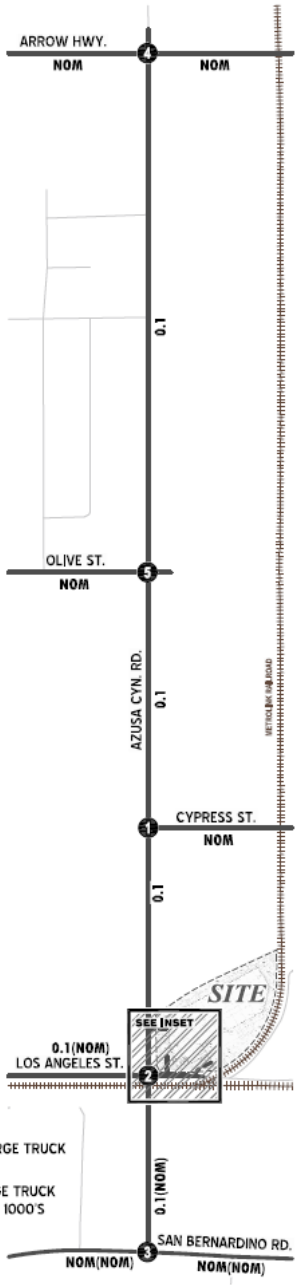
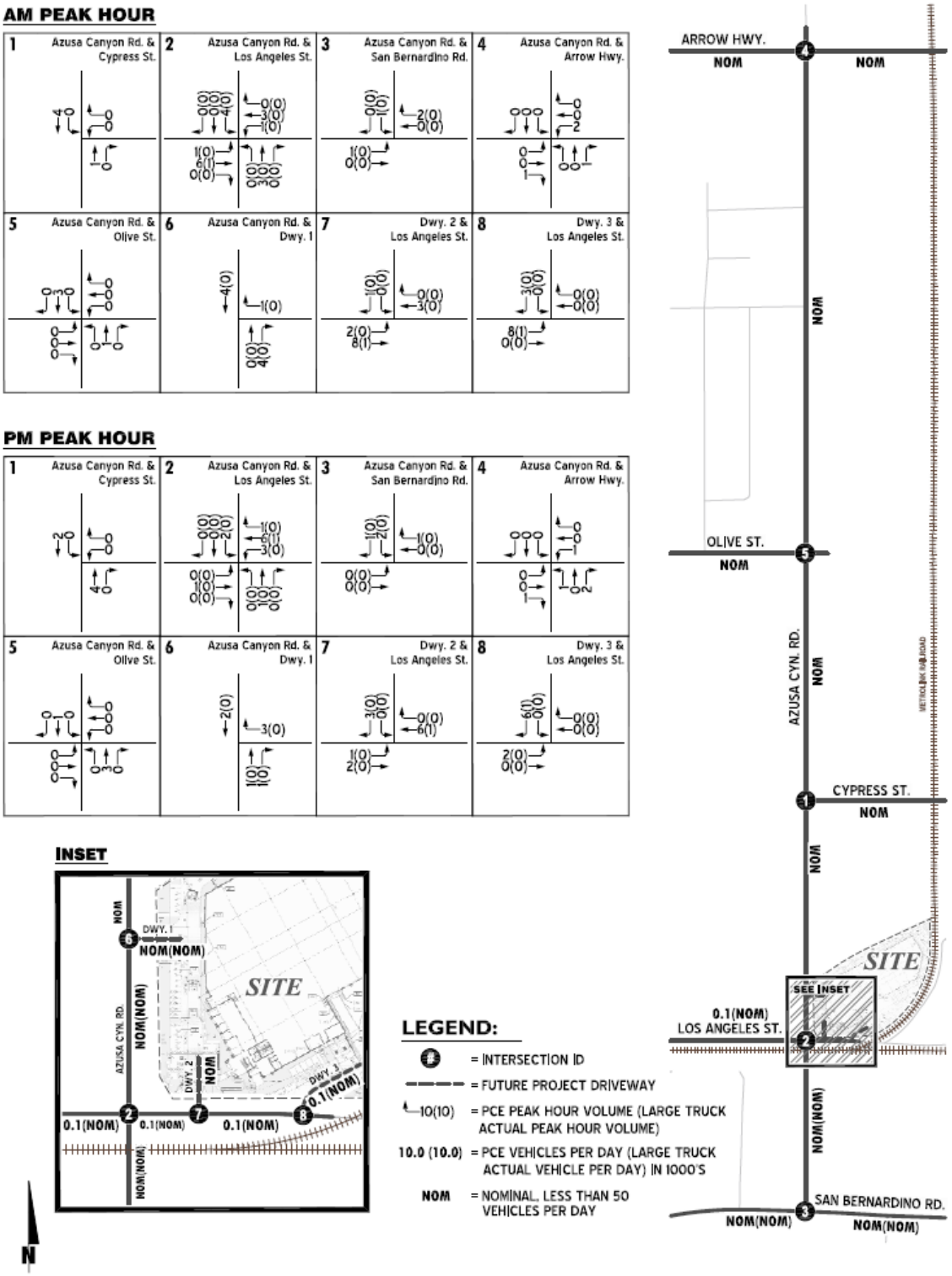


EXHIBIT 8: REVISED SITE EXISTING BASELINE TRAFFIC VOLUMES



INTERIM YEAR CUMULATIVE OPERATIONS ANALYSIS

Table 1 summarizes the Interim Year Without and With Project peak hour operations analysis. Appendix 6.1 and Appendix 6.2 contain the operations analysis worksheets supporting Table 1. As shown on Table 1, the same improvements recommended previously will continue to provide acceptable traffic operations. These include providing an additional eastbound left turn lane and converting the westbound approach from an exclusive right turn lane and shared through-left turn lane to an exclusive left turn lane and shared through / right turn lane at the intersection of Azusa Canyon Road at Los Angeles Street / Private Road.

TABLE 1: REVISED INTERSECTION ANALYSIS FOR INTERIM YEAR CUMULATIVE PLUS SITE BASELINE

LAND USE (2022) CONDITIONS

														WITHOUT PROJECT								WITH PROJECT							
														HCM				ICU				HCM				ICU			
			Intersection Approach Lanes[1]											Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]		Delay[2] (Secs)		Level of Service[2]		ICU[4] (v/c)		Level of Service[4]	
		Traffic	Northbound			Southbound			Eastbound			Westbound																	
#	Intersection	Control[3]	L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Azusa Canyon Rd. / Cypress St.	TS	0	2	0	1	2	0	0	0	0	1	1!	1	25.7	35.7	C	D	0.33	0.61	A	B	26.2	35.8	C	D	0.33	0.61	A	B
2	Azusa Canyon Rd. / Los Angeles St.	AWS	0	1!	0	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	**44.0**	**111.2**	**E**	**F**	-	-	-	-	**47.0**	**117.0**	**E**	**F**	-	-	-	-
	- With Improvements	TS	0	1!	0	0.5	0.5	1	1.5	0.5	1	1	1	0	19.6	24.2	B	C	0.53	0.76	A	C	21.7	25.5	C	C	0.54	0.76	A	C
3	Azusa Canyon Rd. / San Bernardino Rd.	TS	0	0	0	1	0	d	1	2	0	0	2	0	20.7	32.2	C	C	0.41	0.82	A	D	20.8	32.5	C	C	0.42	0.82	A	D
4	Azusa Canyon Rd. / Arrow Hwy.	TS	1.5	0.5	1	1	1	0	1	3	0	1	2	d	**61.3**	**74.6**	**E**	**E**	**0.98**	0.89	**E**	D	**61.5**	**77.9**	**E**	**E**	**0.98**	0.89	**E**	D
	- With Improvements	TS	1.5	0.5	1>	1	1	0	1	3	0	1	3	0	32.4	33.5	C	C	0.74	0.89	C	D	32.5	33.5	C	C	0.74	0.89	C	D
5	Azusa Canyon Rd. / Olive St.	TS	1	2	0	1	2	d	1	1	d	1	1	d	15.1	28.2	B	C	0.35	0.46	A	A	15.5	28.6	B	C	0.34	0.46	A	A
6	Azusa Canyon Rd. / Dwy. 1	CSS	0	2	0	0	2	0	0	0	0	0	0	1	10.0	11.5	A	B	-	-	-	-	10.0	11.6	A	B	-	-	-	-
7	Dwy. 2 / Los Angeles St.	CSS	0	0	0	0	1!	0	0.5	0.5	0	0	1	0	8.5	8.7	A	A	-	-	-	-	8.5	8.8	A	A	-	-	-	-
8	Dwy. 3 / Los Angeles St.	CSS	0	0	0	0	1!	0	0.5	0.5	0	0	1	0	8.4	8.7	A	A	-	-	-	-	8.5	8.7	A	A	-	-	-	-

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; 1 = Improvement

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
" - " value is shown for unsignalized ICU values. Delay and level of service is calculated using Synchro 11 analysis software.
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop

[4] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

2040 CONDITIONS OPERATIONS ANALYSIS

Table 2 summarizes the 2040 Without and With Project peak hour operations analysis. Appendix 7.1 and Appendix 7.2 contain the operations analysis worksheets supporting Table 1. The results are again consistent with the previously published primary traffic study report analysis, and the same improvements are again required to provide acceptable traffic operations.

TABLE 2: INTERSECTION ANALYSIS FOR 2040 PLUS SITE BASELINE LANE USE CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												WITHOUT PROJECT								WITH PROJECT							
			Northbound			Southbound			Eastbound			Westbound			HCM Delay[2] (Secs)		HCM Level of Service[2]		ICU ICU[4] (v/c)		ICU Level of Service[4]		HCM Delay[2] (Secs)		HCM Level of Service[2]		ICU ICU[4] (v/c)		ICU Level of Service[4]	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Azusa Canyon Rd. / Cypress St.	TS	0	2	0	1	2	0	0	0	0	1	1!	1	26.3	44.6	C	D	0.35	0.67	A	B	26.5	45.4	C	D	0.35	0.67	A	B
2	Azusa Canyon Rd. / Los Angeles St.	AWS	0	1!	0	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	**52.7**	**136.7**	**F**	**F**	-	-	-	-	**56.0**	**142.9**	**F**	**F**	-	-	-	-
	- With Improvements	TS	0	1!	0	0.5	0.5	1	1.5	0.5	1	1	1	0	23.2	27.9	C	C	0.55	0.85	A	D	23.4	28.2	C	C	0.56	0.86	A	D
3	Azusa Canyon Rd. / San Bernardino Rd.	TS	0	0	0	1	0	d	1	2	0	0	2	0	21.2	36.3	C	D	0.44	0.90	A	D	21.2	36.5	C	D	0.45	0.90	A	D
4	Azusa Canyon Rd. / Arrow Hwy.	TS	1.5	0.5	1	1	1	0	1	3	0	1	2	d	**76.8**	**92.2**	**E**	**F**	**1.03**	**0.94**	**F**	**E**	**76.9**	**92.8**	**E**	**F**	**1.03**	**0.95**	**F**	**E**
	- With Improvements	TS	1.5	0.5	1>	1	1	0	1	3	0	1	3	0	34.3	34.5	C	C	0.77	0.89	C	D	34.5	34.6	C	C	0.77	0.89	C	D
5	Azusa Canyon Rd. / Olive St.	TS	1	2	0	1	2	d	1	1	d	1	1	d	15.5	29.0	B	C	0.35	0.48	A	A	15.5	31.7	B	C	0.35	0.48	A	A
6	Azusa Canyon Rd. / Dwy. 1	CSS	0	2	0	0	2	0	0	0	0	0	0	1	10.0	11.9	A	B	-	-	-	-	10.0	12.0	A	B	-	-	-	-
7	Dwy. 2 / Los Angeles St.	CSS	0	0	0	0	1!	0	0.5	0.5	0	0	1	0	8.5	8.7	A	A	-	-	-	-	8.5	8.8	A	A	-	-	-	-
8	Dwy. 3 / Los Angeles St.	CSS	0	0	0	0	1!	0	0.5	0.5	0	0	1	0	8.5	8.7	A	A	-	-	-	-	8.5	8.7	A	A	-	-	-	-

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; 1 = Improvement

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. " - " value is shown for unsignalized ICU values. Delay and level of service is calculated using Synchro 11 analysis software. **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop

[4] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

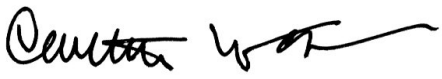
CONCLUSION

Based on the project access sensitivity evaluation, the project access at Driveway 1 can be restricted to right turn in / out only access without changing the previous recommendations and conclusions.

If you have any questions or comments, I can be reached at (949) 275-0940.

Respectfully submitted,

URBAN CROSSROADS, INC.



Carleton Waters, PE
Senior Transportation Engineer

APPENDIX 6.1:

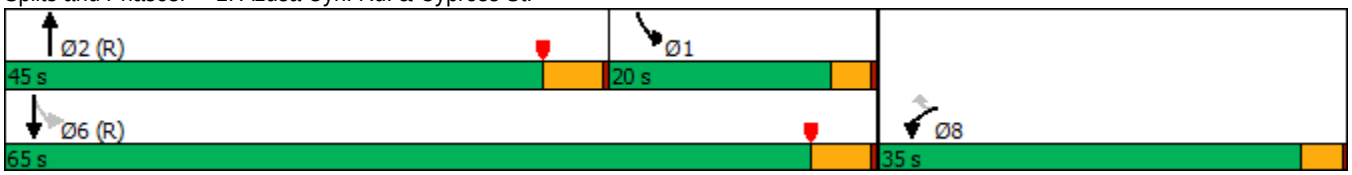
INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	241	397	357	171	151	235
Future Volume (vph)	241	397	357	171	151	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		49%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	35.0	35.0	45.0		20.0	65.0
Total Split (%)	35.0%	35.0%	45.0%		20.0%	65.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 81 (81%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	241	397	357	171	151	235
Future Volume (veh/h)	241	397	357	171	151	235
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	236	475	397	190	168	261
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	335	596	951	450	796	2635
Arrive On Green	0.19	0.19	0.40	0.40	0.56	1.00
Sat Flow, veh/h	1810	3220	2474	1124	1810	3705
Grp Volume(v), veh/h	236	475	300	287	168	261
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1698	1810	1805
Q Serve(g_s), s	12.2	14.1	12.0	12.2	0.0	0.0
Cycle Q Clear(g_c), s	12.2	14.1	12.0	12.2	0.0	0.0
Prop In Lane	1.00	1.00		0.66	1.00	
Lane Grp Cap(c), veh/h	335	596	722	679	796	2635
V/C Ratio(X)	0.70	0.80	0.42	0.42	0.21	0.10
Avail Cap(c_a), veh/h	570	1014	722	679	796	2635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.2	38.9	21.6	21.7	7.4	0.0
Incr Delay (d2), s/veh	2.7	2.5	1.8	1.9	0.1	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	5.5	5.6	5.3	5.1	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.9	41.4	23.3	23.6	7.6	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	711		587			429
Approach Delay, s/veh	41.2		23.5			3.0
Approach LOS	D		C			A

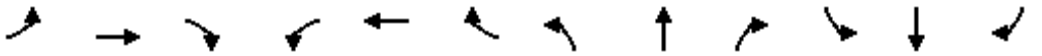
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.0	45.0			78.0	22.0
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	16.5	* 40			60.0	31.5
Max Q Clear Time (g_c+I1), s	2.0	14.2			2.0	16.1
Green Ext Time (p_c), s	0.4	3.9			1.9	2.4

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	44
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	212	15	190	7	8	18	231	297	8	18	161	283
Future Vol, veh/h	212	15	190	7	8	18	231	297	8	18	161	283
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	226	16	202	7	9	19	246	316	9	19	171	301
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17	11.8	91.6	15.5
HCM LOS	C	B	F	C

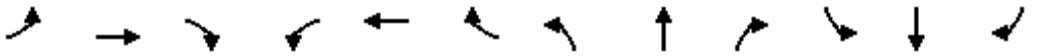
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	43%	93%	0%	47%	0%	10%	0%
Vol Thru, %	55%	7%	0%	53%	0%	90%	0%
Vol Right, %	1%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	536	227	190	15	18	179	283
LT Vol	231	212	0	7	0	18	0
Through Vol	297	15	0	8	0	161	0
RT Vol	8	0	190	0	18	0	283
Lane Flow Rate	570	241	202	16	19	190	301
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.089	0.526	0.375	0.039	0.041	0.373	0.527
Departure Headway (Hd)	6.874	8.168	6.963	9.187	8.211	7.298	6.527
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	444	519	392	439	497	557
Service Time	4.928	5.868	4.663	6.887	5.911	4.998	4.227
HCM Lane V/C Ratio	1.075	0.543	0.389	0.041	0.043	0.382	0.54
HCM Control Delay	91.6	19.6	13.8	12.3	11.3	14.3	16.3
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	17.7	3	1.7	0.1	0.1	1.7	3.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	47%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (veh/h)	212	15	190	7	8	18	231	297	8	18	161	283
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	237	0	202	7	9	19	246	316	9	19	171	301
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	527	0	234	45	14	29	442	538	15	134	1185	1142
Arrive On Green	0.15	0.00	0.15	0.02	0.02	0.02	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	544	1149	550	759	21	133	1670	1610
Grp Volume(v), veh/h	237	0	202	7	0	28	571	0	0	190	0	301
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1693	1330	0	0	1803	0	1610
Q Serve(g_s), s	6.0	0.0	12.3	0.4	0.0	1.6	18.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.0	0.0	12.3	0.4	0.0	1.6	20.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.68	0.43		0.02	0.10		1.00
Lane Grp Cap(c), veh/h	527	0	234	45	0	42	995	0	0	1319	0	1142
V/C Ratio(X)	0.45	0.00	0.86	0.16	0.00	0.66	0.57	0.00	0.00	0.14	0.00	0.26
Avail Cap(c_a), veh/h	579	0	258	290	0	271	995	0	0	1319	0	1142
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	41.7	47.7	0.0	48.3	7.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	23.1	1.6	0.0	16.5	2.2	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.2	0.2	0.0	0.9	5.6	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	0.0	64.8	49.3	0.0	64.9	9.3	0.0	0.0	0.2	0.0	0.6
LnGrp LOS	D	A	E	D	A	E	A	A	A	A	A	A
Approach Vol, veh/h		439			35			571			491	
Approach Delay, s/veh		51.2			61.8			9.3			0.4	
Approach LOS		D			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.0		18.6		75.0		6.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		22.8		14.3		2.0		3.6				
Green Ext Time (p_c), s		5.4		0.3		2.3		0.1				

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

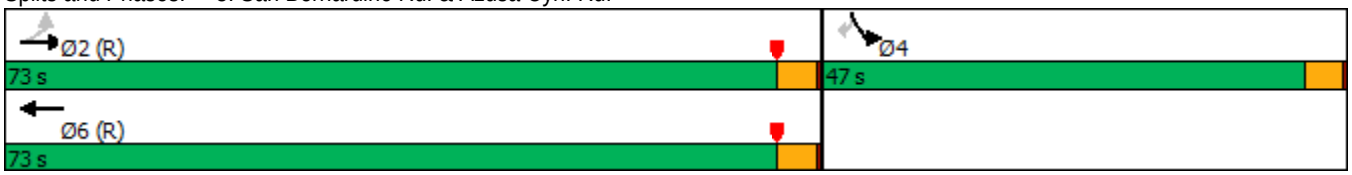
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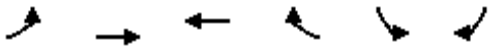
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	152	358	460	270	80
Future Volume (vph)	90	152	358	460	270	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	152	358	460	270	80
Future Volume (veh/h)	90	152	358	460	270	80
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	101	171	402	517	303	90
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	291	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	618	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	101	171	402	517	303	90
Grp Sat Flow(s),veh/h/ln	618	1805	1805	1610	1810	1610
Q Serve(g_s), s	14.7	2.5	14.6	24.1	15.5	4.6
Cycle Q Clear(g_c), s	38.8	2.5	14.6	24.1	15.5	4.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	291	2076	1038	926	648	577
V/C Ratio(X)	0.35	0.08	0.39	0.56	0.47	0.16
Avail Cap(c_a), veh/h	291	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	11.4	13.9	16.0	29.7	26.2
Incr Delay (d2), s/veh	3.3	0.1	1.1	2.4	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.0	5.9	8.9	7.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.4	11.5	15.0	18.4	32.1	26.7
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		272	919		393	
Approach Delay, s/veh		18.8	16.9		30.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

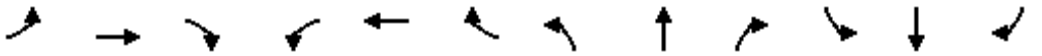
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	329	209	2501	47	515	0	169	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2120	522	240	2249	953	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	3800	1610	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1147	515	209	2501	47	515	0	169	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1610	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.0	27.0	13.6	71.0	1.5	16.9	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.0	27.0	13.6	71.0	1.5	16.9	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1824	818	240	2249	953	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	1.11	0.05	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1824	818	351	2249	953	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.2	23.3	51.0	24.5	10.3	50.5	0.0	48.4	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.8	57.4	0.1	27.3	0.0	15.1	2.0	0.0	9.0
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	1.2	11.7	11.0	7.0	45.6	0.5	9.7	0.0	5.8	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	24.9	26.9	65.8	81.9	10.4	77.8	0.0	63.6	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1691			2757			684			80	
Approach Delay, s/veh		26.6			79.5			74.3			59.0	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.0	3.9	73.0		18.9				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	61.3	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.

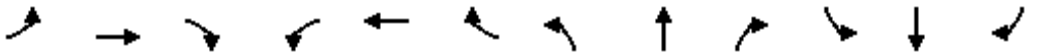
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	329	209	2501	47	515	0	169	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2120	522	240	3301	62	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	5577	104	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1147	515	209	1701	847	515	0	169	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1881	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.0	27.0	13.6	39.7	40.1	16.9	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.0	27.0	13.6	39.7	40.1	16.9	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1824	818	240	2249	1113	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	0.76	0.76	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1824	818	351	2249	1113	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.2	23.3	51.0	18.1	18.2	50.5	0.0	48.4	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.8	2.4	4.9	27.3	0.0	15.1	2.0	0.0	9.0
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	1.2	11.7	11.0	7.0	16.2	17.0	9.7	0.0	5.8	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	24.9	26.9	65.8	20.5	23.1	77.8	0.0	63.6	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	C	C	E	A	E	D	A	E
Approach Vol, veh/h		1691			2757			684			80	
Approach Delay, s/veh		26.6			24.8			74.3			59.0	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.0	3.9	42.1		18.9				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	21.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.4	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

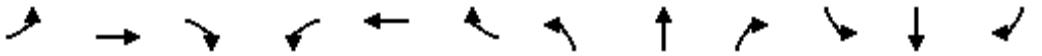
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Future Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	32.0	56.0		11.0	35.0	35.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	32.0%	56.0%		11.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 22 (22%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	130	1	1	1	132	609	12	3	255	39
Future Volume (veh/h)	86	2	130	1	1	1	132	609	12	3	255	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	141	1	1	1	143	662	13	3	277	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	231	212	179	212	212	179	176	2718	53	6	2370	1057
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.19	1.00	1.00	0.00	0.66	0.66
Sat Flow, veh/h	1437	1900	1610	1265	1900	1610	1810	3621	71	1810	3610	1610
Grp Volume(v), veh/h	93	2	141	1	1	1	143	330	345	3	277	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1265	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.2	0.1	8.5	0.1	0.0	0.1	7.6	0.0	0.0	0.2	2.9	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.5	0.2	0.0	0.1	7.6	0.0	0.0	0.2	2.9	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	231	212	179	212	212	179	176	1355	1416	6	2370	1057
V/C Ratio(X)	0.40	0.01	0.79	0.00	0.00	0.01	0.81	0.24	0.24	0.52	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	425	532	451	516	1355	1416	136	2370	1057
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	0.73	0.73	0.73
Uniform Delay (d), s/veh	42.3	39.5	43.3	39.6	39.5	39.5	39.4	0.0	0.0	49.8	6.4	6.1
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.3	0.4	0.4	43.9	0.1	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	2.2	0.0	3.7	0.0	0.0	0.0	3.4	0.2	0.2	0.1	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	39.5	50.7	39.6	39.5	39.5	47.7	0.4	0.4	93.7	6.5	6.1
LnGrp LOS	D	D	D	D	D	D	D	A	A	F	A	A
Approach Vol, veh/h		236			3			818			322	
Approach Delay, s/veh		47.7			39.6			8.7			7.2	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	80.0		16.1	13.2	70.7		16.1				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	51.0		28.0	28.5	30.0		28.0				
Max Q Clear Time (g_c+I1), s	2.2	2.0		10.5	9.6	4.9		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.1	
HCM 6th LOS		B	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	523	4	0	463
Future Volume (vph)	0	1	523	4	0	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

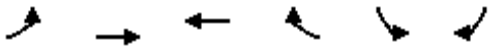
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	523	4	0	463
Future Vol, veh/h	0	1	523	4	0	463
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	551	4	0	487

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	278	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	725	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	725	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	725	-
HCM Lane V/C Ratio	-	-	0.001	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	40	33	0	0	1
Future Volume (vph)	2	40	33	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

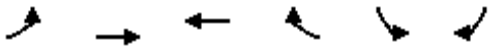
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	40	33	0	0	1
Future Vol, veh/h	2	40	33	0	0	1
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	42	35	0	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	35	0	-	0	81	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1589	-	-	-	926	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1589	-	-	-	925	1044
Mov Cap-2 Maneuver	-	-	-	-	925	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	982	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1589	-	-	-	1044
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	32	30	0	0	3
Future Volume (vph)	8	32	30	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	32	30	0	0	3
Future Vol, veh/h	8	32	30	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	34	32	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	82	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	925	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	920	1048
Mov Cap-2 Maneuver	-	-	-	-	920	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	978	-

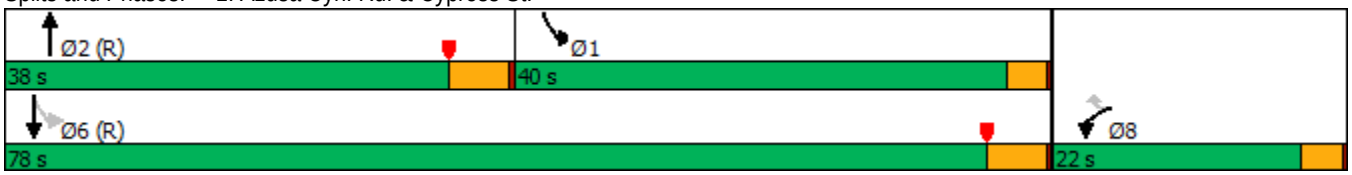
Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	1048
HCM Lane V/C Ratio	0.005	-	-	-	0.003
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	359	533	463	484
Future Volume (vph)	181	208	359	533	463	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	208	359	533	463	484
Future Volume (veh/h)	181	208	359	533	463	484
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	137	378	561	487	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	405	180	596	531	838	2900
Arrive On Green	0.11	0.11	0.33	0.33	0.85	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	268	137	378	561	487	509
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.1	8.3	17.7	33.0	0.3	0.0
Cycle Q Clear(g_c), s	7.1	8.3	17.7	33.0	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	405	180	596	531	838	2900
V/C Ratio(X)	0.66	0.76	0.63	1.06	0.58	0.18
Avail Cap(c_a), veh/h	670	298	596	531	838	2900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	42.6	43.1	28.4	33.5	4.4	0.0
Incr Delay (d2), s/veh	1.9	6.5	5.1	54.6	0.9	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	3.6	8.3	20.5	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	49.6	33.5	88.1	5.3	0.1
LnGrp LOS	D	D	C	F	A	A
Approach Vol, veh/h	405		939			996
Approach Delay, s/veh	46.2		66.1			2.7
Approach LOS	D		E			A

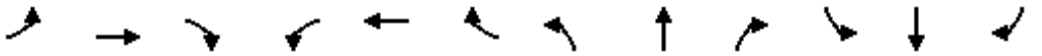
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	47.3	38.0			85.3	14.7
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	2.3	35.0			2.0	10.3
Green Ext Time (p_c), s	1.6	0.0			3.9	0.9

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

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	111.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	527	7	405	41	26	18	177	330	11	11	461	207
Future Vol, veh/h	527	7	405	41	26	18	177	330	11	11	461	207
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	543	7	418	42	27	19	182	340	11	11	475	213
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

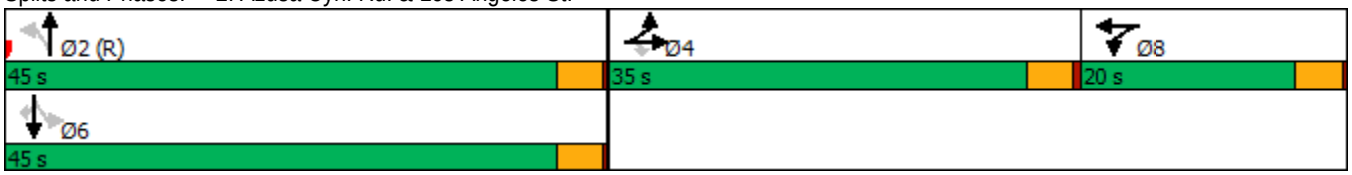
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	123.4	15.7	146.2	79.7
HCM LOS	F	C	F	F

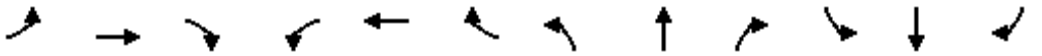
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	99%	0%	61%	0%	2%	0%
Vol Thru, %	64%	1%	0%	39%	0%	98%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	518	534	405	67	18	472	207
LT Vol	177	527	0	41	0	11	0
Through Vol	330	7	0	26	0	461	0
RT Vol	11	0	405	0	18	0	207
Lane Flow Rate	534	551	418	69	19	487	213
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.221	1.312	0.863	0.194	0.047	1.111	0.445
Departure Headway (Hd)	8.618	9.222	7.973	11.026	9.956	8.758	8.017
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	427	396	459	327	362	418	452
Service Time	6.618	6.922	5.673	8.726	7.656	6.458	5.717
HCM Lane V/C Ratio	1.251	1.391	0.911	0.211	0.052	1.165	0.471
HCM Control Delay	146.2	184	43.5	16.4	13.1	107.2	17
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	20.8	23.4	8.8	0.7	0.1	16.2	2.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	35.0	35.0	35.0	20.0	20.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	35.0%	35.0%	35.0%	20.0%	20.0%		45.0%	45.0%		45.0%	45.0%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (veh/h)	527	7	405	41	26	18	177	330	11	11	461	207
Initial Q (Qb), veh	0	1	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	548	0	418	42	27	19	182	340	11	11	475	213
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1033	0	459	78	45	32	272	475	15	45	1033	888
Arrive On Green	0.29	0.00	0.29	0.04	0.04	0.04	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1038	730	406	862	27	15	1873	1610
Grp Volume(v), veh/h	548	0	418	42	0	46	533	0	0	486	0	213
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1769	1295	0	0	1888	0	1610
Q Serve(g_s), s	12.8	0.0	25.1	2.3	0.0	2.6	27.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.8	0.0	25.1	2.3	0.0	2.6	30.2	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.41	0.34		0.02	0.02		1.00
Lane Grp Cap(c), veh/h	1033	0	459	78	0	77	762	0	0	1078	0	888
V/C Ratio(X)	0.53	0.00	0.91	0.54	0.00	0.60	0.70	0.00	0.00	0.45	0.00	0.24
Avail Cap(c_a), veh/h	1122	0	499	290	0	283	762	0	0	1078	0	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.60	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	34.5	46.8	0.0	47.0	16.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	19.8	5.6	0.0	7.3	3.2	0.0	0.0	1.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	11.7	1.1	0.0	1.3	9.1	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	54.3	52.4	0.0	54.3	19.6	0.0	0.0	1.4	0.0	0.6
LnGrp LOS	C	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		966			88			533			699	
Approach Delay, s/veh		40.8			53.4			19.6			1.1	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.1		32.5		59.1		8.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		41.0		31.0		41.0		16.0				
Max Q Clear Time (g_c+I1), s		32.2		27.1		2.0		4.6				
Green Ext Time (p_c), s		2.8		1.5		4.3		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		24.2
HCM 6th LOS		C

Notes

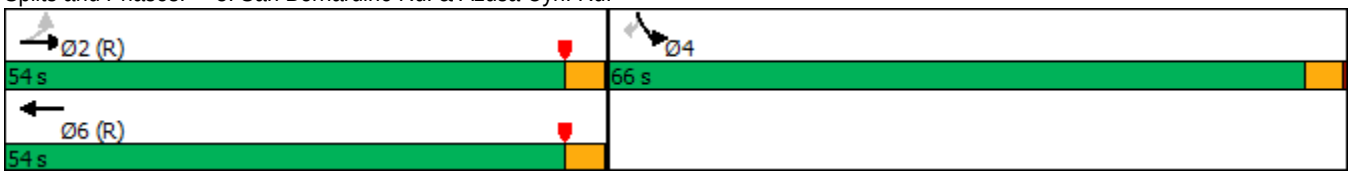
User approved volume balancing among the lanes for turning movement.

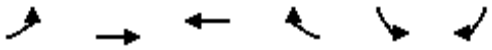
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	379	786	164
Future Volume (vph)	131	357	362	379	786	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	131	357	362	379	786	164
Future Volume (veh/h)	131	357	362	379	786	164
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	376	381	399	827	173
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	218	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	703	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	138	376	381	399	827	173
Grp Sat Flow(s),veh/h/ln	703	1805	1805	1610	1810	1610
Q Serve(g_s), s	22.7	8.1	18.7	23.1	48.8	7.0
Cycle Q Clear(g_c), s	45.8	8.1	18.7	23.1	48.8	7.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	218	1504	752	671	935	832
V/C Ratio(X)	0.63	0.25	0.51	0.59	0.88	0.21
Avail Cap(c_a), veh/h	218	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	22.8	25.9	27.1	25.8	15.7
Incr Delay (d2), s/veh	13.2	0.4	2.4	3.9	12.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.5	8.3	9.3	23.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.1	23.2	28.3	31.0	37.8	16.3
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		514	780		1000	
Approach Delay, s/veh		32.6	29.7		34.1	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

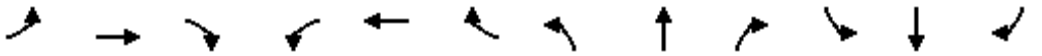
Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	8.6	65.0		17.0	73.4	73.4	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.2%	54.2%		14.2%	61.2%	61.2%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	381	246	1646	38	272	0	329	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2453	336	204	2214	938	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4906	673	1810	3800	1610	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2015	1008	246	1646	38	272	0	329	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1610	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.8	60.0	60.0	13.5	38.3	1.2	8.3	0.0	18.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.8	60.0	60.0	13.5	38.3	1.2	8.3	0.0	18.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	204	2214	938	543	0	242	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	1.21	0.74	0.04	0.50	0.00	1.36	0.23	0.00	0.44
Avail Cap(c_a), veh/h	77	1900	889	204	2214	938	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	30.0	30.0	53.3	18.4	10.7	46.9	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	26.3	38.9	73.8	130.6	2.3	0.1	3.2	0.0	186.9	3.6	0.0	9.9
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	1.6	35.1	41.6	13.4	15.8	0.4	4.0	0.0	19.8	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	68.9	103.8	183.9	20.8	10.8	50.1	0.0	237.9	55.0	0.0	62.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	D	A	E
Approach Vol, veh/h		3065			1930			601			96	
Approach Delay, s/veh		80.6			41.3			152.9			59.6	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.1	74.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	5.1	68.4		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.2	4.8	40.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		74.6	
HCM 6th LOS		E	

Notes

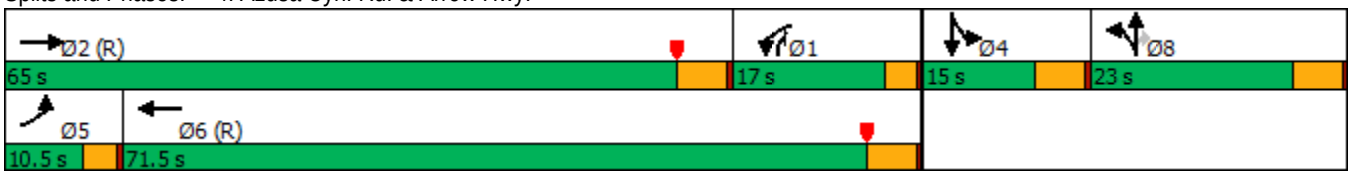
User approved volume balancing among the lanes for turning movement.

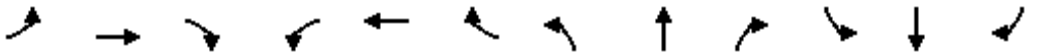
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	10.5	65.0		17.0	71.5		23.0	23.0	17.0	15.0	15.0	
Total Split (%)	8.8%	54.2%		14.2%	59.6%		19.2%	19.2%	14.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	381	246	1646	38	272	0	329	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2453	336	505	4228	98	543	0	691	151	27	111
Arrive On Green	0.06	1.00	1.00	0.56	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4906	673	1810	5549	128	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2015	1008	246	1127	557	272	0	329	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1877	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.7	60.0	59.2	9.9	0.0	0.0	8.3	0.0	0.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.7	60.0	59.2	9.9	0.0	0.0	8.3	0.0	0.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		0.07	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	505	2896	1430	543	0	691	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	0.49	0.39	0.39	0.50	0.00	0.48	0.23	0.00	0.44
Avail Cap(c_a), veh/h	106	1900	889	505	2896	1430	543	0	691	151	0	138
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	0.0	21.3	0.0	0.0	46.9	0.0	24.6	51.4	0.0	52.3
Incr Delay (d2), s/veh	20.8	38.9	73.8	0.7	0.4	0.8	3.2	0.0	2.3	3.6	0.0	9.9
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	1.5	10.3	18.2	3.5	0.2	0.3	4.0	0.0	7.1	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.8	38.9	73.8	22.0	0.4	0.8	50.1	0.0	26.9	55.0	0.0	62.2
LnGrp LOS	E	F	F	C	A	A	D	A	C	D	A	E
Approach Vol, veh/h		3065			1930			601			96	
Approach Delay, s/veh		50.9			3.3			37.4			59.6	
Approach LOS		D			A			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.5	65.0		15.0	7.1	96.4		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	* 60		10.0	7.0	66.5		18.0				
Max Q Clear Time (g_c+I1), s	11.9	62.0		6.2	4.7	2.0		10.3				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	17.0		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		33.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Future Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	32.0	60.0		8.0	36.0	36.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	60.0%		8.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	361	3	1	1	245	321	1	1	582	85
Future Volume (veh/h)	112	1	361	3	1	1	245	321	1	1	582	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	1	384	3	1	1	261	341	1	1	619	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	440	487	413	332	487	413	294	2243	7	2	1609	718
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.33	1.00	1.00	0.00	0.45	0.45
Sat Flow, veh/h	1437	1900	1610	1014	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	119	1	384	3	1	1	261	167	175	1	619	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1014	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	23.3	0.2	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Cycle Q Clear(g_c), s	6.8	0.0	23.3	0.3	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	440	487	413	332	487	413	294	1097	1153	2	1609	718
V/C Ratio(X)	0.27	0.00	0.93	0.01	0.00	0.00	0.89	0.15	0.15	0.50	0.38	0.13
Avail Cap(c_a), veh/h	460	513	435	345	513	435	516	1097	1153	81	1609	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78	0.13	0.13	0.13
Uniform Delay (d), s/veh	30.2	27.7	36.3	27.8	27.7	27.7	32.8	0.0	0.0	49.9	18.5	16.3
Incr Delay (d2), s/veh	0.3	0.0	26.0	0.0	0.0	0.0	7.3	0.2	0.2	23.5	0.1	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	2.3	0.0	11.9	0.1	0.0	0.0	5.4	0.1	0.1	0.0	4.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	27.7	62.3	27.8	27.7	27.7	40.2	0.2	0.2	73.4	18.6	16.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	E	B	B
Approach Vol, veh/h		504			5			603			710	
Approach Delay, s/veh		54.7			27.7			17.5			18.4	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	65.7		30.6	19.8	49.6		30.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	55.0		27.0	28.5	31.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		25.3	15.7	13.5		2.3				
Green Ext Time (p_c), s	0.0	2.2		0.4	0.6	4.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.2	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	3	875	1	0	679
Future Volume (vph)	0	3	875	1	0	679
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

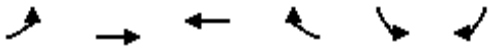
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	875	1	0	679
Future Vol, veh/h	0	3	875	1	0	679
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	921	1	0	715

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	461	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	553	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	553	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	553	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	11.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	29	81	0	0	3
Future Volume (vph)	1	29	81	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

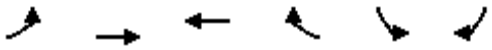
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	29	81	0	0	3
Future Vol, veh/h	1	29	81	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	31	85	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	85	0	-	0	118	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1524	-	-	-	883	980
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1524	-	-	-	882	980
Mov Cap-2 Maneuver	-	-	-	-	882	-
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	995	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1524	-	-	-	980
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	27	75	0	0	6
Future Volume (vph)	2	27	75	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	27	75	0	0	6
Future Vol, veh/h	2	27	75	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	28	79	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	111	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1532	-	-	-	891	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1532	-	-	-	890	987
Mov Cap-2 Maneuver	-	-	-	-	890	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A

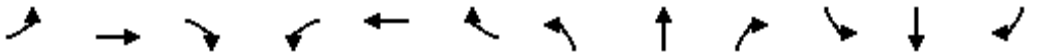
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	987
HCM Lane V/C Ratio	0.001	-	-	-	0.006
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	241	397	357	171	151	235
Future Volume (vph)	241	397	357	171	151	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3347	1470	3435		1805	3610
Flt Permitted	0.97	1.00	1.00		0.40	1.00
Satd. Flow (perm)	3347	1470	3435		767	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	268	441	397	190	168	261
RTOR Reduction (vph)	183	193	41	0	0	0
Lane Group Flow (vph)	301	32	546	0	168	261
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.3	14.3	57.2		78.7	77.2
Effective Green, g (s)	14.3	14.3	57.2		78.7	77.2
Actuated g/C Ratio	0.14	0.14	0.57		0.79	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	478	210	1964		774	2786
v/s Ratio Prot	c0.09		c0.16		c0.04	0.07
v/s Ratio Perm		0.02			0.13	
v/c Ratio	0.63	0.15	0.28		0.22	0.09
Uniform Delay, d1	40.4	37.5	10.9		4.0	2.8
Progression Factor	1.00	1.00	1.00		1.99	1.75
Incremental Delay, d2	2.6	0.3	0.4		0.1	0.1
Delay (s)	42.9	37.9	11.2		8.1	5.0
Level of Service	D	D	B		A	A
Approach Delay (s)	41.3		11.2			6.2
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

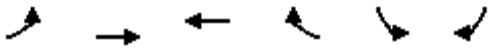
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1707			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.94	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1707			1469			1780	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	226	16	202	7	9	19	246	316	9	19	171	301
RTOR Reduction (vph)	0	0	177	0	18	0	0	0	0	0	0	85
Lane Group Flow (vph)	120	122	25	7	10	0	0	571	0	0	190	216
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.2	12.2	12.2	4.2	4.2			71.6			71.6	71.6
Effective Green, g (s)	12.2	12.2	12.2	4.2	4.2			71.6			71.6	71.6
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.72			0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	209	220	231	75	71			1051			1274	1360
v/s Ratio Prot	c0.07	0.07		0.00	c0.01							
v/s Ratio Perm			0.01					c0.39			0.11	0.11
v/c Ratio	0.57	0.55	0.11	0.09	0.14			0.54			0.15	0.16
Uniform Delay, d1	41.4	41.3	39.1	46.1	46.2			6.6			4.5	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.46	0.62
Incremental Delay, d2	3.8	3.0	0.2	0.5	0.9			2.0			0.2	0.2
Delay (s)	45.2	44.4	39.3	46.6	47.0			8.6			2.3	3.1
Level of Service	D	D	D	D	D			A			A	A
Approach Delay (s)		42.3			47.0			8.6			2.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

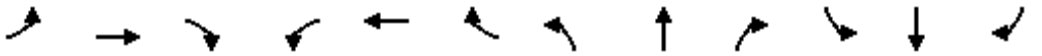
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	152	358	460	270	80
Future Volume (vph)	90	152	358	460	270	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3305		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	464	3610	3305		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	101	171	402	517	303	90
RTOR Reduction (vph)	0	0	194	0	0	27
Lane Group Flow (vph)	101	171	725	0	303	63
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	266	2075	1900		646	578
v/s Ratio Prot		0.05	c0.22		c0.17	
v/s Ratio Perm	0.22					0.04
v/c Ratio	0.38	0.08	0.38		0.47	0.11
Uniform Delay, d1	13.9	11.4	13.9		29.7	25.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.1	0.1	0.6		2.4	0.4
Delay (s)	17.9	11.5	14.5		32.1	26.1
Level of Service	B	B	B		C	C
Approach Delay (s)		13.9	14.5		30.7	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

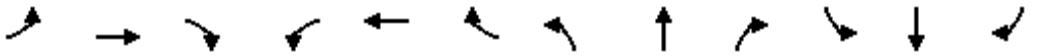
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	329	209	2501	47	501	19	169	22	13	45
RTOR Reduction (vph)	0	34	0	0	0	19	0	0	144	0	41	0
Lane Group Flow (vph)	29	1628	0	209	2501	28	261	259	25	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.66		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.76	0.62		0.73	1.11	0.02	0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.3		48.6	24.5	10.1	50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.2	57.0	0.0	35.5	34.3	0.6	1.8	1.3	
Delay (s)	119.2	25.4		57.9	81.4	10.2	85.7	84.5	44.6	52.8	52.2	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.0			78.4			75.2			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

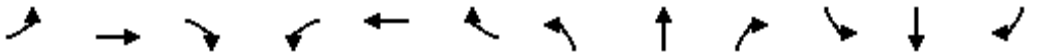
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	329	209	2501	47	501	19	169	22	13	45
RTOR Reduction (vph)	0	34	0	0	2	0	0	0	144	0	41	0
Lane Group Flow (vph)	29	1628	0	209	2546	0	261	259	25	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.45		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.62		0.73	0.75		0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.3		48.6	18.0		50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.2	1.6		35.5	34.3	0.6	1.8	1.3	
Delay (s)	119.2	25.4		57.9	19.6		85.7	84.5	44.6	52.8	52.2	
Level of Service	F	C		E	B		F	F	D	D	D	
Approach Delay (s)		27.0			22.5			75.2			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Future Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3600		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3600		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	141	1	1	1	143	662	13	3	277	42
RTOR Reduction (vph)	0	0	123	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	18	1	1	0	143	674	0	3	277	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.3	72.5		1.3	60.5	60.5
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.3	72.5		1.3	60.5	60.5
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.72		0.01	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	240	2610		23	2184	977
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.13	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.5	38.1	38.1	38.1	40.8	4.7		48.8	8.4	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.96		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	3.8	0.2		2.6	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	43.3	4.7		51.4	8.6	8.0
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.5			38.1			11.4			8.9	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

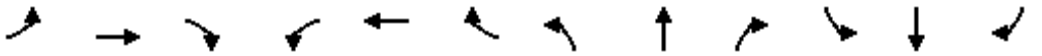
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	359	533	463	484
Future Volume (vph)	181	208	359	533	463	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3286		1805	3610
Flt Permitted	0.97	1.00	1.00		0.18	1.00
Satd. Flow (perm)	3394	1470	3286		345	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	219	378	561	487	509
RTOR Reduction (vph)	63	113	244	0	0	0
Lane Group Flow (vph)	218	16	695	0	487	509
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.1	12.1	39.4		80.9	79.4
Effective Green, g (s)	12.1	12.1	39.4		80.9	79.4
Actuated g/C Ratio	0.12	0.12	0.39		0.81	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	410	177	1294		812	2866
v/s Ratio Prot	c0.06		0.21		c0.22	0.14
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.53	0.09	0.54		0.60	0.18
Uniform Delay, d1	41.3	39.0	23.3		13.8	2.5
Progression Factor	1.00	1.00	1.00		0.85	1.39
Incremental Delay, d2	1.3	0.2	1.6		1.1	0.1
Delay (s)	42.6	39.3	24.9		12.9	3.6
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		24.9			8.1
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

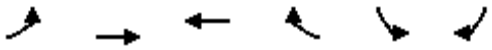
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.94			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1782			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.58			0.99	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1782			1103			1877	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	543	7	418	42	27	19	182	340	11	11	475	213
RTOR Reduction (vph)	0	0	300	0	18	0	0	0	0	0	0	90
Lane Group Flow (vph)	277	273	118	42	28	0	0	533	0	0	486	123
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.5	23.5	23.5	6.7	6.7			57.8			57.8	57.8
Effective Green, g (s)	23.5	23.5	23.5	6.7	6.7			57.8			57.8	57.8
Actuated g/C Ratio	0.24	0.24	0.24	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	403	424	446	120	119			637			1084	1098
v/s Ratio Prot	c0.16	0.15		c0.02	0.02							
v/s Ratio Perm			0.06					c0.48			0.26	0.06
v/c Ratio	0.69	0.64	0.26	0.35	0.24			0.84			0.45	0.11
Uniform Delay, d1	34.9	34.5	31.2	44.6	44.2			17.2			12.0	9.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	2.17
Incremental Delay, d2	4.8	3.3	0.3	1.8	1.0			12.3			1.3	0.2
Delay (s)	39.7	37.8	31.5	46.3	45.3			29.6			13.3	20.9
Level of Service	D	D	C	D	D			C			B	C
Approach Delay (s)		35.6			45.8			29.6			15.6	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

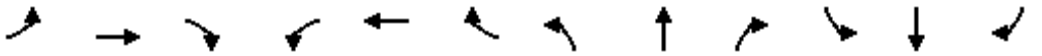
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	379	786	164
Future Volume (vph)	131	357	362	379	786	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3333		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	451	3610	3333		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	376	381	399	827	173
RTOR Reduction (vph)	0	0	158	0	0	19
Lane Group Flow (vph)	138	376	623	0	827	154
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	187	1504	1388		932	834
v/s Ratio Prot		0.10	0.19		c0.46	
v/s Ratio Perm	c0.31					0.10
v/c Ratio	0.74	0.25	0.45		0.89	0.18
Uniform Delay, d1	29.5	22.8	25.1		25.9	15.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	22.7	0.4	1.1		12.3	0.5
Delay (s)	52.2	23.2	26.2		38.1	16.0
Level of Service	D	C	C		D	B
Approach Delay (s)		31.0	26.2		34.3	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

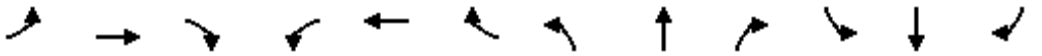
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	381	246	1646	38	261	15	329	35	12	49
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	184	0	45	0
Lane Group Flow (vph)	42	3005	0	246	1646	22	138	138	145	35	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.1	60.0		13.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.1	60.0		13.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.03	0.50		0.11	0.58	0.58	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	2850		213	2197	1098	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.43		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.66	1.05		1.15	0.75	0.02	0.48	0.48	0.51	0.22	0.10	
Uniform Delay, d1	57.3	30.0		53.2	18.8	10.8	46.7	46.7	46.9	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.7	33.4		109.7	2.4	0.0	5.8	5.8	6.4	3.2	1.3	
Delay (s)	78.9	63.4		163.0	21.2	10.8	52.5	52.5	53.3	54.6	52.1	
Level of Service	E	E		F	C	B	D	D	D	D	D	
Approach Delay (s)		63.6			39.1			53.0			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

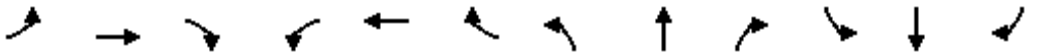
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	381	246	1646	38	261	15	329	35	12	49
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	70	0	45	0
Lane Group Flow (vph)	42	3005	0	246	1682	0	138	138	259	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.6	59.3		14.2	67.9		18.0	18.0	32.2	10.0	10.0	
Effective Green, g (s)	5.6	59.3		14.2	67.9		18.0	18.0	32.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.49		0.12	0.57		0.15	0.15	0.27	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	88	2816		224	3225		285	285	509	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.30		0.07	0.07	c0.06	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.48	1.07		1.10	0.52		0.48	0.48	0.51	0.22	0.10	
Uniform Delay, d1	55.8	30.4		52.9	16.0		46.7	46.7	37.2	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	38.2		88.9	0.6		5.8	5.8	0.8	3.2	1.3	
Delay (s)	59.8	68.6		141.8	16.7		52.5	52.5	38.0	54.6	52.1	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		68.4			32.6			44.6			53.0	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Future Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	119	1	384	3	1	1	261	341	1	1	619	90
RTOR Reduction (vph)	0	0	328	0	0	1	0	0	0	0	0	43
Lane Group Flow (vph)	119	1	56	3	1	0	261	342	0	1	619	47
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	70.8		1.2	52.3	52.3
Effective Green, g (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	70.8		1.2	52.3	52.3
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.20	0.71		0.01	0.52	0.52
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	208	275	234	208	275	234	355	2554		21	1888	844
v/s Ratio Prot		0.00			0.00		c0.14	0.09		0.00	c0.17	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.24	0.01	0.00	0.00	0.74	0.13		0.05	0.33	0.06
Uniform Delay, d1	39.9	36.6	37.9	36.6	36.6	36.6	37.7	4.7		48.8	13.7	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.21	0.46		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	0.5	0.0	0.0	0.0	6.7	0.1		0.9	0.5	0.1
Delay (s)	43.6	36.6	38.4	36.7	36.6	36.6	52.3	2.2		49.8	14.2	11.8
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.6			36.6			23.9			13.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 6.2:

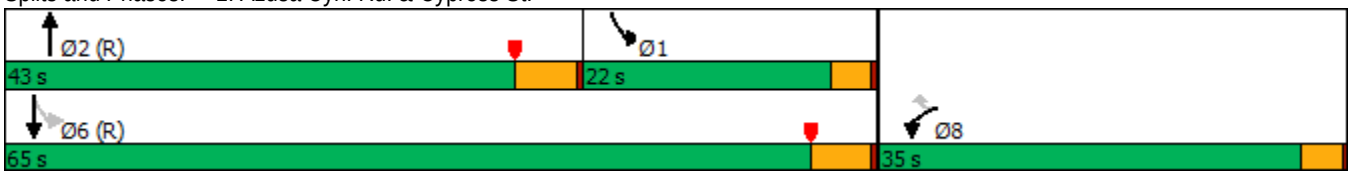
INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	242	397	359	171	151	240
Future Volume (vph)	242	397	359	171	151	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		49%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	35.0	35.0	43.0		22.0	65.0
Total Split (%)	35.0%	35.0%	43.0%		22.0%	65.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	242	397	359	171	151	240
Future Volume (veh/h)	242	397	359	171	151	240
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	237	476	399	190	168	267
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	336	597	905	426	810	2633
Arrive On Green	0.19	0.19	0.38	0.38	0.60	1.00
Sat Flow, veh/h	1810	3220	2478	1120	1810	3705
Grp Volume(v), veh/h	237	476	301	288	168	267
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1698	1810	1805
Q Serve(g_s), s	12.3	14.1	12.4	12.7	0.0	0.0
Cycle Q Clear(g_c), s	12.3	14.1	12.4	12.7	0.0	0.0
Prop In Lane	1.00	1.00		0.66	1.00	
Lane Grp Cap(c), veh/h	336	597	686	645	810	2633
V/C Ratio(X)	0.71	0.80	0.44	0.45	0.21	0.10
Avail Cap(c_a), veh/h	570	1014	686	645	810	2633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.2	38.9	23.1	23.1	7.1	0.0
Incr Delay (d2), s/veh	2.7	2.5	2.0	2.2	0.1	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	5.6	5.7	5.6	5.4	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.9	41.4	25.1	25.4	7.2	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	713		589			435
Approach Delay, s/veh	41.2		25.2			2.8
Approach LOS	D		C			A

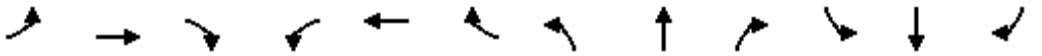
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.9	43.0			77.9	22.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	18.5	* 38			60.0	31.5
Max Q Clear Time (g_c+I1), s	2.0	14.7			2.0	16.1
Green Ext Time (p_c), s	0.4	3.8			1.9	2.4

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	47
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	213	25	190	8	11	18	231	302	8	24	161	283
Future Vol, veh/h	213	25	190	8	11	18	231	302	8	24	161	283
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	227	27	202	9	12	19	246	321	9	26	171	301
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.6	11.9	99.6	15.9
HCM LOS	C	B	F	C

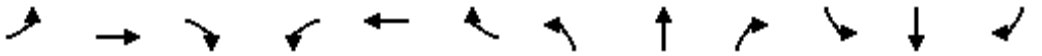
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	43%	89%	0%	42%	0%	13%	0%
Vol Thru, %	56%	11%	0%	58%	0%	87%	0%
Vol Right, %	1%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	541	238	190	19	18	185	283
LT Vol	231	213	0	8	0	24	0
Through Vol	302	25	0	11	0	161	0
RT Vol	8	0	190	0	18	0	283
Lane Flow Rate	576	253	202	20	19	197	301
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.112	0.553	0.377	0.049	0.042	0.39	0.533
Departure Headway (Hd)	6.953	8.22	7.033	9.267	8.314	7.413	6.626
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	441	515	389	433	488	548
Service Time	5.007	5.92	4.733	6.967	6.014	5.113	4.326
HCM Lane V/C Ratio	1.099	0.574	0.392	0.051	0.044	0.404	0.549
HCM Control Delay	99.6	20.6	13.9	12.4	11.4	14.8	16.6
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	18.7	3.3	1.7	0.2	0.1	1.8	3.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	44%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (veh/h)	213	25	190	8	11	18	231	302	8	24	161	283
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	246	0	202	9	12	19	246	321	9	26	171	301
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	527	0	235	49	18	28	430	531	14	172	1109	1139
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	3619	0	1610	1810	662	1049	536	751	20	185	1567	1610
Grp Volume(v), veh/h	246	0	202	9	0	31	576	0	0	197	0	301
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1711	1307	0	0	1752	0	1610
Q Serve(g_s), s	6.2	0.0	12.3	0.5	0.0	1.8	20.3	0.0	0.0	0.0	0.0	6.7
Cycle Q Clear(g_c), s	6.2	0.0	12.3	0.5	0.0	1.8	23.7	0.0	0.0	3.4	0.0	6.7
Prop In Lane	1.00		1.00	1.00		0.61	0.43		0.02	0.13		1.00
Lane Grp Cap(c), veh/h	527	0	235	49	0	46	976	0	0	1280	0	1139
V/C Ratio(X)	0.47	0.00	0.86	0.19	0.00	0.68	0.59	0.00	0.00	0.15	0.00	0.26
Avail Cap(c_a), veh/h	579	0	258	290	0	274	976	0	0	1280	0	1139
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	1.00	1.00	0.00	1.00	0.93	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	41.7	47.6	0.0	48.2	7.8	0.0	0.0	4.8	0.0	5.3
Incr Delay (d2), s/veh	0.6	0.0	23.0	1.8	0.0	15.9	2.4	0.0	0.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	6.2	0.2	0.0	1.0	6.2	0.0	0.0	1.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	0.0	64.8	49.4	0.0	64.1	10.3	0.0	0.0	5.0	0.0	5.8
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		448			40			576			498	
Approach Delay, s/veh		51.1			60.8			10.3			5.5	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.8		18.6		74.8		6.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		25.7		14.3		8.7		3.8				
Green Ext Time (p_c), s		5.3		0.3		2.4		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

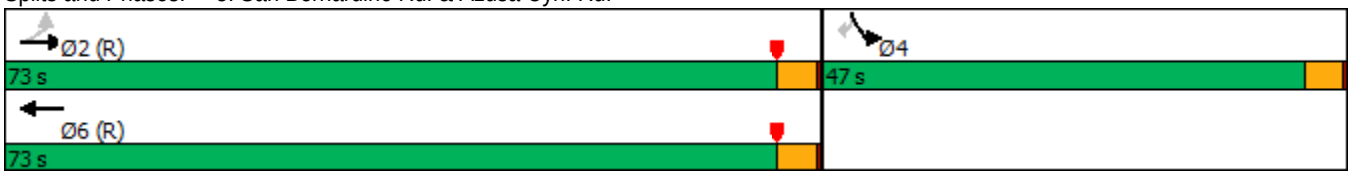
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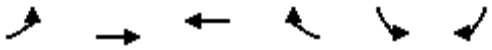
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	152	358	463	271	80
Future Volume (vph)	92	152	358	463	271	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	92	152	358	463	271	80
Future Volume (veh/h)	92	152	358	463	271	80
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	103	171	402	520	304	90
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	289	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	616	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	103	171	402	520	304	90
Grp Sat Flow(s),veh/h/ln	616	1805	1805	1610	1810	1610
Q Serve(g_s), s	15.1	2.5	14.6	24.3	15.5	4.6
Cycle Q Clear(g_c), s	39.5	2.5	14.6	24.3	15.5	4.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	289	2076	1038	926	648	577
V/C Ratio(X)	0.36	0.08	0.39	0.56	0.47	0.16
Avail Cap(c_a), veh/h	289	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	11.4	13.9	16.0	29.7	26.2
Incr Delay (d2), s/veh	3.4	0.1	1.1	2.5	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.0	5.9	8.9	7.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.8	11.5	15.0	18.5	32.1	26.7
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		274	922		394	
Approach Delay, s/veh		19.1	17.0		30.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

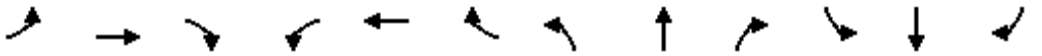
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	56.0		26.0	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.7%		21.7%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	331	212	2501	47	516	0	170	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2110	523	242	2249	953	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	3800	1610	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1148	516	212	2501	47	516	0	170	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1610	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.1	27.2	13.8	71.0	1.5	17.0	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.1	27.2	13.8	71.0	1.5	17.0	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1818	815	242	2249	953	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	1.11	0.05	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1818	815	339	2249	953	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.4	23.4	51.0	24.5	10.3	50.6	0.0	48.5	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	16.5	57.4	0.1	27.6	0.0	15.4	2.0	0.0	9.0
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	1.2	11.8	11.1	7.2	45.6	0.5	9.7	0.0	5.9	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.1	27.1	67.5	81.9	10.4	78.2	0.0	63.9	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1693			2760			686			80	
Approach Delay, s/veh		26.7			79.6			74.6			59.0	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	22.5	51.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.0	3.9	73.0		19.0				
Green Ext Time (p_c), s	0.3	11.7		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		61.5	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

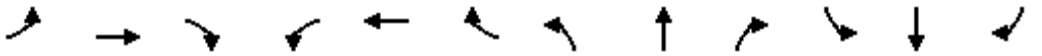
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	54.9		27.1	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.6%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	331	212	2501	47	516	0	170	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2109	523	243	3301	62	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	5577	104	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1148	516	212	1701	847	516	0	170	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1881	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.1	27.2	13.8	39.7	40.1	17.0	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.1	27.2	13.8	39.7	40.1	17.0	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1817	815	243	2249	1113	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	0.76	0.76	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1817	815	356	2249	1113	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.4	23.4	50.9	18.1	18.2	50.6	0.0	48.5	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.8	2.4	4.9	27.6	0.0	15.4	2.0	0.0	9.0
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	1.2	11.8	11.1	7.1	16.2	17.0	9.7	0.0	5.9	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.1	27.2	65.7	20.5	23.1	78.2	0.0	63.9	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	C	C	E	A	E	D	A	E
Approach Vol, veh/h		1693			2760			686			80	
Approach Delay, s/veh		26.8			24.8			74.6			59.0	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.6	49.9		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.0	3.9	42.1		19.0				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	21.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.5	
HCM 6th LOS		C	

Notes

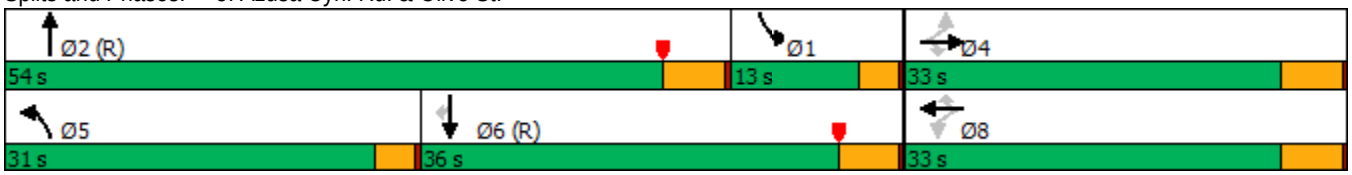
User approved volume balancing among the lanes for turning movement.

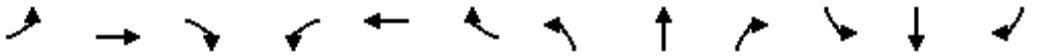
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Future Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	131	1	1	1	132	610	12	3	260	39
Future Volume (veh/h)	86	2	131	1	1	1	132	610	12	3	260	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	142	1	1	1	143	663	13	3	283	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	232	213	180	212	213	180	176	1774	35	449	2368	1056
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.19	0.98	0.98	0.25	0.66	0.66
Sat Flow, veh/h	1437	1900	1610	1264	1900	1610	1810	3621	71	1810	3610	1610
Grp Volume(v), veh/h	93	2	142	1	1	1	143	330	346	3	283	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1264	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	8.6	0.1	0.0	0.1	7.6	0.6	0.6	0.1	2.9	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.6	0.2	0.0	0.1	7.6	0.6	0.6	0.1	2.9	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	232	213	180	212	213	180	176	884	925	449	2368	1056
V/C Ratio(X)	0.40	0.01	0.79	0.00	0.00	0.01	0.81	0.37	0.37	0.01	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	425	532	451	498	884	925	449	2368	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.72	0.72	0.72
Uniform Delay (d), s/veh	42.2	39.5	43.2	39.5	39.5	39.5	39.4	0.5	0.5	28.3	6.4	6.1
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.2	1.1	1.1	0.0	0.1	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	2.2	0.0	3.8	0.0	0.0	0.0	3.4	0.4	0.4	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	39.5	50.7	39.6	39.5	39.5	47.6	1.6	1.6	28.3	6.5	6.1
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		237			3			819			328	
Approach Delay, s/veh		47.7			39.5			9.7			6.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.8	54.0		16.2	13.2	70.6		16.2				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		10.6	9.6	4.9		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	2.0		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	523	10	0	469
Future Volume (vph)	0	2	523	10	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

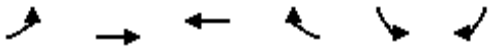
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	523	10	0	469
Future Vol, veh/h	0	2	523	10	0	469
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	551	11	0	494

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	281	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	722	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	722	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	722	-
HCM Lane V/C Ratio	-	-	0.003	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	53	36	0	0	2
Future Volume (vph)	5	53	36	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

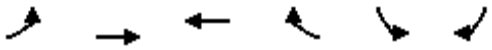
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	53	36	0	0	2
Future Vol, veh/h	5	53	36	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	56	38	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	104	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	66	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1585	-	-	-	899	1040
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	896	1040
Mov Cap-2 Maneuver	-	-	-	-	896	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1585	-	-	-	1040
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	32	30	0	0	6
Future Volume (vph)	21	32	30	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	32	30	0	0	6
Future Vol, veh/h	21	32	30	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	34	32	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	110	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	78	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	892	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	880	1048
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	950	-

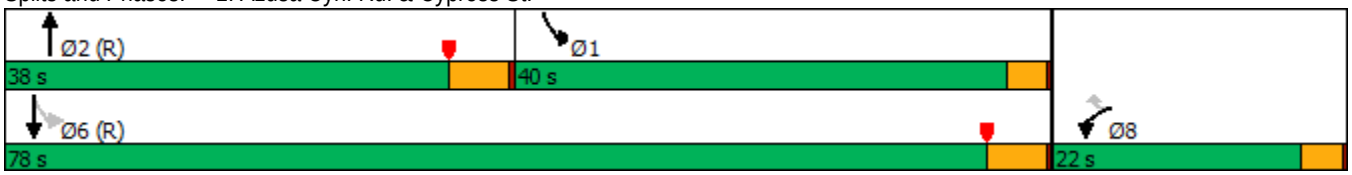
Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	1048
HCM Lane V/C Ratio	0.014	-	-	-	0.006
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	365	534	463	486
Future Volume (vph)	181	208	365	534	463	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	208	365	534	463	486
Future Volume (veh/h)	181	208	365	534	463	486
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	137	384	562	487	512
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	405	180	596	531	838	2900
Arrive On Green	0.11	0.11	0.33	0.33	0.85	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	268	137	384	562	487	512
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.1	8.3	18.1	33.0	0.3	0.0
Cycle Q Clear(g_c), s	7.1	8.3	18.1	33.0	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	405	180	596	531	838	2900
V/C Ratio(X)	0.66	0.76	0.64	1.06	0.58	0.18
Avail Cap(c_a), veh/h	670	298	596	531	838	2900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	42.6	43.1	28.5	33.5	4.4	0.0
Incr Delay (d2), s/veh	1.9	6.5	5.3	55.2	0.9	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	3.6	8.5	20.6	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	49.6	33.8	88.7	5.3	0.1
LnGrp LOS	D	D	C	F	A	A
Approach Vol, veh/h	405		946			999
Approach Delay, s/veh	46.2		66.4			2.7
Approach LOS	D		E			A

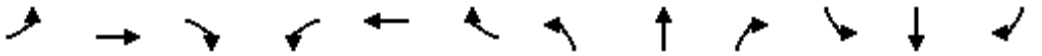
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	47.3	38.0			85.3	14.7
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	2.3	35.0			2.0	10.3
Green Ext Time (p_c), s	1.6	0.0			4.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	117
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	527	11	405	46	37	19	177	332	11	13	461	207
Future Vol, veh/h	527	11	405	46	37	19	177	332	11	13	461	207
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	543	11	418	47	38	20	182	342	11	13	475	213
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

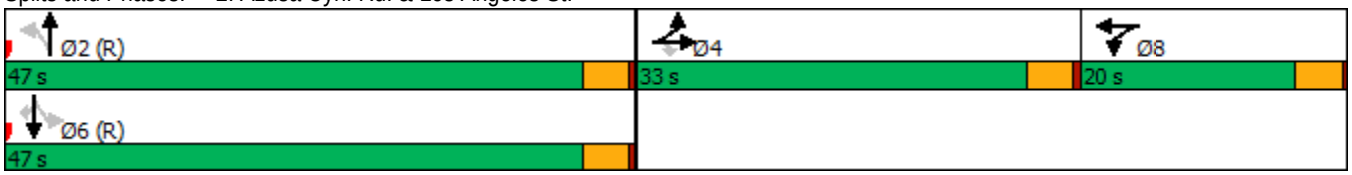
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	130.3	16.5	155.3	84.3
HCM LOS	F	C	F	F

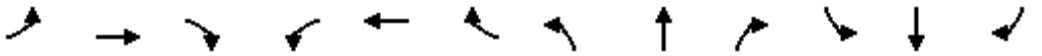
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	98%	0%	55%	0%	3%	0%
Vol Thru, %	64%	2%	0%	45%	0%	97%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	520	538	405	83	19	474	207
LT Vol	177	527	0	46	0	13	0
Through Vol	332	11	0	37	0	461	0
RT Vol	11	0	405	0	19	0	207
Lane Flow Rate	536	555	418	86	20	489	213
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.243	1.335	0.875	0.24	0.05	1.128	0.45
Departure Headway (Hd)	8.761	9.371	8.125	11.049	10.008	8.886	8.142
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	418	394	451	327	360	410	446
Service Time	6.761	7.071	5.825	8.749	7.708	6.586	5.842
HCM Lane V/C Ratio	1.282	1.409	0.927	0.263	0.056	1.193	0.478
HCM Control Delay	155.3	193.8	45.9	17.2	13.2	113.5	17.3
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	21.4	24.1	9.1	0.9	0.2	16.7	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (veh/h)	527	11	405	46	37	19	177	332	11	13	461	207
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	551	0	418	47	38	20	182	342	11	13	475	213
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1013	0	451	93	60	32	270	474	15	47	1024	884
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1172	617	405	865	27	19	1866	1610
Grp Volume(v), veh/h	551	0	418	47	0	58	535	0	0	488	0	213
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1789	1296	0	0	1884	0	1610
Q Serve(g_s), s	12.9	0.0	25.2	2.5	0.0	3.2	27.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.9	0.0	25.2	2.5	0.0	3.2	30.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.34	0.34		0.02	0.03		1.00
Lane Grp Cap(c), veh/h	1013	0	451	93	0	92	760	0	0	1071	0	884
V/C Ratio(X)	0.54	0.00	0.93	0.51	0.00	0.63	0.70	0.00	0.00	0.46	0.00	0.24
Avail Cap(c_a), veh/h	1050	0	467	290	0	286	760	0	0	1071	0	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.59	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	35.0	46.2	0.0	46.5	16.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	24.4	4.2	0.0	7.0	3.3	0.0	0.0	1.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	12.3	1.2	0.0	1.6	9.3	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	59.4	50.4	0.0	53.5	19.8	0.0	0.0	1.4	0.0	0.6
LnGrp LOS	C	A	E	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		969			105			535			701	
Approach Delay, s/veh		43.3			52.1			19.8			1.2	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.9		32.0		58.9		9.1				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		32.6		27.2		2.0		5.2				
Green Ext Time (p_c), s		3.2		0.8		4.4		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

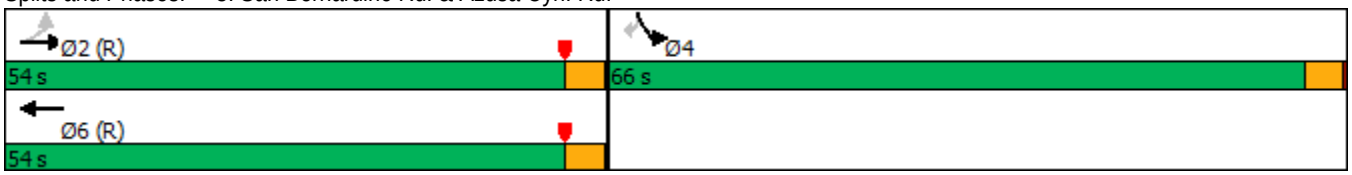
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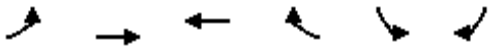
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	132	357	362	380	789	166
Future Volume (vph)	132	357	362	380	789	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	132	357	362	380	789	166
Future Volume (veh/h)	132	357	362	380	789	166
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	139	376	381	400	831	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	217	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	703	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	139	376	381	400	831	175
Grp Sat Flow(s),veh/h/ln	703	1805	1805	1610	1810	1610
Q Serve(g_s), s	23.0	8.1	18.7	23.1	49.3	7.1
Cycle Q Clear(g_c), s	46.1	8.1	18.7	23.1	49.3	7.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	217	1504	752	671	935	832
V/C Ratio(X)	0.64	0.25	0.51	0.60	0.89	0.21
Avail Cap(c_a), veh/h	217	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	22.8	25.9	27.2	25.9	15.7
Incr Delay (d2), s/veh	13.6	0.4	2.4	3.9	12.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.5	8.3	9.3	23.5	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.6	23.2	28.3	31.0	38.3	16.3
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		515	781		1006	
Approach Delay, s/veh		32.8	29.7		34.4	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

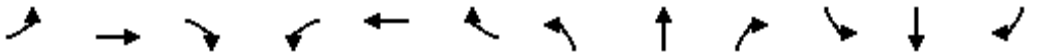
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	8.6	64.0		18.0	73.4	73.4	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.2%	53.3%		15.0%	61.2%	61.2%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	382	247	1646	38	274	0	333	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2411	331	219	2214	938	543	0	242	151	27	111
Arrive On Green	0.03	0.49	0.49	0.12	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4905	674	1810	3800	1610	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2016	1008	247	1646	38	274	0	333	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1610	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.8	59.0	59.0	14.5	38.3	1.2	8.4	0.0	18.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.8	59.0	59.0	14.5	38.3	1.2	8.4	0.0	18.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1868	875	219	2214	938	543	0	242	151	0	138
V/C Ratio(X)	0.78	1.08	1.15	1.13	0.74	0.04	0.50	0.00	1.38	0.23	0.00	0.44
Avail Cap(c_a), veh/h	77	1868	875	219	2214	938	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	30.5	30.5	52.8	18.4	10.7	46.9	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	26.3	45.8	81.7	100.1	2.3	0.1	3.3	0.0	193.8	3.6	0.0	9.9
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	1.6	36.5	42.9	12.5	15.8	0.4	4.0	0.0	20.2	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	76.3	112.2	152.9	20.8	10.8	50.2	0.0	244.8	55.0	0.0	62.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	D	A	E
Approach Vol, veh/h		3066			1931			607			96	
Approach Delay, s/veh		88.2			37.5			156.9			59.6	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	64.0		15.0	7.1	74.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	14.5	59.0		10.0	5.1	68.4		18.0				
Max Q Clear Time (g_c+I1), s	16.5	61.0		6.2	4.8	40.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			77.9									
HCM 6th LOS			E									

Notes

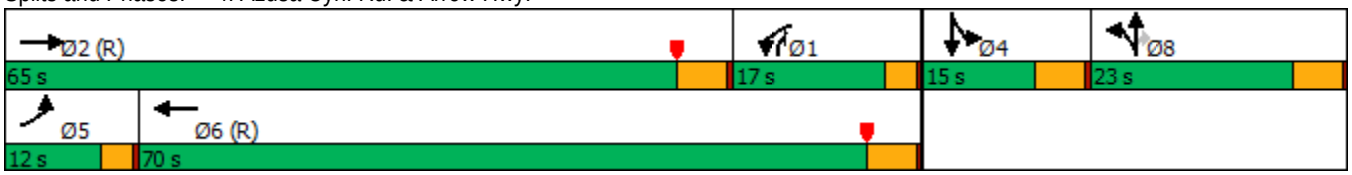
User approved volume balancing among the lanes for turning movement.

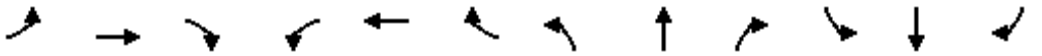
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	12.0	65.0		17.0	70.0		23.0	23.0	17.0	15.0	15.0	
Total Split (%)	10.0%	54.2%		14.2%	58.3%		19.2%	19.2%	14.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 16 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	382	247	1646	38	274	0	333	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2452	337	508	4235	98	543	0	693	151	27	111
Arrive On Green	0.06	1.00	1.00	0.56	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4905	674	1810	5549	128	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2016	1008	247	1127	557	274	0	333	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1877	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.7	60.0	60.0	9.9	0.0	0.0	8.4	0.0	0.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.7	60.0	60.0	9.9	0.0	0.0	8.4	0.0	0.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		0.07	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	508	2900	1432	543	0	693	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	0.49	0.39	0.39	0.50	0.00	0.48	0.23	0.00	0.44
Avail Cap(c_a), veh/h	128	1900	889	508	2900	1432	543	0	693	151	0	138
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	0.0	21.1	0.0	0.0	46.9	0.0	24.5	51.4	0.0	52.3
Incr Delay (d2), s/veh	20.7	39.1	74.0	0.7	0.4	0.8	3.3	0.0	2.3	3.6	0.0	9.9
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	1.5	10.3	18.3	3.5	0.2	0.3	4.0	0.0	7.2	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.7	39.1	74.0	21.8	0.4	0.8	50.2	0.0	26.9	55.0	0.0	62.2
LnGrp LOS	E	F	F	C	A	A	D	A	C	D	A	E
Approach Vol, veh/h		3066			1931			607			96	
Approach Delay, s/veh		51.1			3.3			37.4			59.6	
Approach LOS		D			A			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.7	65.0		15.0	7.1	96.6		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	* 60		10.0	8.5	65.0		18.0				
Max Q Clear Time (g_c+I1), s	11.9	62.0		6.2	4.7	2.0		10.4				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	16.9		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		33.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

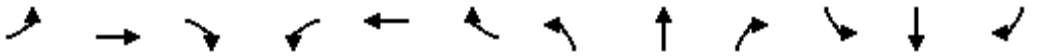
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Future Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	31.0	32.0	61.0		8.0	37.0	37.0
Total Split (%)	31.0%	31.0%	31.0%	31.0%	31.0%	31.0%	32.0%	61.0%		8.0%	37.0%	37.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	361	3	1	1	246	326	1	1	584	85
Future Volume (veh/h)	112	1	361	3	1	1	246	326	1	1	584	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	1	384	3	1	1	262	347	1	1	621	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	438	484	410	330	484	410	295	2068	6	64	1613	720
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.33	1.00	1.00	0.04	0.45	0.45
Sat Flow, veh/h	1437	1900	1610	1014	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	119	1	384	3	1	1	262	170	178	1	621	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1014	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	23.3	0.2	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Cycle Q Clear(g_c), s	6.8	0.0	23.3	0.3	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	438	484	410	330	484	410	295	1011	1063	64	1613	720
V/C Ratio(X)	0.27	0.00	0.94	0.01	0.00	0.00	0.89	0.17	0.17	0.02	0.38	0.13
Avail Cap(c_a), veh/h	445	494	419	335	494	419	516	1011	1063	81	1613	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.26	0.26	0.26
Uniform Delay (d), s/veh	30.3	27.8	36.5	27.9	27.8	27.8	32.8	0.0	0.0	46.6	18.5	16.2
Incr Delay (d2), s/veh	0.3	0.0	28.2	0.0	0.0	0.0	7.3	0.3	0.3	0.0	0.2	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	2.3	0.0	12.2	0.1	0.0	0.0	5.5	0.1	0.1	0.0	4.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	27.8	64.6	27.9	27.8	27.8	40.1	0.3	0.3	46.6	18.7	16.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	D	B	B
Approach Vol, veh/h		504			5			610			712	
Approach Delay, s/veh		56.5			27.8			17.4			18.4	
Approach LOS		E			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	61.0		30.5	19.8	49.7		30.5				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	* 56		26.0	28.5	32.0		26.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		25.3	15.7	13.5		2.3				
Green Ext Time (p_c), s	0.0	2.2		0.1	0.6	4.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.6	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	8	876	3	0	681
Future Volume (vph)	0	8	876	3	0	681
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

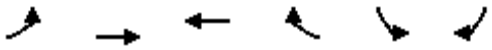
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	876	3	0	681
Future Vol, veh/h	0	8	876	3	0	681
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	922	3	0	717

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	463	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	551	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	551	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	551	-
HCM Lane V/C Ratio	-	-	0.015	-
HCM Control Delay (s)	-	-	11.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	34	94	0	0	7
Future Volume (vph)	2	34	94	0	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

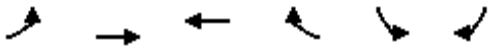
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	34	94	0	0	7
Future Vol, veh/h	2	34	94	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	36	99	0	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	139	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1507	-	-	-	859	962
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1507	-	-	-	858	962
Mov Cap-2 Maneuver	-	-	-	-	858	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	988	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1507	-	-	-	962
HCM Lane V/C Ratio	0.001	-	-	-	0.008
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	27	75	0	0	19
Future Volume (vph)	7	27	75	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	27	75	0	0	19
Future Vol, veh/h	7	27	75	0	0	19
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	28	79	0	0	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	121	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1532	-	-	-	879	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	986	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1532	-	-	-	875	987
Mov Cap-2 Maneuver	-	-	-	-	875	-
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.7
HCM LOS			A

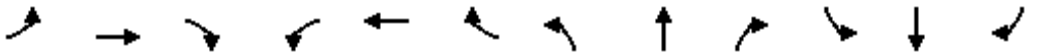
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	987
HCM Lane V/C Ratio	0.005	-	-	-	0.02
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	242	397	359	171	151	240
Future Volume (vph)	242	397	359	171	151	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3347	1470	3435		1805	3610
Flt Permitted	0.97	1.00	1.00		0.40	1.00
Satd. Flow (perm)	3347	1470	3435		758	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	441	399	190	168	267
RTOR Reduction (vph)	183	193	41	0	0	0
Lane Group Flow (vph)	302	32	548	0	168	267
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.3	14.3	55.2		78.7	77.2
Effective Green, g (s)	14.3	14.3	55.2		78.7	77.2
Actuated g/C Ratio	0.14	0.14	0.55		0.79	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	478	210	1896		790	2786
v/s Ratio Prot	c0.09		c0.16		c0.04	0.07
v/s Ratio Perm		0.02			0.13	
v/c Ratio	0.63	0.15	0.29		0.21	0.10
Uniform Delay, d1	40.4	37.5	11.9		4.1	2.8
Progression Factor	1.00	1.00	1.00		1.10	0.92
Incremental Delay, d2	2.7	0.3	0.4		0.1	0.1
Delay (s)	43.1	37.9	12.3		4.7	2.6
Level of Service	D	D	B		A	A
Approach Delay (s)	41.4		12.3			3.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

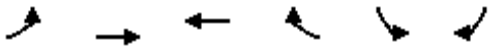
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.91			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1725			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.91	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1725			1466			1726	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	227	27	202	9	12	19	246	321	9	26	171	301
RTOR Reduction (vph)	0	0	177	0	18	0	0	0	0	0	0	87
Lane Group Flow (vph)	127	127	25	9	13	0	0	576	0	0	197	214
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.5	12.5	12.5	4.4	4.4			71.1			71.1	71.1
Effective Green, g (s)	12.5	12.5	12.5	4.4	4.4			71.1			71.1	71.1
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.71			0.71	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	214	225	237	79	75			1042			1227	1350
v/s Ratio Prot	c0.07	0.07		0.00	c0.01							
v/s Ratio Perm			0.01					c0.39			0.11	0.11
v/c Ratio	0.59	0.56	0.11	0.11	0.17			0.55			0.16	0.16
Uniform Delay, d1	41.3	41.2	38.8	45.9	46.0			6.9			4.7	4.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.95	6.62
Incremental Delay, d2	4.4	3.2	0.2	0.6	1.1			2.1			0.3	0.2
Delay (s)	45.7	44.4	39.0	46.6	47.1			9.0			9.4	31.4
Level of Service	D	D	D	D	D			A			A	C
Approach Delay (s)		42.4			47.0			9.0			22.7	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

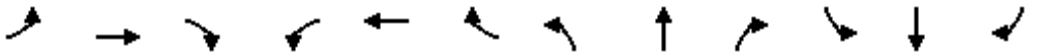
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	152	358	463	271	80
Future Volume (vph)	92	152	358	463	271	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3305		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	462	3610	3305		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	103	171	402	520	304	90
RTOR Reduction (vph)	0	0	195	0	0	27
Lane Group Flow (vph)	103	171	727	0	304	63
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	265	2075	1900		646	578
v/s Ratio Prot		0.05	0.22		c0.17	
v/s Ratio Perm	c0.22					0.04
v/c Ratio	0.39	0.08	0.38		0.47	0.11
Uniform Delay, d1	14.0	11.4	13.9		29.7	25.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.3	0.1	0.6		2.5	0.4
Delay (s)	18.2	11.5	14.5		32.2	26.1
Level of Service	B	B	B		C	C
Approach Delay (s)		14.0	14.5		30.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

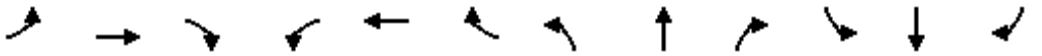
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	331	212	2501	47	502	19	170	22	13	45
RTOR Reduction (vph)	0	35	0	0	0	19	0	0	145	0	41	0
Lane Group Flow (vph)	29	1629	0	212	2501	28	261	260	26	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.66		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.76	0.62		0.74	1.11	0.02	0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.3		48.7	24.5	10.1	50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.9	57.0	0.0	35.5	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.5		58.6	81.4	10.2	85.7	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.1			78.5			75.4			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	61.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

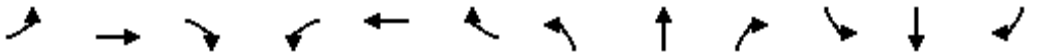
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	331	212	2501	47	502	19	170	22	13	45
RTOR Reduction (vph)	0	35	0	0	2	0	0	0	145	0	41	0
Lane Group Flow (vph)	29	1629	0	212	2546	0	261	260	26	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2622		289	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.45		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.62		0.73	0.75		0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.5		48.5	18.0		50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.3	1.6		35.5	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.6		57.8	19.6		85.7	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	B		F	F	D	D	D	
Approach Delay (s)		27.2			22.6			75.4			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Future Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3600		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3600		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	142	1	1	1	143	663	13	3	283	42
RTOR Reduction (vph)	0	0	124	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	18	1	1	0	143	675	0	3	283	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.2	71.9		1.9	60.6	60.6
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.2	71.9		1.9	60.6	60.6
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.72		0.02	0.61	0.61
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	238	2588		34	2187	978
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.09	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.5	38.1	38.1	38.1	40.9	4.9		48.2	8.4	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.25	0.69		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	55.2	3.6		49.3	8.5	7.9
Level of Service	D	D	D	D	D	D	E	A		D	A	A
Approach Delay (s)		40.5			38.1			12.6			8.8	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

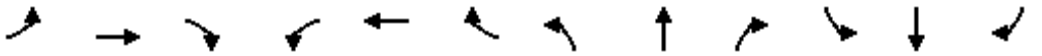
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	365	534	463	486
Future Volume (vph)	181	208	365	534	463	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3288		1805	3610
Flt Permitted	0.97	1.00	1.00		0.18	1.00
Satd. Flow (perm)	3394	1470	3288		339	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	219	384	562	487	512
RTOR Reduction (vph)	63	113	241	0	0	0
Lane Group Flow (vph)	218	16	705	0	487	512
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.1	12.1	39.4		80.9	79.4
Effective Green, g (s)	12.1	12.1	39.4		80.9	79.4
Actuated g/C Ratio	0.12	0.12	0.39		0.81	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	410	177	1295		809	2866
v/s Ratio Prot	c0.06		0.21		c0.22	0.14
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.53	0.09	0.54		0.60	0.18
Uniform Delay, d1	41.3	39.0	23.4		13.9	2.5
Progression Factor	1.00	1.00	1.00		0.63	0.56
Incremental Delay, d2	1.3	0.2	1.6		1.2	0.1
Delay (s)	42.6	39.3	25.0		10.0	1.5
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		25.0			5.7
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

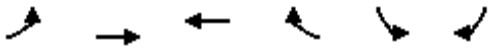
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.95			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1802			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.58			0.98	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1802			1105			1871	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	543	11	418	47	38	20	182	342	11	13	475	213
RTOR Reduction (vph)	0	0	301	0	19	0	0	0	0	0	0	89
Lane Group Flow (vph)	277	277	117	47	39	0	0	535	0	0	488	124
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.0	23.0	23.0	7.0	7.0			58.0			58.0	58.0
Effective Green, g (s)	23.0	23.0	23.0	7.0	7.0			58.0			58.0	58.0
Actuated g/C Ratio	0.23	0.23	0.23	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	394	415	437	126	126			640			1085	1102
v/s Ratio Prot	c0.16	0.15		c0.03	0.02							
v/s Ratio Perm			0.06					c0.48			0.26	0.07
v/c Ratio	0.70	0.67	0.27	0.37	0.31			0.84			0.45	0.11
Uniform Delay, d1	35.4	35.0	31.6	44.4	44.2			17.1			11.9	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.88	1.03
Incremental Delay, d2	5.6	4.0	0.3	1.9	1.4			12.2			1.3	0.2
Delay (s)	41.0	39.1	31.9	46.3	45.6			29.3			11.9	9.9
Level of Service	D	D	C	D	D			C			B	A
Approach Delay (s)		36.5			45.9			29.3			11.3	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

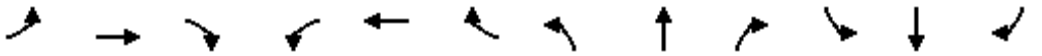
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	132	357	362	380	789	166
Future Volume (vph)	132	357	362	380	789	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3333		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	450	3610	3333		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	376	381	400	831	175
RTOR Reduction (vph)	0	0	158	0	0	19
Lane Group Flow (vph)	139	376	623	0	831	156
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	187	1504	1388		932	834
v/s Ratio Prot		0.10	0.19		c0.46	
v/s Ratio Perm	c0.31					0.10
v/c Ratio	0.74	0.25	0.45		0.89	0.19
Uniform Delay, d1	29.6	22.8	25.1		26.0	15.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	23.2	0.4	1.1		12.6	0.5
Delay (s)	52.8	23.2	26.2		38.6	16.0
Level of Service	D	C	C		D	B
Approach Delay (s)		31.2	26.2		34.7	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

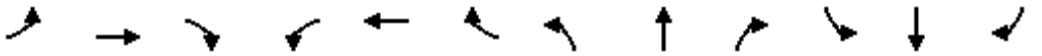
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	382	247	1646	38	263	15	333	35	12	49
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	196	0	45	0
Lane Group Flow (vph)	42	3006	0	247	1646	22	139	139	138	35	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.1	59.0		14.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.1	59.0		14.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.03	0.49		0.12	0.58	0.58	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	2802		229	2197	1098	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.43		c0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			0.07			
v/c Ratio	0.66	1.07		1.08	0.75	0.02	0.49	0.49	0.48	0.22	0.10	
Uniform Delay, d1	57.3	30.5		52.8	18.8	10.8	46.8	46.8	46.7	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.7	40.4		81.9	2.4	0.0	5.9	5.9	5.7	3.2	1.3	
Delay (s)	78.9	70.9		134.7	21.2	10.8	52.6	52.6	52.5	54.6	52.1	
Level of Service	E	E		F	C	B	D	D	D	D	D	
Approach Delay (s)		71.0			35.5			52.5			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

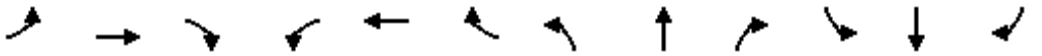
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	382	247	1646	38	263	15	333	35	12	49
RTOR Reduction (vph)	0	19	0	0	2	0	0	0	70	0	45	0
Lane Group Flow (vph)	42	3005	0	247	1682	0	139	139	263	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	6.4	59.3		14.2	67.1		18.0	18.0	32.2	10.0	10.0	
Effective Green, g (s)	6.4	59.3		14.2	67.1		18.0	18.0	32.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.49		0.12	0.56		0.15	0.15	0.27	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	101	2816		224	3187		285	285	509	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.30		0.07	0.07	c0.06	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.42	1.07		1.10	0.53		0.49	0.49	0.52	0.22	0.10	
Uniform Delay, d1	55.0	30.4		52.9	16.5		46.8	46.8	37.3	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.8	38.3		90.3	0.6		5.9	5.9	0.9	3.2	1.3	
Delay (s)	57.8	68.6		143.2	17.2		52.6	52.6	38.2	54.6	52.1	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		68.5			33.3			44.8			53.0	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Future Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	119	1	384	3	1	1	262	347	1	1	621	90
RTOR Reduction (vph)	0	0	328	0	0	1	0	0	0	0	0	29
Lane Group Flow (vph)	119	1	56	3	1	0	262	348	0	1	621	61
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	71.1		0.9	52.3	52.3
Effective Green, g (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	71.1		0.9	52.3	52.3
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.20	0.71		0.01	0.52	0.52
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	208	275	234	208	275	234	355	2565		16	1888	844
v/s Ratio Prot		0.00			0.00		c0.15	0.10		c0.00	c0.17	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.04
v/c Ratio	0.57	0.00	0.24	0.01	0.00	0.00	0.74	0.14		0.06	0.33	0.07
Uniform Delay, d1	39.9	36.6	37.9	36.6	36.6	36.6	37.7	4.6		49.1	13.7	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.12	1.31		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	0.5	0.0	0.0	0.0	6.8	0.1		1.6	0.5	0.2
Delay (s)	43.6	36.6	38.4	36.7	36.6	36.6	49.1	6.2		50.8	14.2	12.0
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.6			36.6			24.6			14.0	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 7.1:

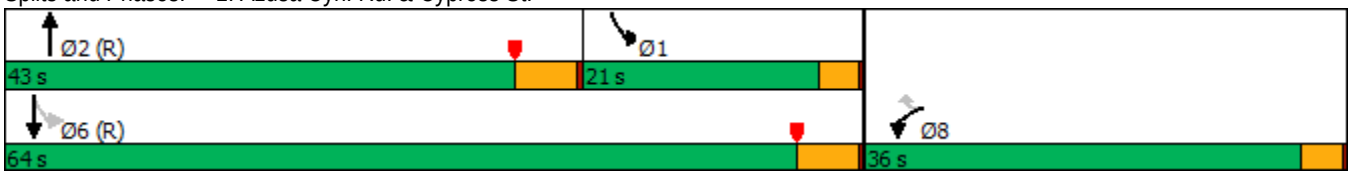
2040 PLUS SITE BASELINE LAND USE CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	261	419	357	186	161	244
Future Volume (vph)	261	419	357	186	161	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	36.0	36.0	43.0		21.0	64.0
Total Split (%)	36.0%	36.0%	43.0%		21.0%	64.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	261	419	357	186	161	244
Future Volume (veh/h)	261	419	357	186	161	244
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	252	507	397	207	179	271
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	355	632	876	451	784	2595
Arrive On Green	0.20	0.20	0.38	0.38	0.58	1.00
Sat Flow, veh/h	1810	3220	2400	1187	1810	3705
Grp Volume(v), veh/h	252	507	310	294	179	271
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1686	1810	1805
Q Serve(g_s), s	13.0	15.0	12.8	13.1	0.0	0.0
Cycle Q Clear(g_c), s	13.0	15.0	12.8	13.1	0.0	0.0
Prop In Lane	1.00	1.00		0.70	1.00	
Lane Grp Cap(c), veh/h	355	632	686	641	784	2595
V/C Ratio(X)	0.71	0.80	0.45	0.46	0.23	0.10
Avail Cap(c_a), veh/h	588	1047	686	641	784	2595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	37.5	38.3	23.2	23.3	7.9	0.0
Incr Delay (d2), s/veh	2.6	2.4	2.1	2.4	0.1	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	5.9	6.0	5.8	5.5	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	40.8	25.3	25.6	8.1	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	759		604			450
Approach Delay, s/veh	40.6		25.5			3.3
Approach LOS	D		C			A

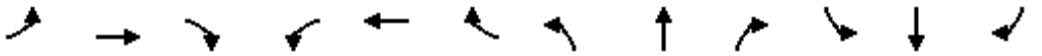
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.9	43.0			76.9	23.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	17.5	* 38			59.0	32.5
Max Q Clear Time (g_c+I1), s	2.0	15.1			2.0	17.0
Green Ext Time (p_c), s	0.4	3.9			1.9	2.6

Intersection Summary	
HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	52.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	216	16	206	8	9	22	249	297	9	21	167	303
Future Vol, veh/h	216	16	206	8	9	22	249	297	9	21	167	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	230	17	219	9	10	23	265	316	10	22	178	322
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.9	12	114.6	17
HCM LOS	C	B	F	C

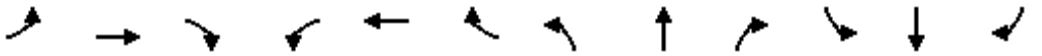
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	93%	0%	47%	0%	11%	0%
Vol Thru, %	54%	7%	0%	53%	0%	89%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	232	206	17	22	188	303
LT Vol	249	216	0	8	0	21	0
Through Vol	297	16	0	9	0	167	0
RT Vol	9	0	206	0	22	0	303
Lane Flow Rate	590	247	219	18	23	200	322
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.154	0.546	0.412	0.045	0.052	0.399	0.575
Departure Headway (Hd)	7.037	8.351	7.145	9.455	8.474	7.495	6.717
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	434	506	381	425	484	542
Service Time	5.087	6.051	4.845	7.155	6.174	5.195	4.417
HCM Lane V/C Ratio	1.135	0.569	0.433	0.047	0.054	0.413	0.594
HCM Control Delay	114.6	20.6	14.8	12.6	11.6	15.1	18.1
HCM Lane LOS	F	C	B	B	B	C	C
HCM 95th-tile Q	20.5	3.2	2	0.1	0.2	1.9	3.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	46%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (veh/h)	216	16	206	8	9	22	249	297	9	21	167	303
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	242	0	219	9	10	23	265	316	10	22	178	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	559	0	249	50	14	33	431	478	15	143	1138	1124
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	3619	0	1610	1810	512	1177	543	685	21	148	1631	1610
Grp Volume(v), veh/h	242	0	219	9	0	33	591	0	0	200	0	322
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1688	1250	0	0	1779	0	1610
Q Serve(g_s), s	6.1	0.0	13.3	0.5	0.0	1.9	25.2	0.0	0.0	0.0	0.0	7.6
Cycle Q Clear(g_c), s	6.1	0.0	13.3	0.5	0.0	1.9	28.8	0.0	0.0	3.6	0.0	7.6
Prop In Lane	1.00		1.00	1.00		0.70	0.45		0.02	0.11		1.00
Lane Grp Cap(c), veh/h	559	0	249	50	0	47	924	0	0	1281	0	1124
V/C Ratio(X)	0.43	0.00	0.88	0.18	0.00	0.71	0.64	0.00	0.00	0.16	0.00	0.29
Avail Cap(c_a), veh/h	579	0	258	290	0	270	924	0	0	1281	0	1124
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	1.00	1.00	0.00	1.00	0.92	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	41.4	47.5	0.0	48.2	9.3	0.0	0.0	5.1	0.0	5.7
Incr Delay (d2), s/veh	0.5	0.0	27.1	1.7	0.0	17.6	3.1	0.0	0.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.9	0.2	0.0	1.0	7.3	0.0	0.0	1.3	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.0	68.5	49.2	0.0	65.9	12.4	0.0	0.0	5.4	0.0	6.3
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		461			42			591			522	
Approach Delay, s/veh		52.9			62.3			12.4			6.0	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.8		19.4		73.8		6.8				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		30.8		15.3		9.6		3.9				
Green Ext Time (p_c), s		5.4		0.1		2.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			23.2									
HCM 6th LOS			C									

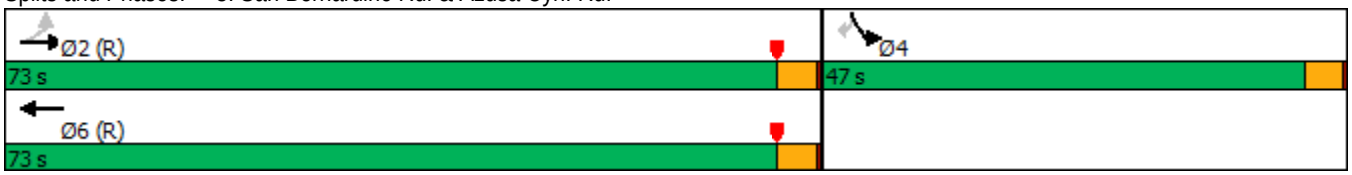
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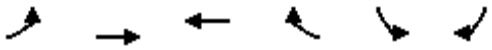
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	160	377	474	287	84
Future Volume (vph)	90	160	377	474	287	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	160	377	474	287	84
Future Volume (veh/h)	90	160	377	474	287	84
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	101	180	424	533	322	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	277	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	596	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	101	180	424	533	322	94
Grp Sat Flow(s),veh/h/ln	596	1805	1805	1610	1810	1610
Q Serve(g_s), s	15.6	2.7	15.7	25.2	16.7	4.8
Cycle Q Clear(g_c), s	40.8	2.7	15.7	25.2	16.7	4.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	277	2076	1038	926	648	577
V/C Ratio(X)	0.36	0.09	0.41	0.58	0.50	0.16
Avail Cap(c_a), veh/h	277	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	11.4	14.2	16.2	30.1	26.2
Incr Delay (d2), s/veh	3.7	0.1	1.2	2.6	2.7	0.6
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	1.0	6.3	9.3	7.7	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.8	11.5	15.4	18.8	32.8	26.8
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		281	957		416	
Approach Delay, s/veh		19.2	17.3		31.4	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

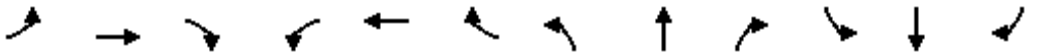
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	329	209	2647	51	540	0	169	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2120	522	240	2245	951	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	3800	1610	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1147	515	209	2647	51	540	0	169	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.0	27.0	13.6	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.0	27.0	13.6	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1824	818	240	2245	951	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	1.18	0.05	0.99	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1824	818	351	2245	951	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.2	23.3	51.0	24.6	10.4	51.0	0.0	48.4	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	14.8	85.6	0.1	36.8	0.0	15.1	2.2	0.0	10.0
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	1.3	11.7	11.0	7.0	54.4	0.6	10.8	0.0	5.8	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	24.9	26.9	65.8	110.1	10.5	87.7	0.0	63.6	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	F	B	F	A	E	D	A	E
Approach Vol, veh/h		1693			2907			709			86	
Approach Delay, s/veh		26.7			105.2			82.0			59.9	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.2	4.0	72.9		19.9				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		76.8	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

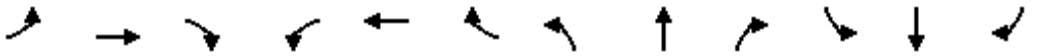
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.4		26.6	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.2%		22.2%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	329	209	2647	51	540	0	169	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2120	522	240	3293	63	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	5574	107	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1147	515	209	1800	898	540	0	169	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.0	27.0	13.6	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.0	27.0	13.6	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1824	818	240	2245	1111	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	0.80	0.81	0.99	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1824	818	348	2245	1111	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.2	23.3	51.1	19.1	19.2	51.0	0.0	48.4	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	15.1	3.1	6.3	36.8	0.0	15.1	2.2	0.0	10.0
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	1.3	11.7	11.0	7.0	18.3	19.3	10.8	0.0	5.8	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	24.9	26.9	66.1	22.2	25.6	87.7	0.0	63.6	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	C	C	F	A	E	D	A	E
Approach Vol, veh/h		1693			2907			709			86	
Approach Delay, s/veh		26.7			26.4			82.0			59.9	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.1	50.4		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.2	4.0	46.8		19.9				
Green Ext Time (p_c), s	0.3	11.5		0.1	0.0	19.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		34.3
HCM 6th LOS		C

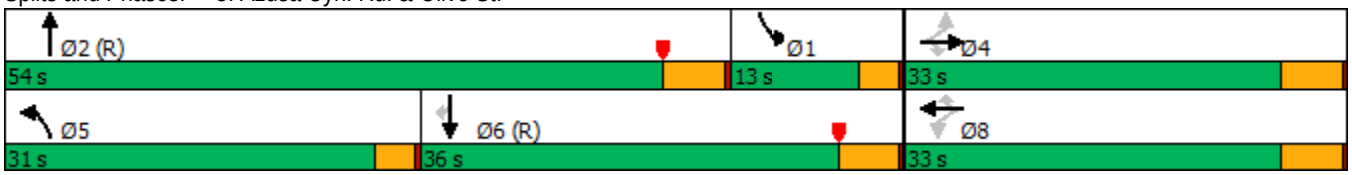
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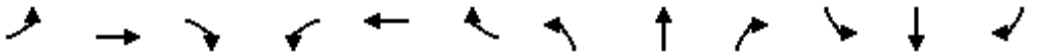
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Future Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	135	1	1	1	135	628	13	3	268	39
Future Volume (veh/h)	86	2	135	1	1	1	135	628	13	3	268	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	147	1	1	1	147	683	14	3	291	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	237	219	185	216	219	185	180	1773	36	443	2348	1047
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.20	0.98	0.98	0.24	0.65	0.65
Sat Flow, veh/h	1437	1900	1610	1258	1900	1610	1810	3618	74	1810	3610	1610
Grp Volume(v), veh/h	93	2	147	1	1	1	147	341	356	3	291	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1258	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	8.9	0.1	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.9	0.2	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	237	219	185	216	219	185	180	884	924	443	2348	1047
V/C Ratio(X)	0.39	0.01	0.79	0.00	0.00	0.01	0.82	0.39	0.39	0.01	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	423	532	451	498	884	924	443	2348	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.73	0.73	0.73
Uniform Delay (d), s/veh	41.9	39.2	43.1	39.3	39.2	39.2	39.2	0.5	0.5	28.6	6.6	6.3
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.2	1.2	1.1	0.0	0.1	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	2.2	0.0	3.9	0.0	0.0	0.0	3.5	0.4	0.4	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	39.2	50.5	39.3	39.2	39.2	47.4	1.7	1.6	28.6	6.7	6.3
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		242			3			844			336	
Approach Delay, s/veh		47.5			39.2			9.6			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.5	54.0		16.5	13.4	70.0		16.5				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		10.9	9.8	5.1		2.2				
Green Ext Time (p_c), s	0.0	5.0		0.6	0.3	2.0		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	531	4	0	491
Future Volume (vph)	0	1	531	4	0	491
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

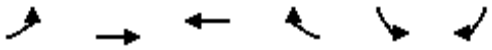
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	531	4	0	491
Future Vol, veh/h	0	1	531	4	0	491
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	559	4	0	517

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	282	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	721	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	721	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	721	-
HCM Lane V/C Ratio	-	-	0.001	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	44	38	0	0	1
Future Volume (vph)	2	44	38	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

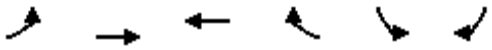
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	44	38	0	0	1
Future Vol, veh/h	2	44	38	0	0	1
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	46	40	0	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	40	0	-	0	90	40
Stage 1	-	-	-	-	40	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1583	-	-	-	915	1037
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1583	-	-	-	914	1037
Mov Cap-2 Maneuver	-	-	-	-	914	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	1037
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	36	35	0	0	3
Future Volume (vph)	8	36	35	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	36	35	0	0	3
Future Vol, veh/h	8	36	35	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	38	37	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	91	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	914	1041
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	909	1041
Mov Cap-2 Maneuver	-	-	-	-	909	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	974	-

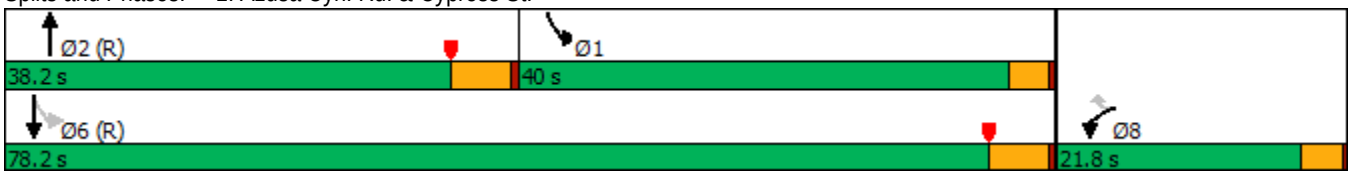
Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1041
HCM Lane V/C Ratio	0.005	-	-	-	0.003
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	377	578	492	484
Future Volume (vph)	196	223	377	578	492	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	21.8	21.8	38.2		40.0	78.2
Total Split (%)	21.8%	21.8%	38.2%		40.0%	78.2%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	196	223	377	578	492	484
Future Volume (veh/h)	196	223	377	578	492	484
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	288	147	397	608	518	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	427	190	599	535	823	2877
Arrive On Green	0.12	0.12	0.33	0.33	0.69	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	288	147	397	608	518	509
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.6	8.9	18.8	33.2	9.2	0.0
Cycle Q Clear(g_c), s	7.6	8.9	18.8	33.2	9.2	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	427	190	599	535	823	2877
V/C Ratio(X)	0.67	0.77	0.66	1.14	0.63	0.18
Avail Cap(c_a), veh/h	662	295	599	535	823	2877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.87	0.87
Uniform Delay (d), s/veh	42.3	42.8	28.6	33.4	9.8	0.0
Incr Delay (d2), s/veh	1.9	6.6	5.7	82.7	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	3.5	3.8	8.9	24.8	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	49.4	34.3	116.1	11.1	0.1
LnGrp LOS	D	D	C	F	B	A
Approach Vol, veh/h	435		1005			1027
Approach Delay, s/veh	45.9		83.8			5.7
Approach LOS	D		F			A

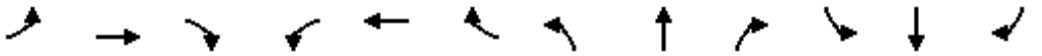
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.5	38.2			84.7	15.3
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.2	18.3
Max Q Clear Time (g_c+I1), s	11.2	35.2			2.0	10.9
Green Ext Time (p_c), s	1.7	0.0			3.9	0.9

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	136.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	566	8	438	44	28	22	191	350	12	14	469	210
Future Vol, veh/h	566	8	438	44	28	22	191	350	12	14	469	210
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	584	8	452	45	29	23	197	361	12	14	484	216
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

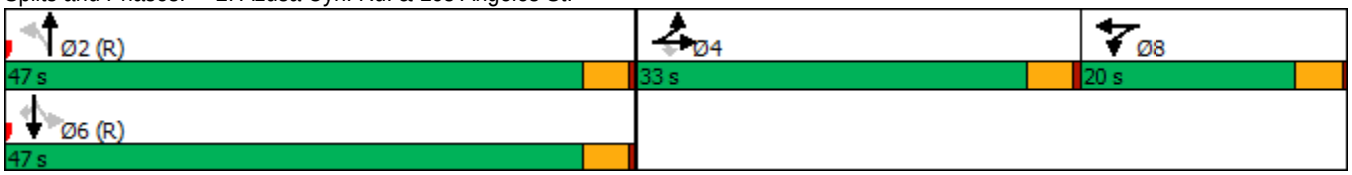
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	156.1	16	182.5	88.1
HCM LOS	F	C	F	F

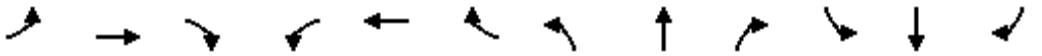
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	35%	99%	0%	61%	0%	3%	0%
Vol Thru, %	63%	1%	0%	39%	0%	97%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	553	574	438	72	22	483	210
LT Vol	191	566	0	44	0	14	0
Through Vol	350	8	0	28	0	469	0
RT Vol	12	0	438	0	22	0	210
Lane Flow Rate	570	592	452	74	23	498	216
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.313	1.426	0.939	0.209	0.057	1.144	0.455
Departure Headway (Hd)	8.667	9.413	8.162	11.162	10.09	8.856	8.11
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	422	391	447	324	357	413	448
Service Time	6.667	7.113	5.862	8.862	7.79	6.556	5.81
HCM Lane V/C Ratio	1.351	1.514	1.011	0.228	0.064	1.206	0.482
HCM Control Delay	182.5	231.4	57.4	16.8	13.4	118.8	17.4
HCM Lane LOS	F	F	F	C	B	F	C
HCM 95th-tile Q	24.6	27.7	10.9	0.8	0.2	17.4	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	33.0	33.0	33.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (veh/h)	566	8	438	44	28	22	191	350	12	14	469	210
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	590	0	452	45	29	23	197	361	12	14	484	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1050	0	467	86	47	37	272	454	15	48	1011	873
Arrive On Green	0.29	0.00	0.29	0.05	0.05	0.05	0.54	0.54	0.54	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	981	778	411	837	27	21	1864	1610
Grp Volume(v), veh/h	590	0	452	45	0	52	570	0	0	498	0	216
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1760	1275	0	0	1885	0	1610
Q Serve(g_s), s	13.8	0.0	27.7	2.4	0.0	2.9	33.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.8	0.0	27.7	2.4	0.0	2.9	36.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.44	0.35		0.02	0.03		1.00
Lane Grp Cap(c), veh/h	1050	0	467	86	0	84	740	0	0	1059	0	873
V/C Ratio(X)	0.56	0.00	0.97	0.52	0.00	0.62	0.77	0.00	0.00	0.47	0.00	0.25
Avail Cap(c_a), veh/h	1050	0	467	290	0	282	740	0	0	1059	0	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.44	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	35.0	46.5	0.0	46.7	18.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	33.4	4.8	0.0	7.2	3.5	0.0	0.0	1.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	14.5	1.2	0.0	1.4	10.7	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	68.4	51.3	0.0	53.9	21.8	0.0	0.0	1.5	0.0	0.7
LnGrp LOS	C	A	E	D	A	D	C	A	A	A	A	A
Approach Vol, veh/h		1042			97			570			714	
Approach Delay, s/veh		47.1			52.7			21.8			1.2	
Approach LOS		D			D			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.2		33.0		58.2		8.8				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		38.3		29.7		2.0		4.9				
Green Ext Time (p_c), s		1.9		0.0		4.5		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			27.9									
HCM 6th LOS			C									

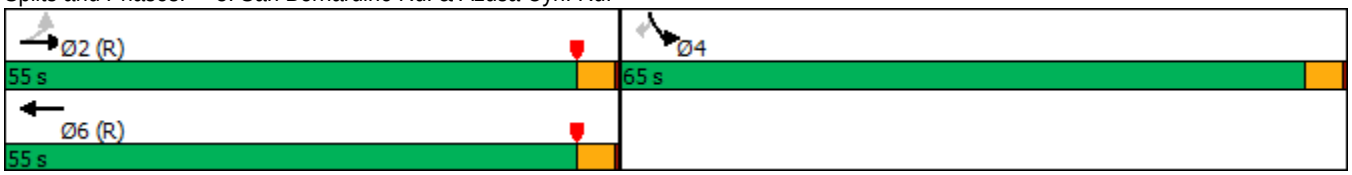
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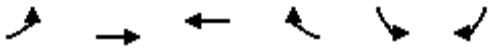
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	405	829	168
Future Volume (vph)	139	375	385	405	829	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	55.0	55.0	55.0		65.0	65.0
Total Split (%)	45.8%	45.8%	45.8%		54.2%	54.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	139	375	385	405	829	168
Future Volume (veh/h)	139	375	385	405	829	168
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	395	405	426	873	177
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	206	1534	767	684	920	819
Arrive On Green	0.43	0.43	0.43	0.43	0.51	0.51
Sat Flow, veh/h	671	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	146	395	405	426	873	177
Grp Sat Flow(s),veh/h/ln	671	1805	1805	1610	1810	1610
Q Serve(g_s), s	26.1	8.5	20.0	24.8	55.0	7.3
Cycle Q Clear(g_c), s	50.9	8.5	20.0	24.8	55.0	7.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	206	1534	767	684	920	819
V/C Ratio(X)	0.71	0.26	0.53	0.62	0.95	0.22
Avail Cap(c_a), veh/h	206	1534	767	684	920	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	22.3	25.6	27.0	28.0	16.3
Incr Delay (d2), s/veh	18.5	0.4	2.6	4.2	19.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.6	8.8	10.0	27.8	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.4	22.7	28.2	31.2	47.7	16.9
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		541	831		1050	
Approach Delay, s/veh		34.2	29.7		42.5	
Approach LOS		C	C		D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		65.0		55.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		51.0		61.0		51.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	36.3	
HCM 6th LOS	D	

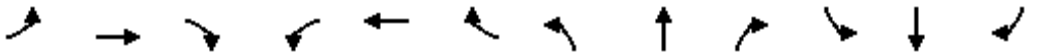
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.8	65.0		17.0	71.2	71.2	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	9.0%	54.2%		14.2%	59.3%	59.3%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 18 (15%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	2833	400	256	1664	41	275	0	333	37	13	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	2460	331	204	2202	933	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4920	661	1810	3800	1610	3619	0	1610	1810	322	1337
Grp Volume(v), veh/h	46	2155	1078	256	1664	41	275	0	333	37	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1659
Q Serve(g_s), s	3.0	60.0	60.0	13.5	39.3	1.3	8.4	0.0	18.0	2.3	0.0	4.6
Cycle Q Clear(g_c), s	3.0	60.0	60.0	13.5	39.3	1.3	8.4	0.0	18.0	2.3	0.0	4.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	60	1900	891	204	2202	933	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.13	1.21	1.26	0.76	0.04	0.51	0.00	1.38	0.25	0.00	0.48
Avail Cap(c_a), veh/h	110	1900	891	204	2202	933	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.6	30.0	30.0	53.3	18.9	10.9	46.9	0.0	51.0	51.5	0.0	52.5
Incr Delay (d2), s/veh	18.7	67.6	105.1	149.4	2.5	0.1	3.3	0.0	193.8	3.8	0.0	11.7
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	1.7	42.7	49.3	14.4	16.2	0.5	4.0	0.0	20.2	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.3	97.6	135.1	202.6	21.3	11.0	50.2	0.0	244.8	55.3	0.0	64.2
LnGrp LOS	E	F	F	F	C	B	D	A	F	E	A	E
Approach Vol, veh/h		3279			1961			608			104	
Approach Delay, s/veh		109.6			44.8			156.8			61.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.5	74.5		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	7.3	66.2		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.6	5.0	41.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	13.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		92.2	
HCM 6th LOS		F	

Notes

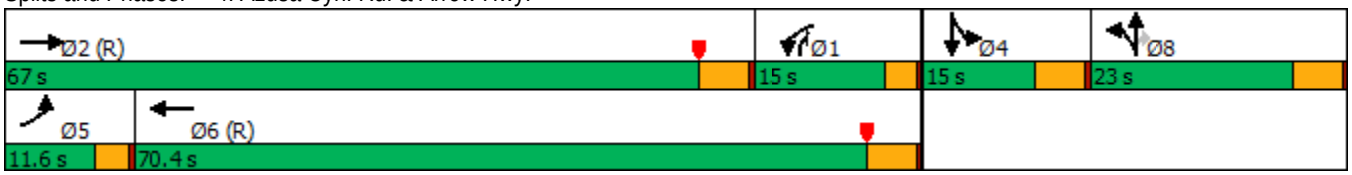
User approved volume balancing among the lanes for turning movement.

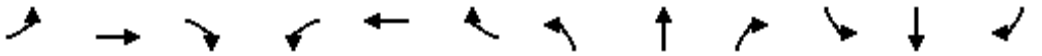
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	11.6	67.0		15.0	70.4		23.0	23.0	15.0	15.0	15.0	
Total Split (%)	9.7%	55.8%		12.5%	58.7%		19.2%	19.2%	12.5%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	2663	376	241	1564	39	259	0	313	35	12	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	2542	342	726	4983	124	543	0	888	151	26	112
Arrive On Green	0.05	0.77	0.77	0.60	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4920	661	1810	5537	138	3619	0	1610	1810	316	1342
Grp Volume(v), veh/h	43	2026	1013	241	1073	530	259	0	313	35	0	63
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1875	1810	0	1610	1810	0	1658
Q Serve(g_s), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Cycle Q Clear(g_c), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Prop In Lane	1.00		0.37	1.00		0.07	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	56	1963	920	726	3420	1687	543	0	888	151	0	138
V/C Ratio(X)	0.77	1.03	1.10	0.33	0.31	0.31	0.48	0.00	0.35	0.23	0.00	0.46
Avail Cap(c_a), veh/h	122	1963	920	726	3420	1687	543	0	888	151	0	138
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.8	13.5	13.5	15.9	0.0	0.0	46.7	0.0	15.0	51.4	0.0	52.4
Incr Delay (d2), s/veh	20.1	29.0	61.2	0.3	0.2	0.5	2.9	0.0	1.1	3.6	0.0	10.5
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	1.6	17.4	24.5	2.9	0.1	0.2	3.8	0.0	5.0	1.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	42.5	74.7	16.1	0.2	0.5	49.6	0.0	16.1	55.0	0.0	62.9
LnGrp LOS	E	F	F	B	A	A	D	A	B	D	A	E
Approach Vol, veh/h		3082			1844			572			98	
Approach Delay, s/veh		53.6			2.4			31.3			60.1	
Approach LOS		D			A			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.2	67.0		15.0	7.2	113.0		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	* 62		10.0	8.1	65.4		18.0				
Max Q Clear Time (g_c+I1), s	9.9	64.0		6.3	4.8	2.0		9.9				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	15.5		1.4				

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

Notes

User approved volume balancing among the lanes for turning movement.

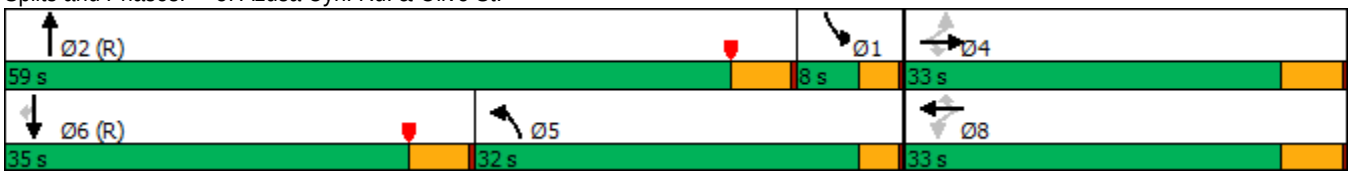
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

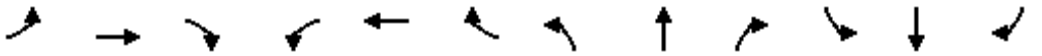
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Future Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	32.0	59.0		8.0	35.0	35.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	32.0%	59.0%		8.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1	380	3	1	1	258	340	1	1	592	85
Future Volume (veh/h)	116	1	380	3	1	1	258	340	1	1	592	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	1	404	3	1	1	274	362	1	1	630	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	457	510	432	339	510	432	537	1994	6	102	1083	483
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.59	1.00	1.00	0.06	0.30	0.30
Sat Flow, veh/h	1437	1900	1610	996	1900	1610	1810	3693	10	1810	3610	1610
Grp Volume(v), veh/h	123	1	404	3	1	1	274	177	186	1	630	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	996	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.8	0.0	24.5	0.2	0.0	0.0	8.8	0.0	0.0	0.1	14.8	4.1
Cycle Q Clear(g_c), s	6.9	0.0	24.5	0.3	0.0	0.0	8.8	0.0	0.0	0.1	14.8	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	457	510	432	339	510	432	537	975	1025	102	1083	483
V/C Ratio(X)	0.27	0.00	0.93	0.01	0.00	0.00	0.51	0.18	0.18	0.01	0.58	0.19
Avail Cap(c_a), veh/h	474	532	451	350	532	451	537	975	1025	102	1083	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.09	0.09	0.09
Uniform Delay (d), s/veh	29.3	26.8	35.7	26.9	26.8	26.8	16.1	0.0	0.0	44.5	29.7	26.0
Incr Delay (d2), s/veh	0.3	0.0	26.3	0.0	0.0	0.0	0.6	0.3	0.3	0.0	0.2	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	2.4	0.0	12.6	0.1	0.0	0.0	3.0	0.1	0.1	0.0	6.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	26.8	62.1	26.9	26.8	26.8	16.7	0.3	0.3	44.5	29.9	26.0
LnGrp LOS	C	C	E	C	C	C	B	A	A	D	C	C
Approach Vol, veh/h		528			5			637			721	
Approach Delay, s/veh		54.4			26.8			7.3			29.4	
Approach LOS		D			C			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	59.0		31.8	33.2	35.0		31.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	54.0		28.0	28.5	30.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		26.5	10.8	16.8		2.3				
Green Ext Time (p_c), s	0.0	2.3		0.3	0.7	3.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			29.0									
HCM 6th LOS			C									



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	3	937	1	0	693
Future Volume (vph)	0	3	937	1	0	693
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

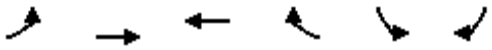
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	937	1	0	693
Future Vol, veh/h	0	3	937	1	0	693
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	986	1	0	729

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	494	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	526	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	526	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	526	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	11.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	33	90	0	0	3
Future Volume (vph)	1	33	90	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

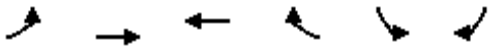
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	33	90	0	0	3
Future Vol, veh/h	1	33	90	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	35	95	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	95	0	-	0	132	95
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1512	-	-	-	867	967
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	866	967
Mov Cap-2 Maneuver	-	-	-	-	866	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	-	967
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	31	84	0	0	6
Future Volume (vph)	2	31	84	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	31	84	0	0	6
Future Vol, veh/h	2	31	84	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	33	88	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	125	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	875	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	874	976
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.7
HCM LOS			A

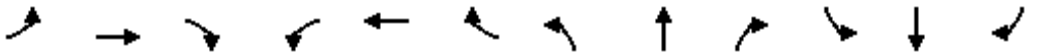
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	976
HCM Lane V/C Ratio	0.001	-	-	-	0.006
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	261	419	357	186	161	244
Future Volume (vph)	261	419	357	186	161	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3424		1805	3610
Flt Permitted	0.97	1.00	1.00		0.39	1.00
Satd. Flow (perm)	3351	1470	3424		741	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	290	466	397	207	179	271
RTOR Reduction (vph)	173	204	49	0	0	0
Lane Group Flow (vph)	341	38	555	0	179	271
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	15.9	15.9	54.6		77.1	75.6
Effective Green, g (s)	15.9	15.9	54.6		77.1	75.6
Actuated g/C Ratio	0.16	0.16	0.55		0.77	0.76
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	532	233	1869		757	2729
v/s Ratio Prot	c0.10		c0.16		c0.04	0.08
v/s Ratio Perm		0.03			0.14	
v/c Ratio	0.64	0.17	0.30		0.24	0.10
Uniform Delay, d1	39.4	36.3	12.3		4.9	3.2
Progression Factor	1.00	1.00	1.00		1.08	0.92
Incremental Delay, d2	2.6	0.3	0.4		0.2	0.1
Delay (s)	42.0	36.7	12.7		5.5	3.0
Level of Service	D	D	B		A	A
Approach Delay (s)	40.3		12.7			4.0
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

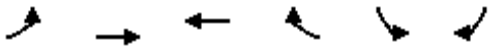
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1701			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.76			0.93	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1701			1447			1758	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	230	17	219	9	10	23	265	316	10	22	178	322
RTOR Reduction (vph)	0	0	192	0	22	0	0	0	0	0	0	92
Lane Group Flow (vph)	124	123	27	9	11	0	0	591	0	0	200	230
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.4	12.4	12.4	4.3	4.3			71.3			71.3	71.3
Effective Green, g (s)	12.4	12.4	12.4	4.3	4.3			71.3			71.3	71.3
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.71			0.71	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	212	223	235	77	73			1031			1253	1354
v/s Ratio Prot	c0.07	0.07		0.00	c0.01							
v/s Ratio Perm			0.01					c0.41			0.11	0.12
v/c Ratio	0.58	0.55	0.12	0.12	0.15			0.57			0.16	0.17
Uniform Delay, d1	41.4	41.2	38.9	46.0	46.1			7.0			4.6	4.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			2.08	7.27
Incremental Delay, d2	4.1	2.9	0.2	0.7	1.0			2.3			0.3	0.3
Delay (s)	45.4	44.1	39.1	46.7	47.0			9.3			9.9	34.3
Level of Service	D	D	D	D	D			A			A	C
Approach Delay (s)		42.1			47.0			9.3			25.0	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

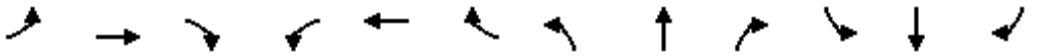
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	160	377	474	287	84
Future Volume (vph)	90	160	377	474	287	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3308		1805	1615
Flt Permitted	0.23	1.00	1.00		0.95	1.00
Satd. Flow (perm)	438	3610	3308		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	101	180	424	533	322	94
RTOR Reduction (vph)	0	0	190	0	0	26
Lane Group Flow (vph)	101	180	767	0	322	68
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	251	2075	1902		646	578
v/s Ratio Prot		0.05	c0.23		c0.18	
v/s Ratio Perm	0.23					0.04
v/c Ratio	0.40	0.09	0.40		0.50	0.12
Uniform Delay, d1	14.1	11.4	14.1		30.1	25.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	0.1	0.6		2.7	0.4
Delay (s)	18.8	11.5	14.7		32.8	26.2
Level of Service	B	B	B		C	C
Approach Delay (s)		14.1	14.7		31.3	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

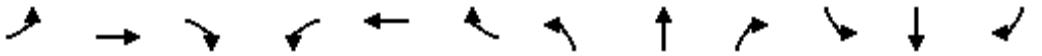
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	329	209	2647	51	525	21	169	24	14	48
RTOR Reduction (vph)	0	34	0	0	0	21	0	0	144	0	44	0
Lane Group Flow (vph)	31	1628	0	209	2647	30	273	273	25	24	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.70		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.82	0.62		0.73	1.18	0.03	0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.3		48.6	24.5	10.1	50.6	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.2	84.2	0.0	43.6	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.4		57.9	108.6	10.2	94.2	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.4			103.3			82.4			52.6	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	75.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

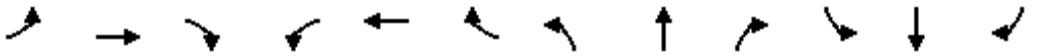
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	329	209	2647	51	525	21	169	24	14	48
RTOR Reduction (vph)	0	34	0	0	2	0	0	0	144	0	44	0
Lane Group Flow (vph)	31	1628	0	209	2696	0	273	273	25	24	18	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.47		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.82	0.62		0.73	0.80		0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.3		48.6	18.9		50.6	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.2	2.1		43.6	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.4		57.9	21.0		94.2	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	C		F	F	D	D	D	
Approach Delay (s)		27.4			23.6			82.4			52.6	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Future Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	147	1	1	1	147	683	14	3	291	42
RTOR Reduction (vph)	0	0	128	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	19	1	1	0	147	696	0	3	291	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.72		0.02	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	243	2587		34	2176	973
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.27		0.09	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.6	38.1	38.1	38.1	40.7	4.9		48.2	8.6	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.24	0.67		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	54.4	3.5		49.3	8.7	8.1
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.4			38.1			12.4			9.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

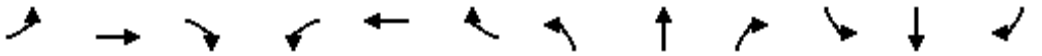
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	377	578	492	484
Future Volume (vph)	196	223	377	578	492	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3282		1805	3610
Flt Permitted	0.97	1.00	1.00		0.15	1.00
Satd. Flow (perm)	3394	1470	3282		290	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	235	397	608	518	509
RTOR Reduction (vph)	62	121	254	0	0	0
Lane Group Flow (vph)	240	18	751	0	518	509
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.6	12.6	38.9		80.4	78.9
Effective Green, g (s)	12.6	12.6	38.9		80.4	78.9
Actuated g/C Ratio	0.13	0.13	0.39		0.80	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	427	185	1276		786	2848
v/s Ratio Prot	c0.07		0.23		c0.24	0.14
v/s Ratio Perm		0.01			c0.29	
v/c Ratio	0.56	0.09	0.59		0.66	0.18
Uniform Delay, d1	41.1	38.7	24.2		15.9	2.6
Progression Factor	1.00	1.00	1.00		0.80	0.30
Incremental Delay, d2	1.7	0.2	2.0		1.9	0.1
Delay (s)	42.8	38.9	26.2		14.6	0.9
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		26.2			7.8
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

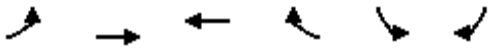
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.93			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1774			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.54			0.98	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1774			1033			1866	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	584	8	452	45	29	23	197	361	12	14	484	216
RTOR Reduction (vph)	0	0	296	0	21	0	0	0	0	0	0	95
Lane Group Flow (vph)	298	294	156	45	31	0	0	570	0	0	498	121
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	24.0	24.0	24.0	7.9	7.9			56.1			56.1	56.1
Effective Green, g (s)	24.0	24.0	24.0	7.9	7.9			56.1			56.1	56.1
Actuated g/C Ratio	0.24	0.24	0.24	0.08	0.08			0.56			0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	411	433	456	142	140			579			1046	1065
v/s Ratio Prot	c0.17	0.16		c0.02	0.02							
v/s Ratio Perm			0.08					c0.55			0.27	0.06
v/c Ratio	0.73	0.68	0.34	0.32	0.22			0.98			0.48	0.11
Uniform Delay, d1	35.0	34.5	31.5	43.5	43.2			21.5			13.1	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.73	0.82
Incremental Delay, d2	6.2	4.2	0.4	1.3	0.8			33.6			1.5	0.2
Delay (s)	41.2	38.7	31.9	44.8	44.0			55.1			11.1	8.7
Level of Service	D	D	C	D	D			E			B	A
Approach Delay (s)		36.5			44.3			55.1			10.3	
Approach LOS		D			D			E			B	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

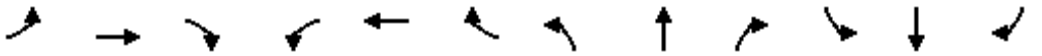
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	405	829	168
Future Volume (vph)	139	375	385	405	829	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.22	1.00	1.00		0.95	1.00
Satd. Flow (perm)	415	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	395	405	426	873	177
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	146	395	673	0	873	159
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	51.0	51.0	51.0		61.0	61.0
Effective Green, g (s)	51.0	51.0	51.0		61.0	61.0
Actuated g/C Ratio	0.42	0.42	0.42		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	176	1534	1416		917	820
v/s Ratio Prot		0.11	0.20		c0.48	
v/s Ratio Perm	c0.35					0.10
v/c Ratio	0.83	0.26	0.48		0.95	0.19
Uniform Delay, d1	30.6	22.3	24.9		28.1	16.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	34.4	0.4	1.1		20.1	0.5
Delay (s)	65.0	22.7	26.0		48.3	16.6
Level of Service	E	C	C		D	B
Approach Delay (s)		34.1	26.0		42.9	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

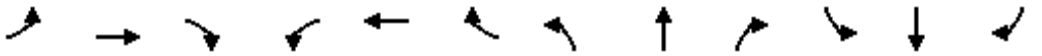
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	46	2833	400	256	1664	41	264	16	333	37	13	54
RTOR Reduction (vph)	0	18	0	0	0	18	0	0	182	0	50	0
Lane Group Flow (vph)	46	3216	0	256	1664	23	140	140	151	37	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	5.8	60.0		13.5	67.7	67.7	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	5.8	60.0		13.5	67.7	67.7	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.05	0.50		0.11	0.56	0.56	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	91	2850		213	2143	1071	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.56		c0.13	0.44		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.51	1.13		1.20	0.78	0.02	0.49	0.49	0.53	0.23	0.11	
Uniform Delay, d1	55.7	30.0		53.2	20.3	11.5	46.8	46.8	47.1	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.4	62.8		126.9	2.8	0.0	5.9	5.9	6.9	3.4	1.4	
Delay (s)	60.1	92.8		180.1	23.1	11.6	52.7	52.7	54.0	54.9	52.3	
Level of Service	E	F		F	C	B	D	D	D	D	D	
Approach Delay (s)		92.4			43.4			53.4			53.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		

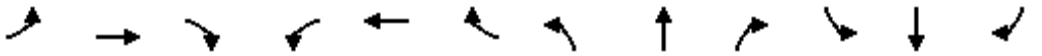
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	71	0	47	0
Lane Group Flow (vph)	43	3021	0	241	1601	0	131	132	242	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	6.2	61.3		12.2	67.3		18.0	18.0	30.2	10.0	10.0	
Effective Green, g (s)	6.2	61.3		12.2	67.3		18.0	18.0	30.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.51		0.10	0.56		0.15	0.15	0.25	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	98	2911		193	3196		285	285	478	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.28		0.07	0.07	c0.05	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	1.04		1.25	0.50		0.46	0.46	0.51	0.22	0.10	
Uniform Delay, d1	55.2	29.4		53.9	16.1		46.6	46.6	38.5	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	27.5		147.5	0.6		5.3	5.3	0.8	3.2	1.3	
Delay (s)	58.3	56.8		201.4	16.7		51.8	51.9	39.3	54.6	52.2	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		56.9			40.8			45.1			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Future Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3609		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3609		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	123	1	404	3	1	1	274	362	1	1	630	90
RTOR Reduction (vph)	0	0	343	0	0	1	0	0	0	0	0	49
Lane Group Flow (vph)	123	1	61	3	1	0	274	363	0	1	630	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.25	0.71		0.01	0.46	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	215	285	242	215	285	242	458	2547		16	1664	744
v/s Ratio Prot		0.00			0.00		c0.15	0.10		0.00	c0.17	
v/s Ratio Perm	c0.09		0.04	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.25	0.01	0.00	0.00	0.60	0.14		0.06	0.38	0.06
Uniform Delay, d1	39.5	36.1	37.5	36.2	36.1	36.1	32.8	4.8		49.1	17.6	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.53		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	0.5	0.0	0.0	0.0	1.8	0.1		1.6	0.7	0.1
Delay (s)	43.2	36.1	38.1	36.2	36.1	36.1	26.0	2.6		50.8	18.3	15.1
Level of Service	D	D	D	D	D	D	C	A		D	B	B
Approach Delay (s)		39.3			36.2			12.7			17.9	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 7.2:

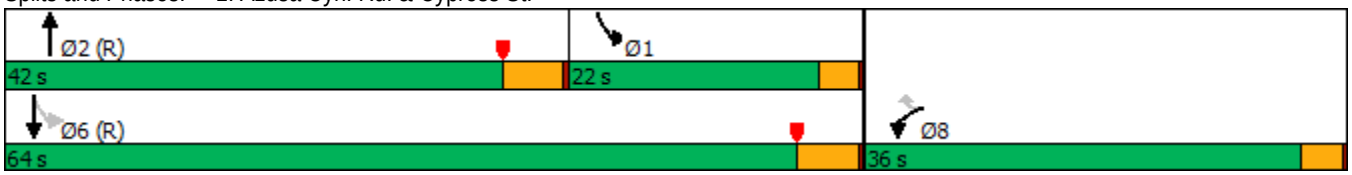
2040 PLUS SITE BASELINE LAND USE WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	419	359	186	161	249
Future Volume (vph)	262	419	359	186	161	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	36.0	36.0	42.0		22.0	64.0
Total Split (%)	36.0%	36.0%	42.0%		22.0%	64.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	262	419	359	186	161	249
Future Volume (veh/h)	262	419	359	186	161	249
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	252	507	399	207	179	277
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	355	632	854	438	792	2595
Arrive On Green	0.20	0.20	0.37	0.37	0.60	1.00
Sat Flow, veh/h	1810	3220	2404	1183	1810	3705
Grp Volume(v), veh/h	252	507	311	295	179	277
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1687	1810	1805
Q Serve(g_s), s	13.0	15.0	13.1	13.4	0.0	0.0
Cycle Q Clear(g_c), s	13.0	15.0	13.1	13.4	0.0	0.0
Prop In Lane	1.00	1.00		0.70	1.00	
Lane Grp Cap(c), veh/h	355	632	668	624	792	2595
V/C Ratio(X)	0.71	0.80	0.47	0.47	0.23	0.11
Avail Cap(c_a), veh/h	588	1047	668	624	792	2595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	37.5	38.3	24.0	24.1	7.7	0.0
Incr Delay (d2), s/veh	2.6	2.4	2.3	2.6	0.1	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	5.9	6.0	5.9	5.7	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	40.8	26.3	26.6	7.8	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	759		606			456
Approach Delay, s/veh	40.6		26.5			3.1
Approach LOS	D		C			A

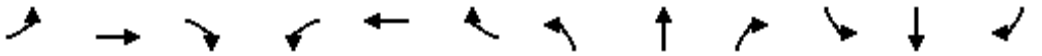
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.9	42.0			76.9	23.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	18.5	* 37			59.0	32.5
Max Q Clear Time (g_c+I1), s	2.0	15.4			2.0	17.0
Green Ext Time (p_c), s	0.4	3.9			2.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	56
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	217	26	206	9	12	22	249	302	9	27	167	303
Future Vol, veh/h	217	26	206	9	12	22	249	302	9	27	167	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	231	28	219	10	13	23	265	321	10	29	178	322
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	18.6	12.2	123.7	17.4
HCM LOS	C	B	F	C

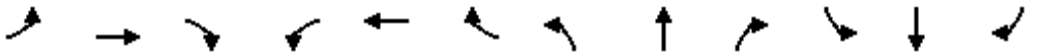
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	44%	89%	0%	43%	0%	14%	0%
Vol Thru, %	54%	11%	0%	57%	0%	86%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	560	243	206	21	22	194	303
LT Vol	249	217	0	9	0	27	0
Through Vol	302	26	0	12	0	167	0
RT Vol	9	0	206	0	22	0	303
Lane Flow Rate	596	259	219	22	23	206	322
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.178	0.573	0.414	0.055	0.052	0.416	0.581
Departure Headway (Hd)	7.116	8.401	7.213	9.535	8.575	7.606	6.813
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	512	432	502	378	420	477	532
Service Time	5.161	6.101	4.913	7.235	6.275	5.306	4.513
HCM Lane V/C Ratio	1.164	0.6	0.436	0.058	0.055	0.432	0.605
HCM Control Delay	123.7	21.8	14.9	12.8	11.7	15.6	18.5
HCM Lane LOS	F	C	B	B	B	C	C
HCM 95th-tile Q	21.5	3.5	2	0.2	0.2	2	3.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	44%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (veh/h)	217	26	206	9	12	22	249	302	9	27	167	303
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	251	0	219	10	13	23	265	321	10	29	178	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	559	0	249	55	19	33	427	480	15	177	1066	1120
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	3619	0	1610	1810	615	1089	539	690	21	195	1532	1610
Grp Volume(v), veh/h	251	0	219	10	0	36	596	0	0	207	0	322
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1704	1250	0	0	1728	0	1610
Q Serve(g_s), s	6.3	0.0	13.3	0.5	0.0	2.1	25.9	0.0	0.0	0.0	0.0	7.6
Cycle Q Clear(g_c), s	6.3	0.0	13.3	0.5	0.0	2.1	29.6	0.0	0.0	3.7	0.0	7.6
Prop In Lane	1.00		1.00	1.00		0.64	0.44		0.02	0.14		1.00
Lane Grp Cap(c), veh/h	559	0	249	55	0	51	921	0	0	1242	0	1120
V/C Ratio(X)	0.45	0.00	0.88	0.18	0.00	0.70	0.65	0.00	0.00	0.17	0.00	0.29
Avail Cap(c_a), veh/h	579	0	258	290	0	273	921	0	0	1242	0	1120
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	1.00	1.00	0.00	1.00	0.92	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	41.4	47.3	0.0	48.0	9.6	0.0	0.0	5.2	0.0	5.8
Incr Delay (d2), s/veh	0.6	0.0	27.1	1.6	0.0	15.8	3.2	0.0	0.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	6.9	0.3	0.0	1.1	7.5	0.0	0.0	1.4	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	68.5	48.9	0.0	63.8	12.8	0.0	0.0	5.5	0.0	6.4
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		470			46			596			529	
Approach Delay, s/veh		52.7			60.6			12.8			6.1	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.5		19.4		73.5		7.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		31.6		15.3		9.6		4.1				
Green Ext Time (p_c), s		5.3		0.1		2.6		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			C									

Notes

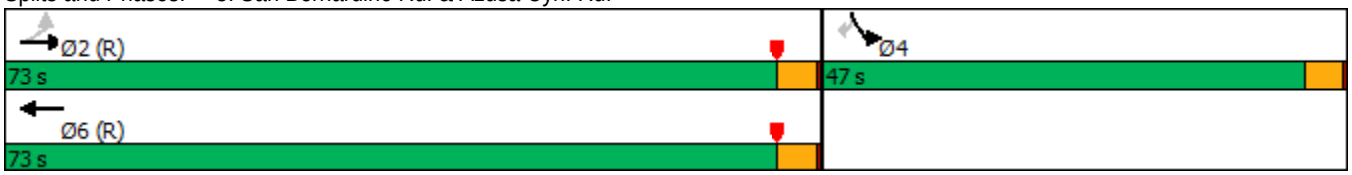
User approved pedestrian interval to be less than phase max green.

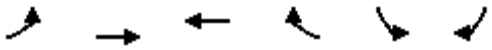
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	160	377	477	288	84
Future Volume (vph)	92	160	377	477	288	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	92	160	377	477	288	84
Future Volume (veh/h)	92	160	377	477	288	84
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	103	180	424	536	324	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	276	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	594	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	103	180	424	536	324	94
Grp Sat Flow(s),veh/h/ln	594	1805	1805	1610	1810	1610
Q Serve(g_s), s	16.0	2.7	15.7	25.4	16.8	4.8
Cycle Q Clear(g_c), s	41.5	2.7	15.7	25.4	16.8	4.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	276	2076	1038	926	648	577
V/C Ratio(X)	0.37	0.09	0.41	0.58	0.50	0.16
Avail Cap(c_a), veh/h	276	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	11.4	14.2	16.2	30.1	26.2
Incr Delay (d2), s/veh	3.8	0.1	1.2	2.6	2.7	0.6
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	1.0	6.3	9.4	7.8	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.3	11.5	15.4	18.9	32.8	26.8
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		283	960		418	
Approach Delay, s/veh		19.4	17.3		31.5	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

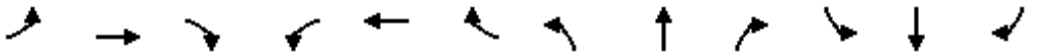
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	54.9		27.1	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.6%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	331	212	2647	51	541	0	170	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2109	523	243	2245	951	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	3800	1610	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1148	516	212	2647	51	541	0	170	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.1	27.2	13.8	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.1	27.2	13.8	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1817	815	243	2245	951	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	1.18	0.05	1.00	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1817	815	356	2245	951	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.4	23.4	50.9	24.6	10.4	51.0	0.0	48.5	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	14.8	85.6	0.1	37.2	0.0	15.4	2.2	0.0	10.0
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	1.3	11.8	11.1	7.1	54.4	0.6	10.9	0.0	5.9	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.1	27.2	65.7	110.1	10.5	88.2	0.0	63.9	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	F	B	F	A	E	D	A	E
Approach Vol, veh/h		1695			2910			711			86	
Approach Delay, s/veh		26.9			105.1			82.4			59.9	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.6	49.9		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.2	4.0	72.9		19.9				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		76.9	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

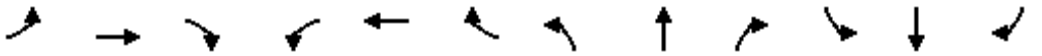
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.0		27.0	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.5%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	331	212	2647	51	541	0	170	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2109	523	243	3293	63	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	5574	107	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1148	516	212	1800	898	541	0	170	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.1	27.2	13.8	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.1	27.2	13.8	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1818	815	243	2245	1111	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	0.80	0.81	1.00	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1818	815	354	2245	1111	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.4	23.4	50.9	19.1	19.2	51.0	0.0	48.5	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	14.9	3.1	6.3	37.2	0.0	15.4	2.2	0.0	10.0
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	1.3	11.8	11.1	7.1	18.3	19.3	10.9	0.0	5.9	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.1	27.2	65.9	22.2	25.6	88.2	0.0	63.9	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	C	C	F	A	E	D	A	E
Approach Vol, veh/h		1695			2910			711			86	
Approach Delay, s/veh		26.9			26.4			82.4			59.9	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.5	50.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.2	4.0	46.8		19.9				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	19.0		0.0				

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

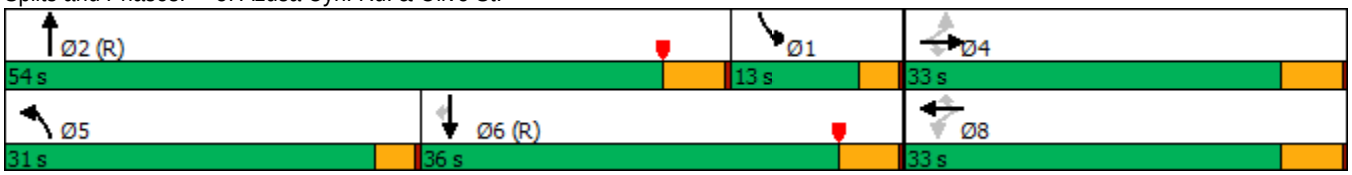
Notes

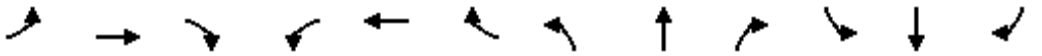
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Future Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	136	1	1	1	135	629	13	3	273	39
Future Volume (veh/h)	86	2	136	1	1	1	135	629	13	3	273	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	148	1	1	1	147	684	14	3	297	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	238	220	186	216	220	186	180	1773	36	442	2346	1046
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.20	0.98	0.98	0.24	0.65	0.65
Sat Flow, veh/h	1437	1900	1610	1257	1900	1610	1810	3618	74	1810	3610	1610
Grp Volume(v), veh/h	93	2	148	1	1	1	147	341	357	3	297	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1257	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	9.0	0.1	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Cycle Q Clear(g_c), s	6.2	0.1	9.0	0.2	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	238	220	186	216	220	186	180	884	924	442	2346	1046
V/C Ratio(X)	0.39	0.01	0.79	0.00	0.00	0.01	0.82	0.39	0.39	0.01	0.13	0.04
Avail Cap(c_a), veh/h	474	532	451	423	532	451	498	884	924	442	2346	1046
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.73	0.73	0.73
Uniform Delay (d), s/veh	41.8	39.1	43.1	39.2	39.1	39.1	39.2	0.5	0.5	28.6	6.7	6.3
Incr Delay (d2), s/veh	1.0	0.0	7.5	0.0	0.0	0.0	8.2	1.2	1.1	0.0	0.1	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	2.2	0.0	3.9	0.0	0.0	0.0	3.5	0.4	0.5	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	39.2	50.5	39.2	39.1	39.1	47.4	1.7	1.6	28.6	6.8	6.3
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		243			3			845			342	
Approach Delay, s/veh		47.5			39.2			9.6			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.4	54.0		16.6	13.4	70.0		16.6				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		11.0	9.8	5.1		2.2				
Green Ext Time (p_c), s	0.0	5.0		0.6	0.3	2.1		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	531	10	0	497
Future Volume (vph)	0	2	531	10	0	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

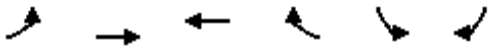
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	531	10	0	497
Future Vol, veh/h	0	2	531	10	0	497
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	559	11	0	523

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	285	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	718	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	718	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	718	-
HCM Lane V/C Ratio	-	-	0.003	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	57	41	0	0	2
Future Volume (vph)	5	57	41	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

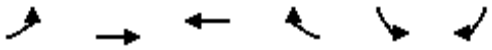
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	57	41	0	0	2
Future Vol, veh/h	5	57	41	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	60	43	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	43	0	-	0	113	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	70	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1579	-	-	-	888	1033
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	885	1033
Mov Cap-2 Maneuver	-	-	-	-	885	-
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	1033
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	36	35	0	0	6
Future Volume (vph)	21	36	35	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	36	35	0	0	6
Future Vol, veh/h	21	36	35	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	38	37	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	119	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	82	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	882	1041
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	946	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	870	1041
Mov Cap-2 Maneuver	-	-	-	-	870	-
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	946	-

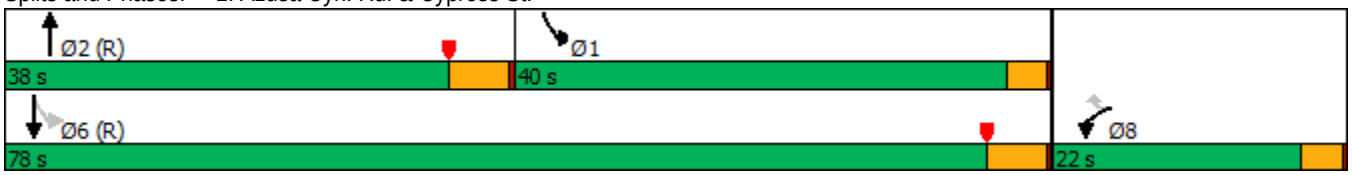
Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1041
HCM Lane V/C Ratio	0.014	-	-	-	0.006
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	383	579	492	486
Future Volume (vph)	196	223	383	579	492	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





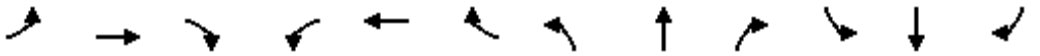
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	196	223	383	579	492	486
Future Volume (veh/h)	196	223	383	579	492	486
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	288	147	403	609	518	512
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	428	190	596	531	826	2877
Arrive On Green	0.12	0.12	0.33	0.33	0.70	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	288	147	403	609	518	512
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.6	8.9	19.3	33.0	9.0	0.0
Cycle Q Clear(g_c), s	7.6	8.9	19.3	33.0	9.0	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	428	190	596	531	826	2877
V/C Ratio(X)	0.67	0.77	0.68	1.15	0.63	0.18
Avail Cap(c_a), veh/h	670	298	596	531	826	2877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.87	0.87
Uniform Delay (d), s/veh	42.2	42.8	28.9	33.5	9.6	0.0
Incr Delay (d2), s/veh	1.9	6.5	6.1	86.1	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	3.5	3.8	9.2	25.2	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	49.3	35.0	119.6	10.9	0.1
LnGrp LOS	D	D	C	F	B	A
Approach Vol, veh/h	435		1012			1030
Approach Delay, s/veh	45.9		85.9			5.6
Approach LOS	D		F			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.7	38.0			84.7	15.3
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	11.0	35.0			2.0	10.9
Green Ext Time (p_c), s	1.7	0.0			4.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	45.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	142.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	566	12	438	49	39	23	191	352	12	16	469	210
Future Vol, veh/h	566	12	438	49	39	23	191	352	12	16	469	210
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	584	12	452	51	40	24	197	363	12	16	484	216
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

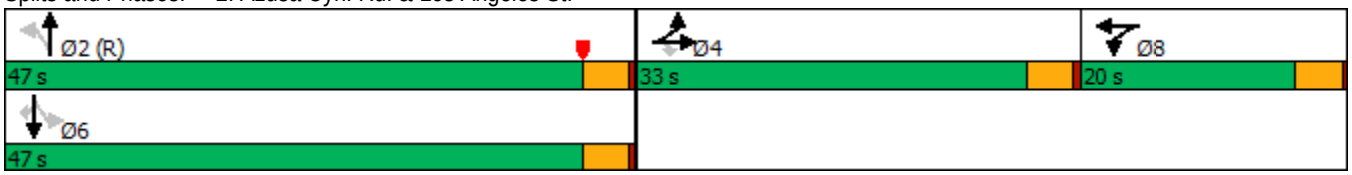
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	163.9	16.8	192.3	92.9
HCM LOS	F	C	F	F

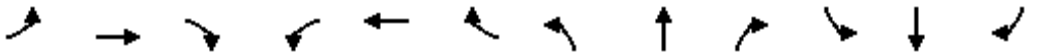
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	98%	0%	56%	0%	3%	0%
Vol Thru, %	63%	2%	0%	44%	0%	97%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	578	438	88	23	485	210
LT Vol	191	566	0	49	0	16	0
Through Vol	352	12	0	39	0	469	0
RT Vol	12	0	438	0	23	0	210
Lane Flow Rate	572	596	452	91	24	500	216
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.336	1.451	0.95	0.254	0.06	1.161	0.46
Departure Headway (Hd)	8.8	9.564	8.314	11.175	10.131	8.975	8.227
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	418	387	438	324	356	410	442
Service Time	6.8	7.264	6.014	8.875	7.831	6.675	5.927
HCM Lane V/C Ratio	1.368	1.54	1.032	0.281	0.067	1.22	0.489
HCM Control Delay	192.3	242.4	60.4	17.6	13.5	125.4	17.7
HCM Lane LOS	F	F	F	C	B	F	C
HCM 95th-tile Q	25.3	28.4	11.1	1	0.2	17.9	2.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	33.0	33.0	33.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 10 (10%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (veh/h)	566	12	438	49	39	23	191	352	12	16	469	210
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	593	0	452	51	40	24	197	363	12	16	484	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1050	0	467	101	62	37	268	448	14	51	991	861
Arrive On Green	0.29	0.00	0.29	0.06	0.06	0.06	0.53	0.53	0.53	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1112	667	411	839	27	25	1855	1610
Grp Volume(v), veh/h	593	0	452	51	0	64	572	0	0	500	0	216
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1780	1276	0	0	1881	0	1610
Q Serve(g_s), s	13.9	0.0	27.7	2.7	0.0	3.5	34.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.9	0.0	27.7	2.7	0.0	3.5	37.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.38	0.34		0.02	0.03		1.00
Lane Grp Cap(c), veh/h	1050	0	467	101	0	99	731	0	0	1042	0	861
V/C Ratio(X)	0.57	0.00	0.97	0.51	0.00	0.65	0.78	0.00	0.00	0.48	0.00	0.25
Avail Cap(c_a), veh/h	1050	0	467	290	0	285	731	0	0	1042	0	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.43	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	35.0	45.9	0.0	46.3	19.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	33.4	3.9	0.0	6.9	3.7	0.0	0.0	1.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	14.5	1.3	0.0	1.7	11.0	0.0	0.0	0.5	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	68.4	49.8	0.0	53.2	22.7	0.0	0.0	1.6	0.0	0.7
LnGrp LOS	C	A	E	D	A	D	C	A	A	A	A	A
Approach Vol, veh/h		1045			115			572			716	
Approach Delay, s/veh		47.1			51.7			22.7			1.3	
Approach LOS		D			D			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.4		33.0		57.4		9.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		39.1		29.7		2.0		5.5				
Green Ext Time (p_c), s		1.6		0.0		4.5		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			28.2									
HCM 6th LOS			C									

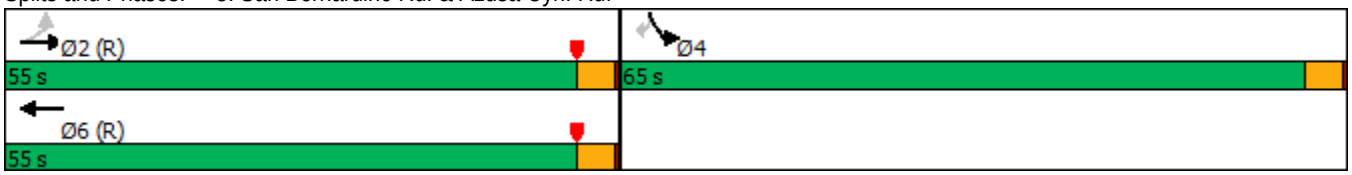
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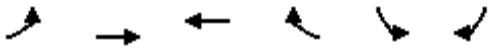
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	140	375	385	406	832	170
Future Volume (vph)	140	375	385	406	832	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	55.0	55.0	55.0		65.0	65.0
Total Split (%)	45.8%	45.8%	45.8%		54.2%	54.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	375	385	406	832	170
Future Volume (veh/h)	140	375	385	406	832	170
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	147	395	405	427	876	179
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	206	1534	767	684	920	819
Arrive On Green	0.43	0.43	0.43	0.43	0.51	0.51
Sat Flow, veh/h	670	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	147	395	405	427	876	179
Grp Sat Flow(s),veh/h/ln	670	1805	1805	1610	1810	1610
Q Serve(g_s), s	26.1	8.5	20.0	24.9	55.4	7.4
Cycle Q Clear(g_c), s	51.0	8.5	20.0	24.9	55.4	7.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	206	1534	767	684	920	819
V/C Ratio(X)	0.71	0.26	0.53	0.62	0.95	0.22
Avail Cap(c_a), veh/h	206	1534	767	684	920	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	22.3	25.6	27.0	28.1	16.3
Incr Delay (d2), s/veh	19.1	0.4	2.6	4.3	20.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	3.6	8.8	10.0	28.1	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.1	22.7	28.2	31.3	48.3	16.9
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		542	832		1055	
Approach Delay, s/veh		34.5	29.8		43.0	
Approach LOS		C	C		D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		65.0		55.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		51.0		61.0		51.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

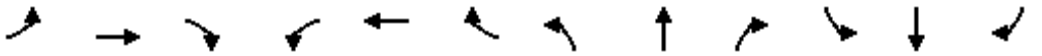
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	9.2	65.0		17.0	72.8	72.8	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.7%	54.2%		14.2%	60.7%	60.7%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	2833	401	257	1664	41	277	0	336	37	13	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	2459	331	204	2203	933	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4918	662	1810	3800	1610	3619	0	1610	1810	322	1337
Grp Volume(v), veh/h	46	2156	1078	257	1664	41	277	0	336	37	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1659
Q Serve(g_s), s	3.0	60.0	60.0	13.5	39.3	1.3	8.5	0.0	18.0	2.3	0.0	4.6
Cycle Q Clear(g_c), s	3.0	60.0	60.0	13.5	39.3	1.3	8.5	0.0	18.0	2.3	0.0	4.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	59	1900	890	204	2203	933	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.13	1.21	1.26	0.76	0.04	0.51	0.00	1.39	0.25	0.00	0.48
Avail Cap(c_a), veh/h	86	1900	890	204	2203	933	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.6	30.0	30.0	53.3	18.9	10.9	46.9	0.0	51.0	51.5	0.0	52.5
Incr Delay (d2), s/veh	22.9	67.8	105.3	151.3	2.5	0.1	3.3	0.0	199.0	3.8	0.0	11.7
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	1.7	42.7	49.3	14.5	16.2	0.5	4.1	0.0	20.6	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.4	97.8	135.3	204.6	21.3	11.0	50.3	0.0	250.0	55.3	0.0	64.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	E	A	E
Approach Vol, veh/h		3280			1962			613			104	
Approach Delay, s/veh		109.9			45.1			159.7			61.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.4	74.6		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	5.7	67.8		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.6	5.0	41.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		92.8	
HCM 6th LOS		F	

Notes

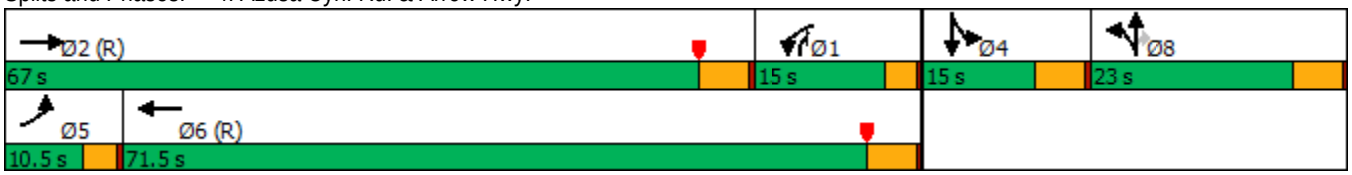
User approved volume balancing among the lanes for turning movement.

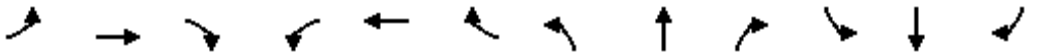
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	10.5	67.0		15.0	71.5		23.0	23.0	15.0	15.0	15.0	
Total Split (%)	8.8%	55.8%		12.5%	59.6%		19.2%	19.2%	12.5%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 6.7 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	2663	377	242	1564	39	261	0	316	35	12	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	2541	342	729	4990	124	543	0	890	151	26	112
Arrive On Green	0.05	0.77	0.77	0.60	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4918	663	1810	5537	138	3619	0	1610	1810	316	1342
Grp Volume(v), veh/h	43	2027	1013	242	1073	530	261	0	316	35	0	63
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1875	1810	0	1610	1810	0	1658
Q Serve(g_s), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Cycle Q Clear(g_c), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Prop In Lane	1.00		0.37	1.00		0.07	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	55	1963	920	729	3425	1690	543	0	890	151	0	138
V/C Ratio(X)	0.78	1.03	1.10	0.33	0.31	0.31	0.48	0.00	0.36	0.23	0.00	0.46
Avail Cap(c_a), veh/h	106	1963	920	729	3425	1690	543	0	890	151	0	138
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.8	13.5	13.5	15.8	0.0	0.0	46.7	0.0	14.9	51.4	0.0	52.4
Incr Delay (d2), s/veh	20.2	29.1	61.4	0.3	0.2	0.5	3.0	0.0	1.1	3.6	0.0	10.5
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	1.6	17.4	24.6	2.9	0.1	0.2	3.8	0.0	5.0	1.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	42.6	74.9	16.0	0.2	0.5	49.7	0.0	16.0	55.0	0.0	62.9
LnGrp LOS	E	F	F	B	A	A	D	A	B	D	A	E
Approach Vol, veh/h		3083			1845			577			98	
Approach Delay, s/veh		53.7			2.4			31.3			60.1	
Approach LOS		D			A			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.4	67.0		15.0	7.2	113.2		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	* 62		10.0	7.0	66.5		18.0				
Max Q Clear Time (g_c+I1), s	9.9	64.0		6.3	4.8	2.0		9.9				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	15.5		1.4				

Intersection Summary		
HCM 6th Ctrl Delay	34.6	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

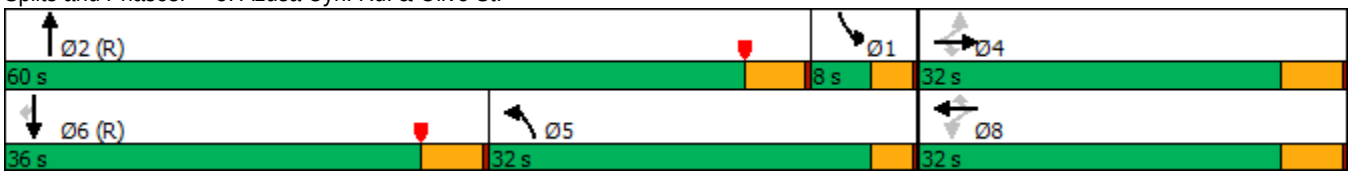
User approved volume balancing among the lanes for turning movement.

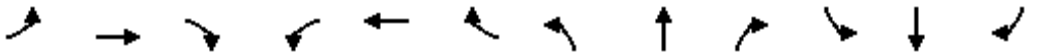
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Future Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	32.0	60.0		8.0	36.0	36.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	60.0%		8.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1	380	3	1	1	259	345	1	1	594	85
Future Volume (veh/h)	116	1	380	3	1	1	259	345	1	1	594	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	1	404	3	1	1	276	367	1	1	632	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	455	507	429	337	507	429	522	2031	6	87	1119	499
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.38	0.73	0.73	0.05	0.31	0.31
Sat Flow, veh/h	1437	1900	1610	996	1900	1610	1810	3693	10	1810	3610	1610
Grp Volume(v), veh/h	123	1	404	3	1	1	276	179	189	1	632	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	996	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.9	0.0	24.6	0.2	0.0	0.0	11.8	3.1	3.1	0.1	14.6	4.1
Cycle Q Clear(g_c), s	6.9	0.0	24.6	0.3	0.0	0.0	11.8	3.1	3.1	0.1	14.6	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	455	507	429	337	507	429	522	993	1044	87	1119	499
V/C Ratio(X)	0.27	0.00	0.94	0.01	0.00	0.00	0.53	0.18	0.18	0.01	0.56	0.18
Avail Cap(c_a), veh/h	460	513	435	340	513	435	522	993	1044	87	1119	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.09	0.09	0.09
Uniform Delay (d), s/veh	29.4	26.9	35.9	27.0	26.9	26.9	25.6	6.5	6.5	45.3	28.9	25.2
Incr Delay (d2), s/veh	0.3	0.0	28.6	0.0	0.0	0.0	0.7	0.3	0.3	0.0	0.2	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	2.4	0.0	12.8	0.1	0.0	0.0	4.8	1.2	1.2	0.0	6.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	26.9	64.5	27.0	26.9	26.9	26.3	6.7	6.7	45.3	29.0	25.3
LnGrp LOS	C	C	E	C	C	C	C	A	A	D	C	C
Approach Vol, veh/h		528			5			644			723	
Approach Delay, s/veh		56.3			27.0			15.1			28.6	
Approach LOS		E			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	60.0		31.7	32.3	36.0		31.7				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	55.0		27.0	28.5	31.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	5.1		26.6	13.8	16.6		2.3				
Green Ext Time (p_c), s	0.0	2.3		0.1	0.7	4.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.7	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	8	938	3	0	695
Future Volume (vph)	0	8	938	3	0	695
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

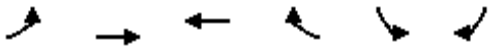
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	938	3	0	695
Future Vol, veh/h	0	8	938	3	0	695
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	987	3	0	732

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	495	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	525	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	525	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	525	-
HCM Lane V/C Ratio	-	-	0.016	-
HCM Control Delay (s)	-	-	12	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	38	103	0	0	7
Future Volume (vph)	2	38	103	0	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

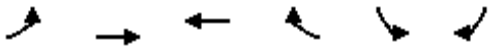
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	38	103	0	0	7
Future Vol, veh/h	2	38	103	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	40	108	0	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	108	0	-	0	152	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1495	-	-	-	844	951
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1495	-	-	-	843	951
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	984	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1495	-	-	-	951
HCM Lane V/C Ratio	0.001	-	-	-	0.008
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	31	84	0	0	19
Future Volume (vph)	7	31	84	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	31	84	0	0	19
Future Vol, veh/h	7	31	84	0	0	19
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	33	88	0	0	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	135	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	863	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	859	976
Mov Cap-2 Maneuver	-	-	-	-	859	-
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	981	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.8
HCM LOS			A

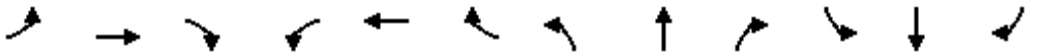
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	976
HCM Lane V/C Ratio	0.005	-	-	-	0.02
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	419	359	186	161	249
Future Volume (vph)	262	419	359	186	161	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3425		1805	3610
Flt Permitted	0.97	1.00	1.00		0.39	1.00
Satd. Flow (perm)	3351	1470	3425		735	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	291	466	399	207	179	277
RTOR Reduction (vph)	173	204	49	0	0	0
Lane Group Flow (vph)	342	38	557	0	179	277
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	15.9	15.9	53.6		77.1	75.6
Effective Green, g (s)	15.9	15.9	53.6		77.1	75.6
Actuated g/C Ratio	0.16	0.16	0.54		0.77	0.76
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	532	233	1835		764	2729
v/s Ratio Prot	c0.10		c0.16		c0.04	0.08
v/s Ratio Perm		0.03			0.14	
v/c Ratio	0.64	0.17	0.30		0.23	0.10
Uniform Delay, d1	39.4	36.3	12.9		5.0	3.2
Progression Factor	1.00	1.00	1.00		2.24	1.98
Incremental Delay, d2	2.7	0.3	0.4		0.2	0.1
Delay (s)	42.0	36.7	13.3		11.4	6.5
Level of Service	D	D	B		B	A
Approach Delay (s)	40.3		13.3			8.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

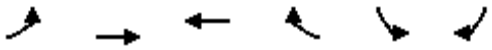
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1718			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.76			0.90	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1718			1444			1704	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	231	28	219	10	13	23	265	321	10	29	178	322
RTOR Reduction (vph)	0	0	191	0	22	0	0	0	0	0	0	98
Lane Group Flow (vph)	129	130	28	10	14	0	0	596	0	0	207	224
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.6	12.6	12.6	5.9	5.9			69.5			69.5	69.5
Effective Green, g (s)	12.6	12.6	12.6	5.9	5.9			69.5			69.5	69.5
Actuated g/C Ratio	0.13	0.13	0.13	0.06	0.06			0.70			0.70	0.70
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	216	227	239	106	101			1003			1184	1320
v/s Ratio Prot	c0.08	0.07		0.01	c0.01							
v/s Ratio Perm			0.01					c0.41			0.12	0.12
v/c Ratio	0.60	0.57	0.12	0.09	0.14			0.59			0.17	0.17
Uniform Delay, d1	41.3	41.2	38.8	44.5	44.6			7.9			5.3	5.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.90	2.36
Incremental Delay, d2	4.4	3.5	0.2	0.4	0.6			2.6			0.3	0.3
Delay (s)	45.7	44.6	39.0	44.9	45.3			10.5			5.1	12.7
Level of Service	D	D	D	D	D			B			A	B
Approach Delay (s)		42.3			45.2			10.5			9.7	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	160	377	477	288	84
Future Volume (vph)	92	160	377	477	288	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3308		1805	1615
Flt Permitted	0.23	1.00	1.00		0.95	1.00
Satd. Flow (perm)	436	3610	3308		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	103	180	424	536	324	94
RTOR Reduction (vph)	0	0	191	0	0	26
Lane Group Flow (vph)	103	180	769	0	324	68
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	250	2075	1902		646	578
v/s Ratio Prot		0.05	0.23		c0.18	
v/s Ratio Perm	c0.24					0.04
v/c Ratio	0.41	0.09	0.40		0.50	0.12
Uniform Delay, d1	14.2	11.4	14.1		30.1	25.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.0	0.1	0.6		2.8	0.4
Delay (s)	19.2	11.5	14.8		32.9	26.2
Level of Service	B	B	B		C	C
Approach Delay (s)		14.3	14.8		31.4	
Approach LOS		B	B		C	

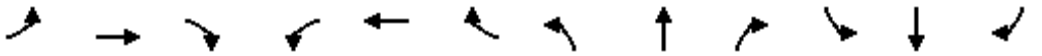
Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	331	212	2647	51	526	21	170	24	14	48
RTOR Reduction (vph)	0	35	0	0	0	21	0	0	145	0	44	0
Lane Group Flow (vph)	31	1629	0	212	2647	30	274	273	26	24	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.2		18.3	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.2		18.3	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2622		289	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.70		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.82	0.62		0.73	1.18	0.03	0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.5		48.5	24.5	10.1	50.7	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.3	84.2	0.0	44.3	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.6		57.8	108.6	10.2	95.0	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.6			103.2			82.7			52.6	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	76.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

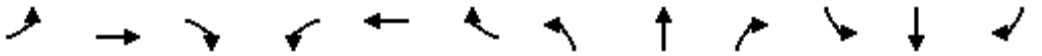
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	331	212	2647	51	526	21	170	24	14	48
RTOR Reduction (vph)	0	35	0	0	2	0	0	0	145	0	44	0
Lane Group Flow (vph)	31	1629	0	212	2696	0	274	273	26	24	18	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2622		289	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.47		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.82	0.62		0.73	0.80		0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.5		48.5	18.9		50.7	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.3	2.1		44.3	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.6		57.8	21.0		95.0	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	C		F	F	D	D	D	
Approach Delay (s)		27.6			23.7			82.7			52.6	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Future Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	148	1	1	1	147	684	14	3	297	42
RTOR Reduction (vph)	0	0	129	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	19	1	1	0	147	697	0	3	297	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.72		0.02	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	243	2587		34	2176	973
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.27		0.09	0.14	0.03
Uniform Delay, d1	40.8	38.1	38.6	38.1	38.1	38.1	40.7	4.9		48.2	8.6	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	1.13		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.8	38.1	38.1	38.1	35.1	5.8		49.3	8.7	8.1
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.4			38.1			10.9			9.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

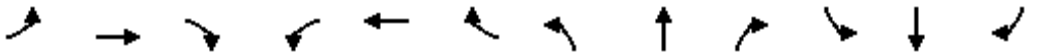
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	383	579	492	486
Future Volume (vph)	196	223	383	579	492	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3284		1805	3610
Flt Permitted	0.97	1.00	1.00		0.15	1.00
Satd. Flow (perm)	3394	1470	3284		285	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	235	403	609	518	512
RTOR Reduction (vph)	62	121	250	0	0	0
Lane Group Flow (vph)	240	18	762	0	518	512
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.6	12.6	38.9		80.4	78.9
Effective Green, g (s)	12.6	12.6	38.9		80.4	78.9
Actuated g/C Ratio	0.13	0.13	0.39		0.80	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	427	185	1277		783	2848
v/s Ratio Prot	c0.07		0.23		c0.24	0.14
v/s Ratio Perm		0.01			c0.29	
v/c Ratio	0.56	0.09	0.60		0.66	0.18
Uniform Delay, d1	41.1	38.7	24.3		16.0	2.6
Progression Factor	1.00	1.00	1.00		0.85	1.55
Incremental Delay, d2	1.7	0.2	2.1		1.9	0.1
Delay (s)	42.8	38.9	26.4		15.5	4.1
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		26.4			9.8
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

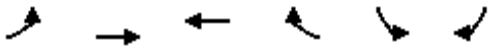
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.94			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1793			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.54			0.98	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1793			1027			1860	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	584	12	452	51	40	24	197	363	12	16	484	216
RTOR Reduction (vph)	0	0	289	0	22	0	0	0	0	0	0	95
Lane Group Flow (vph)	298	298	163	51	42	0	0	572	0	0	500	121
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	24.0	24.0	24.0	8.1	8.1			55.9			55.9	55.9
Effective Green, g (s)	24.0	24.0	24.0	8.1	8.1			55.9			55.9	55.9
Actuated g/C Ratio	0.24	0.24	0.24	0.08	0.08			0.56			0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	411	433	456	146	145			574			1039	1062
v/s Ratio Prot	c0.17	0.17		c0.03	0.02							
v/s Ratio Perm			0.09					c0.56			0.27	0.06
v/c Ratio	0.73	0.69	0.36	0.35	0.29			1.00			0.48	0.11
Uniform Delay, d1	35.0	34.6	31.6	43.5	43.2			21.9			13.3	10.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.47	3.37
Incremental Delay, d2	6.2	4.5	0.5	1.4	1.1			36.5			1.6	0.2
Delay (s)	41.2	39.1	32.1	44.9	44.3			58.5			21.1	35.2
Level of Service	D	D	C	D	D			E			C	D
Approach Delay (s)		36.7			44.6			58.5			25.4	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

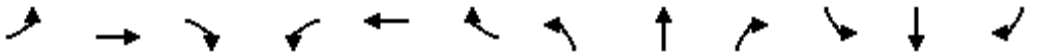
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	140	375	385	406	832	170
Future Volume (vph)	140	375	385	406	832	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.22	1.00	1.00		0.95	1.00
Satd. Flow (perm)	414	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	395	405	427	876	179
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	147	395	674	0	876	161
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	51.0	51.0	51.0		61.0	61.0
Effective Green, g (s)	51.0	51.0	51.0		61.0	61.0
Actuated g/C Ratio	0.42	0.42	0.42		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	175	1534	1416		917	820
v/s Ratio Prot		0.11	0.20		c0.49	
v/s Ratio Perm	c0.36					0.10
v/c Ratio	0.84	0.26	0.48		0.96	0.20
Uniform Delay, d1	30.9	22.3	24.9		28.2	16.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	36.0	0.4	1.1		20.7	0.5
Delay (s)	66.9	22.7	26.0		48.9	16.6
Level of Service	E	C	C		D	B
Approach Delay (s)		34.7	26.0		43.4	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

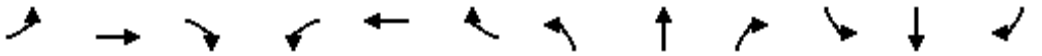
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	46	2833	401	257	1664	41	266	16	336	37	13	54
RTOR Reduction (vph)	0	18	0	0	0	17	0	0	182	0	50	0
Lane Group Flow (vph)	46	3216	0	257	1664	24	141	141	154	37	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.6	60.0		13.5	68.9	68.9	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.6	60.0		13.5	68.9	68.9	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.04	0.50		0.11	0.57	0.57	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	72	2850		213	2181	1090	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.56		c0.14	0.44		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.64	1.13		1.21	0.76	0.02	0.49	0.49	0.54	0.23	0.11	
Uniform Delay, d1	56.9	30.0		53.2	19.4	11.0	46.8	46.8	47.2	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	17.1	62.9		128.6	2.6	0.0	6.0	6.0	7.2	3.4	1.4	
Delay (s)	74.0	92.9		181.9	22.0	11.1	52.8	52.8	54.4	54.9	52.3	
Level of Service	E	F		F	C	B	D	D	D	D	D	
Approach Delay (s)		92.6			42.7			53.7			53.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		

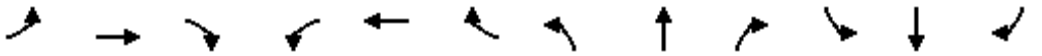
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	71	0	47	0
Lane Group Flow (vph)	43	3022	0	242	1601	0	132	133	245	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.6	61.3		12.2	67.9		18.0	18.0	30.2	10.0	10.0	
Effective Green, g (s)	5.6	61.3		12.2	67.9		18.0	18.0	30.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.51		0.10	0.57		0.15	0.15	0.25	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	88	2911		193	3225		285	285	478	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.28		0.07	0.07	c0.05	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.49	1.04		1.25	0.50		0.46	0.47	0.51	0.22	0.10	
Uniform Delay, d1	55.8	29.4		53.9	15.7		46.6	46.6	38.6	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	27.6		149.5	0.5		5.3	5.4	0.9	3.2	1.3	
Delay (s)	60.0	57.0		203.4	16.3		51.9	52.0	39.5	54.6	52.2	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		57.0			40.8			45.2			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Future Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3609		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3609		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	123	1	404	3	1	1	276	367	1	1	632	90
RTOR Reduction (vph)	0	0	343	0	0	1	0	0	0	0	0	49
Lane Group Flow (vph)	123	1	61	3	1	0	276	368	0	1	632	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.25	0.71		0.01	0.46	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	215	285	242	215	285	242	458	2547		16	1664	744
v/s Ratio Prot		0.00			0.00		c0.15	0.10		0.00	c0.18	
v/s Ratio Perm	c0.09		0.04	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.25	0.01	0.00	0.00	0.60	0.14		0.06	0.38	0.06
Uniform Delay, d1	39.5	36.1	37.5	36.2	36.1	36.1	32.9	4.8		49.1	17.6	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.29	1.01		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	0.5	0.0	0.0	0.0	1.9	0.1		1.6	0.7	0.1
Delay (s)	43.2	36.1	38.1	36.2	36.1	36.1	44.3	5.0		50.8	18.3	15.1
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.3			36.2			21.8			17.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 6.1:

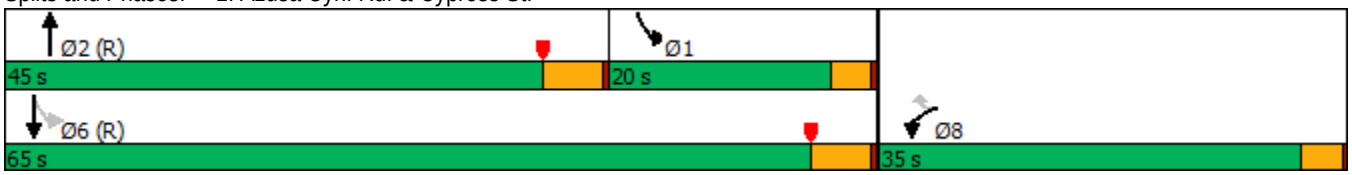
INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	241	397	357	171	151	235
Future Volume (vph)	241	397	357	171	151	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		49%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	35.0	35.0	45.0		20.0	65.0
Total Split (%)	35.0%	35.0%	45.0%		20.0%	65.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 81 (81%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	241	397	357	171	151	235
Future Volume (veh/h)	241	397	357	171	151	235
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	236	475	397	190	168	261
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	335	596	951	450	796	2635
Arrive On Green	0.19	0.19	0.40	0.40	0.56	1.00
Sat Flow, veh/h	1810	3220	2474	1124	1810	3705
Grp Volume(v), veh/h	236	475	300	287	168	261
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1698	1810	1805
Q Serve(g_s), s	12.2	14.1	12.0	12.2	0.0	0.0
Cycle Q Clear(g_c), s	12.2	14.1	12.0	12.2	0.0	0.0
Prop In Lane	1.00	1.00		0.66	1.00	
Lane Grp Cap(c), veh/h	335	596	722	679	796	2635
V/C Ratio(X)	0.70	0.80	0.42	0.42	0.21	0.10
Avail Cap(c_a), veh/h	570	1014	722	679	796	2635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.2	38.9	21.6	21.7	7.4	0.0
Incr Delay (d2), s/veh	2.7	2.5	1.8	1.9	0.1	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	5.5	5.6	5.3	5.1	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.9	41.4	23.3	23.6	7.6	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	711		587			429
Approach Delay, s/veh	41.2		23.5			3.0
Approach LOS	D		C			A

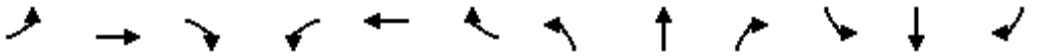
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.0	45.0			78.0	22.0
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	16.5	* 40			60.0	31.5
Max Q Clear Time (g_c+I1), s	2.0	14.2			2.0	16.1
Green Ext Time (p_c), s	0.4	3.9			1.9	2.4

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	44
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	212	15	190	7	8	18	231	297	8	18	161	283
Future Vol, veh/h	212	15	190	7	8	18	231	297	8	18	161	283
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	226	16	202	7	9	19	246	316	9	19	171	301
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17	11.8	91.6	15.5
HCM LOS	C	B	F	C

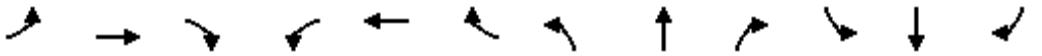
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	43%	93%	0%	47%	0%	10%	0%
Vol Thru, %	55%	7%	0%	53%	0%	90%	0%
Vol Right, %	1%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	536	227	190	15	18	179	283
LT Vol	231	212	0	7	0	18	0
Through Vol	297	15	0	8	0	161	0
RT Vol	8	0	190	0	18	0	283
Lane Flow Rate	570	241	202	16	19	190	301
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.089	0.526	0.375	0.039	0.041	0.373	0.527
Departure Headway (Hd)	6.874	8.168	6.963	9.187	8.211	7.298	6.527
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	444	519	392	439	497	557
Service Time	4.928	5.868	4.663	6.887	5.911	4.998	4.227
HCM Lane V/C Ratio	1.075	0.543	0.389	0.041	0.043	0.382	0.54
HCM Control Delay	91.6	19.6	13.8	12.3	11.3	14.3	16.3
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	17.7	3	1.7	0.1	0.1	1.7	3.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	47%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (veh/h)	212	15	190	7	8	18	231	297	8	18	161	283
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	237	0	202	7	9	19	246	316	9	19	171	301
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	527	0	234	45	14	29	442	538	15	134	1185	1142
Arrive On Green	0.15	0.00	0.15	0.02	0.02	0.02	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	544	1149	550	759	21	133	1670	1610
Grp Volume(v), veh/h	237	0	202	7	0	28	571	0	0	190	0	301
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1693	1330	0	0	1803	0	1610
Q Serve(g_s), s	6.0	0.0	12.3	0.4	0.0	1.6	18.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.0	0.0	12.3	0.4	0.0	1.6	20.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.68	0.43		0.02	0.10		1.00
Lane Grp Cap(c), veh/h	527	0	234	45	0	42	995	0	0	1319	0	1142
V/C Ratio(X)	0.45	0.00	0.86	0.16	0.00	0.66	0.57	0.00	0.00	0.14	0.00	0.26
Avail Cap(c_a), veh/h	579	0	258	290	0	271	995	0	0	1319	0	1142
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	41.7	47.7	0.0	48.3	7.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	23.1	1.6	0.0	16.5	2.2	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.2	0.2	0.0	0.9	5.6	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	0.0	64.8	49.3	0.0	64.9	9.3	0.0	0.0	0.2	0.0	0.6
LnGrp LOS	D	A	E	D	A	E	A	A	A	A	A	A
Approach Vol, veh/h		439			35			571			491	
Approach Delay, s/veh		51.2			61.8			9.3			0.4	
Approach LOS		D			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.0		18.6		75.0		6.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		22.8		14.3		2.0		3.6				
Green Ext Time (p_c), s		5.4		0.3		2.3		0.1				

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

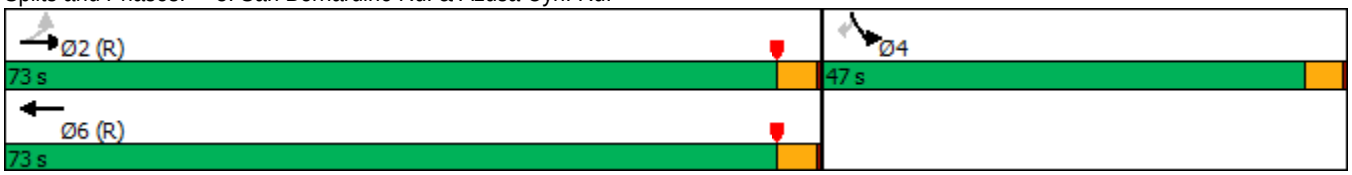
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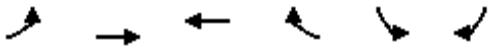
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	152	358	460	270	80
Future Volume (vph)	90	152	358	460	270	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	152	358	460	270	80
Future Volume (veh/h)	90	152	358	460	270	80
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	101	171	402	517	303	90
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	291	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	618	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	101	171	402	517	303	90
Grp Sat Flow(s),veh/h/ln	618	1805	1805	1610	1810	1610
Q Serve(g_s), s	14.7	2.5	14.6	24.1	15.5	4.6
Cycle Q Clear(g_c), s	38.8	2.5	14.6	24.1	15.5	4.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	291	2076	1038	926	648	577
V/C Ratio(X)	0.35	0.08	0.39	0.56	0.47	0.16
Avail Cap(c_a), veh/h	291	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	11.4	13.9	16.0	29.7	26.2
Incr Delay (d2), s/veh	3.3	0.1	1.1	2.4	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.0	5.9	8.9	7.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.4	11.5	15.0	18.4	32.1	26.7
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		272	919		393	
Approach Delay, s/veh		18.8	16.9		30.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

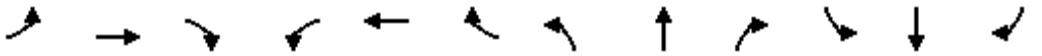
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	329	209	2501	47	515	0	169	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2120	522	240	2249	953	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	3800	1610	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1147	515	209	2501	47	515	0	169	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1610	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.0	27.0	13.6	71.0	1.5	16.9	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.0	27.0	13.6	71.0	1.5	16.9	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1824	818	240	2249	953	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	1.11	0.05	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1824	818	351	2249	953	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.2	23.3	51.0	24.5	10.3	50.5	0.0	48.4	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.8	57.4	0.1	27.3	0.0	15.1	2.0	0.0	9.0
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	1.2	11.7	11.0	7.0	45.6	0.5	9.7	0.0	5.8	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	24.9	26.9	65.8	81.9	10.4	77.8	0.0	63.6	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1691			2757			684			80	
Approach Delay, s/veh		26.6			79.5			74.3			59.0	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.0	3.9	73.0		18.9				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	61.3	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.

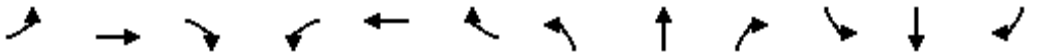
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (veh/h)	26	1213	299	190	2276	43	456	17	154	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	329	209	2501	47	515	0	169	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2120	522	240	3301	62	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	5577	104	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1147	515	209	1701	847	515	0	169	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1881	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.0	27.0	13.6	39.7	40.1	16.9	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.0	27.0	13.6	39.7	40.1	16.9	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1824	818	240	2249	1113	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	0.76	0.76	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1824	818	351	2249	1113	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.2	23.3	51.0	18.1	18.2	50.5	0.0	48.4	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.8	2.4	4.9	27.3	0.0	15.1	2.0	0.0	9.0
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	1.2	11.7	11.0	7.0	16.2	17.0	9.7	0.0	5.8	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	24.9	26.9	65.8	20.5	23.1	77.8	0.0	63.6	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	C	C	E	A	E	D	A	E
Approach Vol, veh/h		1691			2757			684			80	
Approach Delay, s/veh		26.6			24.8			74.3			59.0	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.0	3.9	42.1		18.9				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	21.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.4	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

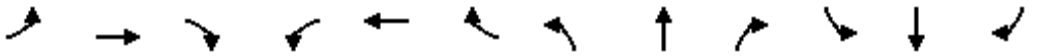
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Future Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	32.0	56.0		11.0	35.0	35.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	32.0%	56.0%		11.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 22 (22%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	130	1	1	1	132	609	12	3	255	39
Future Volume (veh/h)	86	2	130	1	1	1	132	609	12	3	255	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	141	1	1	1	143	662	13	3	277	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	231	212	179	212	212	179	176	2718	53	6	2370	1057
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.19	1.00	1.00	0.00	0.66	0.66
Sat Flow, veh/h	1437	1900	1610	1265	1900	1610	1810	3621	71	1810	3610	1610
Grp Volume(v), veh/h	93	2	141	1	1	1	143	330	345	3	277	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1265	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.2	0.1	8.5	0.1	0.0	0.1	7.6	0.0	0.0	0.2	2.9	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.5	0.2	0.0	0.1	7.6	0.0	0.0	0.2	2.9	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	231	212	179	212	212	179	176	1355	1416	6	2370	1057
V/C Ratio(X)	0.40	0.01	0.79	0.00	0.00	0.01	0.81	0.24	0.24	0.52	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	425	532	451	516	1355	1416	136	2370	1057
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	0.73	0.73	0.73
Uniform Delay (d), s/veh	42.3	39.5	43.3	39.6	39.5	39.5	39.4	0.0	0.0	49.8	6.4	6.1
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.3	0.4	0.4	43.9	0.1	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	2.2	0.0	3.7	0.0	0.0	0.0	3.4	0.2	0.2	0.1	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	39.5	50.7	39.6	39.5	39.5	47.7	0.4	0.4	93.7	6.5	6.1
LnGrp LOS	D	D	D	D	D	D	D	A	A	F	A	A
Approach Vol, veh/h		236			3			818			322	
Approach Delay, s/veh		47.7			39.6			8.7			7.2	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	80.0		16.1	13.2	70.7		16.1				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	51.0		28.0	28.5	30.0		28.0				
Max Q Clear Time (g_c+I1), s	2.2	2.0		10.5	9.6	4.9		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.1	
HCM 6th LOS		B	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	523	4	0	463
Future Volume (vph)	0	1	523	4	0	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

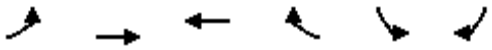
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	523	4	0	463
Future Vol, veh/h	0	1	523	4	0	463
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	551	4	0	487

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	278	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	725	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	725	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	725	-
HCM Lane V/C Ratio	-	-	0.001	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	40	33	0	0	1
Future Volume (vph)	2	40	33	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

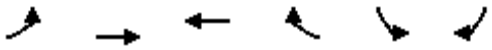
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	40	33	0	0	1
Future Vol, veh/h	2	40	33	0	0	1
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	42	35	0	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	35	0	-	0	81	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1589	-	-	-	926	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1589	-	-	-	925	1044
Mov Cap-2 Maneuver	-	-	-	-	925	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	982	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1589	-	-	-	1044
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	32	30	0	0	3
Future Volume (vph)	8	32	30	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	32	30	0	0	3
Future Vol, veh/h	8	32	30	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	34	32	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	82	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	925	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	920	1048
Mov Cap-2 Maneuver	-	-	-	-	920	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	978	-

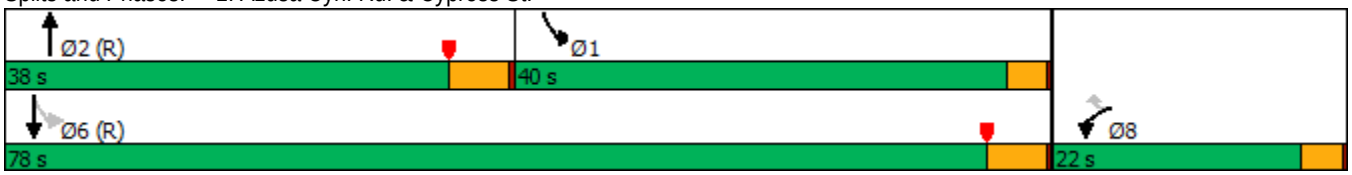
Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	1048
HCM Lane V/C Ratio	0.005	-	-	-	0.003
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	359	533	463	484
Future Volume (vph)	181	208	359	533	463	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	208	359	533	463	484
Future Volume (veh/h)	181	208	359	533	463	484
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	137	378	561	487	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	405	180	596	531	838	2900
Arrive On Green	0.11	0.11	0.33	0.33	0.85	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	268	137	378	561	487	509
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.1	8.3	17.7	33.0	0.3	0.0
Cycle Q Clear(g_c), s	7.1	8.3	17.7	33.0	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	405	180	596	531	838	2900
V/C Ratio(X)	0.66	0.76	0.63	1.06	0.58	0.18
Avail Cap(c_a), veh/h	670	298	596	531	838	2900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	42.6	43.1	28.4	33.5	4.4	0.0
Incr Delay (d2), s/veh	1.9	6.5	5.1	54.6	0.9	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	3.6	8.3	20.5	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	49.6	33.5	88.1	5.3	0.1
LnGrp LOS	D	D	C	F	A	A
Approach Vol, veh/h	405		939			996
Approach Delay, s/veh	46.2		66.1			2.7
Approach LOS	D		E			A

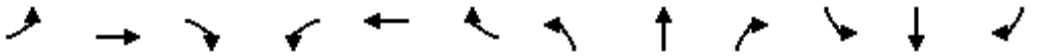
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	47.3	38.0			85.3	14.7
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	2.3	35.0			2.0	10.3
Green Ext Time (p_c), s	1.6	0.0			3.9	0.9

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

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	111.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	527	7	405	41	26	18	177	330	11	11	461	207
Future Vol, veh/h	527	7	405	41	26	18	177	330	11	11	461	207
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	543	7	418	42	27	19	182	340	11	11	475	213
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

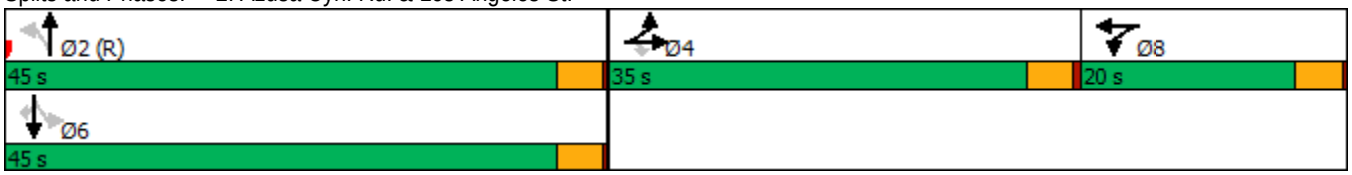
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	123.4	15.7	146.2	79.7
HCM LOS	F	C	F	F

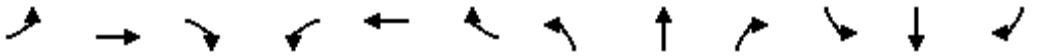
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	99%	0%	61%	0%	2%	0%
Vol Thru, %	64%	1%	0%	39%	0%	98%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	518	534	405	67	18	472	207
LT Vol	177	527	0	41	0	11	0
Through Vol	330	7	0	26	0	461	0
RT Vol	11	0	405	0	18	0	207
Lane Flow Rate	534	551	418	69	19	487	213
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.221	1.312	0.863	0.194	0.047	1.111	0.445
Departure Headway (Hd)	8.618	9.222	7.973	11.026	9.956	8.758	8.017
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	427	396	459	327	362	418	452
Service Time	6.618	6.922	5.673	8.726	7.656	6.458	5.717
HCM Lane V/C Ratio	1.251	1.391	0.911	0.211	0.052	1.165	0.471
HCM Control Delay	146.2	184	43.5	16.4	13.1	107.2	17
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	20.8	23.4	8.8	0.7	0.1	16.2	2.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	35.0	35.0	35.0	20.0	20.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	35.0%	35.0%	35.0%	20.0%	20.0%		45.0%	45.0%		45.0%	45.0%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (veh/h)	527	7	405	41	26	18	177	330	11	11	461	207
Initial Q (Qb), veh	0	1	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	548	0	418	42	27	19	182	340	11	11	475	213
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1033	0	459	78	45	32	272	475	15	45	1033	888
Arrive On Green	0.29	0.00	0.29	0.04	0.04	0.04	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1038	730	406	862	27	15	1873	1610
Grp Volume(v), veh/h	548	0	418	42	0	46	533	0	0	486	0	213
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1769	1295	0	0	1888	0	1610
Q Serve(g_s), s	12.8	0.0	25.1	2.3	0.0	2.6	27.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.8	0.0	25.1	2.3	0.0	2.6	30.2	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.41	0.34		0.02	0.02		1.00
Lane Grp Cap(c), veh/h	1033	0	459	78	0	77	762	0	0	1078	0	888
V/C Ratio(X)	0.53	0.00	0.91	0.54	0.00	0.60	0.70	0.00	0.00	0.45	0.00	0.24
Avail Cap(c_a), veh/h	1122	0	499	290	0	283	762	0	0	1078	0	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.60	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	34.5	46.8	0.0	47.0	16.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	19.8	5.6	0.0	7.3	3.2	0.0	0.0	1.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	11.7	1.1	0.0	1.3	9.1	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	54.3	52.4	0.0	54.3	19.6	0.0	0.0	1.4	0.0	0.6
LnGrp LOS	C	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		966			88			533			699	
Approach Delay, s/veh		40.8			53.4			19.6			1.1	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.1		32.5		59.1		8.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		41.0		31.0		41.0		16.0				
Max Q Clear Time (g_c+I1), s		32.2		27.1		2.0		4.6				
Green Ext Time (p_c), s		2.8		1.5		4.3		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		24.2
HCM 6th LOS		C

Notes

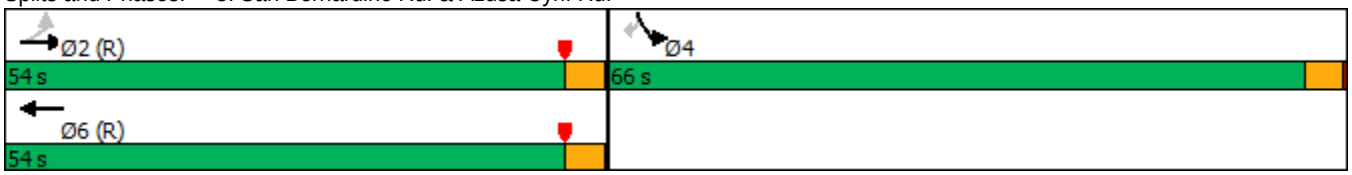
User approved volume balancing among the lanes for turning movement.

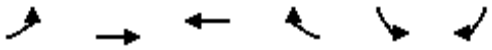
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	379	786	164
Future Volume (vph)	131	357	362	379	786	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	131	357	362	379	786	164
Future Volume (veh/h)	131	357	362	379	786	164
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	376	381	399	827	173
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	218	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	703	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	138	376	381	399	827	173
Grp Sat Flow(s),veh/h/ln	703	1805	1805	1610	1810	1610
Q Serve(g_s), s	22.7	8.1	18.7	23.1	48.8	7.0
Cycle Q Clear(g_c), s	45.8	8.1	18.7	23.1	48.8	7.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	218	1504	752	671	935	832
V/C Ratio(X)	0.63	0.25	0.51	0.59	0.88	0.21
Avail Cap(c_a), veh/h	218	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	22.8	25.9	27.1	25.8	15.7
Incr Delay (d2), s/veh	13.2	0.4	2.4	3.9	12.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.5	8.3	9.3	23.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.1	23.2	28.3	31.0	37.8	16.3
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		514	780		1000	
Approach Delay, s/veh		32.6	29.7		34.1	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

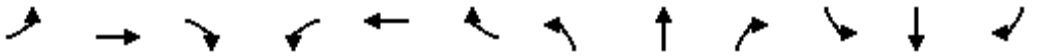
Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	8.6	65.0		17.0	73.4	73.4	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.2%	54.2%		14.2%	61.2%	61.2%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	381	246	1646	38	272	0	329	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2453	336	204	2214	938	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4906	673	1810	3800	1610	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2015	1008	246	1646	38	272	0	329	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1610	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.8	60.0	60.0	13.5	38.3	1.2	8.3	0.0	18.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.8	60.0	60.0	13.5	38.3	1.2	8.3	0.0	18.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	204	2214	938	543	0	242	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	1.21	0.74	0.04	0.50	0.00	1.36	0.23	0.00	0.44
Avail Cap(c_a), veh/h	77	1900	889	204	2214	938	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	30.0	30.0	53.3	18.4	10.7	46.9	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	26.3	38.9	73.8	130.6	2.3	0.1	3.2	0.0	186.9	3.6	0.0	9.9
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	1.6	35.1	41.6	13.4	15.8	0.4	4.0	0.0	19.8	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	68.9	103.8	183.9	20.8	10.8	50.1	0.0	237.9	55.0	0.0	62.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	D	A	E
Approach Vol, veh/h		3065			1930			601			96	
Approach Delay, s/veh		80.6			41.3			152.9			59.6	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.1	74.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	5.1	68.4		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.2	4.8	40.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		74.6	
HCM 6th LOS		E	

Notes

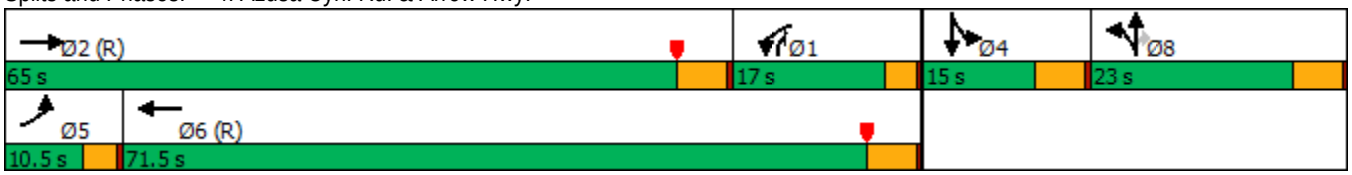
User approved volume balancing among the lanes for turning movement.

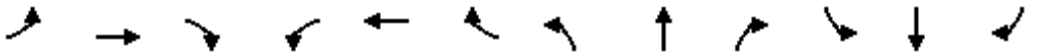
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	10.5	65.0		17.0	71.5		23.0	23.0	17.0	15.0	15.0	
Total Split (%)	8.8%	54.2%		14.2%	59.6%		19.2%	19.2%	14.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (veh/h)	40	2510	362	234	1564	36	248	14	313	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	381	246	1646	38	272	0	329	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2453	336	505	4228	98	543	0	691	151	27	111
Arrive On Green	0.06	1.00	1.00	0.56	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4906	673	1810	5549	128	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2015	1008	246	1127	557	272	0	329	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1877	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.7	60.0	59.2	9.9	0.0	0.0	8.3	0.0	0.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.7	60.0	59.2	9.9	0.0	0.0	8.3	0.0	0.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		0.07	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	505	2896	1430	543	0	691	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	0.49	0.39	0.39	0.50	0.00	0.48	0.23	0.00	0.44
Avail Cap(c_a), veh/h	106	1900	889	505	2896	1430	543	0	691	151	0	138
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	0.0	21.3	0.0	0.0	46.9	0.0	24.6	51.4	0.0	52.3
Incr Delay (d2), s/veh	20.8	38.9	73.8	0.7	0.4	0.8	3.2	0.0	2.3	3.6	0.0	9.9
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	1.5	10.3	18.2	3.5	0.2	0.3	4.0	0.0	7.1	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.8	38.9	73.8	22.0	0.4	0.8	50.1	0.0	26.9	55.0	0.0	62.2
LnGrp LOS	E	F	F	C	A	A	D	A	C	D	A	E
Approach Vol, veh/h		3065			1930			601			96	
Approach Delay, s/veh		50.9			3.3			37.4			59.6	
Approach LOS		D			A			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.5	65.0		15.0	7.1	96.4		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	* 60		10.0	7.0	66.5		18.0				
Max Q Clear Time (g_c+I1), s	11.9	62.0		6.2	4.7	2.0		10.3				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	17.0		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		33.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Future Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	32.0	60.0		8.0	36.0	36.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	60.0%		8.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	361	3	1	1	245	321	1	1	582	85
Future Volume (veh/h)	112	1	361	3	1	1	245	321	1	1	582	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	1	384	3	1	1	261	341	1	1	619	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	440	487	413	332	487	413	294	2243	7	2	1609	718
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.33	1.00	1.00	0.00	0.45	0.45
Sat Flow, veh/h	1437	1900	1610	1014	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	119	1	384	3	1	1	261	167	175	1	619	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1014	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	23.3	0.2	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Cycle Q Clear(g_c), s	6.8	0.0	23.3	0.3	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	440	487	413	332	487	413	294	1097	1153	2	1609	718
V/C Ratio(X)	0.27	0.00	0.93	0.01	0.00	0.00	0.89	0.15	0.15	0.50	0.38	0.13
Avail Cap(c_a), veh/h	460	513	435	345	513	435	516	1097	1153	81	1609	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78	0.13	0.13	0.13
Uniform Delay (d), s/veh	30.2	27.7	36.3	27.8	27.7	27.7	32.8	0.0	0.0	49.9	18.5	16.3
Incr Delay (d2), s/veh	0.3	0.0	26.0	0.0	0.0	0.0	7.3	0.2	0.2	23.5	0.1	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	2.3	0.0	11.9	0.1	0.0	0.0	5.4	0.1	0.1	0.0	4.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	27.7	62.3	27.8	27.7	27.7	40.2	0.2	0.2	73.4	18.6	16.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	E	B	B
Approach Vol, veh/h		504			5			603			710	
Approach Delay, s/veh		54.7			27.7			17.5			18.4	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	65.7		30.6	19.8	49.6		30.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	55.0		27.0	28.5	31.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		25.3	15.7	13.5		2.3				
Green Ext Time (p_c), s	0.0	2.2		0.4	0.6	4.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.2	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	3	875	1	0	679
Future Volume (vph)	0	3	875	1	0	679
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

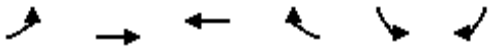
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	875	1	0	679
Future Vol, veh/h	0	3	875	1	0	679
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	921	1	0	715

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	461	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	553	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	553	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	553	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	11.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	29	81	0	0	3
Future Volume (vph)	1	29	81	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

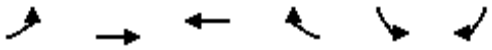
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	29	81	0	0	3
Future Vol, veh/h	1	29	81	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	31	85	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	85	0	-	0	118	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1524	-	-	-	883	980
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1524	-	-	-	882	980
Mov Cap-2 Maneuver	-	-	-	-	882	-
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	995	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1524	-	-	-	980
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	27	75	0	0	6
Future Volume (vph)	2	27	75	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	27	75	0	0	6
Future Vol, veh/h	2	27	75	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	28	79	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	111	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1532	-	-	-	891	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1532	-	-	-	890	987
Mov Cap-2 Maneuver	-	-	-	-	890	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A

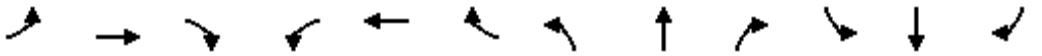
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	987
HCM Lane V/C Ratio	0.001	-	-	-	0.006
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	241	397	357	171	151	235
Future Volume (vph)	241	397	357	171	151	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3347	1470	3435		1805	3610
Flt Permitted	0.97	1.00	1.00		0.40	1.00
Satd. Flow (perm)	3347	1470	3435		767	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	268	441	397	190	168	261
RTOR Reduction (vph)	183	193	41	0	0	0
Lane Group Flow (vph)	301	32	546	0	168	261
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.3	14.3	57.2		78.7	77.2
Effective Green, g (s)	14.3	14.3	57.2		78.7	77.2
Actuated g/C Ratio	0.14	0.14	0.57		0.79	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	478	210	1964		774	2786
v/s Ratio Prot	c0.09		c0.16		c0.04	0.07
v/s Ratio Perm		0.02			0.13	
v/c Ratio	0.63	0.15	0.28		0.22	0.09
Uniform Delay, d1	40.4	37.5	10.9		4.0	2.8
Progression Factor	1.00	1.00	1.00		1.99	1.75
Incremental Delay, d2	2.6	0.3	0.4		0.1	0.1
Delay (s)	42.9	37.9	11.2		8.1	5.0
Level of Service	D	D	B		A	A
Approach Delay (s)	41.3		11.2			6.2
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

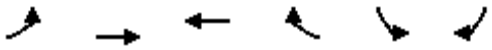
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Future Volume (vph)	212	15	190	7	8	18	231	297	8	18	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1707			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.94	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1707			1469			1780	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	226	16	202	7	9	19	246	316	9	19	171	301
RTOR Reduction (vph)	0	0	177	0	18	0	0	0	0	0	0	85
Lane Group Flow (vph)	120	122	25	7	10	0	0	571	0	0	190	216
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.2	12.2	12.2	4.2	4.2			71.6			71.6	71.6
Effective Green, g (s)	12.2	12.2	12.2	4.2	4.2			71.6			71.6	71.6
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.72			0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	209	220	231	75	71			1051			1274	1360
v/s Ratio Prot	c0.07	0.07		0.00	c0.01							
v/s Ratio Perm			0.01					c0.39			0.11	0.11
v/c Ratio	0.57	0.55	0.11	0.09	0.14			0.54			0.15	0.16
Uniform Delay, d1	41.4	41.3	39.1	46.1	46.2			6.6			4.5	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.46	0.62
Incremental Delay, d2	3.8	3.0	0.2	0.5	0.9			2.0			0.2	0.2
Delay (s)	45.2	44.4	39.3	46.6	47.0			8.6			2.3	3.1
Level of Service	D	D	D	D	D			A			A	A
Approach Delay (s)		42.3			47.0			8.6			2.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

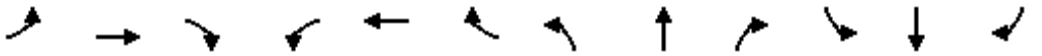
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	152	358	460	270	80
Future Volume (vph)	90	152	358	460	270	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3305		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	464	3610	3305		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	101	171	402	517	303	90
RTOR Reduction (vph)	0	0	194	0	0	27
Lane Group Flow (vph)	101	171	725	0	303	63
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	266	2075	1900		646	578
v/s Ratio Prot		0.05	c0.22		c0.17	
v/s Ratio Perm	0.22					0.04
v/c Ratio	0.38	0.08	0.38		0.47	0.11
Uniform Delay, d1	13.9	11.4	13.9		29.7	25.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.1	0.1	0.6		2.4	0.4
Delay (s)	17.9	11.5	14.5		32.1	26.1
Level of Service	B	B	B		C	C
Approach Delay (s)		13.9	14.5		30.7	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

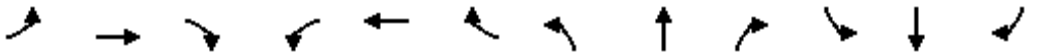
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	329	209	2501	47	501	19	169	22	13	45
RTOR Reduction (vph)	0	34	0	0	0	19	0	0	144	0	41	0
Lane Group Flow (vph)	29	1628	0	209	2501	28	261	259	25	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.66		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.76	0.62		0.73	1.11	0.02	0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.3		48.6	24.5	10.1	50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.2	57.0	0.0	35.5	34.3	0.6	1.8	1.3	
Delay (s)	119.2	25.4		57.9	81.4	10.2	85.7	84.5	44.6	52.8	52.2	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.0			78.4			75.2			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

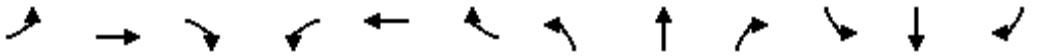
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Future Volume (vph)	26	1213	299	190	2276	43	456	17	154	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	329	209	2501	47	501	19	169	22	13	45
RTOR Reduction (vph)	0	34	0	0	2	0	0	0	144	0	41	0
Lane Group Flow (vph)	29	1628	0	209	2546	0	261	259	25	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.45		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.62		0.73	0.75		0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.3		48.6	18.0		50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.2	1.6		35.5	34.3	0.6	1.8	1.3	
Delay (s)	119.2	25.4		57.9	19.6		85.7	84.5	44.6	52.8	52.2	
Level of Service	F	C		E	B		F	F	D	D	D	
Approach Delay (s)		27.0			22.5			75.2			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Future Volume (vph)	86	2	130	1	1	1	132	609	12	3	255	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3600		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3600		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	141	1	1	1	143	662	13	3	277	42
RTOR Reduction (vph)	0	0	123	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	18	1	1	0	143	674	0	3	277	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.3	72.5		1.3	60.5	60.5
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.3	72.5		1.3	60.5	60.5
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.72		0.01	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	240	2610		23	2184	977
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.13	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.5	38.1	38.1	38.1	40.8	4.7		48.8	8.4	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.96		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	3.8	0.2		2.6	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	43.3	4.7		51.4	8.6	8.0
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.5			38.1			11.4			8.9	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

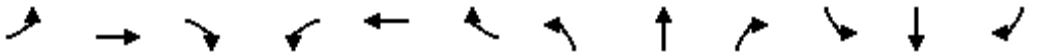
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	359	533	463	484
Future Volume (vph)	181	208	359	533	463	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3286		1805	3610
Flt Permitted	0.97	1.00	1.00		0.18	1.00
Satd. Flow (perm)	3394	1470	3286		345	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	219	378	561	487	509
RTOR Reduction (vph)	63	113	244	0	0	0
Lane Group Flow (vph)	218	16	695	0	487	509
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.1	12.1	39.4		80.9	79.4
Effective Green, g (s)	12.1	12.1	39.4		80.9	79.4
Actuated g/C Ratio	0.12	0.12	0.39		0.81	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	410	177	1294		812	2866
v/s Ratio Prot	c0.06		0.21		c0.22	0.14
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.53	0.09	0.54		0.60	0.18
Uniform Delay, d1	41.3	39.0	23.3		13.8	2.5
Progression Factor	1.00	1.00	1.00		0.85	1.39
Incremental Delay, d2	1.3	0.2	1.6		1.1	0.1
Delay (s)	42.6	39.3	24.9		12.9	3.6
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		24.9			8.1
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

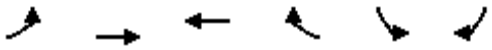
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Future Volume (vph)	527	7	405	41	26	18	177	330	11	11	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.94			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1782			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.58			0.99	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1782			1103			1877	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	543	7	418	42	27	19	182	340	11	11	475	213
RTOR Reduction (vph)	0	0	300	0	18	0	0	0	0	0	0	90
Lane Group Flow (vph)	277	273	118	42	28	0	0	533	0	0	486	123
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.5	23.5	23.5	6.7	6.7			57.8			57.8	57.8
Effective Green, g (s)	23.5	23.5	23.5	6.7	6.7			57.8			57.8	57.8
Actuated g/C Ratio	0.24	0.24	0.24	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	403	424	446	120	119			637			1084	1098
v/s Ratio Prot	c0.16	0.15		c0.02	0.02							
v/s Ratio Perm			0.06					c0.48			0.26	0.06
v/c Ratio	0.69	0.64	0.26	0.35	0.24			0.84			0.45	0.11
Uniform Delay, d1	34.9	34.5	31.2	44.6	44.2			17.2			12.0	9.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	2.17
Incremental Delay, d2	4.8	3.3	0.3	1.8	1.0			12.3			1.3	0.2
Delay (s)	39.7	37.8	31.5	46.3	45.3			29.6			13.3	20.9
Level of Service	D	D	C	D	D			C			B	C
Approach Delay (s)		35.6			45.8			29.6			15.6	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

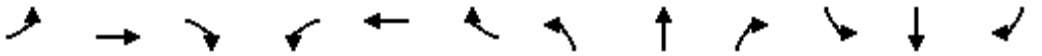
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	357	362	379	786	164
Future Volume (vph)	131	357	362	379	786	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3333		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	451	3610	3333		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	376	381	399	827	173
RTOR Reduction (vph)	0	0	158	0	0	19
Lane Group Flow (vph)	138	376	623	0	827	154
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	187	1504	1388		932	834
v/s Ratio Prot		0.10	0.19		c0.46	
v/s Ratio Perm	c0.31					0.10
v/c Ratio	0.74	0.25	0.45		0.89	0.18
Uniform Delay, d1	29.5	22.8	25.1		25.9	15.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	22.7	0.4	1.1		12.3	0.5
Delay (s)	52.2	23.2	26.2		38.1	16.0
Level of Service	D	C	C		D	B
Approach Delay (s)		31.0	26.2		34.3	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

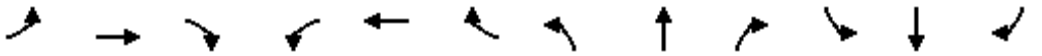
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	381	246	1646	38	261	15	329	35	12	49
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	184	0	45	0
Lane Group Flow (vph)	42	3005	0	246	1646	22	138	138	145	35	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.1	60.0		13.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.1	60.0		13.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.03	0.50		0.11	0.58	0.58	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	2850		213	2197	1098	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.43		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.66	1.05		1.15	0.75	0.02	0.48	0.48	0.51	0.22	0.10	
Uniform Delay, d1	57.3	30.0		53.2	18.8	10.8	46.7	46.7	46.9	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.7	33.4		109.7	2.4	0.0	5.8	5.8	6.4	3.2	1.3	
Delay (s)	78.9	63.4		163.0	21.2	10.8	52.5	52.5	53.3	54.6	52.1	
Level of Service	E	E		F	C	B	D	D	D	D	D	
Approach Delay (s)		63.6			39.1			53.0			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

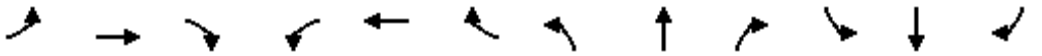
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Future Volume (vph)	40	2510	362	234	1564	36	248	14	313	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	381	246	1646	38	261	15	329	35	12	49
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	70	0	45	0
Lane Group Flow (vph)	42	3005	0	246	1682	0	138	138	259	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.6	59.3		14.2	67.9		18.0	18.0	32.2	10.0	10.0	
Effective Green, g (s)	5.6	59.3		14.2	67.9		18.0	18.0	32.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.49		0.12	0.57		0.15	0.15	0.27	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	88	2816		224	3225		285	285	509	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.30		0.07	0.07	c0.06	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.48	1.07		1.10	0.52		0.48	0.48	0.51	0.22	0.10	
Uniform Delay, d1	55.8	30.4		52.9	16.0		46.7	46.7	37.2	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	38.2		88.9	0.6		5.8	5.8	0.8	3.2	1.3	
Delay (s)	59.8	68.6		141.8	16.7		52.5	52.5	38.0	54.6	52.1	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		68.4			32.6			44.6			53.0	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Future Volume (vph)	112	1	361	3	1	1	245	321	1	1	582	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	119	1	384	3	1	1	261	341	1	1	619	90
RTOR Reduction (vph)	0	0	328	0	0	1	0	0	0	0	0	43
Lane Group Flow (vph)	119	1	56	3	1	0	261	342	0	1	619	47
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	70.8		1.2	52.3	52.3
Effective Green, g (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	70.8		1.2	52.3	52.3
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.20	0.71		0.01	0.52	0.52
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	208	275	234	208	275	234	355	2554		21	1888	844
v/s Ratio Prot		0.00			0.00		c0.14	0.09		0.00	c0.17	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.24	0.01	0.00	0.00	0.74	0.13		0.05	0.33	0.06
Uniform Delay, d1	39.9	36.6	37.9	36.6	36.6	36.6	37.7	4.7		48.8	13.7	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.21	0.46		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	0.5	0.0	0.0	0.0	6.7	0.1		0.9	0.5	0.1
Delay (s)	43.6	36.6	38.4	36.7	36.6	36.6	52.3	2.2		49.8	14.2	11.8
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.6			36.6			23.9			13.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 6.2:

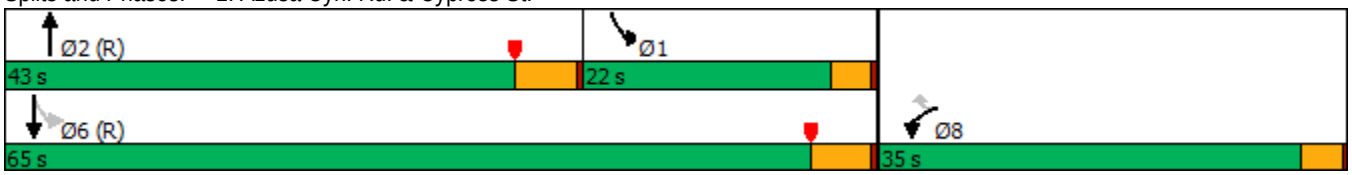
INTERIM YEAR CUMULATIVE PLUS SITE BASELINE LAND USE WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	242	397	359	171	151	240
Future Volume (vph)	242	397	359	171	151	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		49%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	35.0	35.0	43.0		22.0	65.0
Total Split (%)	35.0%	35.0%	43.0%		22.0%	65.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	242	397	359	171	151	240
Future Volume (veh/h)	242	397	359	171	151	240
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	237	476	399	190	168	267
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	336	597	905	426	810	2633
Arrive On Green	0.19	0.19	0.38	0.38	0.60	1.00
Sat Flow, veh/h	1810	3220	2478	1120	1810	3705
Grp Volume(v), veh/h	237	476	301	288	168	267
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1698	1810	1805
Q Serve(g_s), s	12.3	14.1	12.4	12.7	0.0	0.0
Cycle Q Clear(g_c), s	12.3	14.1	12.4	12.7	0.0	0.0
Prop In Lane	1.00	1.00		0.66	1.00	
Lane Grp Cap(c), veh/h	336	597	686	645	810	2633
V/C Ratio(X)	0.71	0.80	0.44	0.45	0.21	0.10
Avail Cap(c_a), veh/h	570	1014	686	645	810	2633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	38.2	38.9	23.1	23.1	7.1	0.0
Incr Delay (d2), s/veh	2.7	2.5	2.0	2.2	0.1	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	5.6	5.7	5.6	5.4	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.9	41.4	25.1	25.4	7.2	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	713		589			435
Approach Delay, s/veh	41.2		25.2			2.8
Approach LOS	D		C			A

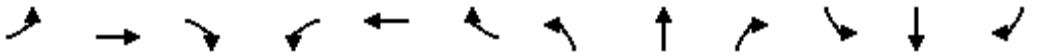
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.9	43.0			77.9	22.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	18.5	* 38			60.0	31.5
Max Q Clear Time (g_c+I1), s	2.0	14.7			2.0	16.1
Green Ext Time (p_c), s	0.4	3.8			1.9	2.4

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	47
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	213	25	190	8	11	18	231	302	8	24	161	283
Future Vol, veh/h	213	25	190	8	11	18	231	302	8	24	161	283
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	227	27	202	9	12	19	246	321	9	26	171	301
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.6	11.9	99.6	15.9
HCM LOS	C	B	F	C

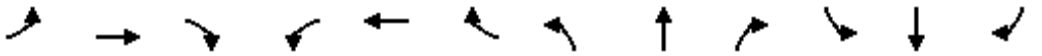
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	43%	89%	0%	42%	0%	13%	0%
Vol Thru, %	56%	11%	0%	58%	0%	87%	0%
Vol Right, %	1%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	541	238	190	19	18	185	283
LT Vol	231	213	0	8	0	24	0
Through Vol	302	25	0	11	0	161	0
RT Vol	8	0	190	0	18	0	283
Lane Flow Rate	576	253	202	20	19	197	301
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.112	0.553	0.377	0.049	0.042	0.39	0.533
Departure Headway (Hd)	6.953	8.22	7.033	9.267	8.314	7.413	6.626
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	441	515	389	433	488	548
Service Time	5.007	5.92	4.733	6.967	6.014	5.113	4.326
HCM Lane V/C Ratio	1.099	0.574	0.392	0.051	0.044	0.404	0.549
HCM Control Delay	99.6	20.6	13.9	12.4	11.4	14.8	16.6
HCM Lane LOS	F	C	B	B	B	B	C
HCM 95th-tile Q	18.7	3.3	1.7	0.2	0.1	1.8	3.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	44%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (veh/h)	213	25	190	8	11	18	231	302	8	24	161	283
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	246	0	202	9	12	19	246	321	9	26	171	301
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	527	0	235	49	18	28	430	531	14	172	1109	1139
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	3619	0	1610	1810	662	1049	536	751	20	185	1567	1610
Grp Volume(v), veh/h	246	0	202	9	0	31	576	0	0	197	0	301
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1711	1307	0	0	1752	0	1610
Q Serve(g_s), s	6.2	0.0	12.3	0.5	0.0	1.8	20.3	0.0	0.0	0.0	0.0	6.7
Cycle Q Clear(g_c), s	6.2	0.0	12.3	0.5	0.0	1.8	23.7	0.0	0.0	3.4	0.0	6.7
Prop In Lane	1.00		1.00	1.00		0.61	0.43		0.02	0.13		1.00
Lane Grp Cap(c), veh/h	527	0	235	49	0	46	976	0	0	1280	0	1139
V/C Ratio(X)	0.47	0.00	0.86	0.19	0.00	0.68	0.59	0.00	0.00	0.15	0.00	0.26
Avail Cap(c_a), veh/h	579	0	258	290	0	274	976	0	0	1280	0	1139
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	1.00	1.00	0.00	1.00	0.93	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	41.7	47.6	0.0	48.2	7.8	0.0	0.0	4.8	0.0	5.3
Incr Delay (d2), s/veh	0.6	0.0	23.0	1.8	0.0	15.9	2.4	0.0	0.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	6.2	0.2	0.0	1.0	6.2	0.0	0.0	1.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	0.0	64.8	49.4	0.0	64.1	10.3	0.0	0.0	5.0	0.0	5.8
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		448			40			576			498	
Approach Delay, s/veh		51.1			60.8			10.3			5.5	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.8		18.6		74.8		6.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		25.7		14.3		8.7		3.8				
Green Ext Time (p_c), s		5.3		0.3		2.4		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

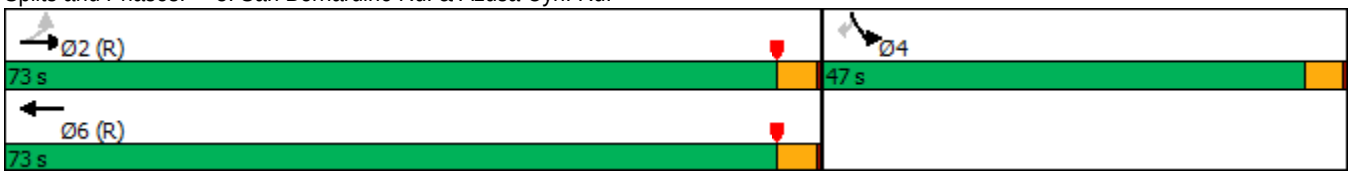
Notes

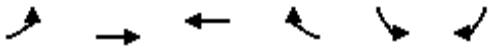
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	152	358	463	271	80
Future Volume (vph)	92	152	358	463	271	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	92	152	358	463	271	80
Future Volume (veh/h)	92	152	358	463	271	80
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	103	171	402	520	304	90
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	289	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	616	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	103	171	402	520	304	90
Grp Sat Flow(s),veh/h/ln	616	1805	1805	1610	1810	1610
Q Serve(g_s), s	15.1	2.5	14.6	24.3	15.5	4.6
Cycle Q Clear(g_c), s	39.5	2.5	14.6	24.3	15.5	4.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	289	2076	1038	926	648	577
V/C Ratio(X)	0.36	0.08	0.39	0.56	0.47	0.16
Avail Cap(c_a), veh/h	289	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	11.4	13.9	16.0	29.7	26.2
Incr Delay (d2), s/veh	3.4	0.1	1.1	2.5	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.0	5.9	8.9	7.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.8	11.5	15.0	18.5	32.1	26.7
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		274	922		394	
Approach Delay, s/veh		19.1	17.0		30.9	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

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

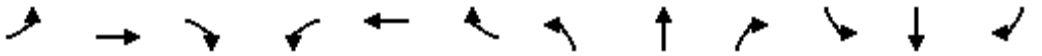
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	56.0		26.0	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.7%		21.7%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	331	212	2501	47	516	0	170	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2110	523	242	2249	953	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	3800	1610	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1148	516	212	2501	47	516	0	170	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1610	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.1	27.2	13.8	71.0	1.5	17.0	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.1	27.2	13.8	71.0	1.5	17.0	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1818	815	242	2249	953	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	1.11	0.05	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1818	815	339	2249	953	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.4	23.4	51.0	24.5	10.3	50.6	0.0	48.5	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	16.5	57.4	0.1	27.6	0.0	15.4	2.0	0.0	9.0
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	1.2	11.8	11.1	7.2	45.6	0.5	9.7	0.0	5.9	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.1	27.1	67.5	81.9	10.4	78.2	0.0	63.9	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	F	B	E	A	E	D	A	E
Approach Vol, veh/h		1693			2760			686			80	
Approach Delay, s/veh		26.7			79.6			74.6			59.0	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	22.5	51.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.0	3.9	73.0		19.0				
Green Ext Time (p_c), s	0.3	11.7		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		61.5	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

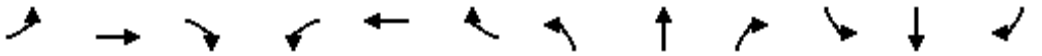
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	54.9		27.1	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.6%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (veh/h)	26	1213	301	193	2276	43	457	17	155	20	12	41
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	1333	331	212	2501	47	516	0	170	22	13	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	2109	523	243	3301	62	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	5577	104	3619	0	1610	1810	374	1293
Grp Volume(v), veh/h	29	1148	516	212	1701	847	516	0	170	22	0	58
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1881	1810	0	1610	1810	0	1667
Q Serve(g_s), s	1.9	27.1	27.2	13.8	39.7	40.1	17.0	0.0	12.0	1.4	0.0	4.0
Cycle Q Clear(g_c), s	1.9	27.1	27.2	13.8	39.7	40.1	17.0	0.0	12.0	1.4	0.0	4.0
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	37	1817	815	243	2249	1113	543	0	242	151	0	139
V/C Ratio(X)	0.78	0.63	0.63	0.87	0.76	0.76	0.95	0.00	0.70	0.15	0.00	0.42
Avail Cap(c_a), veh/h	60	1817	815	356	2249	1113	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	23.4	23.4	50.9	18.1	18.2	50.6	0.0	48.5	51.0	0.0	52.2
Incr Delay (d2), s/veh	28.2	1.7	3.7	14.8	2.4	4.9	27.6	0.0	15.4	2.0	0.0	9.0
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	1.2	11.8	11.1	7.1	16.2	17.0	9.7	0.0	5.9	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	25.1	27.2	65.7	20.5	23.1	78.2	0.0	63.9	53.1	0.0	61.2
LnGrp LOS	F	C	C	E	C	C	E	A	E	D	A	E
Approach Vol, veh/h		1693			2760			686			80	
Approach Delay, s/veh		26.8			24.8			74.6			59.0	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.0	76.0		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.6	49.9		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.0	3.9	42.1		19.0				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	21.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.5	
HCM 6th LOS		C	

Notes

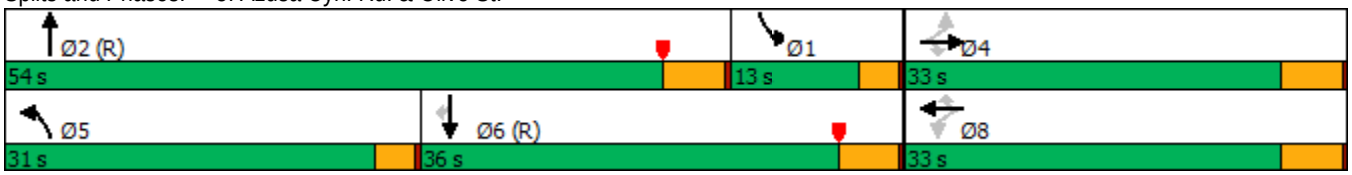
User approved volume balancing among the lanes for turning movement.

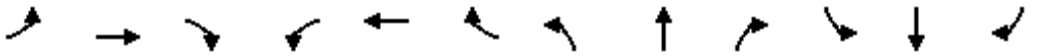
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Future Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	131	1	1	1	132	610	12	3	260	39
Future Volume (veh/h)	86	2	131	1	1	1	132	610	12	3	260	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	142	1	1	1	143	663	13	3	283	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	232	213	180	212	213	180	176	1774	35	449	2368	1056
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.19	0.98	0.98	0.25	0.66	0.66
Sat Flow, veh/h	1437	1900	1610	1264	1900	1610	1810	3621	71	1810	3610	1610
Grp Volume(v), veh/h	93	2	142	1	1	1	143	330	346	3	283	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1264	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	8.6	0.1	0.0	0.1	7.6	0.6	0.6	0.1	2.9	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.6	0.2	0.0	0.1	7.6	0.6	0.6	0.1	2.9	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	232	213	180	212	213	180	176	884	925	449	2368	1056
V/C Ratio(X)	0.40	0.01	0.79	0.00	0.00	0.01	0.81	0.37	0.37	0.01	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	425	532	451	498	884	925	449	2368	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.72	0.72	0.72
Uniform Delay (d), s/veh	42.2	39.5	43.2	39.5	39.5	39.5	39.4	0.5	0.5	28.3	6.4	6.1
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.2	1.1	1.1	0.0	0.1	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	2.2	0.0	3.8	0.0	0.0	0.0	3.4	0.4	0.4	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	39.5	50.7	39.6	39.5	39.5	47.6	1.6	1.6	28.3	6.5	6.1
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		237			3			819			328	
Approach Delay, s/veh		47.7			39.5			9.7			6.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.8	54.0		16.2	13.2	70.6		16.2				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		10.6	9.6	4.9		2.2				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.3	2.0		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	523	10	0	469
Future Volume (vph)	0	2	523	10	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

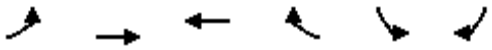
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	523	10	0	469
Future Vol, veh/h	0	2	523	10	0	469
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	551	11	0	494

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	281	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	722	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	722	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	722	-
HCM Lane V/C Ratio	-	-	0.003	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	53	36	0	0	2
Future Volume (vph)	5	53	36	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

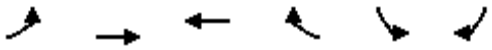
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	53	36	0	0	2
Future Vol, veh/h	5	53	36	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	56	38	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	104	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	66	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1585	-	-	-	899	1040
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	896	1040
Mov Cap-2 Maneuver	-	-	-	-	896	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1585	-	-	-	1040
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	32	30	0	0	6
Future Volume (vph)	21	32	30	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	32	30	0	0	6
Future Vol, veh/h	21	32	30	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	34	32	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	110	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	78	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	892	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	880	1048
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	950	-

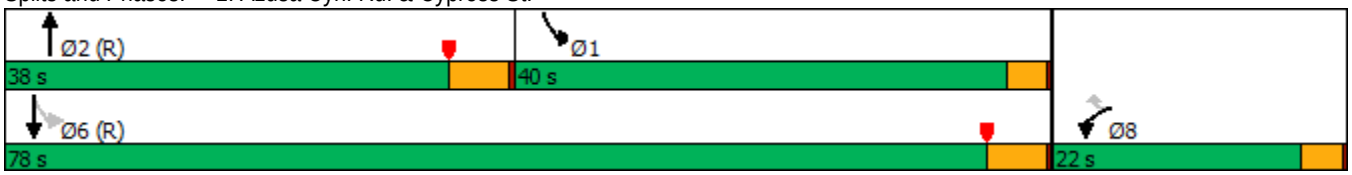
Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	1048
HCM Lane V/C Ratio	0.014	-	-	-	0.006
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	365	534	463	486
Future Volume (vph)	181	208	365	534	463	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	208	365	534	463	486
Future Volume (veh/h)	181	208	365	534	463	486
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	137	384	562	487	512
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	405	180	596	531	838	2900
Arrive On Green	0.11	0.11	0.33	0.33	0.85	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	268	137	384	562	487	512
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.1	8.3	18.1	33.0	0.3	0.0
Cycle Q Clear(g_c), s	7.1	8.3	18.1	33.0	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	405	180	596	531	838	2900
V/C Ratio(X)	0.66	0.76	0.64	1.06	0.58	0.18
Avail Cap(c_a), veh/h	670	298	596	531	838	2900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	42.6	43.1	28.5	33.5	4.4	0.0
Incr Delay (d2), s/veh	1.9	6.5	5.3	55.2	0.9	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	3.6	8.5	20.6	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	49.6	33.8	88.7	5.3	0.1
LnGrp LOS	D	D	C	F	A	A
Approach Vol, veh/h	405		946			999
Approach Delay, s/veh	46.2		66.4			2.7
Approach LOS	D		E			A

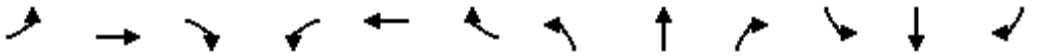
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	47.3	38.0			85.3	14.7
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	2.3	35.0			2.0	10.3
Green Ext Time (p_c), s	1.6	0.0			4.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	117
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	527	11	405	46	37	19	177	332	11	13	461	207
Future Vol, veh/h	527	11	405	46	37	19	177	332	11	13	461	207
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	543	11	418	47	38	20	182	342	11	13	475	213
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

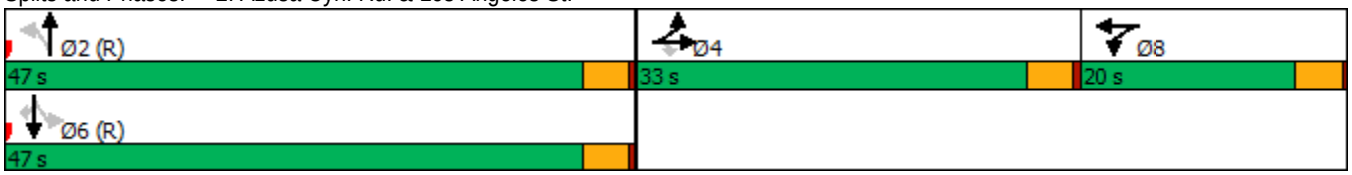
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	130.3	16.5	155.3	84.3
HCM LOS	F	C	F	F

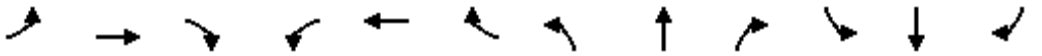
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	98%	0%	55%	0%	3%	0%
Vol Thru, %	64%	2%	0%	45%	0%	97%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	520	538	405	83	19	474	207
LT Vol	177	527	0	46	0	13	0
Through Vol	332	11	0	37	0	461	0
RT Vol	11	0	405	0	19	0	207
Lane Flow Rate	536	555	418	86	20	489	213
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.243	1.335	0.875	0.24	0.05	1.128	0.45
Departure Headway (Hd)	8.761	9.371	8.125	11.049	10.008	8.886	8.142
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	418	394	451	327	360	410	446
Service Time	6.761	7.071	5.825	8.749	7.708	6.586	5.842
HCM Lane V/C Ratio	1.282	1.409	0.927	0.263	0.056	1.193	0.478
HCM Control Delay	155.3	193.8	45.9	17.2	13.2	113.5	17.3
HCM Lane LOS	F	F	E	C	B	F	C
HCM 95th-tile Q	21.4	24.1	9.1	0.9	0.2	16.7	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (veh/h)	527	11	405	46	37	19	177	332	11	13	461	207
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	551	0	418	47	38	20	182	342	11	13	475	213
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1013	0	451	93	60	32	270	474	15	47	1024	884
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.55	0.55	0.55	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1172	617	405	865	27	19	1866	1610
Grp Volume(v), veh/h	551	0	418	47	0	58	535	0	0	488	0	213
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1789	1296	0	0	1884	0	1610
Q Serve(g_s), s	12.9	0.0	25.2	2.5	0.0	3.2	27.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.9	0.0	25.2	2.5	0.0	3.2	30.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.34	0.34		0.02	0.03		1.00
Lane Grp Cap(c), veh/h	1013	0	451	93	0	92	760	0	0	1071	0	884
V/C Ratio(X)	0.54	0.00	0.93	0.51	0.00	0.63	0.70	0.00	0.00	0.46	0.00	0.24
Avail Cap(c_a), veh/h	1050	0	467	290	0	286	760	0	0	1071	0	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.59	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	35.0	46.2	0.0	46.5	16.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	24.4	4.2	0.0	7.0	3.3	0.0	0.0	1.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	12.3	1.2	0.0	1.6	9.3	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	59.4	50.4	0.0	53.5	19.8	0.0	0.0	1.4	0.0	0.6
LnGrp LOS	C	A	E	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h		969			105			535			701	
Approach Delay, s/veh		43.3			52.1			19.8			1.2	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.9		32.0		58.9		9.1				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		32.6		27.2		2.0		5.2				
Green Ext Time (p_c), s		3.2		0.8		4.4		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

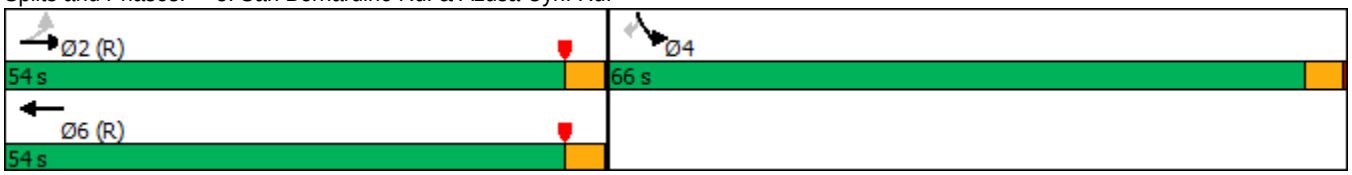
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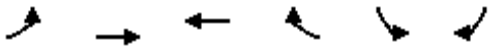
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	132	357	362	380	789	166
Future Volume (vph)	132	357	362	380	789	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	54.0	54.0	54.0		66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%		55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	132	357	362	380	789	166
Future Volume (veh/h)	132	357	362	380	789	166
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	139	376	381	400	831	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	217	1504	752	671	935	832
Arrive On Green	0.42	0.42	0.42	0.42	0.52	0.52
Sat Flow, veh/h	703	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	139	376	381	400	831	175
Grp Sat Flow(s),veh/h/ln	703	1805	1805	1610	1810	1610
Q Serve(g_s), s	23.0	8.1	18.7	23.1	49.3	7.1
Cycle Q Clear(g_c), s	46.1	8.1	18.7	23.1	49.3	7.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	217	1504	752	671	935	832
V/C Ratio(X)	0.64	0.25	0.51	0.60	0.89	0.21
Avail Cap(c_a), veh/h	217	1504	752	671	935	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	22.8	25.9	27.2	25.9	15.7
Incr Delay (d2), s/veh	13.6	0.4	2.4	3.9	12.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.5	8.3	9.3	23.5	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.6	23.2	28.3	31.0	38.3	16.3
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		515	781		1006	
Approach Delay, s/veh		32.8	29.7		34.4	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.0		66.0		54.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		50.0		62.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

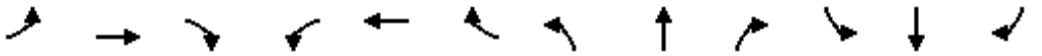
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	8.6	64.0		18.0	73.4	73.4	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.2%	53.3%		15.0%	61.2%	61.2%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	382	247	1646	38	274	0	333	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2411	331	219	2214	938	543	0	242	151	27	111
Arrive On Green	0.03	0.49	0.49	0.12	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4905	674	1810	3800	1610	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2016	1008	247	1646	38	274	0	333	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1610	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.8	59.0	59.0	14.5	38.3	1.2	8.4	0.0	18.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.8	59.0	59.0	14.5	38.3	1.2	8.4	0.0	18.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1868	875	219	2214	938	543	0	242	151	0	138
V/C Ratio(X)	0.78	1.08	1.15	1.13	0.74	0.04	0.50	0.00	1.38	0.23	0.00	0.44
Avail Cap(c_a), veh/h	77	1868	875	219	2214	938	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	30.5	30.5	52.8	18.4	10.7	46.9	0.0	51.0	51.4	0.0	52.3
Incr Delay (d2), s/veh	26.3	45.8	81.7	100.1	2.3	0.1	3.3	0.0	193.8	3.6	0.0	9.9
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	1.6	36.5	42.9	12.5	15.8	0.4	4.0	0.0	20.2	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	76.3	112.2	152.9	20.8	10.8	50.2	0.0	244.8	55.0	0.0	62.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	D	A	E
Approach Vol, veh/h		3066			1931			607			96	
Approach Delay, s/veh		88.2			37.5			156.9			59.6	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	64.0		15.0	7.1	74.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	14.5	59.0		10.0	5.1	68.4		18.0				
Max Q Clear Time (g_c+I1), s	16.5	61.0		6.2	4.8	40.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			77.9									
HCM 6th LOS			E									

Notes

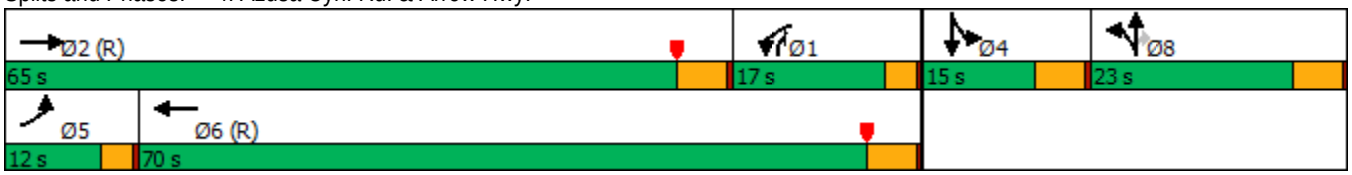
User approved volume balancing among the lanes for turning movement.

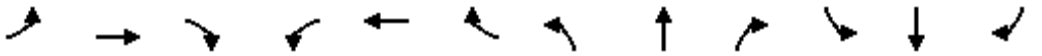
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	12.0	65.0		17.0	70.0		23.0	23.0	17.0	15.0	15.0	
Total Split (%)	10.0%	54.2%		14.2%	58.3%		19.2%	19.2%	14.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 16 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (veh/h)	40	2510	363	235	1564	36	250	14	316	33	11	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	2642	382	247	1646	38	274	0	333	35	12	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	2452	337	508	4235	98	543	0	693	151	27	111
Arrive On Green	0.06	1.00	1.00	0.56	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4905	674	1810	5549	128	3619	0	1610	1810	327	1333
Grp Volume(v), veh/h	42	2016	1008	247	1127	557	274	0	333	35	0	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1779	1810	1900	1877	1810	0	1610	1810	0	1660
Q Serve(g_s), s	2.7	60.0	60.0	9.9	0.0	0.0	8.4	0.0	0.0	2.2	0.0	4.2
Cycle Q Clear(g_c), s	2.7	60.0	60.0	9.9	0.0	0.0	8.4	0.0	0.0	2.2	0.0	4.2
Prop In Lane	1.00		0.38	1.00		0.07	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	54	1900	889	508	2900	1432	543	0	693	151	0	138
V/C Ratio(X)	0.78	1.06	1.13	0.49	0.39	0.39	0.50	0.00	0.48	0.23	0.00	0.44
Avail Cap(c_a), veh/h	128	1900	889	508	2900	1432	543	0	693	151	0	138
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	0.0	21.1	0.0	0.0	46.9	0.0	24.5	51.4	0.0	52.3
Incr Delay (d2), s/veh	20.7	39.1	74.0	0.7	0.4	0.8	3.3	0.0	2.3	3.6	0.0	9.9
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	1.5	10.3	18.3	3.5	0.2	0.3	4.0	0.0	7.2	1.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.7	39.1	74.0	21.8	0.4	0.8	50.2	0.0	26.9	55.0	0.0	62.2
LnGrp LOS	E	F	F	C	A	A	D	A	C	D	A	E
Approach Vol, veh/h		3066			1931			607			96	
Approach Delay, s/veh		51.1			3.3			37.4			59.6	
Approach LOS		D			A			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.7	65.0		15.0	7.1	96.6		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	* 60		10.0	8.5	65.0		18.0				
Max Q Clear Time (g_c+I1), s	11.9	62.0		6.2	4.7	2.0		10.4				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	16.9		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		33.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

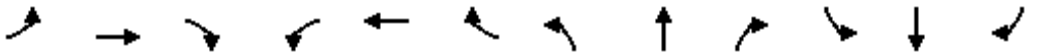
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Future Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	31.0	32.0	61.0		8.0	37.0	37.0
Total Split (%)	31.0%	31.0%	31.0%	31.0%	31.0%	31.0%	32.0%	61.0%		8.0%	37.0%	37.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	361	3	1	1	246	326	1	1	584	85
Future Volume (veh/h)	112	1	361	3	1	1	246	326	1	1	584	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	119	1	384	3	1	1	262	347	1	1	621	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	438	484	410	330	484	410	295	2068	6	64	1613	720
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.33	1.00	1.00	0.04	0.45	0.45
Sat Flow, veh/h	1437	1900	1610	1014	1900	1610	1810	3692	11	1810	3610	1610
Grp Volume(v), veh/h	119	1	384	3	1	1	262	170	178	1	621	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1014	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	23.3	0.2	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Cycle Q Clear(g_c), s	6.8	0.0	23.3	0.3	0.0	0.0	13.7	0.0	0.0	0.1	11.5	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	438	484	410	330	484	410	295	1011	1063	64	1613	720
V/C Ratio(X)	0.27	0.00	0.94	0.01	0.00	0.00	0.89	0.17	0.17	0.02	0.38	0.13
Avail Cap(c_a), veh/h	445	494	419	335	494	419	516	1011	1063	81	1613	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.26	0.26	0.26
Uniform Delay (d), s/veh	30.3	27.8	36.5	27.9	27.8	27.8	32.8	0.0	0.0	46.6	18.5	16.2
Incr Delay (d2), s/veh	0.3	0.0	28.2	0.0	0.0	0.0	7.3	0.3	0.3	0.0	0.2	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	2.3	0.0	12.2	0.1	0.0	0.0	5.5	0.1	0.1	0.0	4.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	27.8	64.6	27.9	27.8	27.8	40.1	0.3	0.3	46.6	18.7	16.3
LnGrp LOS	C	C	E	C	C	C	D	A	A	D	B	B
Approach Vol, veh/h		504			5			610			712	
Approach Delay, s/veh		56.5			27.8			17.4			18.4	
Approach LOS		E			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	61.0		30.5	19.8	49.7		30.5				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	* 56		26.0	28.5	32.0		26.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		25.3	15.7	13.5		2.3				
Green Ext Time (p_c), s	0.0	2.2		0.1	0.6	4.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.6	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	8	876	3	0	681
Future Volume (vph)	0	8	876	3	0	681
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

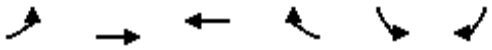
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	876	3	0	681
Future Vol, veh/h	0	8	876	3	0	681
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	922	3	0	717

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	463	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	551	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	551	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	551	-
HCM Lane V/C Ratio	-	-	0.015	-
HCM Control Delay (s)	-	-	11.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	34	94	0	0	7
Future Volume (vph)	2	34	94	0	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

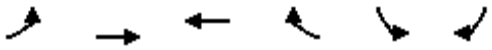
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	34	94	0	0	7
Future Vol, veh/h	2	34	94	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	36	99	0	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	139	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1507	-	-	-	859	962
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1507	-	-	-	858	962
Mov Cap-2 Maneuver	-	-	-	-	858	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	988	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1507	-	-	-	962
HCM Lane V/C Ratio	0.001	-	-	-	0.008
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	27	75	0	0	19
Future Volume (vph)	7	27	75	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	27	75	0	0	19
Future Vol, veh/h	7	27	75	0	0	19
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	28	79	0	0	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	121	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1532	-	-	-	879	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	986	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1532	-	-	-	875	987
Mov Cap-2 Maneuver	-	-	-	-	875	-
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.7
HCM LOS			A

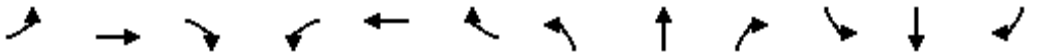
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1532	-	-	-	987
HCM Lane V/C Ratio	0.005	-	-	-	0.02
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	242	397	359	171	151	240
Future Volume (vph)	242	397	359	171	151	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3347	1470	3435		1805	3610
Flt Permitted	0.97	1.00	1.00		0.40	1.00
Satd. Flow (perm)	3347	1470	3435		758	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	441	399	190	168	267
RTOR Reduction (vph)	183	193	41	0	0	0
Lane Group Flow (vph)	302	32	548	0	168	267
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	14.3	14.3	55.2		78.7	77.2
Effective Green, g (s)	14.3	14.3	55.2		78.7	77.2
Actuated g/C Ratio	0.14	0.14	0.55		0.79	0.77
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	478	210	1896		790	2786
v/s Ratio Prot	c0.09		c0.16		c0.04	0.07
v/s Ratio Perm		0.02			0.13	
v/c Ratio	0.63	0.15	0.29		0.21	0.10
Uniform Delay, d1	40.4	37.5	11.9		4.1	2.8
Progression Factor	1.00	1.00	1.00		1.10	0.92
Incremental Delay, d2	2.7	0.3	0.4		0.1	0.1
Delay (s)	43.1	37.9	12.3		4.7	2.6
Level of Service	D	D	B		A	A
Approach Delay (s)	41.4		12.3			3.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

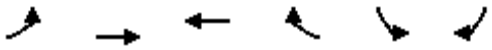
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Future Volume (vph)	213	25	190	8	11	18	231	302	8	24	161	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.91			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1725			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77			0.91	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1725			1466			1726	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	227	27	202	9	12	19	246	321	9	26	171	301
RTOR Reduction (vph)	0	0	177	0	18	0	0	0	0	0	0	87
Lane Group Flow (vph)	127	127	25	9	13	0	0	576	0	0	197	214
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.5	12.5	12.5	4.4	4.4			71.1			71.1	71.1
Effective Green, g (s)	12.5	12.5	12.5	4.4	4.4			71.1			71.1	71.1
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.71			0.71	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	214	225	237	79	75			1042			1227	1350
v/s Ratio Prot	c0.07	0.07		0.00	c0.01							
v/s Ratio Perm			0.01					c0.39			0.11	0.11
v/c Ratio	0.59	0.56	0.11	0.11	0.17			0.55			0.16	0.16
Uniform Delay, d1	41.3	41.2	38.8	45.9	46.0			6.9			4.7	4.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.95	6.62
Incremental Delay, d2	4.4	3.2	0.2	0.6	1.1			2.1			0.3	0.2
Delay (s)	45.7	44.4	39.0	46.6	47.1			9.0			9.4	31.4
Level of Service	D	D	D	D	D			A			A	C
Approach Delay (s)		42.4			47.0			9.0			22.7	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

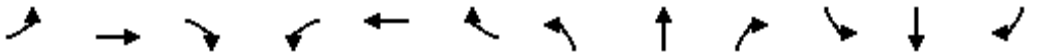
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	152	358	463	271	80
Future Volume (vph)	92	152	358	463	271	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3305		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	462	3610	3305		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	103	171	402	520	304	90
RTOR Reduction (vph)	0	0	195	0	0	27
Lane Group Flow (vph)	103	171	727	0	304	63
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	265	2075	1900		646	578
v/s Ratio Prot		0.05	0.22		c0.17	
v/s Ratio Perm	c0.22					0.04
v/c Ratio	0.39	0.08	0.38		0.47	0.11
Uniform Delay, d1	14.0	11.4	13.9		29.7	25.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.3	0.1	0.6		2.5	0.4
Delay (s)	18.2	11.5	14.5		32.2	26.1
Level of Service	B	B	B		C	C
Approach Delay (s)		14.0	14.5		30.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

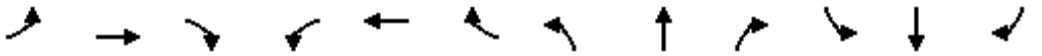
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	331	212	2501	47	502	19	170	22	13	45
RTOR Reduction (vph)	0	35	0	0	0	19	0	0	145	0	41	0
Lane Group Flow (vph)	29	1629	0	212	2501	28	261	260	26	22	17	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.66		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.76	0.62		0.74	1.11	0.02	0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.3		48.7	24.5	10.1	50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.9	57.0	0.0	35.5	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.5		58.6	81.4	10.2	85.7	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.1			78.5			75.4			52.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	61.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

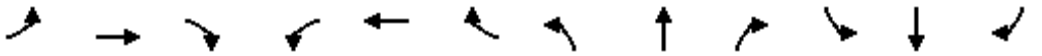
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Future Volume (vph)	26	1213	301	193	2276	43	457	17	155	20	12	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	29	1333	331	212	2501	47	502	19	170	22	13	45
RTOR Reduction (vph)	0	35	0	0	2	0	0	0	145	0	41	0
Lane Group Flow (vph)	29	1629	0	212	2546	0	261	260	26	22	17	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2622		289	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.45		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.62		0.73	0.75		0.92	0.91	0.09	0.14	0.11	
Uniform Delay, d1	58.5	24.5		48.5	18.0		50.3	50.2	43.9	51.0	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	60.7	1.1		9.3	1.6		35.5	34.9	0.6	1.8	1.3	
Delay (s)	119.2	25.6		57.8	19.6		85.7	85.1	44.6	52.8	52.2	
Level of Service	F	C		E	B		F	F	D	D	D	
Approach Delay (s)		27.2			22.6			75.4			52.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Future Volume (vph)	86	2	131	1	1	1	132	610	12	3	260	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3600		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3600		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	142	1	1	1	143	663	13	3	283	42
RTOR Reduction (vph)	0	0	124	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	18	1	1	0	143	675	0	3	283	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.2	71.9		1.9	60.6	60.6
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.2	71.9		1.9	60.6	60.6
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.72		0.02	0.61	0.61
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	238	2588		34	2187	978
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.26		0.09	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.5	38.1	38.1	38.1	40.9	4.9		48.2	8.4	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.25	0.69		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	55.2	3.6		49.3	8.5	7.9
Level of Service	D	D	D	D	D	D	E	A		D	A	A
Approach Delay (s)		40.5			38.1			12.6			8.8	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

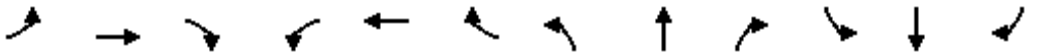
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	208	365	534	463	486
Future Volume (vph)	181	208	365	534	463	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3288		1805	3610
Flt Permitted	0.97	1.00	1.00		0.18	1.00
Satd. Flow (perm)	3394	1470	3288		339	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	219	384	562	487	512
RTOR Reduction (vph)	63	113	241	0	0	0
Lane Group Flow (vph)	218	16	705	0	487	512
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.1	12.1	39.4		80.9	79.4
Effective Green, g (s)	12.1	12.1	39.4		80.9	79.4
Actuated g/C Ratio	0.12	0.12	0.39		0.81	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	410	177	1295		809	2866
v/s Ratio Prot	c0.06		0.21		c0.22	0.14
v/s Ratio Perm		0.01			c0.27	
v/c Ratio	0.53	0.09	0.54		0.60	0.18
Uniform Delay, d1	41.3	39.0	23.4		13.9	2.5
Progression Factor	1.00	1.00	1.00		0.63	0.56
Incremental Delay, d2	1.3	0.2	1.6		1.2	0.1
Delay (s)	42.6	39.3	25.0		10.0	1.5
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		25.0			5.7
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

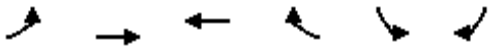
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Future Volume (vph)	527	11	405	46	37	19	177	332	11	13	461	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.95			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1802			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.58			0.98	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1802			1105			1871	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	543	11	418	47	38	20	182	342	11	13	475	213
RTOR Reduction (vph)	0	0	301	0	19	0	0	0	0	0	0	89
Lane Group Flow (vph)	277	277	117	47	39	0	0	535	0	0	488	124
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	23.0	23.0	23.0	7.0	7.0			58.0			58.0	58.0
Effective Green, g (s)	23.0	23.0	23.0	7.0	7.0			58.0			58.0	58.0
Actuated g/C Ratio	0.23	0.23	0.23	0.07	0.07			0.58			0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	394	415	437	126	126			640			1085	1102
v/s Ratio Prot	c0.16	0.15		c0.03	0.02							
v/s Ratio Perm			0.06					c0.48			0.26	0.07
v/c Ratio	0.70	0.67	0.27	0.37	0.31			0.84			0.45	0.11
Uniform Delay, d1	35.4	35.0	31.6	44.4	44.2			17.1			11.9	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.88	1.03
Incremental Delay, d2	5.6	4.0	0.3	1.9	1.4			12.2			1.3	0.2
Delay (s)	41.0	39.1	31.9	46.3	45.6			29.3			11.9	9.9
Level of Service	D	D	C	D	D			C			B	A
Approach Delay (s)		36.5			45.9			29.3			11.3	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

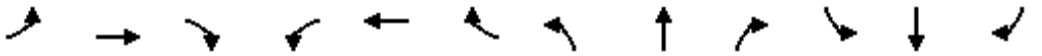
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	132	357	362	380	789	166
Future Volume (vph)	132	357	362	380	789	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3333		1805	1615
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	450	3610	3333		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	376	381	400	831	175
RTOR Reduction (vph)	0	0	158	0	0	19
Lane Group Flow (vph)	139	376	623	0	831	156
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	50.0	50.0	50.0		62.0	62.0
Effective Green, g (s)	50.0	50.0	50.0		62.0	62.0
Actuated g/C Ratio	0.42	0.42	0.42		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	187	1504	1388		932	834
v/s Ratio Prot		0.10	0.19		c0.46	
v/s Ratio Perm	c0.31					0.10
v/c Ratio	0.74	0.25	0.45		0.89	0.19
Uniform Delay, d1	29.6	22.8	25.1		26.0	15.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	23.2	0.4	1.1		12.6	0.5
Delay (s)	52.8	23.2	26.2		38.6	16.0
Level of Service	D	C	C		D	B
Approach Delay (s)		31.2	26.2		34.7	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

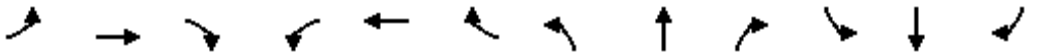
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	382	247	1646	38	263	15	333	35	12	49
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	196	0	45	0
Lane Group Flow (vph)	42	3006	0	247	1646	22	139	139	138	35	16	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.1	59.0		14.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.1	59.0		14.5	69.4	69.4	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.03	0.49		0.12	0.58	0.58	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	2802		229	2197	1098	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.43		c0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			0.07			
v/c Ratio	0.66	1.07		1.08	0.75	0.02	0.49	0.49	0.48	0.22	0.10	
Uniform Delay, d1	57.3	30.5		52.8	18.8	10.8	46.8	46.8	46.7	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.7	40.4		81.9	2.4	0.0	5.9	5.9	5.7	3.2	1.3	
Delay (s)	78.9	70.9		134.7	21.2	10.8	52.6	52.6	52.5	54.6	52.1	
Level of Service	E	E		F	C	B	D	D	D	D	D	
Approach Delay (s)		71.0			35.5			52.5			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

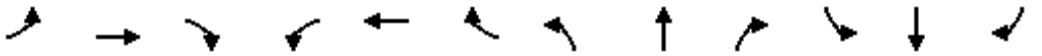
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Future Volume (vph)	40	2510	363	235	1564	36	250	14	316	33	11	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	2642	382	247	1646	38	263	15	333	35	12	49
RTOR Reduction (vph)	0	19	0	0	2	0	0	0	70	0	45	0
Lane Group Flow (vph)	42	3005	0	247	1682	0	139	139	263	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	6.4	59.3		14.2	67.1		18.0	18.0	32.2	10.0	10.0	
Effective Green, g (s)	6.4	59.3		14.2	67.1		18.0	18.0	32.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.49		0.12	0.56		0.15	0.15	0.27	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	101	2816		224	3187		285	285	509	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.30		0.07	0.07	c0.06	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.42	1.07		1.10	0.53		0.49	0.49	0.52	0.22	0.10	
Uniform Delay, d1	55.0	30.4		52.9	16.5		46.8	46.8	37.3	51.4	50.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.8	38.3		90.3	0.6		5.9	5.9	0.9	3.2	1.3	
Delay (s)	57.8	68.6		143.2	17.2		52.6	52.6	38.2	54.6	52.1	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		68.5			33.3			44.8			53.0	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Future Volume (vph)	112	1	361	3	1	1	246	326	1	1	584	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3608		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3608		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	119	1	384	3	1	1	262	347	1	1	621	90
RTOR Reduction (vph)	0	0	328	0	0	1	0	0	0	0	0	29
Lane Group Flow (vph)	119	1	56	3	1	0	262	348	0	1	621	61
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	71.1		0.9	52.3	52.3
Effective Green, g (s)	14.5	14.5	14.5	14.5	14.5	14.5	19.7	71.1		0.9	52.3	52.3
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.20	0.71		0.01	0.52	0.52
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	208	275	234	208	275	234	355	2565		16	1888	844
v/s Ratio Prot		0.00			0.00		c0.15	0.10		c0.00	c0.17	
v/s Ratio Perm	c0.08		0.03	0.00		0.00						0.04
v/c Ratio	0.57	0.00	0.24	0.01	0.00	0.00	0.74	0.14		0.06	0.33	0.07
Uniform Delay, d1	39.9	36.6	37.9	36.6	36.6	36.6	37.7	4.6		49.1	13.7	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.12	1.31		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	0.5	0.0	0.0	0.0	6.8	0.1		1.6	0.5	0.2
Delay (s)	43.6	36.6	38.4	36.7	36.6	36.6	49.1	6.2		50.8	14.2	12.0
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.6			36.6			24.6			14.0	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 7.1:

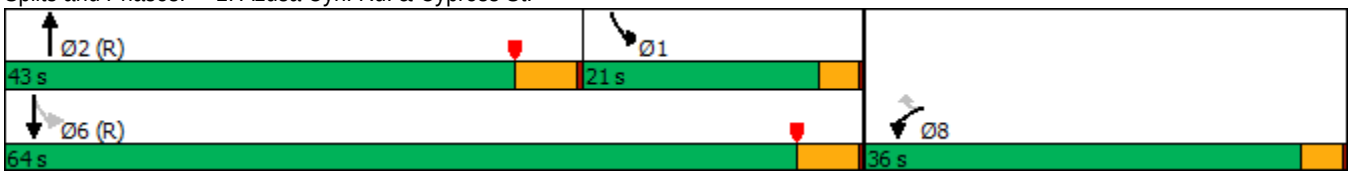
2040 PLUS SITE BASELINE LAND USE CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	261	419	357	186	161	244
Future Volume (vph)	261	419	357	186	161	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	36.0	36.0	43.0		21.0	64.0
Total Split (%)	36.0%	36.0%	43.0%		21.0%	64.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	261	419	357	186	161	244
Future Volume (veh/h)	261	419	357	186	161	244
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	252	507	397	207	179	271
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	355	632	876	451	784	2595
Arrive On Green	0.20	0.20	0.38	0.38	0.58	1.00
Sat Flow, veh/h	1810	3220	2400	1187	1810	3705
Grp Volume(v), veh/h	252	507	310	294	179	271
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1686	1810	1805
Q Serve(g_s), s	13.0	15.0	12.8	13.1	0.0	0.0
Cycle Q Clear(g_c), s	13.0	15.0	12.8	13.1	0.0	0.0
Prop In Lane	1.00	1.00		0.70	1.00	
Lane Grp Cap(c), veh/h	355	632	686	641	784	2595
V/C Ratio(X)	0.71	0.80	0.45	0.46	0.23	0.10
Avail Cap(c_a), veh/h	588	1047	686	641	784	2595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	37.5	38.3	23.2	23.3	7.9	0.0
Incr Delay (d2), s/veh	2.6	2.4	2.1	2.4	0.1	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	5.9	6.0	5.8	5.5	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	40.8	25.3	25.6	8.1	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	759		604			450
Approach Delay, s/veh	40.6		25.5			3.3
Approach LOS	D		C			A

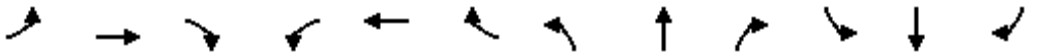
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.9	43.0			76.9	23.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	17.5	* 38			59.0	32.5
Max Q Clear Time (g_c+I1), s	2.0	15.1			2.0	17.0
Green Ext Time (p_c), s	0.4	3.9			1.9	2.6

Intersection Summary	
HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	52.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	216	16	206	8	9	22	249	297	9	21	167	303
Future Vol, veh/h	216	16	206	8	9	22	249	297	9	21	167	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	230	17	219	9	10	23	265	316	10	22	178	322
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.9	12	114.6	17
HCM LOS	C	B	F	C

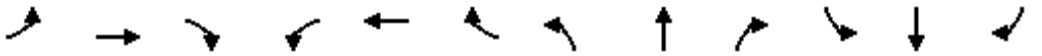
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	93%	0%	47%	0%	11%	0%
Vol Thru, %	54%	7%	0%	53%	0%	89%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	232	206	17	22	188	303
LT Vol	249	216	0	8	0	21	0
Through Vol	297	16	0	9	0	167	0
RT Vol	9	0	206	0	22	0	303
Lane Flow Rate	590	247	219	18	23	200	322
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.154	0.546	0.412	0.045	0.052	0.399	0.575
Departure Headway (Hd)	7.037	8.351	7.145	9.455	8.474	7.495	6.717
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	434	506	381	425	484	542
Service Time	5.087	6.051	4.845	7.155	6.174	5.195	4.417
HCM Lane V/C Ratio	1.135	0.569	0.433	0.047	0.054	0.413	0.594
HCM Control Delay	114.6	20.6	14.8	12.6	11.6	15.1	18.1
HCM Lane LOS	F	C	B	B	B	C	C
HCM 95th-tile Q	20.5	3.2	2	0.1	0.2	1.9	3.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	46%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (veh/h)	216	16	206	8	9	22	249	297	9	21	167	303
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	242	0	219	9	10	23	265	316	10	22	178	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	559	0	249	50	14	33	431	478	15	143	1138	1124
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	3619	0	1610	1810	512	1177	543	685	21	148	1631	1610
Grp Volume(v), veh/h	242	0	219	9	0	33	591	0	0	200	0	322
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1688	1250	0	0	1779	0	1610
Q Serve(g_s), s	6.1	0.0	13.3	0.5	0.0	1.9	25.2	0.0	0.0	0.0	0.0	7.6
Cycle Q Clear(g_c), s	6.1	0.0	13.3	0.5	0.0	1.9	28.8	0.0	0.0	3.6	0.0	7.6
Prop In Lane	1.00		1.00	1.00		0.70	0.45		0.02	0.11		1.00
Lane Grp Cap(c), veh/h	559	0	249	50	0	47	924	0	0	1281	0	1124
V/C Ratio(X)	0.43	0.00	0.88	0.18	0.00	0.71	0.64	0.00	0.00	0.16	0.00	0.29
Avail Cap(c_a), veh/h	579	0	258	290	0	270	924	0	0	1281	0	1124
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	1.00	1.00	0.00	1.00	0.92	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	41.4	47.5	0.0	48.2	9.3	0.0	0.0	5.1	0.0	5.7
Incr Delay (d2), s/veh	0.5	0.0	27.1	1.7	0.0	17.6	3.1	0.0	0.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	6.9	0.2	0.0	1.0	7.3	0.0	0.0	1.3	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.0	68.5	49.2	0.0	65.9	12.4	0.0	0.0	5.4	0.0	6.3
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		461			42			591			522	
Approach Delay, s/veh		52.9			62.3			12.4			6.0	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.8		19.4		73.8		6.8				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		30.8		15.3		9.6		3.9				
Green Ext Time (p_c), s		5.4		0.1		2.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			23.2									
HCM 6th LOS			C									

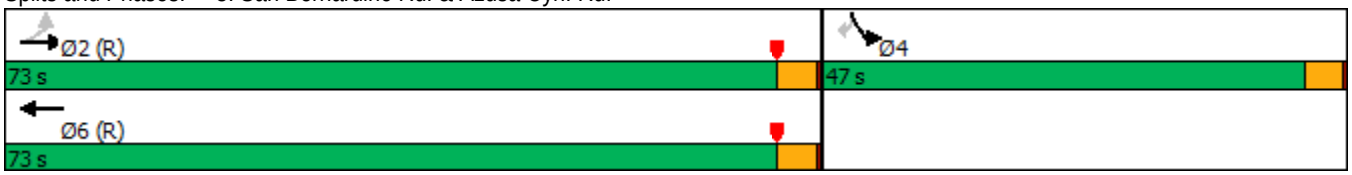
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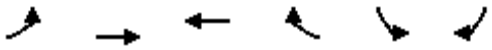
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	160	377	474	287	84
Future Volume (vph)	90	160	377	474	287	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	160	377	474	287	84
Future Volume (veh/h)	90	160	377	474	287	84
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	101	180	424	533	322	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	277	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	596	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	101	180	424	533	322	94
Grp Sat Flow(s),veh/h/ln	596	1805	1805	1610	1810	1610
Q Serve(g_s), s	15.6	2.7	15.7	25.2	16.7	4.8
Cycle Q Clear(g_c), s	40.8	2.7	15.7	25.2	16.7	4.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	277	2076	1038	926	648	577
V/C Ratio(X)	0.36	0.09	0.41	0.58	0.50	0.16
Avail Cap(c_a), veh/h	277	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	11.4	14.2	16.2	30.1	26.2
Incr Delay (d2), s/veh	3.7	0.1	1.2	2.6	2.7	0.6
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	1.0	6.3	9.3	7.7	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.8	11.5	15.4	18.8	32.8	26.8
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		281	957		416	
Approach Delay, s/veh		19.2	17.3		31.4	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

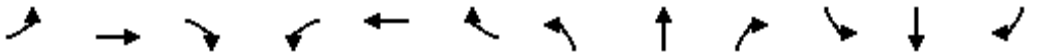
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.2		26.8	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.0%		22.3%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	329	209	2647	51	540	0	169	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2120	522	240	2245	951	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	3800	1610	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1147	515	209	2647	51	540	0	169	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.0	27.0	13.6	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.0	27.0	13.6	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1824	818	240	2245	951	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	1.18	0.05	0.99	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1824	818	351	2245	951	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.2	23.3	51.0	24.6	10.4	51.0	0.0	48.4	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	14.8	85.6	0.1	36.8	0.0	15.1	2.2	0.0	10.0
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	1.3	11.7	11.0	7.0	54.4	0.6	10.8	0.0	5.8	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	24.9	26.9	65.8	110.1	10.5	87.7	0.0	63.6	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	F	B	F	A	E	D	A	E
Approach Vol, veh/h		1693			2907			709			86	
Approach Delay, s/veh		26.7			105.2			82.0			59.9	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.3	50.2		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.2	4.0	72.9		19.9				
Green Ext Time (p_c), s	0.3	11.4		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		76.8	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

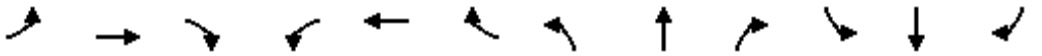
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.4		26.6	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	46.2%		22.2%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (veh/h)	28	1213	299	190	2409	46	478	19	154	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	329	209	2647	51	540	0	169	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2120	522	240	3293	63	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4416	1088	1810	5574	107	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1147	515	209	1800	898	540	0	169	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1704	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.0	27.0	13.6	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.0	27.0	13.6	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1824	818	240	2245	1111	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	0.80	0.81	0.99	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1824	818	348	2245	1111	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.2	23.3	51.1	19.1	19.2	51.0	0.0	48.4	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	15.1	3.1	6.3	36.8	0.0	15.1	2.2	0.0	10.0
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	1.3	11.7	11.0	7.0	18.3	19.3	10.8	0.0	5.8	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	24.9	26.9	66.1	22.2	25.6	87.7	0.0	63.6	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	C	C	F	A	E	D	A	E
Approach Vol, veh/h		1693			2907			709			86	
Approach Delay, s/veh		26.7			26.4			82.0			59.9	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	62.6		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.1	50.4		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.6	29.0		6.2	4.0	46.8		19.9				
Green Ext Time (p_c), s	0.3	11.5		0.1	0.0	19.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		34.3
HCM 6th LOS		C

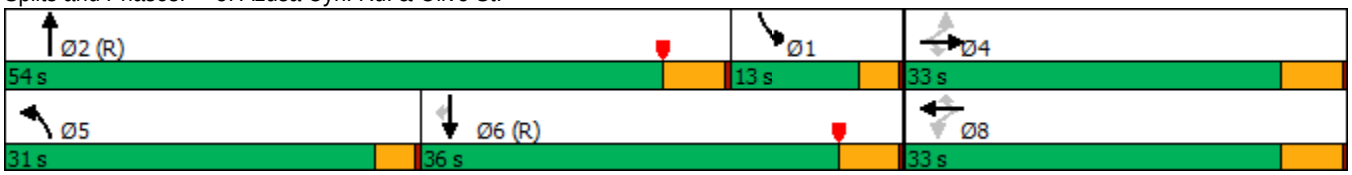
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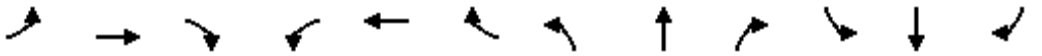
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Future Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	135	1	1	1	135	628	13	3	268	39
Future Volume (veh/h)	86	2	135	1	1	1	135	628	13	3	268	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	147	1	1	1	147	683	14	3	291	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	237	219	185	216	219	185	180	1773	36	443	2348	1047
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.20	0.98	0.98	0.24	0.65	0.65
Sat Flow, veh/h	1437	1900	1610	1258	1900	1610	1810	3618	74	1810	3610	1610
Grp Volume(v), veh/h	93	2	147	1	1	1	147	341	356	3	291	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1258	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	8.9	0.1	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Cycle Q Clear(g_c), s	6.2	0.1	8.9	0.2	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	237	219	185	216	219	185	180	884	924	443	2348	1047
V/C Ratio(X)	0.39	0.01	0.79	0.00	0.00	0.01	0.82	0.39	0.39	0.01	0.12	0.04
Avail Cap(c_a), veh/h	474	532	451	423	532	451	498	884	924	443	2348	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.73	0.73	0.73
Uniform Delay (d), s/veh	41.9	39.2	43.1	39.3	39.2	39.2	39.2	0.5	0.5	28.6	6.6	6.3
Incr Delay (d2), s/veh	1.1	0.0	7.4	0.0	0.0	0.0	8.2	1.2	1.1	0.0	0.1	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	2.2	0.0	3.9	0.0	0.0	0.0	3.5	0.4	0.4	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	39.2	50.5	39.3	39.2	39.2	47.4	1.7	1.6	28.6	6.7	6.3
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		242			3			844			336	
Approach Delay, s/veh		47.5			39.2			9.6			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.5	54.0		16.5	13.4	70.0		16.5				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		10.9	9.8	5.1		2.2				
Green Ext Time (p_c), s	0.0	5.0		0.6	0.3	2.0		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	531	4	0	491
Future Volume (vph)	0	1	531	4	0	491
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

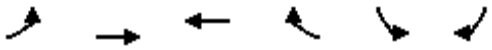
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	531	4	0	491
Future Vol, veh/h	0	1	531	4	0	491
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	559	4	0	517

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	282	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	721	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	721	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	721	-
HCM Lane V/C Ratio	-	-	0.001	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	44	38	0	0	1
Future Volume (vph)	2	44	38	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

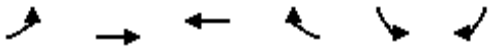
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	44	38	0	0	1
Future Vol, veh/h	2	44	38	0	0	1
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	46	40	0	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	40	0	-	0	90	40
Stage 1	-	-	-	-	40	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1583	-	-	-	915	1037
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1583	-	-	-	914	1037
Mov Cap-2 Maneuver	-	-	-	-	914	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	1037
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	36	35	0	0	3
Future Volume (vph)	8	36	35	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	36	35	0	0	3
Future Vol, veh/h	8	36	35	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	38	37	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	91	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	914	1041
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	909	1041
Mov Cap-2 Maneuver	-	-	-	-	909	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	974	-

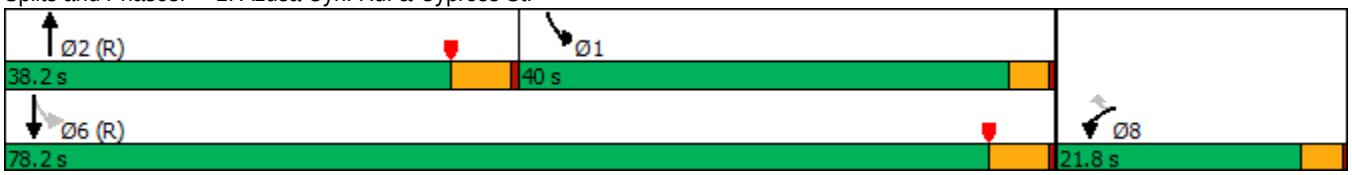
Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1041
HCM Lane V/C Ratio	0.005	-	-	-	0.003
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	377	578	492	484
Future Volume (vph)	196	223	377	578	492	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	21.8	21.8	38.2		40.0	78.2
Total Split (%)	21.8%	21.8%	38.2%		40.0%	78.2%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	196	223	377	578	492	484
Future Volume (veh/h)	196	223	377	578	492	484
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	288	147	397	608	518	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	427	190	599	535	823	2877
Arrive On Green	0.12	0.12	0.33	0.33	0.69	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	288	147	397	608	518	509
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.6	8.9	18.8	33.2	9.2	0.0
Cycle Q Clear(g_c), s	7.6	8.9	18.8	33.2	9.2	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	427	190	599	535	823	2877
V/C Ratio(X)	0.67	0.77	0.66	1.14	0.63	0.18
Avail Cap(c_a), veh/h	662	295	599	535	823	2877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.87	0.87
Uniform Delay (d), s/veh	42.3	42.8	28.6	33.4	9.8	0.0
Incr Delay (d2), s/veh	1.9	6.6	5.7	82.7	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	3.5	3.8	8.9	24.8	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	49.4	34.3	116.1	11.1	0.1
LnGrp LOS	D	D	C	F	B	A
Approach Vol, veh/h	435		1005			1027
Approach Delay, s/veh	45.9		83.8			5.7
Approach LOS	D		F			A

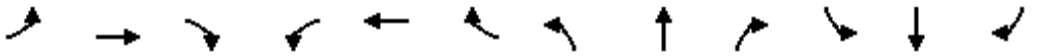
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.5	38.2			84.7	15.3
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.2	18.3
Max Q Clear Time (g_c+I1), s	11.2	35.2			2.0	10.9
Green Ext Time (p_c), s	1.7	0.0			3.9	0.9

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	136.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	566	8	438	44	28	22	191	350	12	14	469	210
Future Vol, veh/h	566	8	438	44	28	22	191	350	12	14	469	210
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	584	8	452	45	29	23	197	361	12	14	484	216
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

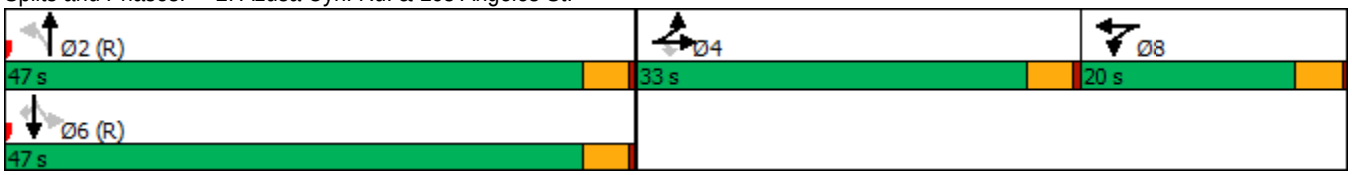
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	156.1	16	182.5	88.1
HCM LOS	F	C	F	F

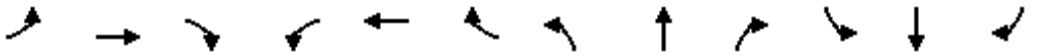
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	35%	99%	0%	61%	0%	3%	0%
Vol Thru, %	63%	1%	0%	39%	0%	97%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	553	574	438	72	22	483	210
LT Vol	191	566	0	44	0	14	0
Through Vol	350	8	0	28	0	469	0
RT Vol	12	0	438	0	22	0	210
Lane Flow Rate	570	592	452	74	23	498	216
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.313	1.426	0.939	0.209	0.057	1.144	0.455
Departure Headway (Hd)	8.667	9.413	8.162	11.162	10.09	8.856	8.11
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	422	391	447	324	357	413	448
Service Time	6.667	7.113	5.862	8.862	7.79	6.556	5.81
HCM Lane V/C Ratio	1.351	1.514	1.011	0.228	0.064	1.206	0.482
HCM Control Delay	182.5	231.4	57.4	16.8	13.4	118.8	17.4
HCM Lane LOS	F	F	F	C	B	F	C
HCM 95th-tile Q	24.6	27.7	10.9	0.8	0.2	17.4	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	33.0	33.0	33.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (veh/h)	566	8	438	44	28	22	191	350	12	14	469	210
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	590	0	452	45	29	23	197	361	12	14	484	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1050	0	467	86	47	37	272	454	15	48	1011	873
Arrive On Green	0.29	0.00	0.29	0.05	0.05	0.05	0.54	0.54	0.54	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	981	778	411	837	27	21	1864	1610
Grp Volume(v), veh/h	590	0	452	45	0	52	570	0	0	498	0	216
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1760	1275	0	0	1885	0	1610
Q Serve(g_s), s	13.8	0.0	27.7	2.4	0.0	2.9	33.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.8	0.0	27.7	2.4	0.0	2.9	36.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.44	0.35		0.02	0.03		1.00
Lane Grp Cap(c), veh/h	1050	0	467	86	0	84	740	0	0	1059	0	873
V/C Ratio(X)	0.56	0.00	0.97	0.52	0.00	0.62	0.77	0.00	0.00	0.47	0.00	0.25
Avail Cap(c_a), veh/h	1050	0	467	290	0	282	740	0	0	1059	0	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.44	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	35.0	46.5	0.0	46.7	18.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	33.4	4.8	0.0	7.2	3.5	0.0	0.0	1.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	14.5	1.2	0.0	1.4	10.7	0.0	0.0	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	68.4	51.3	0.0	53.9	21.8	0.0	0.0	1.5	0.0	0.7
LnGrp LOS	C	A	E	D	A	D	C	A	A	A	A	A
Approach Vol, veh/h		1042			97			570			714	
Approach Delay, s/veh		47.1			52.7			21.8			1.2	
Approach LOS		D			D			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.2		33.0		58.2		8.8				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		38.3		29.7		2.0		4.9				
Green Ext Time (p_c), s		1.9		0.0		4.5		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			27.9									
HCM 6th LOS			C									

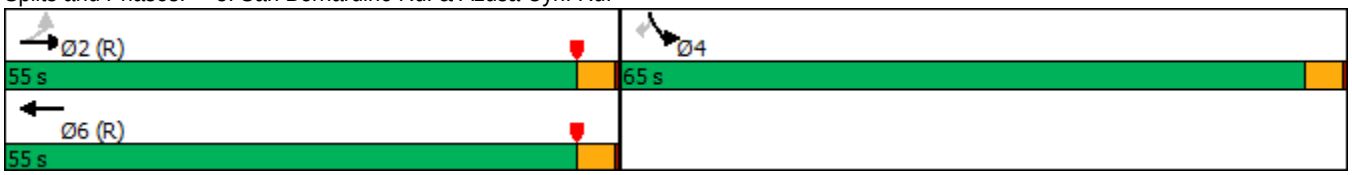
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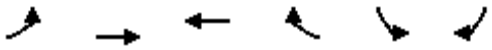
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	405	829	168
Future Volume (vph)	139	375	385	405	829	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	55.0	55.0	55.0		65.0	65.0
Total Split (%)	45.8%	45.8%	45.8%		54.2%	54.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	139	375	385	405	829	168
Future Volume (veh/h)	139	375	385	405	829	168
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	395	405	426	873	177
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	206	1534	767	684	920	819
Arrive On Green	0.43	0.43	0.43	0.43	0.51	0.51
Sat Flow, veh/h	671	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	146	395	405	426	873	177
Grp Sat Flow(s),veh/h/ln	671	1805	1805	1610	1810	1610
Q Serve(g_s), s	26.1	8.5	20.0	24.8	55.0	7.3
Cycle Q Clear(g_c), s	50.9	8.5	20.0	24.8	55.0	7.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	206	1534	767	684	920	819
V/C Ratio(X)	0.71	0.26	0.53	0.62	0.95	0.22
Avail Cap(c_a), veh/h	206	1534	767	684	920	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	22.3	25.6	27.0	28.0	16.3
Incr Delay (d2), s/veh	18.5	0.4	2.6	4.2	19.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.6	8.8	10.0	27.8	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.4	22.7	28.2	31.2	47.7	16.9
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		541	831		1050	
Approach Delay, s/veh		34.2	29.7		42.5	
Approach LOS		C	C		D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		65.0		55.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		51.0		61.0		51.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	36.3	
HCM 6th LOS	D	

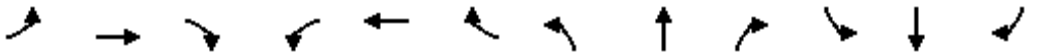
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	10.8	65.0		17.0	71.2	71.2	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	9.0%	54.2%		14.2%	59.3%	59.3%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 18 (15%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	2833	400	256	1664	41	275	0	333	37	13	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	2460	331	204	2202	933	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4920	661	1810	3800	1610	3619	0	1610	1810	322	1337
Grp Volume(v), veh/h	46	2155	1078	256	1664	41	275	0	333	37	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1659
Q Serve(g_s), s	3.0	60.0	60.0	13.5	39.3	1.3	8.4	0.0	18.0	2.3	0.0	4.6
Cycle Q Clear(g_c), s	3.0	60.0	60.0	13.5	39.3	1.3	8.4	0.0	18.0	2.3	0.0	4.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	60	1900	891	204	2202	933	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.13	1.21	1.26	0.76	0.04	0.51	0.00	1.38	0.25	0.00	0.48
Avail Cap(c_a), veh/h	110	1900	891	204	2202	933	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.6	30.0	30.0	53.3	18.9	10.9	46.9	0.0	51.0	51.5	0.0	52.5
Incr Delay (d2), s/veh	18.7	67.6	105.1	149.4	2.5	0.1	3.3	0.0	193.8	3.8	0.0	11.7
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	1.7	42.7	49.3	14.4	16.2	0.5	4.0	0.0	20.2	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.3	97.6	135.1	202.6	21.3	11.0	50.2	0.0	244.8	55.3	0.0	64.2
LnGrp LOS	E	F	F	F	C	B	D	A	F	E	A	E
Approach Vol, veh/h		3279			1961			608			104	
Approach Delay, s/veh		109.6			44.8			156.8			61.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.5	74.5		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	7.3	66.2		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.6	5.0	41.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	13.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		92.2	
HCM 6th LOS		F	

Notes

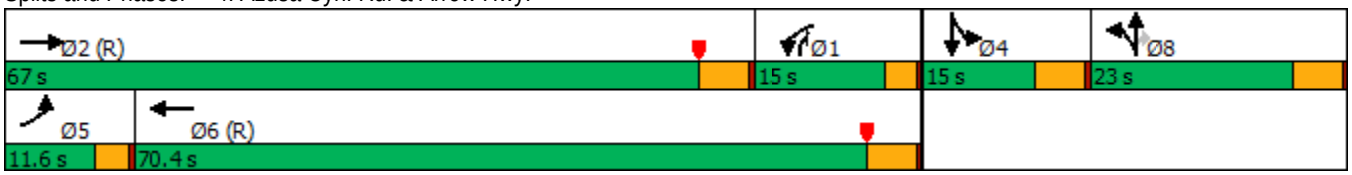
User approved volume balancing among the lanes for turning movement.

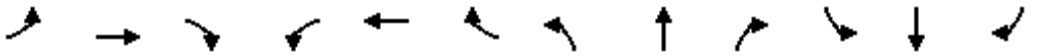
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	11.6	67.0		15.0	70.4		23.0	23.0	15.0	15.0	15.0	
Total Split (%)	9.7%	55.8%		12.5%	58.7%		19.2%	19.2%	12.5%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (veh/h)	43	2663	376	241	1564	39	248	15	313	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	2663	376	241	1564	39	259	0	313	35	12	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	2542	342	726	4983	124	543	0	888	151	26	112
Arrive On Green	0.05	0.77	0.77	0.60	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4920	661	1810	5537	138	3619	0	1610	1810	316	1342
Grp Volume(v), veh/h	43	2026	1013	241	1073	530	259	0	313	35	0	63
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1875	1810	0	1610	1810	0	1658
Q Serve(g_s), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Cycle Q Clear(g_c), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Prop In Lane	1.00		0.37	1.00		0.07	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	56	1963	920	726	3420	1687	543	0	888	151	0	138
V/C Ratio(X)	0.77	1.03	1.10	0.33	0.31	0.31	0.48	0.00	0.35	0.23	0.00	0.46
Avail Cap(c_a), veh/h	122	1963	920	726	3420	1687	543	0	888	151	0	138
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.8	13.5	13.5	15.9	0.0	0.0	46.7	0.0	15.0	51.4	0.0	52.4
Incr Delay (d2), s/veh	20.1	29.0	61.2	0.3	0.2	0.5	2.9	0.0	1.1	3.6	0.0	10.5
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	1.6	17.4	24.5	2.9	0.1	0.2	3.8	0.0	5.0	1.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	42.5	74.7	16.1	0.2	0.5	49.6	0.0	16.1	55.0	0.0	62.9
LnGrp LOS	E	F	F	B	A	A	D	A	B	D	A	E
Approach Vol, veh/h		3082			1844			572			98	
Approach Delay, s/veh		53.6			2.4			31.3			60.1	
Approach LOS		D			A			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.2	67.0		15.0	7.2	113.0		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	* 62		10.0	8.1	65.4		18.0				
Max Q Clear Time (g_c+I1), s	9.9	64.0		6.3	4.8	2.0		9.9				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	15.5		1.4				

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

Notes

User approved volume balancing among the lanes for turning movement.

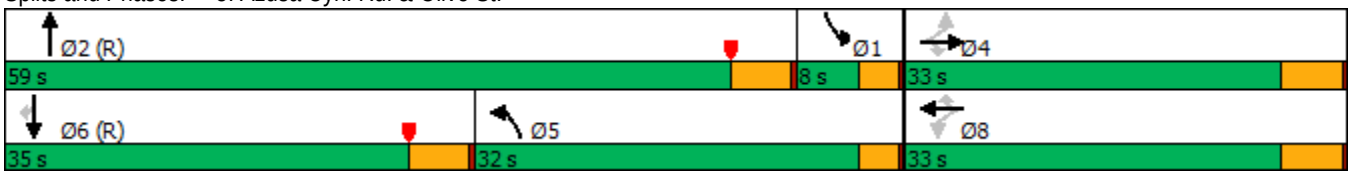
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

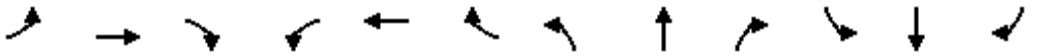
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Future Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	32.0	59.0		8.0	35.0	35.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	32.0%	59.0%		8.0%	35.0%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1	380	3	1	1	258	340	1	1	592	85
Future Volume (veh/h)	116	1	380	3	1	1	258	340	1	1	592	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	1	404	3	1	1	274	362	1	1	630	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	457	510	432	339	510	432	537	1994	6	102	1083	483
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.59	1.00	1.00	0.06	0.30	0.30
Sat Flow, veh/h	1437	1900	1610	996	1900	1610	1810	3693	10	1810	3610	1610
Grp Volume(v), veh/h	123	1	404	3	1	1	274	177	186	1	630	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	996	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.8	0.0	24.5	0.2	0.0	0.0	8.8	0.0	0.0	0.1	14.8	4.1
Cycle Q Clear(g_c), s	6.9	0.0	24.5	0.3	0.0	0.0	8.8	0.0	0.0	0.1	14.8	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	457	510	432	339	510	432	537	975	1025	102	1083	483
V/C Ratio(X)	0.27	0.00	0.93	0.01	0.00	0.00	0.51	0.18	0.18	0.01	0.58	0.19
Avail Cap(c_a), veh/h	474	532	451	350	532	451	537	975	1025	102	1083	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.09	0.09	0.09
Uniform Delay (d), s/veh	29.3	26.8	35.7	26.9	26.8	26.8	16.1	0.0	0.0	44.5	29.7	26.0
Incr Delay (d2), s/veh	0.3	0.0	26.3	0.0	0.0	0.0	0.6	0.3	0.3	0.0	0.2	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	2.4	0.0	12.6	0.1	0.0	0.0	3.0	0.1	0.1	0.0	6.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	26.8	62.1	26.9	26.8	26.8	16.7	0.3	0.3	44.5	29.9	26.0
LnGrp LOS	C	C	E	C	C	C	B	A	A	D	C	C
Approach Vol, veh/h		528			5			637			721	
Approach Delay, s/veh		54.4			26.8			7.3			29.4	
Approach LOS		D			C			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	59.0		31.8	33.2	35.0		31.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	54.0		28.0	28.5	30.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		26.5	10.8	16.8		2.3				
Green Ext Time (p_c), s	0.0	2.3		0.3	0.7	3.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			29.0									
HCM 6th LOS			C									



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	3	937	1	0	693
Future Volume (vph)	0	3	937	1	0	693
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

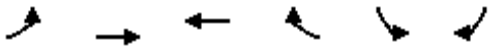
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	937	1	0	693
Future Vol, veh/h	0	3	937	1	0	693
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	986	1	0	729

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	494	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	526	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	526	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	526	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	11.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	33	90	0	0	3
Future Volume (vph)	1	33	90	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

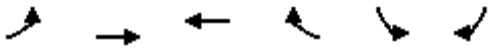
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	33	90	0	0	3
Future Vol, veh/h	1	33	90	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	35	95	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	95	0	-	0	132	95
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1512	-	-	-	867	967
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	866	967
Mov Cap-2 Maneuver	-	-	-	-	866	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	-	967
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	31	84	0	0	6
Future Volume (vph)	2	31	84	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	31	84	0	0	6
Future Vol, veh/h	2	31	84	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	33	88	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	125	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	875	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	874	976
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.7
HCM LOS			A

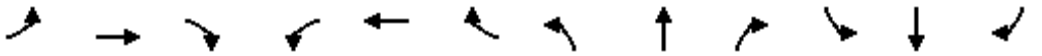
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	976
HCM Lane V/C Ratio	0.001	-	-	-	0.006
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	261	419	357	186	161	244
Future Volume (vph)	261	419	357	186	161	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3424		1805	3610
Flt Permitted	0.97	1.00	1.00		0.39	1.00
Satd. Flow (perm)	3351	1470	3424		741	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	290	466	397	207	179	271
RTOR Reduction (vph)	173	204	49	0	0	0
Lane Group Flow (vph)	341	38	555	0	179	271
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	15.9	15.9	54.6		77.1	75.6
Effective Green, g (s)	15.9	15.9	54.6		77.1	75.6
Actuated g/C Ratio	0.16	0.16	0.55		0.77	0.76
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	532	233	1869		757	2729
v/s Ratio Prot	c0.10		c0.16		c0.04	0.08
v/s Ratio Perm		0.03			0.14	
v/c Ratio	0.64	0.17	0.30		0.24	0.10
Uniform Delay, d1	39.4	36.3	12.3		4.9	3.2
Progression Factor	1.00	1.00	1.00		1.08	0.92
Incremental Delay, d2	2.6	0.3	0.4		0.2	0.1
Delay (s)	42.0	36.7	12.7		5.5	3.0
Level of Service	D	D	B		A	A
Approach Delay (s)	40.3		12.7			4.0
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

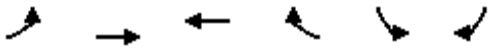
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Future Volume (vph)	216	16	206	8	9	22	249	297	9	21	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1701			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.76			0.93	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1701			1447			1758	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	230	17	219	9	10	23	265	316	10	22	178	322
RTOR Reduction (vph)	0	0	192	0	22	0	0	0	0	0	0	92
Lane Group Flow (vph)	124	123	27	9	11	0	0	591	0	0	200	230
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.4	12.4	12.4	4.3	4.3			71.3			71.3	71.3
Effective Green, g (s)	12.4	12.4	12.4	4.3	4.3			71.3			71.3	71.3
Actuated g/C Ratio	0.12	0.12	0.12	0.04	0.04			0.71			0.71	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	212	223	235	77	73			1031			1253	1354
v/s Ratio Prot	c0.07	0.07		0.00	c0.01							
v/s Ratio Perm			0.01					c0.41			0.11	0.12
v/c Ratio	0.58	0.55	0.12	0.12	0.15			0.57			0.16	0.17
Uniform Delay, d1	41.4	41.2	38.9	46.0	46.1			7.0			4.6	4.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			2.08	7.27
Incremental Delay, d2	4.1	2.9	0.2	0.7	1.0			2.3			0.3	0.3
Delay (s)	45.4	44.1	39.1	46.7	47.0			9.3			9.9	34.3
Level of Service	D	D	D	D	D			A			A	C
Approach Delay (s)		42.1			47.0			9.3			25.0	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

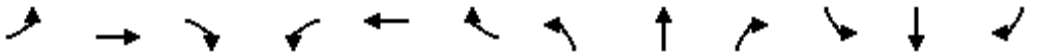
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	160	377	474	287	84
Future Volume (vph)	90	160	377	474	287	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3308		1805	1615
Flt Permitted	0.23	1.00	1.00		0.95	1.00
Satd. Flow (perm)	438	3610	3308		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	101	180	424	533	322	94
RTOR Reduction (vph)	0	0	190	0	0	26
Lane Group Flow (vph)	101	180	767	0	322	68
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	251	2075	1902		646	578
v/s Ratio Prot		0.05	c0.23		c0.18	
v/s Ratio Perm	0.23					0.04
v/c Ratio	0.40	0.09	0.40		0.50	0.12
Uniform Delay, d1	14.1	11.4	14.1		30.1	25.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	0.1	0.6		2.7	0.4
Delay (s)	18.8	11.5	14.7		32.8	26.2
Level of Service	B	B	B		C	C
Approach Delay (s)		14.1	14.7		31.3	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

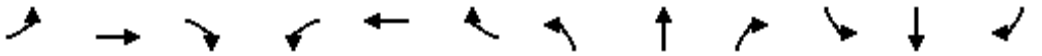
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	329	209	2647	51	525	21	169	24	14	48
RTOR Reduction (vph)	0	34	0	0	0	21	0	0	144	0	44	0
Lane Group Flow (vph)	31	1628	0	209	2647	30	273	273	25	24	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.70		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.82	0.62		0.73	1.18	0.03	0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.3		48.6	24.5	10.1	50.6	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.2	84.2	0.0	43.6	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.4		57.9	108.6	10.2	94.2	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.4			103.3			82.4			52.6	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	75.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

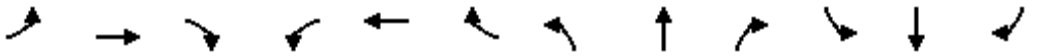
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Future Volume (vph)	28	1213	299	190	2409	46	478	19	154	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	329	209	2647	51	525	21	169	24	14	48
RTOR Reduction (vph)	0	34	0	0	2	0	0	0	144	0	44	0
Lane Group Flow (vph)	31	1628	0	209	2696	0	273	273	25	24	18	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.4		18.1	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2631		286	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.47		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.82	0.62		0.73	0.80		0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.3		48.6	18.9		50.6	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.2	2.1		43.6	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.4		57.9	21.0		94.2	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	C		F	F	D	D	D	
Approach Delay (s)		27.4			23.6			82.4			52.6	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Future Volume (vph)	86	2	135	1	1	1	135	628	13	3	268	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	147	1	1	1	147	683	14	3	291	42
RTOR Reduction (vph)	0	0	128	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	19	1	1	0	147	696	0	3	291	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.72		0.02	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	243	2587		34	2176	973
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.27		0.09	0.13	0.03
Uniform Delay, d1	40.8	38.1	38.6	38.1	38.1	38.1	40.7	4.9		48.2	8.6	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.24	0.67		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.7	38.1	38.1	38.1	54.4	3.5		49.3	8.7	8.1
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.4			38.1			12.4			9.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

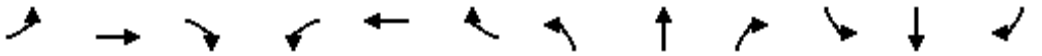
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	377	578	492	484
Future Volume (vph)	196	223	377	578	492	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3282		1805	3610
Flt Permitted	0.97	1.00	1.00		0.15	1.00
Satd. Flow (perm)	3394	1470	3282		290	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	235	397	608	518	509
RTOR Reduction (vph)	62	121	254	0	0	0
Lane Group Flow (vph)	240	18	751	0	518	509
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.6	12.6	38.9		80.4	78.9
Effective Green, g (s)	12.6	12.6	38.9		80.4	78.9
Actuated g/C Ratio	0.13	0.13	0.39		0.80	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	427	185	1276		786	2848
v/s Ratio Prot	c0.07		0.23		c0.24	0.14
v/s Ratio Perm		0.01			c0.29	
v/c Ratio	0.56	0.09	0.59		0.66	0.18
Uniform Delay, d1	41.1	38.7	24.2		15.9	2.6
Progression Factor	1.00	1.00	1.00		0.80	0.30
Incremental Delay, d2	1.7	0.2	2.0		1.9	0.1
Delay (s)	42.8	38.9	26.2		14.6	0.9
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		26.2			7.8
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

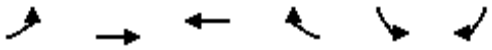
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Future Volume (vph)	566	8	438	44	28	22	191	350	12	14	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.93			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1774			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.54			0.98	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1774			1033			1866	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	584	8	452	45	29	23	197	361	12	14	484	216
RTOR Reduction (vph)	0	0	296	0	21	0	0	0	0	0	0	95
Lane Group Flow (vph)	298	294	156	45	31	0	0	570	0	0	498	121
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	24.0	24.0	24.0	7.9	7.9			56.1			56.1	56.1
Effective Green, g (s)	24.0	24.0	24.0	7.9	7.9			56.1			56.1	56.1
Actuated g/C Ratio	0.24	0.24	0.24	0.08	0.08			0.56			0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	411	433	456	142	140			579			1046	1065
v/s Ratio Prot	c0.17	0.16		c0.02	0.02							
v/s Ratio Perm			0.08					c0.55			0.27	0.06
v/c Ratio	0.73	0.68	0.34	0.32	0.22			0.98			0.48	0.11
Uniform Delay, d1	35.0	34.5	31.5	43.5	43.2			21.5			13.1	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.73	0.82
Incremental Delay, d2	6.2	4.2	0.4	1.3	0.8			33.6			1.5	0.2
Delay (s)	41.2	38.7	31.9	44.8	44.0			55.1			11.1	8.7
Level of Service	D	D	C	D	D			E			B	A
Approach Delay (s)		36.5			44.3			55.1			10.3	
Approach LOS		D			D			E			B	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

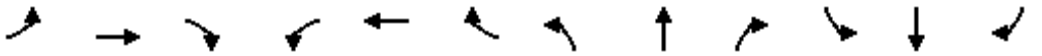
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	375	385	405	829	168
Future Volume (vph)	139	375	385	405	829	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.22	1.00	1.00		0.95	1.00
Satd. Flow (perm)	415	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	395	405	426	873	177
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	146	395	673	0	873	159
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	51.0	51.0	51.0		61.0	61.0
Effective Green, g (s)	51.0	51.0	51.0		61.0	61.0
Actuated g/C Ratio	0.42	0.42	0.42		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	176	1534	1416		917	820
v/s Ratio Prot		0.11	0.20		c0.48	
v/s Ratio Perm	c0.35					0.10
v/c Ratio	0.83	0.26	0.48		0.95	0.19
Uniform Delay, d1	30.6	22.3	24.9		28.1	16.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	34.4	0.4	1.1		20.1	0.5
Delay (s)	65.0	22.7	26.0		48.3	16.6
Level of Service	E	C	C		D	B
Approach Delay (s)		34.1	26.0		42.9	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

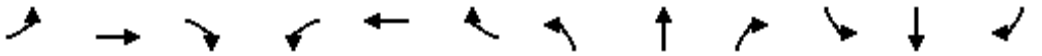
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	46	2833	400	256	1664	41	264	16	333	37	13	54
RTOR Reduction (vph)	0	18	0	0	0	18	0	0	182	0	50	0
Lane Group Flow (vph)	46	3216	0	256	1664	23	140	140	151	37	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	5.8	60.0		13.5	67.7	67.7	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	5.8	60.0		13.5	67.7	67.7	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.05	0.50		0.11	0.56	0.56	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	91	2850		213	2143	1071	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.56		c0.13	0.44		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.51	1.13		1.20	0.78	0.02	0.49	0.49	0.53	0.23	0.11	
Uniform Delay, d1	55.7	30.0		53.2	20.3	11.5	46.8	46.8	47.1	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.4	62.8		126.9	2.8	0.0	5.9	5.9	6.9	3.4	1.4	
Delay (s)	60.1	92.8		180.1	23.1	11.6	52.7	52.7	54.0	54.9	52.3	
Level of Service	E	F		F	C	B	D	D	D	D	D	
Approach Delay (s)		92.4			43.4			53.4			53.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		

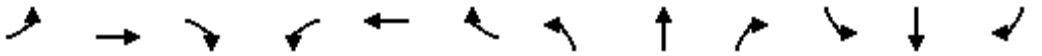
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Future Volume (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	2663	376	241	1564	39	248	15	313	35	12	51
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	71	0	47	0
Lane Group Flow (vph)	43	3021	0	241	1601	0	131	132	242	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	6.2	61.3		12.2	67.3		18.0	18.0	30.2	10.0	10.0	
Effective Green, g (s)	6.2	61.3		12.2	67.3		18.0	18.0	30.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.51		0.10	0.56		0.15	0.15	0.25	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	98	2911		193	3196		285	285	478	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.28		0.07	0.07	c0.05	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	1.04		1.25	0.50		0.46	0.46	0.51	0.22	0.10	
Uniform Delay, d1	55.2	29.4		53.9	16.1		46.6	46.6	38.5	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	27.5		147.5	0.6		5.3	5.3	0.8	3.2	1.3	
Delay (s)	58.3	56.8		201.4	16.7		51.8	51.9	39.3	54.6	52.2	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		56.9			40.8			45.1			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Future Volume (vph)	116	1	380	3	1	1	258	340	1	1	592	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3609		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3609		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	123	1	404	3	1	1	274	362	1	1	630	90
RTOR Reduction (vph)	0	0	343	0	0	1	0	0	0	0	0	49
Lane Group Flow (vph)	123	1	61	3	1	0	274	363	0	1	630	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.25	0.71		0.01	0.46	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	215	285	242	215	285	242	458	2547		16	1664	744
v/s Ratio Prot		0.00			0.00		c0.15	0.10		0.00	c0.17	
v/s Ratio Perm	c0.09		0.04	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.25	0.01	0.00	0.00	0.60	0.14		0.06	0.38	0.06
Uniform Delay, d1	39.5	36.1	37.5	36.2	36.1	36.1	32.8	4.8		49.1	17.6	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.53		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	0.5	0.0	0.0	0.0	1.8	0.1		1.6	0.7	0.1
Delay (s)	43.2	36.1	38.1	36.2	36.1	36.1	26.0	2.6		50.8	18.3	15.1
Level of Service	D	D	D	D	D	D	C	A		D	B	B
Approach Delay (s)		39.3			36.2			12.7			17.9	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 7.2:

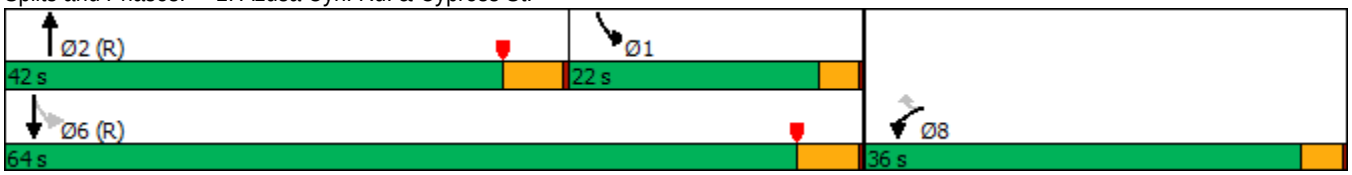
2040 PLUS SITE BASELINE LAND USE WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	419	359	186	161	249
Future Volume (vph)	262	419	359	186	161	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)		48%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	36.0	36.0	42.0		22.0	64.0
Total Split (%)	36.0%	36.0%	42.0%		22.0%	64.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	262	419	359	186	161	249
Future Volume (veh/h)	262	419	359	186	161	249
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	252	507	399	207	179	277
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	355	632	854	438	792	2595
Arrive On Green	0.20	0.20	0.37	0.37	0.60	1.00
Sat Flow, veh/h	1810	3220	2404	1183	1810	3705
Grp Volume(v), veh/h	252	507	311	295	179	277
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1687	1810	1805
Q Serve(g_s), s	13.0	15.0	13.1	13.4	0.0	0.0
Cycle Q Clear(g_c), s	13.0	15.0	13.1	13.4	0.0	0.0
Prop In Lane	1.00	1.00		0.70	1.00	
Lane Grp Cap(c), veh/h	355	632	668	624	792	2595
V/C Ratio(X)	0.71	0.80	0.47	0.47	0.23	0.11
Avail Cap(c_a), veh/h	588	1047	668	624	792	2595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	37.5	38.3	24.0	24.1	7.7	0.0
Incr Delay (d2), s/veh	2.6	2.4	2.3	2.6	0.1	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	5.9	6.0	5.9	5.7	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	40.8	26.3	26.6	7.8	0.1
LnGrp LOS	D	D	C	C	A	A
Approach Vol, veh/h	759		606			456
Approach Delay, s/veh	40.6		26.5			3.1
Approach LOS	D		C			A

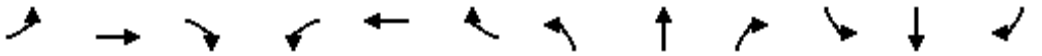
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.9	42.0			76.9	23.1
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	18.5	* 37			59.0	32.5
Max Q Clear Time (g_c+I1), s	2.0	15.4			2.0	17.0
Green Ext Time (p_c), s	0.4	3.9			2.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	56
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	217	26	206	9	12	22	249	302	9	27	167	303
Future Vol, veh/h	217	26	206	9	12	22	249	302	9	27	167	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	231	28	219	10	13	23	265	321	10	29	178	322
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	18.6	12.2	123.7	17.4
HCM LOS	C	B	F	C

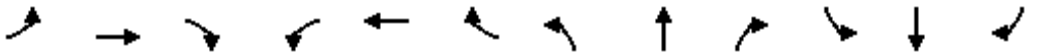
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	44%	89%	0%	43%	0%	14%	0%
Vol Thru, %	54%	11%	0%	57%	0%	86%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	560	243	206	21	22	194	303
LT Vol	249	217	0	9	0	27	0
Through Vol	302	26	0	12	0	167	0
RT Vol	9	0	206	0	22	0	303
Lane Flow Rate	596	259	219	22	23	206	322
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.178	0.573	0.414	0.055	0.052	0.416	0.581
Departure Headway (Hd)	7.116	8.401	7.213	9.535	8.575	7.606	6.813
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	512	432	502	378	420	477	532
Service Time	5.161	6.101	4.913	7.235	6.275	5.306	4.513
HCM Lane V/C Ratio	1.164	0.6	0.436	0.058	0.055	0.432	0.605
HCM Control Delay	123.7	21.8	14.9	12.8	11.7	15.6	18.5
HCM Lane LOS	F	C	B	B	B	C	C
HCM 95th-tile Q	21.5	3.5	2	0.2	0.2	2	3.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)	44%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%		60.0%	60.0%		60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (veh/h)	217	26	206	9	12	22	249	302	9	27	167	303
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	251	0	219	10	13	23	265	321	10	29	178	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	559	0	249	55	19	33	427	480	15	177	1066	1120
Arrive On Green	0.15	0.00	0.15	0.03	0.03	0.03	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	3619	0	1610	1810	615	1089	539	690	21	195	1532	1610
Grp Volume(v), veh/h	251	0	219	10	0	36	596	0	0	207	0	322
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1704	1250	0	0	1728	0	1610
Q Serve(g_s), s	6.3	0.0	13.3	0.5	0.0	2.1	25.9	0.0	0.0	0.0	0.0	7.6
Cycle Q Clear(g_c), s	6.3	0.0	13.3	0.5	0.0	2.1	29.6	0.0	0.0	3.7	0.0	7.6
Prop In Lane	1.00		1.00	1.00		0.64	0.44		0.02	0.14		1.00
Lane Grp Cap(c), veh/h	559	0	249	55	0	51	921	0	0	1242	0	1120
V/C Ratio(X)	0.45	0.00	0.88	0.18	0.00	0.70	0.65	0.00	0.00	0.17	0.00	0.29
Avail Cap(c_a), veh/h	579	0	258	290	0	273	921	0	0	1242	0	1120
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	1.00	1.00	0.00	1.00	0.92	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	41.4	47.3	0.0	48.0	9.6	0.0	0.0	5.2	0.0	5.8
Incr Delay (d2), s/veh	0.6	0.0	27.1	1.6	0.0	15.8	3.2	0.0	0.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	6.9	0.3	0.0	1.1	7.5	0.0	0.0	1.4	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	68.5	48.9	0.0	63.8	12.8	0.0	0.0	5.5	0.0	6.4
LnGrp LOS	D	A	E	D	A	E	B	A	A	A	A	A
Approach Vol, veh/h		470			46			596			529	
Approach Delay, s/veh		52.7			60.6			12.8			6.1	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.5		19.4		73.5		7.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		56.0		16.0		56.0		16.0				
Max Q Clear Time (g_c+I1), s		31.6		15.3		9.6		4.1				
Green Ext Time (p_c), s		5.3		0.1		2.6		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			C									

Notes

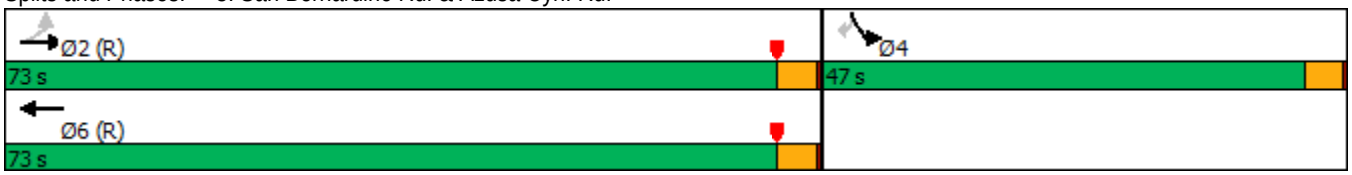
User approved pedestrian interval to be less than phase max green.

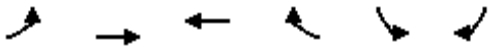
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	160	377	477	288	84
Future Volume (vph)	92	160	377	477	288	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	73.0	73.0	73.0		47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%		39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	92	160	377	477	288	84
Future Volume (veh/h)	92	160	377	477	288	84
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	103	180	424	536	324	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	276	2076	1038	926	648	577
Arrive On Green	0.57	0.57	0.57	0.57	0.36	0.36
Sat Flow, veh/h	594	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	103	180	424	536	324	94
Grp Sat Flow(s),veh/h/ln	594	1805	1805	1610	1810	1610
Q Serve(g_s), s	16.0	2.7	15.7	25.4	16.8	4.8
Cycle Q Clear(g_c), s	41.5	2.7	15.7	25.4	16.8	4.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	276	2076	1038	926	648	577
V/C Ratio(X)	0.37	0.09	0.41	0.58	0.50	0.16
Avail Cap(c_a), veh/h	276	2076	1038	926	648	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	11.4	14.2	16.2	30.1	26.2
Incr Delay (d2), s/veh	3.8	0.1	1.2	2.6	2.7	0.6
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	1.0	6.3	9.4	7.8	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.3	11.5	15.4	18.9	32.8	26.8
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h		283	960		418	
Approach Delay, s/veh		19.4	17.3		31.5	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.0		47.0		73.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		69.0		43.0		69.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

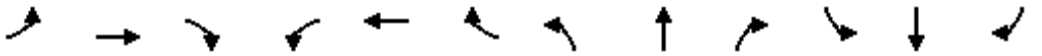
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	54.9		27.1	74.5	74.5	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.6%	62.1%	62.1%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	331	212	2647	51	541	0	170	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2109	523	243	2245	951	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	3800	1610	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1148	516	212	2647	51	541	0	170	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1610	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.1	27.2	13.8	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.1	27.2	13.8	70.9	1.6	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1817	815	243	2245	951	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	1.18	0.05	1.00	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1817	815	356	2245	951	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.4	23.4	50.9	24.6	10.4	51.0	0.0	48.5	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	14.8	85.6	0.1	37.2	0.0	15.4	2.2	0.0	10.0
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	1.3	11.8	11.1	7.1	54.4	0.6	10.9	0.0	5.9	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.1	27.2	65.7	110.1	10.5	88.2	0.0	63.9	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	F	B	F	A	E	D	A	E
Approach Vol, veh/h		1695			2910			711			86	
Approach Delay, s/veh		26.9			105.1			82.4			59.9	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.6	49.9		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.2	4.0	72.9		19.9				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		76.9	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

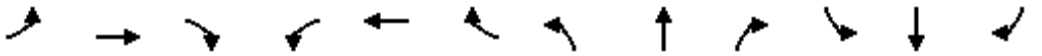
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)							48%					
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	23.0	15.0	15.0	
Total Split (s)	7.5	55.0		27.0	74.5		23.0	23.0	23.0	15.0	15.0	
Total Split (%)	6.3%	45.8%		22.5%	62.1%		19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (veh/h)	28	1213	301	193	2409	46	479	19	155	22	13	44
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1333	331	212	2647	51	541	0	170	24	14	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	2109	523	243	3293	63	543	0	242	151	31	108
Arrive On Green	0.02	0.48	0.48	0.13	0.59	0.59	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4410	1093	1810	5574	107	3619	0	1610	1810	377	1291
Grp Volume(v), veh/h	31	1148	516	212	1800	898	541	0	170	24	0	62
Grp Sat Flow(s),veh/h/ln	1810	1900	1703	1810	1900	1881	1810	0	1610	1810	0	1668
Q Serve(g_s), s	2.0	27.1	27.2	13.8	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Cycle Q Clear(g_c), s	2.0	27.1	27.2	13.8	44.2	44.8	17.9	0.0	12.0	1.5	0.0	4.2
Prop In Lane	1.00		0.64	1.00		0.06	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	39	1818	815	243	2245	1111	543	0	242	151	0	139
V/C Ratio(X)	0.79	0.63	0.63	0.87	0.80	0.81	1.00	0.00	0.70	0.16	0.00	0.45
Avail Cap(c_a), veh/h	60	1818	815	354	2245	1111	543	0	242	151	0	139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	23.4	23.4	50.9	19.1	19.2	51.0	0.0	48.5	51.1	0.0	52.4
Incr Delay (d2), s/veh	30.7	1.7	3.7	14.9	3.1	6.3	37.2	0.0	15.4	2.2	0.0	10.0
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	1.3	11.8	11.1	7.1	18.3	19.3	10.9	0.0	5.9	0.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	25.1	27.2	65.9	22.2	25.6	88.2	0.0	63.9	53.3	0.0	62.4
LnGrp LOS	F	C	C	E	C	C	F	A	E	D	A	E
Approach Vol, veh/h		1695			2910			711			86	
Approach Delay, s/veh		26.9			26.4			82.4			59.9	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	62.4		15.0	6.1	75.9		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	23.5	50.0		10.0	4.0	69.5		18.0				
Max Q Clear Time (g_c+I1), s	15.8	29.2		6.2	4.0	46.8		19.9				
Green Ext Time (p_c), s	0.3	11.3		0.1	0.0	19.0		0.0				

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

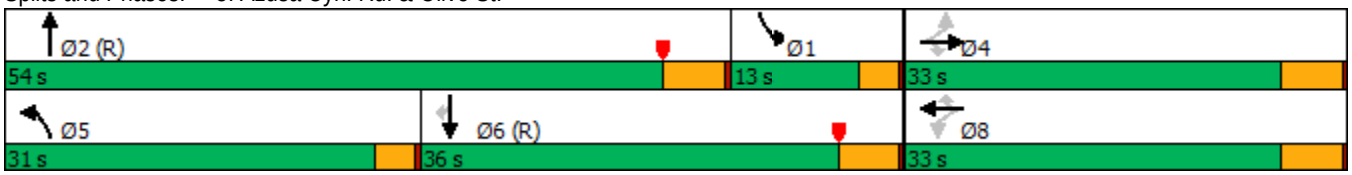
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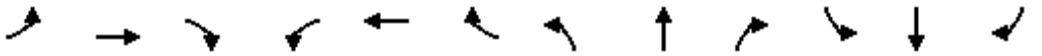
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Future Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	33.0	31.0	54.0		13.0	36.0	36.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	54.0%		13.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2	136	1	1	1	135	629	13	3	273	39
Future Volume (veh/h)	86	2	136	1	1	1	135	629	13	3	273	39
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	2	148	1	1	1	147	684	14	3	297	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	238	220	186	216	220	186	180	1773	36	442	2346	1046
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.20	0.98	0.98	0.24	0.65	0.65
Sat Flow, veh/h	1437	1900	1610	1257	1900	1610	1810	3618	74	1810	3610	1610
Grp Volume(v), veh/h	93	2	148	1	1	1	147	341	357	3	297	42
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	1257	1900	1610	1810	1805	1887	1810	1805	1610
Q Serve(g_s), s	6.1	0.1	9.0	0.1	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Cycle Q Clear(g_c), s	6.2	0.1	9.0	0.2	0.0	0.1	7.8	0.6	0.6	0.1	3.1	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	238	220	186	216	220	186	180	884	924	442	2346	1046
V/C Ratio(X)	0.39	0.01	0.79	0.00	0.00	0.01	0.82	0.39	0.39	0.01	0.13	0.04
Avail Cap(c_a), veh/h	474	532	451	423	532	451	498	884	924	442	2346	1046
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.73	0.73	0.73
Uniform Delay (d), s/veh	41.8	39.1	43.1	39.2	39.1	39.1	39.2	0.5	0.5	28.6	6.7	6.3
Incr Delay (d2), s/veh	1.0	0.0	7.5	0.0	0.0	0.0	8.2	1.2	1.1	0.0	0.1	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	2.2	0.0	3.9	0.0	0.0	0.0	3.5	0.4	0.5	0.1	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	39.2	50.5	39.2	39.1	39.1	47.4	1.7	1.6	28.6	6.8	6.3
LnGrp LOS	D	D	D	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		243			3			845			342	
Approach Delay, s/veh		47.5			39.2			9.6			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.4	54.0		16.6	13.4	70.0		16.6				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	* 49		28.0	27.5	31.0		28.0				
Max Q Clear Time (g_c+I1), s	2.1	2.6		11.0	9.8	5.1		2.2				
Green Ext Time (p_c), s	0.0	5.0		0.6	0.3	2.1		0.0				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	531	10	0	497
Future Volume (vph)	0	2	531	10	0	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

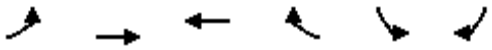
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	531	10	0	497
Future Vol, veh/h	0	2	531	10	0	497
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	559	11	0	523

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	285	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	718	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	718	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	718	-
HCM Lane V/C Ratio	-	-	0.003	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	57	41	0	0	2
Future Volume (vph)	5	57	41	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

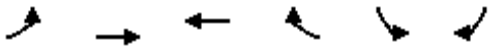
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	57	41	0	0	2
Future Vol, veh/h	5	57	41	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	60	43	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	43	0	-	0	113	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	70	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1579	-	-	-	888	1033
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	885	1033
Mov Cap-2 Maneuver	-	-	-	-	885	-
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	1033
HCM Lane V/C Ratio	0.003	-	-	-	0.002
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	36	35	0	0	6
Future Volume (vph)	21	36	35	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	36	35	0	0	6
Future Vol, veh/h	21	36	35	0	0	6
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	38	37	0	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	119	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	82	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	882	1041
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	946	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	870	1041
Mov Cap-2 Maneuver	-	-	-	-	870	-
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	946	-

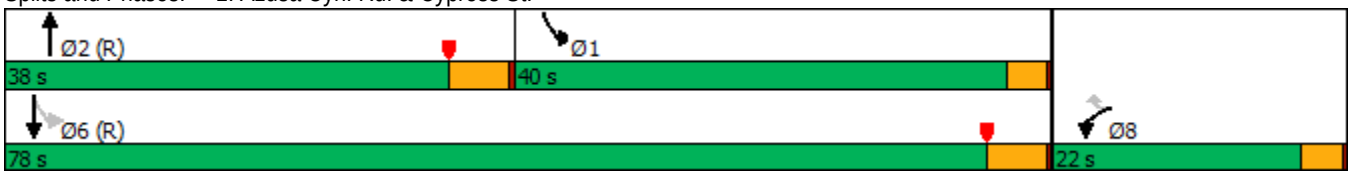
Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1041
HCM Lane V/C Ratio	0.014	-	-	-	0.006
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	383	579	492	486
Future Volume (vph)	196	223	383	579	492	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	220	
Storage Lanes	1	1		0	1	
Taper Length (ft)	90				110	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	35		30			30
Link Distance (ft)	581		985			1333
Travel Time (s)	11.3		22.4			30.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)		41%				
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0		4.0	10.0
Minimum Split (s)	21.5	21.5	23.0		7.5	15.0
Total Split (s)	22.0	22.0	38.0		40.0	78.0
Total Split (%)	22.0%	22.0%	38.0%		40.0%	78.0%
Yellow Time (s)	3.0	3.0	4.5		3.0	4.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	3.5	5.0		3.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Azusa Cyn. Rd. & Cypress St.





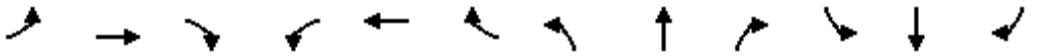
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	196	223	383	579	492	486
Future Volume (veh/h)	196	223	383	579	492	486
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	288	147	403	609	518	512
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	428	190	596	531	826	2877
Arrive On Green	0.12	0.12	0.33	0.33	0.70	1.00
Sat Flow, veh/h	3619	1610	1900	1610	1810	3705
Grp Volume(v), veh/h	288	147	403	609	518	512
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	7.6	8.9	19.3	33.0	9.0	0.0
Cycle Q Clear(g_c), s	7.6	8.9	19.3	33.0	9.0	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	428	190	596	531	826	2877
V/C Ratio(X)	0.67	0.77	0.68	1.15	0.63	0.18
Avail Cap(c_a), veh/h	670	298	596	531	826	2877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.87	0.87
Uniform Delay (d), s/veh	42.2	42.8	28.9	33.5	9.6	0.0
Incr Delay (d2), s/veh	1.9	6.5	6.1	86.1	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	3.5	3.8	9.2	25.2	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	49.3	35.0	119.6	10.9	0.1
LnGrp LOS	D	D	C	F	B	A
Approach Vol, veh/h	435		1012			1030
Approach Delay, s/veh	45.9		85.9			5.6
Approach LOS	D		F			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.7	38.0			84.7	15.3
Change Period (Y+Rc), s	5.0	* 5			5.0	3.5
Max Green Setting (Gmax), s	36.5	* 33			73.0	18.5
Max Q Clear Time (g_c+I1), s	11.0	35.0			2.0	10.9
Green Ext Time (p_c), s	1.7	0.0			4.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	45.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		400
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	142.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	566	12	438	49	39	23	191	352	12	16	469	210
Future Vol, veh/h	566	12	438	49	39	23	191	352	12	16	469	210
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	584	12	452	51	40	24	197	363	12	16	484	216
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	1

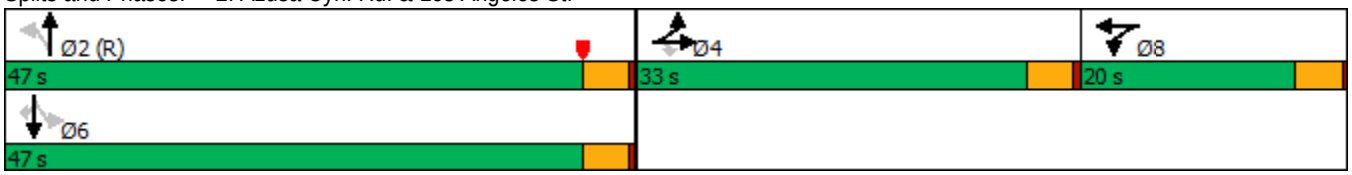
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	163.9	16.8	192.3	92.9
HCM LOS	F	C	F	F

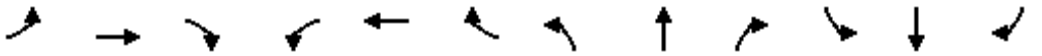
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	98%	0%	56%	0%	3%	0%
Vol Thru, %	63%	2%	0%	44%	0%	97%	0%
Vol Right, %	2%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	578	438	88	23	485	210
LT Vol	191	566	0	49	0	16	0
Through Vol	352	12	0	39	0	469	0
RT Vol	12	0	438	0	23	0	210
Lane Flow Rate	572	596	452	91	24	500	216
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	1.336	1.451	0.95	0.254	0.06	1.161	0.46
Departure Headway (Hd)	8.8	9.564	8.314	11.175	10.131	8.975	8.227
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	418	387	438	324	356	410	442
Service Time	6.8	7.264	6.014	8.875	7.831	6.675	5.927
HCM Lane V/C Ratio	1.368	1.54	1.032	0.281	0.067	1.22	0.489
HCM Control Delay	192.3	242.4	60.4	17.6	13.5	125.4	17.7
HCM Lane LOS	F	F	F	C	B	F	C
HCM 95th-tile Q	25.3	28.4	11.1	1	0.2	17.9	2.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		50	0		0	0		400
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	60			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		1174			160			887			299	
Travel Time (s)		17.8			3.6			20.2			6.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)	49%											
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	33.0	33.0	33.0	20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	20.0	20.0		47.0	47.0		47.0	47.0	47.0
Total Split (%)	33.0%	33.0%	33.0%	20.0%	20.0%		47.0%	47.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 10 (10%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Azusa Cyn. Rd. & Los Angeles St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (veh/h)	566	12	438	49	39	23	191	352	12	16	469	210
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	593	0	452	51	40	24	197	363	12	16	484	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1050	0	467	101	62	37	268	448	14	51	991	861
Arrive On Green	0.29	0.00	0.29	0.06	0.06	0.06	0.53	0.53	0.53	1.00	1.00	1.00
Sat Flow, veh/h	3619	0	1610	1810	1112	667	411	839	27	25	1855	1610
Grp Volume(v), veh/h	593	0	452	51	0	64	572	0	0	500	0	216
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1780	1276	0	0	1881	0	1610
Q Serve(g_s), s	13.9	0.0	27.7	2.7	0.0	3.5	34.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.9	0.0	27.7	2.7	0.0	3.5	37.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.38	0.34		0.02	0.03		1.00
Lane Grp Cap(c), veh/h	1050	0	467	101	0	99	731	0	0	1042	0	861
V/C Ratio(X)	0.57	0.00	0.97	0.51	0.00	0.65	0.78	0.00	0.00	0.48	0.00	0.25
Avail Cap(c_a), veh/h	1050	0	467	290	0	285	731	0	0	1042	0	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.43	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	35.0	45.9	0.0	46.3	19.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	33.4	3.9	0.0	6.9	3.7	0.0	0.0	1.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	14.5	1.3	0.0	1.7	11.0	0.0	0.0	0.5	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	68.4	49.8	0.0	53.2	22.7	0.0	0.0	1.6	0.0	0.7
LnGrp LOS	C	A	E	D	A	D	C	A	A	A	A	A
Approach Vol, veh/h		1045			115			572			716	
Approach Delay, s/veh		47.1			51.7			22.7			1.3	
Approach LOS		D			D			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.4		33.0		57.4		9.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		43.0		29.0		43.0		16.0				
Max Q Clear Time (g_c+I1), s		39.1		29.7		2.0		5.5				
Green Ext Time (p_c), s		1.6		0.0		4.5		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			28.2									
HCM 6th LOS			C									

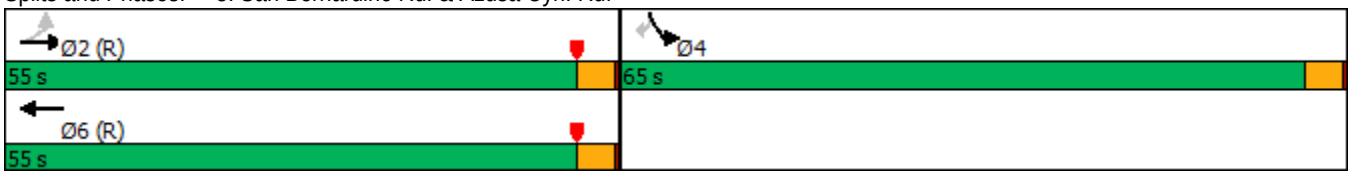
Notes

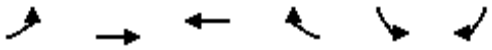
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	140	375	385	406	832	170
Future Volume (vph)	140	375	385	406	832	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			0	0	50
Storage Lanes	1			0	1	1
Taper Length (ft)	60				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		30	
Link Distance (ft)		656	805		887	
Travel Time (s)		11.2	13.7		20.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	55.0	55.0	55.0		65.0	65.0
Total Split (%)	45.8%	45.8%	45.8%		54.2%	54.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: San Bernardino Rd. & Azusa Cyn. Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	375	385	406	832	170
Future Volume (veh/h)	140	375	385	406	832	170
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	147	395	405	427	876	179
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	206	1534	767	684	920	819
Arrive On Green	0.43	0.43	0.43	0.43	0.51	0.51
Sat Flow, veh/h	670	3705	1900	1610	1810	1610
Grp Volume(v), veh/h	147	395	405	427	876	179
Grp Sat Flow(s),veh/h/ln	670	1805	1805	1610	1810	1610
Q Serve(g_s), s	26.1	8.5	20.0	24.9	55.4	7.4
Cycle Q Clear(g_c), s	51.0	8.5	20.0	24.9	55.4	7.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	206	1534	767	684	920	819
V/C Ratio(X)	0.71	0.26	0.53	0.62	0.95	0.22
Avail Cap(c_a), veh/h	206	1534	767	684	920	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	22.3	25.6	27.0	28.1	16.3
Incr Delay (d2), s/veh	19.1	0.4	2.6	4.3	20.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	3.6	8.8	10.0	28.1	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.1	22.7	28.2	31.3	48.3	16.9
LnGrp LOS	E	C	C	C	D	B
Approach Vol, veh/h		542	832		1055	
Approach Delay, s/veh		34.5	29.8		43.0	
Approach LOS		C	C		D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		65.0		55.0
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		51.0		61.0		51.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

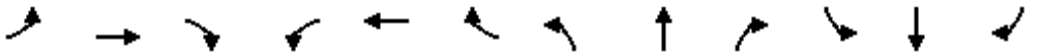
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0	23.0	23.0	23.0	23.0	15.0	15.0	
Total Split (s)	9.2	65.0		17.0	72.8	72.8	23.0	23.0	23.0	15.0	15.0	
Total Split (%)	7.7%	54.2%		14.2%	60.7%	60.7%	19.2%	19.2%	19.2%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	2833	401	257	1664	41	277	0	336	37	13	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	2459	331	204	2203	933	543	0	242	151	27	111
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4918	662	1810	3800	1610	3619	0	1610	1810	322	1337
Grp Volume(v), veh/h	46	2156	1078	257	1664	41	277	0	336	37	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1610	1810	0	1610	1810	0	1659
Q Serve(g_s), s	3.0	60.0	60.0	13.5	39.3	1.3	8.5	0.0	18.0	2.3	0.0	4.6
Cycle Q Clear(g_c), s	3.0	60.0	60.0	13.5	39.3	1.3	8.5	0.0	18.0	2.3	0.0	4.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	59	1900	890	204	2203	933	543	0	242	151	0	138
V/C Ratio(X)	0.77	1.13	1.21	1.26	0.76	0.04	0.51	0.00	1.39	0.25	0.00	0.48
Avail Cap(c_a), veh/h	86	1900	890	204	2203	933	543	0	242	151	0	138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.6	30.0	30.0	53.3	18.9	10.9	46.9	0.0	51.0	51.5	0.0	52.5
Incr Delay (d2), s/veh	22.9	67.8	105.3	151.3	2.5	0.1	3.3	0.0	199.0	3.8	0.0	11.7
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	1.7	42.7	49.3	14.5	16.2	0.5	4.1	0.0	20.6	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.4	97.8	135.3	204.6	21.3	11.0	50.3	0.0	250.0	55.3	0.0	64.2
LnGrp LOS	F	F	F	F	C	B	D	A	F	E	A	E
Approach Vol, veh/h		3280			1962			613			104	
Approach Delay, s/veh		109.9			45.1			159.7			61.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	65.0		15.0	7.4	74.6		23.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	13.5	60.0		10.0	5.7	67.8		18.0				
Max Q Clear Time (g_c+I1), s	15.5	62.0		6.6	5.0	41.3		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	14.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		92.8	
HCM 6th LOS		F	

Notes

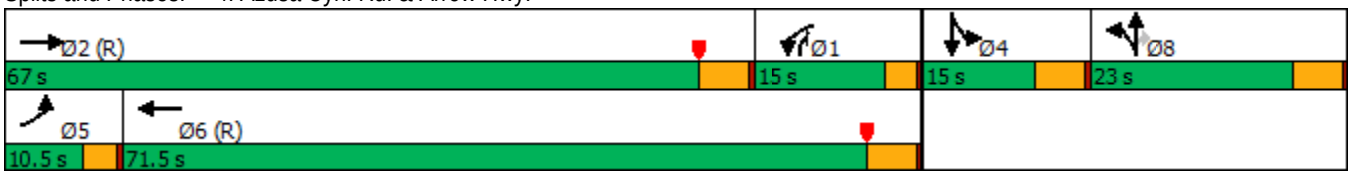
User approved volume balancing among the lanes for turning movement.

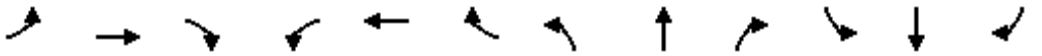
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		50	180		100	200		0	0		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			120			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		958			726			2673			374	
Travel Time (s)		14.5			11.0			60.8			8.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)							47%					
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	7.5	23.0		7.5	23.0		23.0	23.0	7.5	15.0	15.0	
Total Split (s)	10.5	67.0		15.0	71.5		23.0	23.0	15.0	15.0	15.0	
Total Split (%)	8.8%	55.8%		12.5%	59.6%		19.2%	19.2%	12.5%	12.5%	12.5%	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Recall Mode	None	C-Max		None	C-Max		Max	Max	None	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 6.7 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Azusa Cyn. Rd. & Arrow Hwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (veh/h)	43	2663	377	242	1564	39	250	15	316	35	12	51
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	2663	377	242	1564	39	261	0	316	35	12	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	2541	342	729	4990	124	543	0	890	151	26	112
Arrive On Green	0.05	0.77	0.77	0.60	1.00	1.00	0.15	0.00	0.15	0.08	0.08	0.08
Sat Flow, veh/h	1810	4918	663	1810	5537	138	3619	0	1610	1810	316	1342
Grp Volume(v), veh/h	43	2027	1013	242	1073	530	261	0	316	35	0	63
Grp Sat Flow(s),veh/h/ln	1810	1900	1781	1810	1900	1875	1810	0	1610	1810	0	1658
Q Serve(g_s), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Cycle Q Clear(g_c), s	2.8	62.0	62.0	7.9	0.0	0.0	7.9	0.0	0.0	2.2	0.0	4.3
Prop In Lane	1.00		0.37	1.00		0.07	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	55	1963	920	729	3425	1690	543	0	890	151	0	138
V/C Ratio(X)	0.78	1.03	1.10	0.33	0.31	0.31	0.48	0.00	0.36	0.23	0.00	0.46
Avail Cap(c_a), veh/h	106	1963	920	729	3425	1690	543	0	890	151	0	138
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.8	13.5	13.5	15.8	0.0	0.0	46.7	0.0	14.9	51.4	0.0	52.4
Incr Delay (d2), s/veh	20.2	29.1	61.4	0.3	0.2	0.5	3.0	0.0	1.1	3.6	0.0	10.5
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	1.6	17.4	24.6	2.9	0.1	0.2	3.8	0.0	5.0	1.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	42.6	74.9	16.0	0.2	0.5	49.7	0.0	16.0	55.0	0.0	62.9
LnGrp LOS	E	F	F	B	A	A	D	A	B	D	A	E
Approach Vol, veh/h		3083			1845			577			98	
Approach Delay, s/veh		53.7			2.4			31.3			60.1	
Approach LOS		D			A			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.4	67.0		15.0	7.2	113.2		23.0				
Change Period (Y+Rc), s	5.0	* 5		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	* 62		10.0	7.0	66.5		18.0				
Max Q Clear Time (g_c+I1), s	9.9	64.0		6.3	4.8	2.0		9.9				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	15.5		1.4				

Intersection Summary		
HCM 6th Ctrl Delay	34.6	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

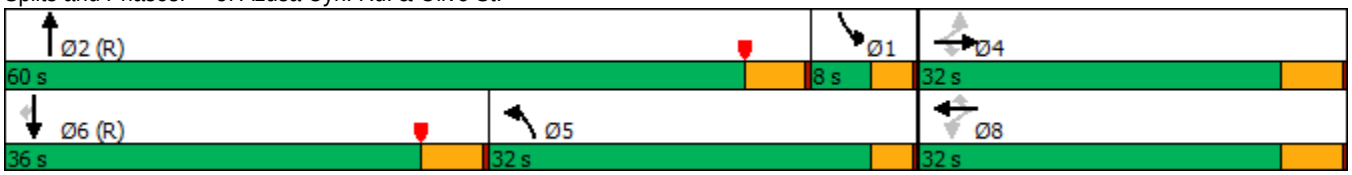
User approved volume balancing among the lanes for turning movement.

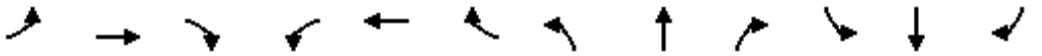
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Future Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	30		30	195		0	170		50
Storage Lanes	1		1	0		0	1		0	1		1
Taper Length (ft)	80			0			110			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		685			218			1333			2673	
Travel Time (s)		13.3			5.0			30.3			60.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	7.5	23.0		7.5	23.0	23.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	32.0	60.0		8.0	36.0	36.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	60.0%		8.0%	36.0%	36.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5		3.0	4.5	4.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lead/Lag							Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Azusa Cyn. Rd. & Olive St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1	380	3	1	1	259	345	1	1	594	85
Future Volume (veh/h)	116	1	380	3	1	1	259	345	1	1	594	85
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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	1	404	3	1	1	276	367	1	1	632	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	455	507	429	337	507	429	522	2031	6	87	1119	499
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.38	0.73	0.73	0.05	0.31	0.31
Sat Flow, veh/h	1437	1900	1610	996	1900	1610	1810	3693	10	1810	3610	1610
Grp Volume(v), veh/h	123	1	404	3	1	1	276	179	189	1	632	90
Grp Sat Flow(s),veh/h/ln	1437	1900	1610	996	1900	1610	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	6.9	0.0	24.6	0.2	0.0	0.0	11.8	3.1	3.1	0.1	14.6	4.1
Cycle Q Clear(g_c), s	6.9	0.0	24.6	0.3	0.0	0.0	11.8	3.1	3.1	0.1	14.6	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	455	507	429	337	507	429	522	993	1044	87	1119	499
V/C Ratio(X)	0.27	0.00	0.94	0.01	0.00	0.00	0.53	0.18	0.18	0.01	0.56	0.18
Avail Cap(c_a), veh/h	460	513	435	340	513	435	522	993	1044	87	1119	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.09	0.09	0.09
Uniform Delay (d), s/veh	29.4	26.9	35.9	27.0	26.9	26.9	25.6	6.5	6.5	45.3	28.9	25.2
Incr Delay (d2), s/veh	0.3	0.0	28.6	0.0	0.0	0.0	0.7	0.3	0.3	0.0	0.2	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	2.4	0.0	12.8	0.1	0.0	0.0	4.8	1.2	1.2	0.0	6.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	26.9	64.5	27.0	26.9	26.9	26.3	6.7	6.7	45.3	29.0	25.3
LnGrp LOS	C	C	E	C	C	C	C	A	A	D	C	C
Approach Vol, veh/h		528			5			644			723	
Approach Delay, s/veh		56.3			27.0			15.1			28.6	
Approach LOS		E			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	60.0		31.7	32.3	36.0		31.7				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	55.0		27.0	28.5	31.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	5.1		26.6	13.8	16.6		2.3				
Green Ext Time (p_c), s	0.0	2.3		0.1	0.7	4.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.7	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	8	938	3	0	695
Future Volume (vph)	0	8	938	3	0	695
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	208		299			985
Travel Time (s)	4.7		6.8			22.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

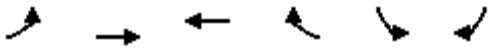
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	938	3	0	695
Future Vol, veh/h	0	8	938	3	0	695
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	987	3	0	732

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	495	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	525	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	525	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	525	-
HCM Lane V/C Ratio	-	-	0.016	-
HCM Control Delay (s)	-	-	12	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	38	103	0	0	7
Future Volume (vph)	2	38	103	0	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		160	175		164	
Travel Time (s)		3.6	4.0		3.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

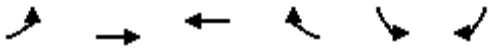
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	38	103	0	0	7
Future Vol, veh/h	2	38	103	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	40	108	0	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	108	0	-	0	152	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1495	-	-	-	844	951
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1495	-	-	-	843	951
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	984	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1495	-	-	-	951
HCM Lane V/C Ratio	0.001	-	-	-	0.008
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	31	84	0	0	19
Future Volume (vph)	7	31	84	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		175	247		166	
Travel Time (s)		4.0	5.6		3.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	31	84	0	0	19
Future Vol, veh/h	7	31	84	0	0	19
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	33	88	0	0	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	135	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	863	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	859	976
Mov Cap-2 Maneuver	-	-	-	-	859	-
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	981	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.8
HCM LOS			A

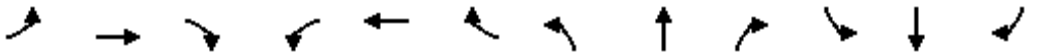
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	976
HCM Lane V/C Ratio	0.005	-	-	-	0.02
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	419	359	186	161	249
Future Volume (vph)	262	419	359	186	161	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.93	0.85	0.95		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3351	1470	3425		1805	3610
Flt Permitted	0.97	1.00	1.00		0.39	1.00
Satd. Flow (perm)	3351	1470	3425		735	3610
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	291	466	399	207	179	277
RTOR Reduction (vph)	173	204	49	0	0	0
Lane Group Flow (vph)	342	38	557	0	179	277
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	15.9	15.9	53.6		77.1	75.6
Effective Green, g (s)	15.9	15.9	53.6		77.1	75.6
Actuated g/C Ratio	0.16	0.16	0.54		0.77	0.76
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	532	233	1835		764	2729
v/s Ratio Prot	c0.10		c0.16		c0.04	0.08
v/s Ratio Perm		0.03			0.14	
v/c Ratio	0.64	0.17	0.30		0.23	0.10
Uniform Delay, d1	39.4	36.3	12.9		5.0	3.2
Progression Factor	1.00	1.00	1.00		2.24	1.98
Incremental Delay, d2	2.7	0.3	0.4		0.2	0.1
Delay (s)	42.0	36.7	13.3		11.4	6.5
Level of Service	D	D	B		B	A
Approach Delay (s)	40.3		13.3			8.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

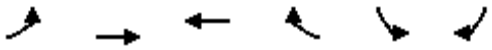
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Future Volume (vph)	217	26	206	9	12	22	249	302	9	27	167	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.90			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1718			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.76			0.90	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1718			1444			1704	1900
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	231	28	219	10	13	23	265	321	10	29	178	322
RTOR Reduction (vph)	0	0	191	0	22	0	0	0	0	0	0	98
Lane Group Flow (vph)	129	130	28	10	14	0	0	596	0	0	207	224
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	12.6	12.6	12.6	5.9	5.9			69.5			69.5	69.5
Effective Green, g (s)	12.6	12.6	12.6	5.9	5.9			69.5			69.5	69.5
Actuated g/C Ratio	0.13	0.13	0.13	0.06	0.06			0.70			0.70	0.70
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	216	227	239	106	101			1003			1184	1320
v/s Ratio Prot	c0.08	0.07		0.01	c0.01							
v/s Ratio Perm			0.01					c0.41			0.12	0.12
v/c Ratio	0.60	0.57	0.12	0.09	0.14			0.59			0.17	0.17
Uniform Delay, d1	41.3	41.2	38.8	44.5	44.6			7.9			5.3	5.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			0.90	2.36
Incremental Delay, d2	4.4	3.5	0.2	0.4	0.6			2.6			0.3	0.3
Delay (s)	45.7	44.6	39.0	44.9	45.3			10.5			5.1	12.7
Level of Service	D	D	D	D	D			B			A	B
Approach Delay (s)		42.3			45.2			10.5			9.7	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	160	377	477	288	84
Future Volume (vph)	92	160	377	477	288	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3308		1805	1615
Flt Permitted	0.23	1.00	1.00		0.95	1.00
Satd. Flow (perm)	436	3610	3308		1805	1615
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	103	180	424	536	324	94
RTOR Reduction (vph)	0	0	191	0	0	26
Lane Group Flow (vph)	103	180	769	0	324	68
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	69.0	69.0	69.0		43.0	43.0
Effective Green, g (s)	69.0	69.0	69.0		43.0	43.0
Actuated g/C Ratio	0.58	0.58	0.58		0.36	0.36
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	250	2075	1902		646	578
v/s Ratio Prot		0.05	0.23		c0.18	
v/s Ratio Perm	c0.24					0.04
v/c Ratio	0.41	0.09	0.40		0.50	0.12
Uniform Delay, d1	14.2	11.4	14.1		30.1	25.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.0	0.1	0.6		2.8	0.4
Delay (s)	19.2	11.5	14.8		32.9	26.2
Level of Service	B	B	B		C	C
Approach Delay (s)		14.3	14.8		31.4	
Approach LOS		B	B		C	

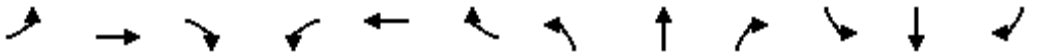
Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	331	212	2647	51	526	21	170	24	14	48
RTOR Reduction (vph)	0	35	0	0	0	21	0	0	145	0	44	0
Lane Group Flow (vph)	31	1629	0	212	2647	30	274	273	26	24	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	2.4	55.2		18.3	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.2		18.3	71.1	71.1	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59	0.59	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2622		289	2251	1125	285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.70		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.82	0.62		0.73	1.18	0.03	0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.5		48.5	24.5	10.1	50.7	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.3	84.2	0.0	44.3	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.6		57.8	108.6	10.2	95.0	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	F	B	F	F	D	D	D	
Approach Delay (s)		27.6			103.2			82.7			52.6	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	76.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

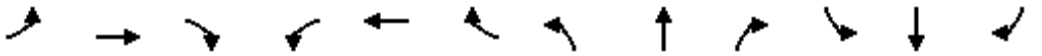
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Future Volume (vph)	28	1213	301	193	2409	46	479	19	155	22	13	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	1333	331	212	2647	51	526	21	170	24	14	48
RTOR Reduction (vph)	0	35	0	0	2	0	0	0	145	0	44	0
Lane Group Flow (vph)	31	1629	0	212	2696	0	274	273	26	24	18	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Actuated Green, G (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	2.4	55.2		18.3	71.1		18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.02	0.46		0.15	0.59		0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	38	2622		289	3377		285	285	285	158	158	
v/s Ratio Prot	0.02	0.29		c0.11	c0.47		c0.14	0.14		c0.01	0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.82	0.62		0.73	0.80		0.96	0.96	0.09	0.15	0.11	
Uniform Delay, d1	58.6	24.5		48.5	18.9		50.7	50.6	43.9	51.1	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	76.1	1.1		9.3	2.1		44.3	43.6	0.6	2.0	1.5	
Delay (s)	134.7	25.6		57.8	21.0		95.0	94.2	44.6	53.1	52.4	
Level of Service	F	C		E	C		F	F	D	D	D	
Approach Delay (s)		27.6			23.7			82.7			52.6	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Future Volume (vph)	86	2	136	1	1	1	135	629	13	3	273	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3599		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1437	1900	1615	1805	3599		1805	3610	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	2	148	1	1	1	147	684	14	3	297	42
RTOR Reduction (vph)	0	0	129	0	0	1	0	1	0	0	0	17
Lane Group Flow (vph)	93	2	19	1	1	0	147	697	0	3	297	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	13.5	71.9		1.9	60.3	60.3
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.72		0.02	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	241	205	182	241	205	243	2587		34	2176	973
v/s Ratio Prot		0.00			0.00		c0.08	c0.19		0.00	c0.08	
v/s Ratio Perm	c0.06		0.01	0.00		0.00						0.02
v/c Ratio	0.51	0.01	0.09	0.01	0.00	0.00	0.60	0.27		0.09	0.14	0.03
Uniform Delay, d1	40.8	38.1	38.6	38.1	38.1	38.1	40.7	4.9		48.2	8.6	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	1.13		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.2	0.0	0.0	0.0	4.0	0.2		1.1	0.1	0.0
Delay (s)	43.2	38.2	38.8	38.1	38.1	38.1	35.1	5.8		49.3	8.7	8.1
Level of Service	D	D	D	D	D	D	D	A		D	A	A
Approach Delay (s)		40.4			38.1			10.9			9.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

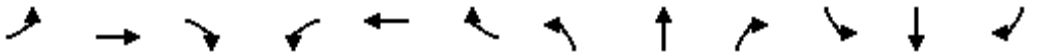
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	223	383	579	492	486
Future Volume (vph)	196	223	383	579	492	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	5.0		3.5	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frt	0.95	0.85	0.91		1.00	1.00
Flt Protected	0.97	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3394	1470	3284		1805	3610
Flt Permitted	0.97	1.00	1.00		0.15	1.00
Satd. Flow (perm)	3394	1470	3284		285	3610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	235	403	609	518	512
RTOR Reduction (vph)	62	121	250	0	0	0
Lane Group Flow (vph)	240	18	762	0	518	512
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	12.6	12.6	38.9		80.4	78.9
Effective Green, g (s)	12.6	12.6	38.9		80.4	78.9
Actuated g/C Ratio	0.13	0.13	0.39		0.80	0.79
Clearance Time (s)	3.5	3.5	5.0		3.5	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	427	185	1277		783	2848
v/s Ratio Prot	c0.07		0.23		c0.24	0.14
v/s Ratio Perm		0.01			c0.29	
v/c Ratio	0.56	0.09	0.60		0.66	0.18
Uniform Delay, d1	41.1	38.7	24.3		16.0	2.6
Progression Factor	1.00	1.00	1.00		0.85	1.55
Incremental Delay, d2	1.7	0.2	2.1		1.9	0.1
Delay (s)	42.8	38.9	26.4		15.5	4.1
Level of Service	D	D	C		B	A
Approach Delay (s)	41.6		26.4			9.8
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

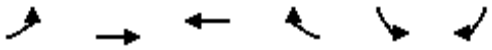
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Future Volume (vph)	566	12	438	49	39	23	191	352	12	16	469	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.94			1.00			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1715	1805	1900	1805	1793			1900			1900	1900
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.54			0.98	1.00
Satd. Flow (perm)	1715	1805	1900	1805	1793			1027			1860	1900
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	584	12	452	51	40	24	197	363	12	16	484	216
RTOR Reduction (vph)	0	0	289	0	22	0	0	0	0	0	0	95
Lane Group Flow (vph)	298	298	163	51	42	0	0	572	0	0	500	121
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2			6		6
Actuated Green, G (s)	24.0	24.0	24.0	8.1	8.1			55.9			55.9	55.9
Effective Green, g (s)	24.0	24.0	24.0	8.1	8.1			55.9			55.9	55.9
Actuated g/C Ratio	0.24	0.24	0.24	0.08	0.08			0.56			0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	411	433	456	146	145			574			1039	1062
v/s Ratio Prot	c0.17	0.17		c0.03	0.02							
v/s Ratio Perm			0.09					c0.56			0.27	0.06
v/c Ratio	0.73	0.69	0.36	0.35	0.29			1.00			0.48	0.11
Uniform Delay, d1	35.0	34.6	31.6	43.5	43.2			21.9			13.3	10.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.47	3.37
Incremental Delay, d2	6.2	4.5	0.5	1.4	1.1			36.5			1.6	0.2
Delay (s)	41.2	39.1	32.1	44.9	44.3			58.5			21.1	35.2
Level of Service	D	D	C	D	D			E			C	D
Approach Delay (s)		36.7			44.6			58.5			25.4	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

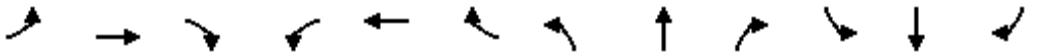
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	140	375	385	406	832	170
Future Volume (vph)	140	375	385	406	832	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.92		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3610	3332		1805	1615
Flt Permitted	0.22	1.00	1.00		0.95	1.00
Satd. Flow (perm)	414	3610	3332		1805	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	395	405	427	876	179
RTOR Reduction (vph)	0	0	158	0	0	18
Lane Group Flow (vph)	147	395	674	0	876	161
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	51.0	51.0	51.0		61.0	61.0
Effective Green, g (s)	51.0	51.0	51.0		61.0	61.0
Actuated g/C Ratio	0.42	0.42	0.42		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	175	1534	1416		917	820
v/s Ratio Prot		0.11	0.20		c0.49	
v/s Ratio Perm	c0.36					0.10
v/c Ratio	0.84	0.26	0.48		0.96	0.20
Uniform Delay, d1	30.9	22.3	24.9		28.2	16.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	36.0	0.4	1.1		20.7	0.5
Delay (s)	66.9	22.7	26.0		48.9	16.6
Level of Service	E	C	C		D	B
Approach Delay (s)		34.7	26.0		43.4	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

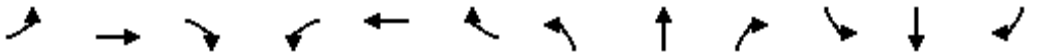
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00	1.00	*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	3800	1900	1900	1900	1900	1900	1900	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	46	2833	401	257	1664	41	266	16	336	37	13	54
RTOR Reduction (vph)	0	18	0	0	0	17	0	0	182	0	50	0
Lane Group Flow (vph)	46	3216	0	257	1664	24	141	141	154	37	18	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			8			
Actuated Green, G (s)	4.6	60.0		13.5	68.9	68.9	18.0	18.0	18.0	10.0	10.0	
Effective Green, g (s)	4.6	60.0		13.5	68.9	68.9	18.0	18.0	18.0	10.0	10.0	
Actuated g/C Ratio	0.04	0.50		0.11	0.57	0.57	0.15	0.15	0.15	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	72	2850		213	2181	1090	285	285	285	158	158	
v/s Ratio Prot	0.02	c0.56		c0.14	0.44		0.07	0.07		c0.02	0.01	
v/s Ratio Perm						0.01			c0.08			
v/c Ratio	0.64	1.13		1.21	0.76	0.02	0.49	0.49	0.54	0.23	0.11	
Uniform Delay, d1	56.9	30.0		53.2	19.4	11.0	46.8	46.8	47.2	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	17.1	62.9		128.6	2.6	0.0	6.0	6.0	7.2	3.4	1.4	
Delay (s)	74.0	92.9		181.9	22.0	11.1	52.8	52.8	54.4	54.9	52.3	
Level of Service	E	F		F	C	B	D	D	D	D	D	
Approach Delay (s)		92.6			42.7			53.7			53.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		

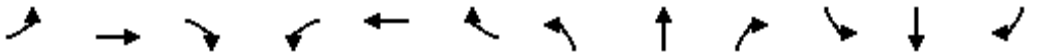
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Future Volume (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Lane Util. Factor	1.00	*1.00		1.00	*1.00		*1.00	*1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Flt Permitted	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1900	5700		1900	5700		1900	1900	1900	1900	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	2663	377	242	1564	39	250	15	316	35	12	51
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	71	0	47	0
Lane Group Flow (vph)	43	3022	0	242	1601	0	132	133	245	35	16	0
Turn Type	Prot	NA		Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases									8			
Actuated Green, G (s)	5.6	61.3		12.2	67.9		18.0	18.0	30.2	10.0	10.0	
Effective Green, g (s)	5.6	61.3		12.2	67.9		18.0	18.0	30.2	10.0	10.0	
Actuated g/C Ratio	0.05	0.51		0.10	0.57		0.15	0.15	0.25	0.08	0.08	
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0	3.5	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	88	2911		193	3225		285	285	478	158	158	
v/s Ratio Prot	0.02	c0.53		c0.13	0.28		0.07	0.07	c0.05	c0.02	0.01	
v/s Ratio Perm									0.08			
v/c Ratio	0.49	1.04		1.25	0.50		0.46	0.47	0.51	0.22	0.10	
Uniform Delay, d1	55.8	29.4		53.9	15.7		46.6	46.6	38.6	51.4	50.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	27.6		149.5	0.5		5.3	5.4	0.9	3.2	1.3	
Delay (s)	60.0	57.0		203.4	16.3		51.9	52.0	39.5	54.6	52.2	
Level of Service	E	E		F	B		D	D	D	D	D	
Approach Delay (s)		57.0			40.8			45.2			53.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Future Volume (vph)	116	1	380	3	1	1	259	345	1	1	594	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1900	1615	1805	3609		1805	3610	1615
Flt Permitted	0.76	1.00	1.00	0.76	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1439	1900	1615	1439	1900	1615	1805	3609		1805	3610	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	123	1	404	3	1	1	276	367	1	1	632	90
RTOR Reduction (vph)	0	0	343	0	0	1	0	0	0	0	0	49
Lane Group Flow (vph)	123	1	61	3	1	0	276	368	0	1	632	41
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	25.4	70.6		0.9	46.1	46.1
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.25	0.71		0.01	0.46	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	215	285	242	215	285	242	458	2547		16	1664	744
v/s Ratio Prot		0.00			0.00		c0.15	0.10		0.00	c0.18	
v/s Ratio Perm	c0.09		0.04	0.00		0.00						0.03
v/c Ratio	0.57	0.00	0.25	0.01	0.00	0.00	0.60	0.14		0.06	0.38	0.06
Uniform Delay, d1	39.5	36.1	37.5	36.2	36.1	36.1	32.9	4.8		49.1	17.6	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.29	1.01		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	0.5	0.0	0.0	0.0	1.9	0.1		1.6	0.7	0.1
Delay (s)	43.2	36.1	38.1	36.2	36.1	36.1	44.3	5.0		50.8	18.3	15.1
Level of Service	D	D	D	D	D	D	D	A		D	B	B
Approach Delay (s)		39.3			36.2			21.8			17.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Appendices

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