Appendix C

Transportation Impact Analysis

Transportation Impact Analysis

Torrance Costco Relocation

Transportation Impact Analysis

Torrance, California

July 2014

Transportation Impact Analysis

Torrance Costco Relocation Transportation Impact Analysis

Torrance, California

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TABLE OF CONTENTS

Executive Summary 2
Project Background 6
Introduction 11
Scope of The Report 11
Level of Service Criteria and significance thresholds 14
Existing Conditions 18
Site Conditions and Adjacent Land Uses 18
Transportation Facilities 18
Traffic Volumes And Peak Hour Operations 20
Project Impact Analysis 26
Year 2016 Cumulative (No-Build) Traffic Conditions 26
Modified Project Development Plan 30
Trip Distribution 33
Year 2016 Cumulative Plus Project Traffic Conditions 35
Transportation Mitigation Measures 42
Summary of Off-Site Intersection Improvements 42
Site Access and Circulation 45
Conclusions and Recommendations 48
Findings 49
Recommendations 50
Appendices 51

Section 1
Executive Summary

EXECUTIVE SUMMARY

In March 19, 2010, the City of Torrance (City) certified the Environmental Impact Report (EIR) prepared for the Rockefeller Group Professional Center Project (State Clearinghouse No. 2007121119) (the Certified EIR). The Certified EIR analyzed the development of approximately 351,200 square feet of medical/office, professional office, and light industrial condominium buildings, to be developed in two phases (the Approved Project) on a 23.58-acre site (the Project Site) located on the south side of Lomita Boulevard between Garnier Street and Crenshaw Boulevard in the City.

The project applicant for the Approved Project, Rock-Lomita LLC, intends to sell the Project Site to Costco Wholesale Corporation (Costco). Based on current market conditions, Rock-Lomita LLC and Costco have decided to seek City approval to modify the Approved Project to provide for the development of a 161,500-square-foot Costco warehouse with a 20-position members-only fueling station, car wash, tire center, and 75,000 square feet of medical office on the Project Site (the Modified Project)

This traffic analysis accounts for the changes to the traffic resulting from the proposed modifications to the Approved Project and for traffic volumes and travel patterns that have changed since the Certified EIR was completed. Intersection turning movement counts conducted in 2014 show a general reduction in volume as compared to the 2012 forecast volume scenario documented in the Certified EIR.

This traffic analysis assesses the incremental difference in trips between the Approved Project and the Modified Project. This analysis accounts for changes in travel patterns associated with redistributing trips from the existing Costco site to the Project Site, and for impacts of trips that could be generated if another discount club occupies the existing Costco warehouse.

This analysis assumes all trips associated with the Approved Project are included in the Modified Project's cumulative volume scenario and that all proportional share contributions will be fulfilled for mitigations identified in the Certified EIR. In accordance with the California Environmental Quality Act (CEQA), the cumulative without project (Cumulative) scenario operations are compared to cumulative plus project conditions to identify whether the proposed modifications to the development program result in any new significant environmental impacts or a substantial increase in the severity of impacts set forth in the Certified EIR.

The findings of this traffic analysis include:

- The potential re-use of the existing Costco building will result in a net reduction of trips on Skypark Drive.
- Relative to the trips estimated for the Approved Project, the Modified Project will result in a net decrease in estimated trips during the weekday a.m. peak period, reflecting Costco's hours of business.

- Intersections that experience a significant impact during the weekday p.m. peak hour are identified in Table 1. The Modified Project shows an impact at five intersections; the Certified EIR identified each of these intersections as significantly impacted by the Approved Project during the weekday p.m. peak hour.
- The severity of the impacts set forth in the Certified EIR will be exceeded by the Modified Project at five intersections; however, no additional mitigations are necessary, other than those in the Certified EIR, to mitigate the impacts of the Modified Project back to the level of impact identified in the Certified EIR.
- The access control and location for the main entrance to the new Costco site is consistent with the Certified EIR assumptions, identifying the need for a new traffic signal on Lomita Boulevard. Secondary access is proposed from the existing full access along the western property boundary and a proposed right-in, right-out access located east of the fueling station.
- The proposed Costco layout can meet access, delivery, and internal parking and circulation needs of the Costco.

Table 1. Summary of Intersection Mitigations

	Approved Project*					Modified Project*		
Study Intersection	AM Impact?	PM Impact?	Project Share	Feasible Improvements	Will Feasible Improvements Mitigate Impacts?	AM Impact?	PM Impact?	Will Feasible Improvements Mitigate Impacts?
1. Calle Mayor & PCH	NO	YES	2%	None	-	NO	NO	-
2. Anza/Vista Montana & PCH	NO	NO	-	-	-	NO	NO	-
3. Hawthorne Blvd & Torrance Blvd	NO	YES	1%	Add EBR overlap	NO	NO	NO	-
4. Hawthorne Blvd & Carson Street	YES	YES	1%	None	NO	NO	NO	-
5. Hawthorne Blvd & Sepulveda Blvd	NO	YES	2%	Add 2nd NBR w/overlap	YES	NO	NO	-
6. Hawthorne Blvd & Lomita Blvd	YES	YES	3%	2nd NB LT Lane NB RT Lane 4th SB TH Lane WB RT w/overlap	NO	NO	YES	YES
7. Hawthorne Blvd & Skypark Dr	NO	YES	3%			NO	NO	-
8. Hawthorne Blvd & PCH	YES	YES	2%	NB RT w/overlap SB RT overlap WB RT w/overlap	YES	NO	NO	-
9. Hawthorne Blvd & Rolling Hills Rd	NO	NO	-	-	-	NO	NO	-
10. Hawthorne Blvd Palos Verdes Dr	NO	NO	-	-	-	NO	NO	-
11. Early Ave & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
12. Garnier St & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
13. Garnier St & Skypark St	NO	NO	-	-	-	NO	NO	-
14. Costco Dwy & Skypark Dr	NO	NO	-	-	-	NO	NO	-
15. Crenshaw Blvd & Torrance Blvd	NO	YES	1%	Add NBR w/overlap	NO	NO	NO	-
16. Crenshaw Blvd & Carson Street	NO	YES	1%	None	-	NO	NO	-
17. Crenshaw Blvd & Sepulveda Blvd	YES	YES	3%	Add NBR w/overlap	NO	NO	NO	-
18. Crenshaw Blvd & Lomita Blvd	NO	YES	5%	None	-	NO	NO	-
19. Crenshaw Blvd & Torrance Crossroads	NO	NO	-	-	-	NO	NO	-
20. Crenshaw Blvd & Skypark Dr	NO	NO	-	-	-	NO	NO	-
21. Crenshaw Blvd & Airport Dr	NO	NO	-	-	-	NO	NO	-
22. Crenshaw Blvd & PCH	YES	YES	2%	Add NBR overlap	NO	NO	NO	-
23. Crenshaw Blvd & Rolling Hills Rd	NO	NO	-	-	-	NO	NO	-
24. Crenshaw Blvd & Palos Verdes Dr	NO	NO	-	-	-	NO	NO	-
25. Pennsylvania Ave & Lomita Blvd	YES	YES	3%	Add NBL	NO	NO	YES	YES
26. Arlington Ave & Sepulveda Blvd	YES	YES	2%	Convert SBR to 2nd SBT	YES	NO	NO	-
27. Narbonne Ave & Lomita Blvd	YES	YES	2%	None	-	NO	YES	NO
28. Narbonne Ave & PCH	YES	YES	2%	None	-	NO	NO	-
29. Eshelman & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
30. Eshelman & PCH	YES	YES	2%	None	-	NO	NO	-
31. Western Ave & Sepulveda Blvd	YES	YES	1%	Add 2nd NBL	YES	NO	YES	YES
32. Western Ave & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
33. Western Ave & PCH	YES	YES	2%	Add 2nd SBL	NO	NO	YES	YES
34. Normandie Ave & PCH	NO	NO	-	-	-	NO	NO	-
35. Vermont Ave & PCH	YES	YES	1%	None	-	NO	NO	-
36. I-110 SB Ramps & PCH	NO	YES	1%	Convert SBR to SBL/SBR	YES	NO	NO	-
37. Figueroa St & I-110 NB Ramps	YES	YES	1%	Signalize intersection	YES	NO	NO	-
38. Figueroa St & PCH	YES	NO	1%	None	-	NO	NO	-
39. Existing Private Dwy & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
40. Madrona Ave & Torrance Blvd	NO	NO	-	-	-	NO	NO	-
41.Madrona Ave & Carson St	NO	NO	-	-	-	NO	NO	-
42.Madrona Ave & Sepulveda Blvd	NO	NO	-	-	-	NO	NO	-
43. Existing W Costco Dwy & Skypark Dr	-	-	-	-	-	NO	NO	-
44. Proposed Costco Dwy & Lomita Blvd	-	-	-	-	-	NO	NO	-
45. Proposed Costco RIRO & Lomita Blvd	-	-	-	-	-	NO	NO	-

PCH = Pacific Coast Highway, RIRO = Right-in, Right-out, NB = Northbound, SB = Southbound, R = Right Turn Lane, L = Left-turn Lane
*** Assumes all impacts identified in table are significant environmental impacts**

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Section 2
Project Background

PROJECT BACKGROUND

The Certified EIR analyzed the development of the Approved Project, which consisted of approximately 351,200 square feet of medical/office, professional office, and light industrial condominium buildings. The Approved Project would be developed in two phases on the 23.58-acre Project Site, located on the south side of Lomita Boulevard between Garnier Street and Crenshaw Boulevard in the City. A site vicinity map is included as Figure 1.

The project applicant for the Approved Project, Rock-Lomita LLC, intends to sell the Project Site to Costco Wholesale Corporation (Costco). Based on current market conditions, the Rock-Lomita LLC and Costco have decided to seek City approval to modify the Approved Project as described below in order to accommodate a Costco that will move from a location on an adjacent offsite parcel.

Approved Project

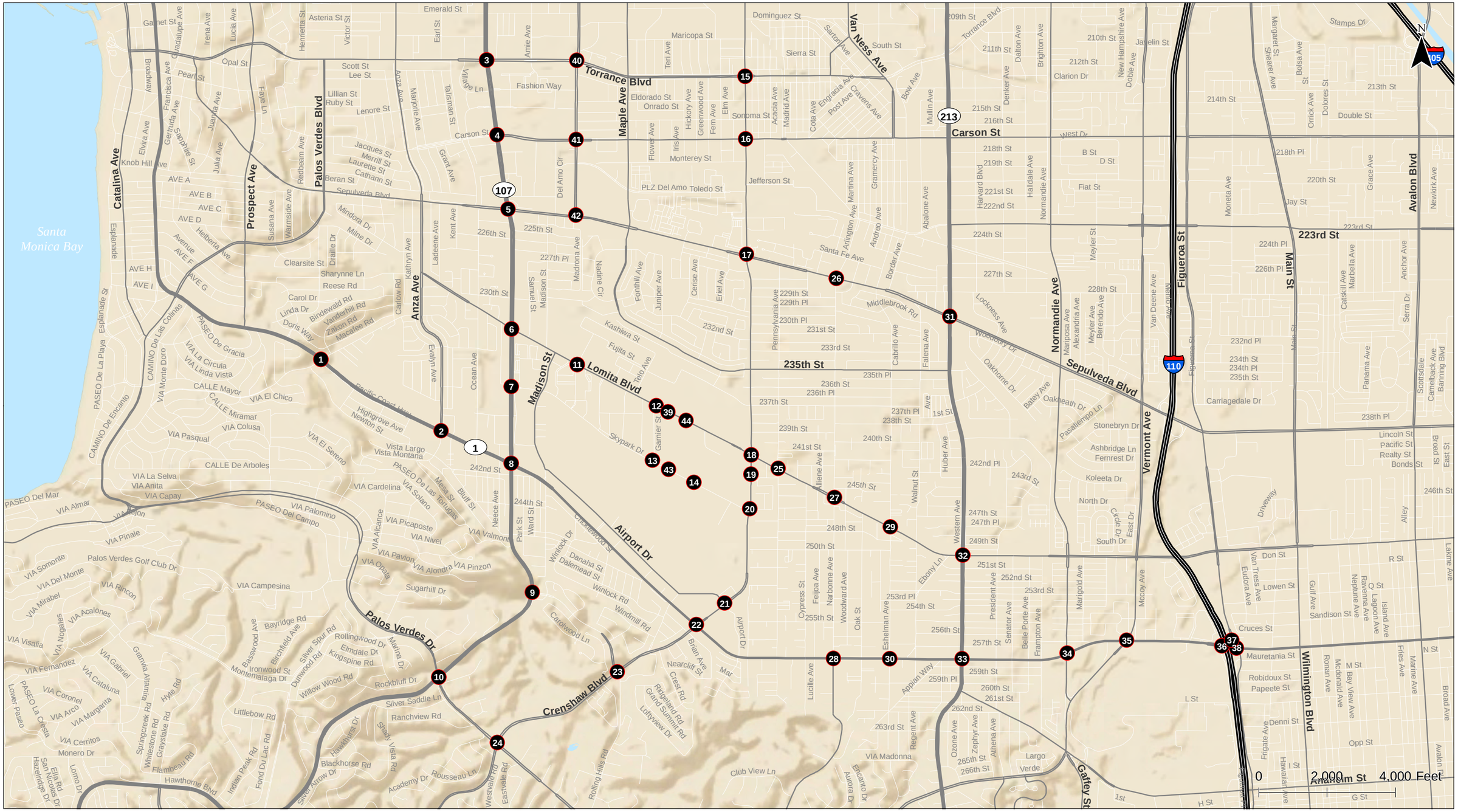
The Approved Project consists of the development of approximately 351,200 square feet of medical office, professional office and light industrial condominium building pads, to be developed in two phases. Phase I of the Approved Project would include three medical office buildings with a floor area of approximately 66,200 square feet, seven professional office buildings with a floor area of approximately 99,790 square feet, and one light industrial building with a floor area of approximately 44,200 square feet. Access ways, parking areas, trash enclosures, bike racks, and outdoor seating areas would also be provided. Phase I was anticipated to be completed in 2010.

Phase II of the Approved Project would include three medical office buildings with a floor area of approximately 62,850 square feet, three professional office buildings with a floor area of approximately 40,150 square feet, and a light industrial building with a floor area of approximately 38,030 square feet (Figure 2.3-3). Phase II was anticipated to be completed in 2012.

Vehicular access to the Project Site would be provided off of Lomita Boulevard at a new signalized entry. Vehicular access to the buildings would be provided from shared driveways.

Modified Project

Rock-Lomita LLC and Costco propose to modify the Approved Project to provide for the development of a 161,500 square-foot Costco warehouse with a 20-position members-only fueling station, a tire center car wash, and 75,000 square feet of medical office on the Project Site. Costco would vacate their 148,000-square-foot existing warehouse adjacent to the Project Site, which would be repurposed for future shopping center use. The Project site plan for the Modified Project is shown in Figure 2. The Costco warehouse and fueling station would employ approximately 200 to 250 people.



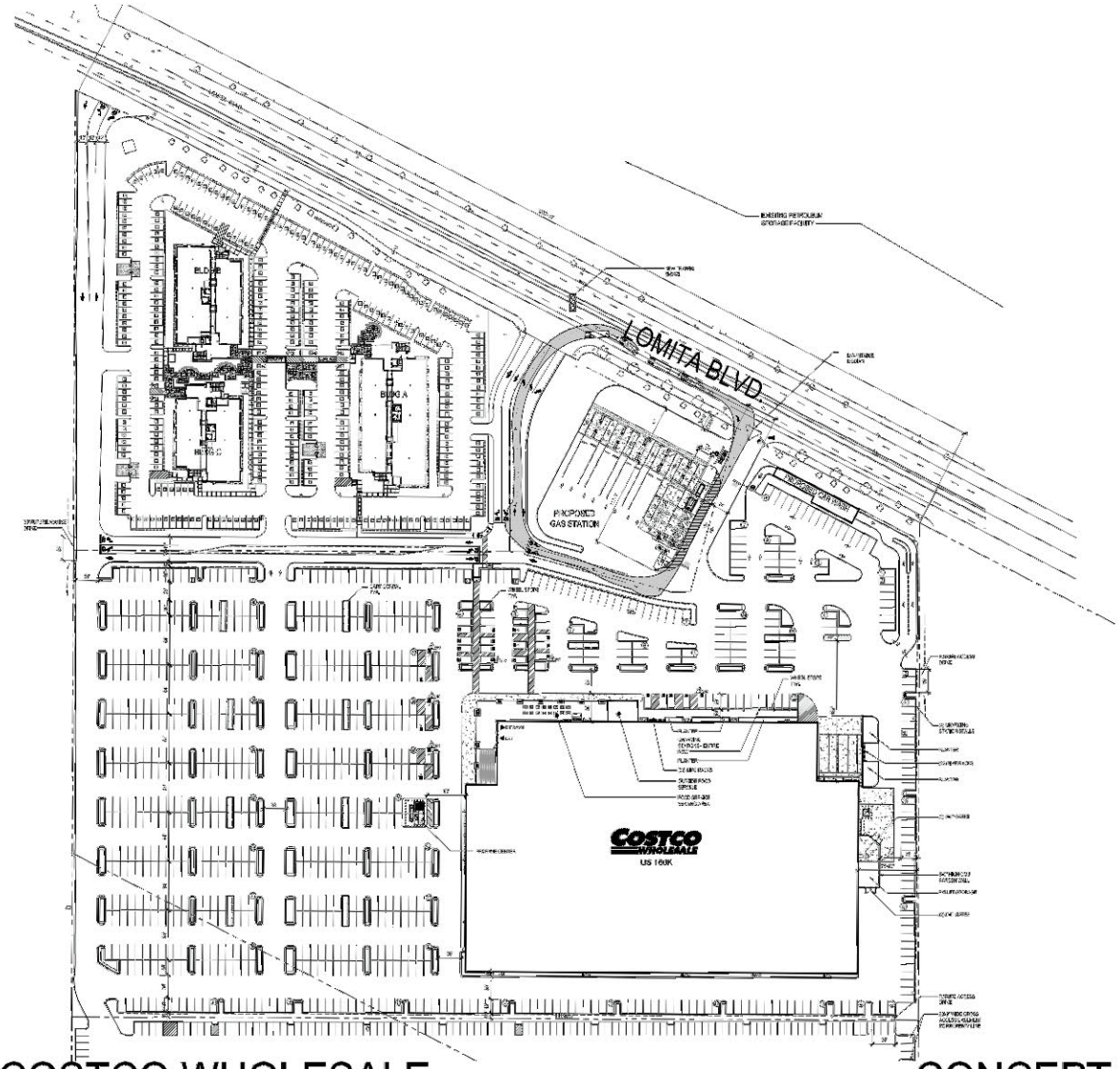
Study Intersections

Site Vicinity
Torrance, California

Figure
1

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Coordinate System: NAD 1983 HARN StatePlane California V FIPS 0405 Feet



PROJECT DATA - COSTCO

CLIENT:	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	2751 SKYPARK DRIVE TORRANCE, CA 90509
ZONING:	M-2
WAREHOUSE SITE AREA:	15.89 ACRES (692,099 S.F.)
GAS SITE AREA:	1.59 ACRES (69,438 S.F.)
TOTAL COSTCO SITE AREA:	17.48 ACRES (761,537 S.F.)
F.A.R.:	171,291 S.F. / 761,537 S.F. = 0.22
SETBACKS:	FRONT: 60' MINIMUM BACK: 60' MINIMUM REAR: 60' MINIMUM
BOUNDARIES INFORMATION:	THIS PLAN HAS BEEN PREPARED BY USING MULVANNY ARCHITECTS SITE PLAN DATED 5/98.

COSTCO BUILDING DATA:

BUILDING AREA	160,054 S.F.
FOOD SERVICE	1,465 S.F.
TOTAL BUILDING	161,519 S.F.

PROPOSED PARKING:

10'X20' LOW EMISSION STALLS	79 STALLS (8%)
10'X20' STALLS	746 STALLS
10'X20' CHARGING STATION STALLS	16 STALLS (2%)
14'X20' HANDICAP STALLS	25 STALLS (3%)
TOTAL PARKING	866 STALLS

NO. OF STALLS PER 1000 S.F. OF BUILDING AREA (163,227 S.F.): 5.37 STALLS

JURISDICTION REQUIREMENT: 5 STALLS PER 1000 SF = 816 STALLS

PROJECT DATA - OUT PARCEL

SITE AREA:	6.68 ACRES (290,522 S.F.)
F.A.R.:	70,988 S.F. / 290,522 S.F. = 0.27

MEDICAL/OFFICE BUILDING DATA:

BUILDING A	
FIRST FLOOR	14,687 S.F.
SECOND FLOOR	14,327 S.F.
TOTAL BUILDING	29,014 S.F.
BUILDING B	
FIRST FLOOR	11,473 S.F.
SECOND FLOOR	11,158 S.F.
TOTAL BUILDING	22,631 S.F.
BUILDING C	
FIRST FLOOR	9,508 S.F.
SECOND FLOOR	9,465 S.F.
TOTAL BUILDING	19,323 S.F.
TOTAL MEDICAL/OFFICE	70,988 S.F.

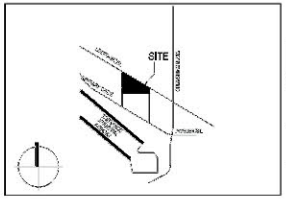
PROPOSED PARKING:

A 9'-6" X 19'-0" STALLS	192 STALLS
M 7'-6" X 15'-0" COMPACT STALLS	13 STALLS
B 9'-6" X 19'-0" STALLS	117 STALLS
C 9'-6" X 19'-0" STALLS	98 STALLS
A B C 9'-6" X19'-0" HANDICAP STALLS	5 STALLS
TOTAL PARKING	355 STALLS

NO. OF STALLS PER 1000 S.F. OF BUILDING AREA (70,988 S.F.): 4.90 STALLS

JURISDICTION REQUIREMENT: 5 STALLS PER 1000 SF = 355 STALLS

VICINITY MAP



COSTCO WHOLESALE
TORRANCE, CA.
2240 LOMITA BLVD.
TORRANCE, CA 90505

MULVANNY G2

13-0008-01
MARCH 04, 2014
CONCEPT SITE PLAN

DD11-06

COSTCO WHOLESALE

TORRANCE, CA

CONCEPT SITE PLAN

MARCH 04, 2014

Proposed Site Plan
Torrance, California

Figure 2

K:\H_Portland\proj\fle\17319 - Torrance CA Costco\dwg\Figs\17319_AllFigs.dwg Jul 23, 2014 - 5:01pm - cbergh Layout Tab: Fig2

Similar to the Approved Project, the Modified Project would be constructed in two phases. Phase I would include construction of the 161,500 square-foot Costco warehouse, together with a tire center, car wash, and fueling station on an approximate 17.48-acre portion of the Project Site. Phase I would commence mid-2015 and require approximately 8 months to complete. Phase II would include development of 75,000 square feet of medical uses on the remaining 6.1 acres. This phase would commence in 2016 and require approximately 12 months to complete. Build out of the Modified Project could be completed in the same year.

Costco Wholesale is a membership-only retail/wholesale business, selling high quality national brands and private label merchandise for commercial and personal use. The warehouse hours are anticipated to be: Monday through Friday from 10:00 a.m. to 8:30 p.m., Saturday from 9:30 a.m. to 6:00 p.m., and Sunday from 10:00 a.m. to 6:00 p.m. Delivery hours will generally occur between 3:00 a.m. and 2:30 p.m.

Primary access to the Project Site will be provided by a new signalized access onto Lomita Boulevard, as envisioned in the Approved Project. Additional access will be provided by an access easement to the adjacent existing Costco parking lot to the south, providing vehicle access to Skypark Drive. In addition, a right-in, right-out access is proposed east of the fueling station. This eastern access will reduce demands on the traffic signal and provide a convenient route for exiting trucks.

Like the Approved Project, the Modified Project includes 75,000 square feet of medical office in the northwest corner of the property. This will be Phase II of the Modified Project. The proposed layout is almost identical to the Approved Project in that it includes three two-story medical office buildings setback approximately 120 feet from Lomita Boulevard. These buildings will be on a separate parcel from the Costco warehouse and fueling station parcels.

Regional access to the site is provided by Pacific Coast Highway (SR 1) approximately three-quarters of a mile south of the project site, Interstate 110 (I-110) approximately three miles east of the Project Site, and Interstate 405 (I-405) approximately four miles north of the project site. Major arterials within the study area include Hawthorne Boulevard (SR 107), Crenshaw Boulevard, Sepulveda Boulevard, Torrance Boulevard, and Lomita Boulevard.

Section 3
Introduction

INTRODUCTION

Costco is planning to relocate the existing Costco warehouse and fueling station operations on Skypark Drive to new facilities on the undeveloped lot located immediately north. The existing building and fueling station will be vacated, and the new site will provide an improved parking layout, slightly larger Costco warehouse, a new car wash, and a new fueling station. The relocation will focus the primary Costco access onto Lomita Boulevard at a new traffic signal.

The transportation impacts associated with relocation of an existing Costco are less than those associated with developing vacant land with a new Costco for several reasons, including:

- The Project Site has been previously approved for development; therefore, this analysis reflects the incremental difference between Approved Project and Modified Project trips.
- Costco has documented that its stores generate more trips than similar discount clubs; therefore, the analysis at the existing warehouse accounts for a net reduction in trips associated with closing the Costco and opening a future discount club.

SCOPE OF THE REPORT

This traffic analysis assesses the incremental difference in trips between the Approved Project and the Modified Project. This analysis accounts for changes in travel patterns associated with redistributing trips from the existing Costco site to the project site, and for impacts of trips that could be generated if another discount club occupies the existing warehouse.

This traffic analysis accounts for traffic volumes and travel patterns that have changed since the Certified EIR was completed. Intersection turning movement counts conducted in 2014 show a general reduction in volumes compared to the 2012 forecast volume scenario documented in the Certified EIR.

The analysis assumes all trips associated with the Approved Project are included in the Modified Project's cumulative volume scenario and that all proportional share contributions will be fulfilled for mitigations identified in the Certified EIR. In accordance with CEQA, the cumulative (without project) scenario operations are compared to cumulative plus project conditions to identify whether the proposed modifications to the development program result in any new significant environmental impacts or a substantial increase in the severity of impacts set forth in the Certified EIR.

KAI performed operational analysis during the weekday a.m. and p.m. peak hours at all intersections studied in the Certified EIR, plus driveways to the existing Costco. The study intersections and existing intersection traffic control are summarized in Table 2.

This report summarizes the analysis in the following order:

- Year 2014 existing land-use and transportation-system conditions within the site vicinity during the weekday a.m. and p.m. peak hours;

- Year 2016 "cumulative" conditions during the weekday a.m. and p.m. peak hours, accounting for the impact of regional growth, related projects (including the Certified EIR), and planned/programmed roadway projects;
- Year 2016 "cumulative plus project" transportation conditions during the weekday a.m. and p.m. peak hours, accounting for the following:
    - Re-purposing of the existing Costco Warehouse and fueling station along Skypark Drive;
    - Trips from the proposed relocated Costco, car wash, and fueling station on Lomita Boulevard; and,
    - Trips from the Phase 2 medical office space within the Project Site.
- Review of the proposed Costco internal circulation and access needs.

Table 2. Study Intersection Summary

Intersection	Traffic Control	Jurisdiction
1. Calle Mayor & Pacific Coast Highway	Signal	City of Torrance/Caltrans
2. Anza/Vista Montana Ave & Pacific Coast Highway	Signal	City of Torrance/Caltrans
3. Hawthorne Blvd & Torrance Blvd	Signal	City of Torrance/Caltrans
4. Hawthorne Blvd & W Carson St	Signal	City of Torrance/Caltrans
5. Hawthorne Blvd & W Sepulveda Blvd	Signal	City of Torrance/Caltrans/CMP
6. Hawthorne Blvd & Lomita Blvd	Signal	City of Torrance/Caltrans
7. Hawthorne Blvd & Skypark Drive	Signal	City of Torrance/Caltrans
8. Hawthorne Blvd & Pacific Coast Highway	Signal	City of Torrance/Caltrans/CMP
9. Hawthorne Blvd & Rolling Hills Rd	Signal	City of Torrance
10. Hawthorne Blvd & Palos Verdes Drive	Signal	City of Rolling Hills Estates
11. Early Ave & Lomita Blvd	Signal	City of Torrance
12. Garnier St & Lomita Blvd	Signal	City of Torrance
13. Garnier St & Skypark Drive	2-Way Stop	City of Torrance
14. Existing Costco Dwy & Skypark Drive	Signal	City of Torrance
15. Crenshaw Blvd & Torrance Blvd	Signal	City of Torrance
16. Crenshaw Blvd & W Carson St	Signal	City of Torrance
17. Crenshaw Blvd & W Sepulveda Blvd	Signal	City of Torrance
18. Crenshaw Blvd & Lomita Blvd	Signal	City of Torrance/City of Lomita
19. Crenshaw Blvd & Torrance Crossroads	Signal	City of Torrance/City of Lomita
20. Crenshaw Blvd & Skypark Drive	Signal	City of Torrance
21. Crenshaw Blvd & Airport Drive	Signal	City of Torrance
22. Crenshaw Blvd & Pacific Coast Highway	Signal	City of Torrance/Caltrans/CMP
23. Crenshaw Blvd & Rolling Hills Drive	Signal	City of Torrance
24. Crenshaw Blvd & Palos Verdes Drive	Signal	City of Rolling Hills Estates
25. Pennsylvania Ave & Lomita Blvd	Signal	City of Lomita
26. Arlington Ave & W Sepulveda Blvd	Signal	City of Torrance
27. Narbonne Ave & Lomita Blvd	Signal	City of Lomita
28. Narbonne Ave & Pacific Coast Highway	Signal	City of Lomita/Caltrans
29. Eshelman Ave & Lomita Blvd	Signal	City of Lomita
30. Eshelman Ave & Pacific Coast Highway	Signal	City of Lomita/Caltrans
31. S Western Ave & W Sepulveda Blvd	Signal	City of Torrance/City of Los Angeles/Caltrans/CMP
32. S Western Ave & Lomita Blvd	Signal	City of Los Angeles/Caltrans/CMP
33. S Western Ave & Pacific Coast Highway	Signal	City of Los Angeles/Caltrans
34. Normandie Ave & Pacific Coast Highway	Signal	City of Los Angeles/Caltrans
35. S Vermont Ave & Pacific Coast Highway	Signal	City of Los Angeles/Caltrans
36. I-110 SB Ramps & Pacific Coast Highway	Signal	City of Los Angeles/Caltrans
37. Figueroa St & I-110 NB Ramps	2-Way Stop	City of Los Angeles/Caltrans
38. Figueroa St & Pacific Coast Highway	Signal	City of Los Angeles/Caltrans/CMP
39. Existing Private Dwy & Lomita Blvd	1-Way Stop	City of Torrance
40. Madrona Ave & Torrance Blvd	Signal	City of Torrance
41. Madrona Ave & W Carson St	Signal	City of Torrance
42. Madrona Ave & W Sepulveda Blvd	Signal	City of Torrance
43. Existing W Costco Dwy & Skypark Drive	1-Way Stop	City of Torrance
44. Project Dwy & Lomita Blvd	Signal[1]	City of Torrance

[1] Signal does not exist in existing year 2014; the intersection will be analyzed as a signalized intersection in the future year 2016 conditions.

LEVEL OF SERVICE CRITERIA AND SIGNIFICANCE THRESHOLDS

The level-of-service (LOS) analyses described in this report were performed in accordance with the Intersection Capacity Utilization (ICU) methodology and in conformance with the procedures contained in the 2000 *Highway Capacity Manual* (HCM). Both methodologies were analyzed using Synchro analysis software. Synchro ICU results were compared to the Table 2 ICU LOS criteria in accordance with agency requirements. Each jurisdiction's intersections were analyzed in accordance to their performance standards identified in the Certified EIR to provide a direct comparison. Table 3 includes the significance criteria for ICU LOS and Table 4 defines the significance criteria for HCM delay methodology.

Table 3. ICU Methodology LOS Criteria

ICU LOS	Significance Criteria
A	If ICU is less than or equal to 60%
B	If ICU is greater than 60%, and less than or equal to 70%
C	If ICU is greater than 70%, and less than or equal to 80%
D	If ICU is greater than 80%, and less than or equal to 90%
E	If ICU is greater than 90%, and less than or equal to 100%
F*	If ICU is greater than 100%

* Intersection is over capacity and likely experiences congestion periods of 15 to 60 consecutive minutes

In general terms, intersection LOS is analogous to the letter grades in a school report card. Motorists using an intersection that operates at LOS "A" experience very little delay, while those using an intersection that operates at LOS "F" will experience congested conditions. The use of the ICU and HCM results provide an understanding of motorist delay and the physical ability of the intersection to accommodate demand volume.

Table 4. HCM Delay Methodology LOS Criteria

Level of Service	Average Delay per Vehicle
A	Very low average control delay, less than 10 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Average control delay is greater than 10 seconds per vehicle and less than or equal to 20 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for a level of service A, causing higher levels of average delay.
C	Average control delay is greater than 20 seconds per vehicle and less than or equal to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Average control delay is greater than 35 seconds per vehicle and less than or equal to 55 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle length, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Average control delay is greater than 55 seconds per vehicle and less than or equal to 80 seconds per vehicle. This is usually considered to be the limit of acceptable delay. These high delay values generally (but not always) indicate poor progression, long cycle lengths, and high volume/capacity ratios. Individual cycle failures are frequent occurrences.
F	Average control delay is in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation. It may also occur at high volume/capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such high delay values, even when the volume/capacity ratio is significantly below 1.0.

Notes: Most of the material in this table is adapted from the Transportation Research Board, Highway Capacity Manual, 2010.

Table 5 summarizes the traffic impact analyses methodology and LOS significance thresholds for each jurisdiction in the study area. Each City within the study area utilizes the ICU methodology for identifying whether a project creates a significant effect on the transportation system. The City of Torrance, within which the proposed project will reside, also uses the HCM delay methodology. Caltrans uses the HCM delay methodology for analyzing project impacts on state facilities.

Six intersections identified within the study area are classified as arterial monitoring intersections in the Los Angeles Congestion Management Program (CMP). In accordance with the CMP, intersections that meet the following criteria must be evaluated:

1) All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the weekday a.m. or p.m. peak hours (of adjacent street traffic).
2) Mainline freeway monitoring locations, where the project will add 150 or more trips in either direction during the weekday a.m. or p.m. peak hours.

Each of the six CMP intersections within the study area met the requirements for a CMP analysis within the Certified EIR; to provide a consistent assessment of the incremental Costco impacts, a CMP analysis

has been prepared regardless of whether these thresholds were triggered with the Modified Project trips. The Modified Project adds less than 150 trips to any freeway mainline segment; therefore, an analysis of project impacts to CMP mainline freeway locations was not required as part of the Certified EIR and is not required with the lesser impacts from the Modified Project.

This study collected manual turning movement counts in January 2014 at each of the study intersections to examine the weekday a.m. and p.m. peak hour service levels. This information is also used as a basis for future volume projections. The method used for analyzing existing conditions is to apply the LOS calculation procedures using the observed peak hour intersection counts and summarize the resulting existing operations for each study intersection. Cumulative and cumulative plus project 2016 traffic forecasts and LOS are then calculated without and with the proposed project, and intersection locations impacted by the project are identified.

Table 5. Study Area Analysis Methodologies and Significance Level Definitions by Jurisdiction

Jurisdiction	# of Study Intersections	Analysis Method	Significant Impact Definition
City of Torrance	30	HCM Delay[1]	Project causes change from LOS "D" to LOS "E" or "F", or Project causes increase in delay at LOS "E" or "F".
		ICU[2]	Project causes increase ≥ 0.02 at LOS "E" or "F".
City of Lomita	7	ICU	Project causes increase ≥ 0.04 at LOS "C", or Project causes increase ≥ 0.02 at LOS "D", or Project causes increase ≥ 0.01 at LOS "E" or "F".
City of Los Angeles	8	ICU	Project causes increase ≥ 0.04 at LOS "C", or Project causes increase ≥ 0.02 at LOS "D", or Project causes increase ≥ 0.01 at LOS "E" or "F".
City of Rolling Hills Estates	2	ICU	Project causes increase from LOS "C", to LOS "D", or Project causes increase from LOS "D" to LOS "E", or Project causes increase ≥ 0.02 at LOS "C", or "D", or Project causes increase ≥ 0.01 at LOS "E" or "F".
CMP	6	ICU	Project causes increase ≥ 0.02 at LOS "F".
Caltrans	19	HCM Delay	Project causes change from LOS "A", "B", or "C" to LOS "D", or from LOS "D" to LOS "E", or from LOS "E" to LOS "F".

[1] Highway Capacity Manual delay methodology calculates delay at the intersection in seconds per vehicle.
[2] Intersection Capacity Utilization methodology measures the sum of the ratios of approach volume divided by approach capacity for each leg of intersection.

Section 4
Existing Conditions

EXISTING CONDITIONS

The existing conditions analysis identifies the site conditions and current operational and geometric characteristics of the roadways within the study area. These conditions will be compared with future conditions later in this report.

Kittelson & Associates, Inc. (KAI) staff visited and inventoried the Project Site and surrounding study intersections in February 2014. At that time, KAI collected information regarding site conditions, adjacent land uses, existing traffic operations, and transportation facilities in the study area.

SITE CONDITIONS AND ADJACENT LAND USES

The Project Site is within the City of Torrance, is currently undeveloped and zoned for mixed-commercial use. The site is approved for medical and general office uses. Surrounding uses include bulk fuel storage to the north, Sam's Club and other retail uses to the east, and a church to the west. Other major land uses located nearby include the Torrance Memorial Medical Center farther west, and the Torrance Airport to the south of Skypark Drive. Land surrounding the Project Site is largely built out, with residential beyond the industrial, retail, and office uses.

TRANSPORTATION FACILITIES

Characteristics of major roadways within the study area are summarized in Table 6.

Table 6. Transportation Facilities and Roadways

Roadway	Number of Lanes	Posted Speed (mph)	Sidewalks	Bicycle Lanes	Transit Accessibility	On-Street Parking
Carson Street	4 Lanes	35[1]	Yes	No	Yes	Yes
Crenshaw Blvd	4-6 Lanes	45	Yes	No	Yes	No
Hawthorne Blvd	8 Lanes	40	Yes	No	Yes	No
Lomita Boulevard	4 Lanes	45	Yes	Yes	Yes	No
Madrona Avenue	2 Lanes	35	Yes	No	Yes	Yes
Pacific Coast Hwy	6 Lanes	45	Yes	No[2]	Yes	No
Sepulveda Blvd	6 Lanes	45	Yes	No[3]	Yes	No
Skypark Drive	4 Lanes	45	Yes	No	No	No
Torrance Blvd	4-6 Lanes	35	Yes	Yes	Yes	No
Western Avenue	4 Lanes	35	Yes	No	Yes	Yes

1 Posted speed is 35 mph; however, during school hours the speed limit reduces to 20 mph.
2 Designated bike-route along Pacific Coast Highway.
3 Designated bike-route W Sepulveda Boulevard.

Roadway Facilities

As shown in Figure **1**, Lomita Boulevard is the only public roadway bordering the project site. The City of Torrance classifies Lomita Boulevard as a *Major Arterial* adjacent to the project site, where it contains a four-lane roadway trending in the east-west direction with sidewalks and bicycle lanes on both sides of the street.

The characteristics of the study roadway system within the City of Torrance are described below:

Crenshaw Boulevard is a north-south six-lane divided roadway with a continuous two-way left-turn lane within the project's vicinity. However, beyond the project's vicinity, Crenshaw Boulevard varies from a four- to six-lane roadway with a raised median running in a north-south direction. On-street parking is prohibited along Crenshaw Boulevard. Crenshaw Boulevard provides access to and from Interstate 405 to the north and Pacific Coast highway to the south.

Skypark Drive is directly south of the project site, trending in the east-west direction. The project site plan includes access from Lomita Boulevard to Skypark Drive. Skypark Drive is a four-lane divided roadway with a continuous two-way left-turn lane. Skypark Drive currently provides access to the existing Costco. On-street parking is prohibited along Skypark Drive.

Torrance Boulevard is a four-lane divided roadway with a continuous two-way left-turn lane running in the east-west direction approximately two miles north of the project site. Torrance Boulevard provides access from Interstate 110 to the east and from the coastal communities to the west. There is no parking on Torrance Boulevard within the site vicinity.

Pedestrian and Bicycle Facilities

Field observations taken in the site vicinity revealed low levels of pedestrian and bicycle activity along the study area roadways. However, Lomita Boulevard is one of the few study roadways that provides sidewalks on both sides of the street and bike lanes in both directions. The proposed Torrance Costco relocation will continue to provide both pedestrian and bicycle access to the site.

Transit Facilities

Local transit service is provided throughout the project vicinity by Torrance Transit. In addition to fixed-route service which is provided seven days a week, Torrance Transit provides dial-a-ride services as well. Monthly transit passes are available for $35 or a base fare of $1.00 for each ride. Reduced rates are available for the disabled, seniors, and students. The project site will be accessible via Torrance Transit Route 9. Route 9 travels along Lomita Boulevard from Avalon Boulevard in the east to Anza Avenue in the west, before heading up Anza Avenue to Del Amo Fashion Center.

Nearby transit stops are located to the west at the signalized Lomita Boulevard/Garnier intersection, and to the east near the signalized intersection with Crenshaw Boulevard. Pedestrian pushbuttons and crossings are provided at the traffic signals.

TRAFFIC VOLUMES AND PEAK HOUR OPERATIONS

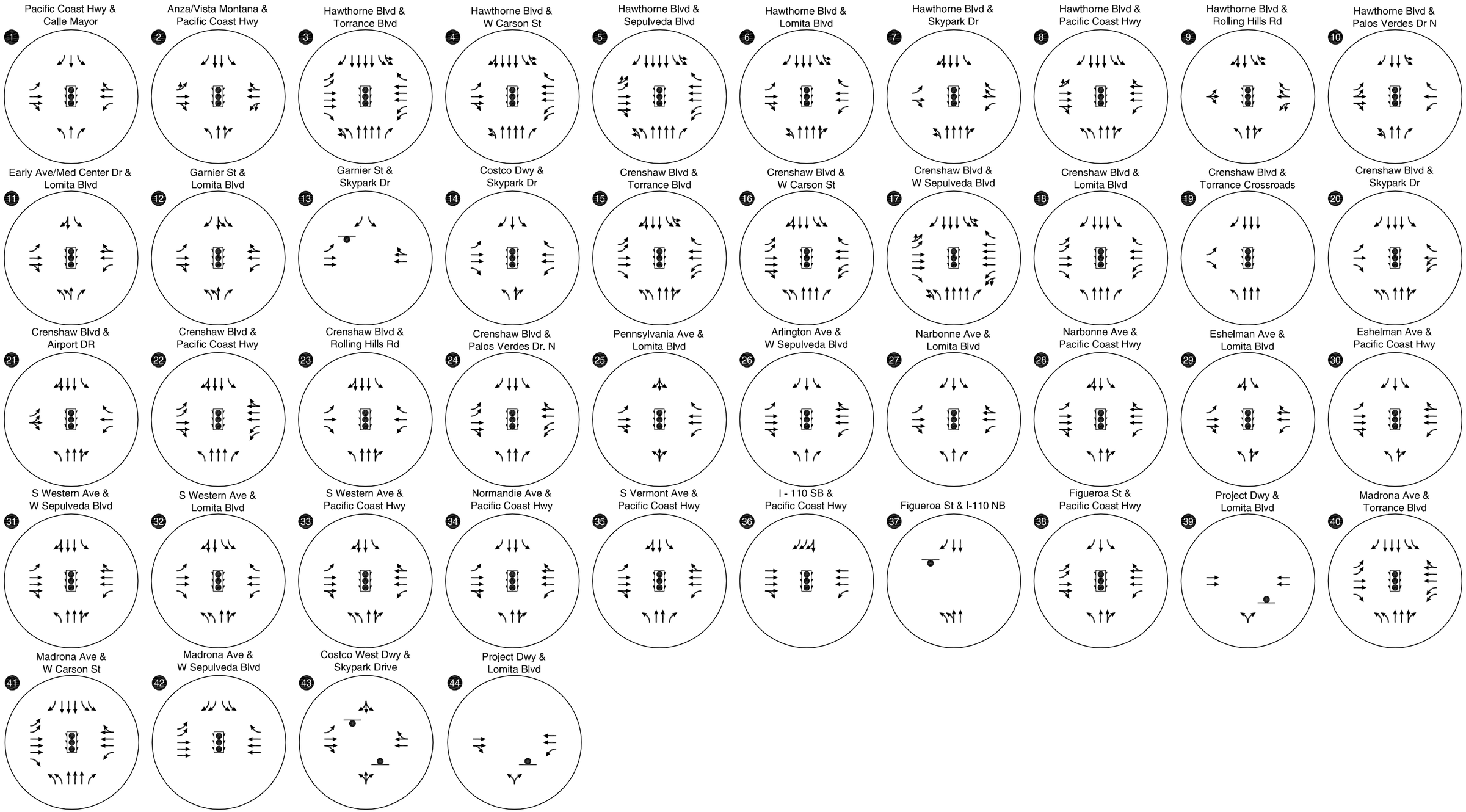
Manual turning-movement counts were obtained for the all the existing study intersections on Thursday, January 9, 2014. All the counts used in this analysis were conducted on a typical mid-week day during the morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak time periods. The individual intersection peak hours were assessed in all analysis scenarios. Figure 3 provides an illustration of each intersection existing configuration and identifies the existing traffic control devices. *Appendix "A" contains the traffic count worksheets at all intersections used in this study.*

Existing Levels of Service

There were a total of 44 intersections analyzed in the study area. Operational analysis of the 40 signalized intersections was based on HCM and ICU methodologies, consistent with jurisdictional requirements. For the remaining four stop-controlled locations studied, the average delay experienced by the stop-controlled leg was assessed only with the HCM delay methodology. A summary of the year 2014 turning-movement counts for the weekday a.m. and p.m. peak hours are illustrated in Figures 4 and 5.

The existing conditions ICU values and LOS for the signalized and unsignalized intersections are summarized in Table 7. As Table 7 indicates, 6 signalized intersections are currently operating at LOS "E" or LOS "F" during the weekday a.m. peak hour and 12 signalized intersections are operating LOS "E" or LOS "F" in the p.m. peak hour.

In addition to using the ICU methodology for determining intersection level of service at signalized intersections, the City of Torrance also utilizes the HCM delay methodology, which calculates the average delay in seconds per vehicle at each intersection. Caltrans relies solely on HCM delay analysis to determine project impacts. Table 7 also summarizes the existing intersection levels of service for intersections controlled by the City of Torrance or Caltrans based on HCM delay methodology. *Appendix "B" includes the level-of-service worksheets under year 2014 existing traffic conditions.*



- STOP SIGN
- TRAFFIC SIGNAL

Existing Lane Configuration and Traffic Control Devices
Weekday AM Peak Hour
Torrance, California

Figure 3

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Table 7. 2014 Existing Traffic Conditions Summary

Intersection	ICU Methodology				HCM Methodology				Jurisdiction
	AM ICU	AM LOS	PM ICU	PM LOS	AM Delay	AM LOS	PM Delay	PM LOS	
1. Calle Mayor & Pacific Coast Highway	83.7%	D	77.0%	C	37.6	D	35.4	D	City of Torrance/Caltrans
2. Anza/Vista Montana Ave & Pacific Coast Hwy	81.5%	D	85.6%	D	39.8	D	37.4	D	City of Torrance/Caltrans
3. Hawthorne Blvd & Torrance Blvd	**95.2%**	**E**	**97.5%**	**E**	38.0	D	42.9	D	City of Torrance/Caltrans
4. Hawthorne Blvd & W Carson Street	75.4%	C	83.6%	D	23.3	C	26.7	C	City of Torrance/Caltrans
5. Hawthorne Blvd & W Sepulveda Blvd	85.7%	D	88.2%	D	30.5	C	33.8	C	City of Torrance/Caltrans/CMP
6. Hawthorne Blvd & Lomita Blvd	**90.6%**	**E**	**100.1%**	**F**	34.7	C	36.5	D	City of Torrance/Caltrans
7. Hawthorne Blvd & Skypark Drive	67.2%	B	82.0%	D	22.5	C	29.5	C	City of Torrance/Caltrans
8. Hawthorne Blvd & Pacific Coast Highway	**90.6%**	**E**	**90.1%**	**E**	45.4	D	54.4	D	City of Torrance/Caltrans/CMP
9. Hawthorne Blvd & Rolling Hills Rd	69.0%	B	80.8%	D	14.1	B	17.6	B	City of Torrance
10. Hawthorne Blvd & Palos Verdes Drive	**92.6%**	**E**	80.3%	D					City of Rolling Hills Estates
11. Early Ave & Lomita Blvd	75.7%	C	78.7%	C	36.2	D	29.0	C	City of Torrance
12. Garnier St & Lomita Blvd	64.1%	B	60.7%	B	8.1	A	11.5	B	City of Torrance
13. Garnier St & Skypark Drive[1]	n/a	n/a	n/a	n/a	12.3	B	16.0	B	City of Torrance
14. Existing Costco Dwy & Skypark Drive	47.3%	A	63.0%	B	0.1	A	25.9	C	City of Torrance
15. Crenshaw Blvd & Torrance Blvd	84.7%	D	86.4%	D	35.6	D	39.0	D	City of Torrance
16. Crenshaw Blvd & W Carson St	81.1%	D	86.0%	D	38.4	D	41.6	D	City of Torrance
17. Crenshaw Blvd & W Sepulveda Blvd	87.3%	D	**103.9%**	**F**	45.6	D	51.7	D	City of Torrance
18. Crenshaw Blvd & Lomita Blvd	80.6%	D	**95.0%**	**E**	38.3	D	46.3	D	City of Torrance/City of Lomita
19. Crenshaw Blvd & Torrance Crossroads	38.9%	A	64.0%	B	8.2	A	19.8	B	City of Torrance/City of Lomita
20. Crenshaw Blvd & Skypark Drive	56.3%	A	83.6%	D	17.9	B	30.7	C	City of Torrance
21. Crenshaw Blvd & Airport Drive	55.5%	B	73.0%	C	15.9	B	29.9	C	City of Torrance
22. Crenshaw Blvd & Pacific Coast Highway	89.4%	D	**99.3%**	**E**	41.6	D	48.5	D	City of Torrance/Caltrans/CMP
23. Crenshaw Blvd & Rolling Hills Drive	69.5%	B	68.0%	B	20.7	C	21.6	C	City of Torrance
24. Crenshaw Blvd & Palos Verdes Drive	73.5%	C	73.8%	C					City of Rolling Hills Estates
25. Pennsylvania Ave & Lomita Blvd	**90.1%**	**E**	88.0%	D					City of Lomita
26. Arlington Ave & W Sepulveda Blvd	**93.4%**	**E**	**93.5%**	**E**	43.6	D	**55.1**	**E**	City of Torrance
27. Narbonne Ave & Lomita Blvd	77.6%	C	**95.6%**	**E**					City of Lomita
28. Narbonne Ave & Pacific Coast Highway	88.5%	D	**92.1%**	**E**	29.4	C	30.0	C	City of Lomita/Caltrans
29. Eshelman Ave & Lomita Blvd	66.4%	B	83.0%	D					City of Lomita
30. Eshelman Ave & Pacific Coast Highway	69.4%	B	71.9%	C	15.6	B	16.4	B	City of Lomita/Caltrans
31. S Western Ave & W Sepulveda Blvd	79.0%	C	**95.5%**	**E**	38.0	D	50.9	D	Torrance/ Los Angeles/Caltrans/CMP
32. S Western Ave & Lomita Blvd	78.5%	C	86.3%	D	33.0	C	35.4	D	City of Los Angeles/Caltrans/CMP
33. S Western Ave & Pacific Coast Highway	82.6%	D	**95.4%**	**E**	44.9	D	**55.4**	**E**	City of Los Angeles/Caltrans
34. Normandie Ave & Pacific Coast Highway	84.5%	D	84.0%	D	22.4	C	20.8	C	City of Los Angeles/Caltrans
35. S Vermont Ave & Pacific Coast Highway	85.1%	D	84.4%	D	34.7	C	34.5	C	City of Los Angeles/Caltrans
36. I-110 Ramps & Pacific Coast Highway	71.2%	C	81.4%	D	28.9	C	30.0	C	City of Los Angeles/Caltrans
37. Figueroa St & I-110 NB Ramps[1]	n/a	n/a	n/a	n/a	**>50**	**F**	**>50**	**F**	City of Los Angeles/Caltrans
38. Figueroa St & Pacific Coast Highway	84.0%	D	91.7%	**E**	30.0	C	28.0	C	City of Los Angeles/Caltrans/CMP
39. Existing Private Dwy & Lomita Blvd[1]	n/a	n/a	n/a	n/a	12.9	B	14.0	B	City of Torrance
40. Madrona Ave & Torrance Blvd	77.7%	C	81.0%	D	34.7	C	39.3	D	City of Torrance
41. Madrona Ave & W Carson St	70.7%	C	87.5%	D	29.5	C	40.8	D	City of Torrance
42. Madrona Ave & W Sepulveda Blvd	59.2%	A	66.5%	B	15.4	B	18.5	B	City of Torrance
43. Existing W Costco Dwy & Skypark Drive[1]	n/a	n/a	n/a	n/a	11.7	B	12.8	B	City of Torrance

[1] For unsignalized intersections, LOS is based on the critical (highest delay) stop-controlled approach

DRAFT

Existing Traffic Volumes
Weekday AM Peak Hour
Torrance, California

Figure
4

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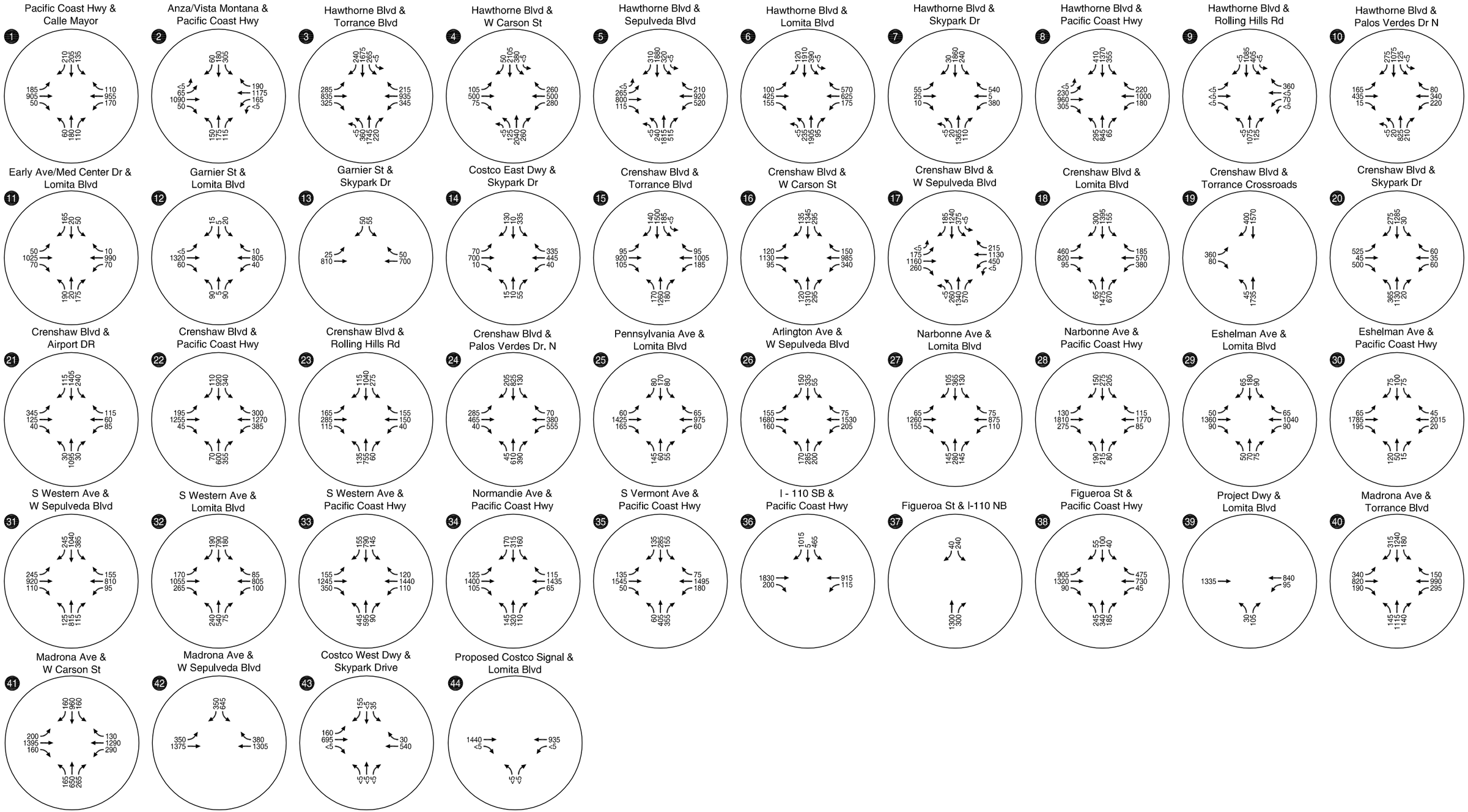


Existing Traffic Volumes
Weekday PM Peak Hour
Torrance, California

Figure
5

Section 5
Transportation Impact Analysis

PROJECT IMPACT ANALYSIS

The transportation impact analysis identifies how the study area's transportation system will operate in the year the proposed development is expected to be fully built, year 2016. The impact of traffic generated by the Modified Project during the typical weekday a.m. and p.m. peak hours was examined as follows:

2016 Cumulative Traffic Conditions

- Developments and transportation improvements planned in the study area were identified.
- Cumulative traffic volume scenario was developed based on:
  - Applying 1.0-percent annual growth to the existing traffic volumes to account for regional growth in the site vicinity between years 2014 and 2016 based on regional plans, and
  - Site-generated trips associated with the Approved Project and other related projects in the study vicinity.
- Cumulative weekday a.m. and p.m. peak hour traffic conditions for 2016 (build-out year of the Modified Project) were analyzed at the study intersections during the weekday a.m. and p.m. peak hours.

Cumulative Plus Project Conditions:

- Subtracted trips from the existing Costco and fuel center on Skypark Drive from the study intersection turning movement volumes
- Added trips generated with the repurposing of the existing Costco site to a generic *Discount Warehouse* use.
- Subtracted site-generated trips associated with the Approved Project.
- Added site-generated trips estimated for build-out of the Modified Project.

Based on this methodology, year 2016 cumulative plus project traffic conditions were analyzed at each of the study intersections and site-access points during the weekday a.m. and p.m. peak hours. In addition, the findings and recommendations of the transportation analysis was coordinated within the project team to ensure safe and efficient access and circulation would be supported within the site layout.

YEAR 2016 CUMULATIVE (NO-BUILD) TRAFFIC CONDITIONS

The purpose of the year 2016 cumulative traffic analysis is 1) to provide the City of Torrance with a planning-level analysis of the study area, and 2) to form a basis for comparison to "plus project" conditions. This analysis does not include the Modified Project, but does include the existing Costco Warehouse and Fuel center on Skypark Drive and the Approved Project. It is assumed that Costco will

contribute the Approved Project's fair share toward the costs of all mitigation measures identified as conditions of approval.

Planned Developments and Transportation Improvements

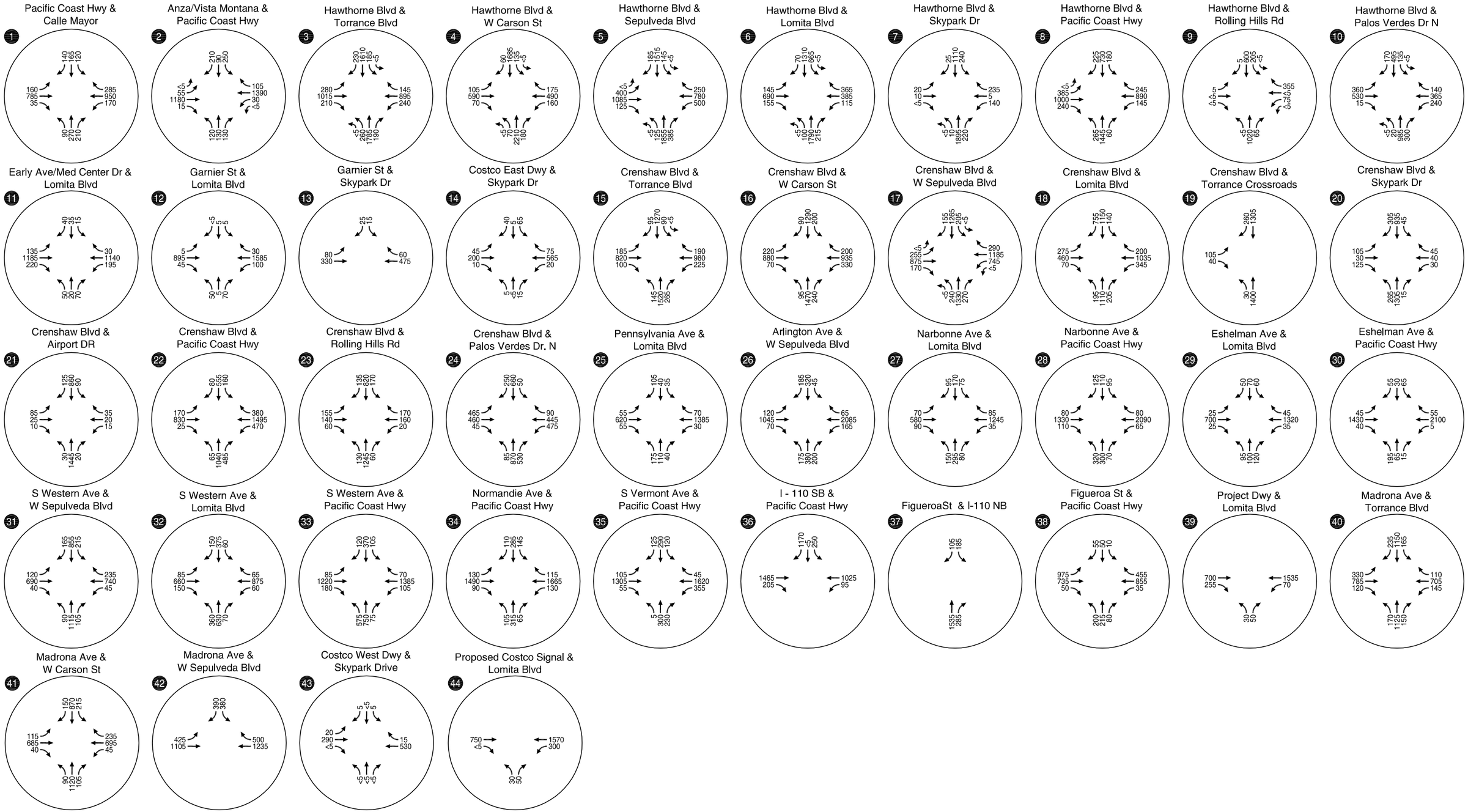
Information on the planned developments affecting the study area intersections were provided by City of Torrance staff and are summarized in Table 8. Trips were assigned to the study intersections based on the available information contained within the respective Transportation Impact Analyses, as available. There were no programmed transportation improvements identified within the project vicinity. *Appendix "C" includes supporting information describing the traffic volumes associated with the developments in Table 8*.

Table 8. Planned Developments

Project Location	Land Use	Size
Approved		
Del Amo Fashion Center Renovation	Shopping Center	250,000 SF
25535 Hawthorne Blvd	Assisted Living	67,000 SF (120 beds)
5215-5315 Torrance Blvd	Medical Office	175,000 SF
3250/3330 Lomita Blvd	Hospital	389,000 SF
Rockefeller Group Professional Center	Medical/General Office	351,209 SF
In Application Process		
S/W Corner of Crenshaw Blvd and 208th St	Transit Center	16,620 SF
2900 Pacific Coast Hwy	Auto Dealer Expansion / Parking Deck	2,750 SF/ 141 cars

Year 2016 Cumulative Operations

The existing year 2014 weekday a.m. and p.m. peak-hour turning-movement volumes, as shown in Figures 4 and 5, were increased with the application of 1 percent annual growth (based on City of Torrance long range plans and staff direction) to reflect anticipated regional growth in the area, and the inclusion of the previously approved and pending projects shown in Table 8. These resulting traffic volumes, as illustrated in Figures 6 and 7, were used to conduct an operational analysis at each study intersection to determine the year 2016 cumulative traffic operations. None of the improvements identified within the Certified EIR were assumed to be in place as part of this analysis. *Appendix "D" contains the year 2016 cumulative traffic level-of-service worksheets.*



Year 2016 Cumulative Traffic Volumes
Weekday AM Peak Hour
Torrance, California

Figure
6

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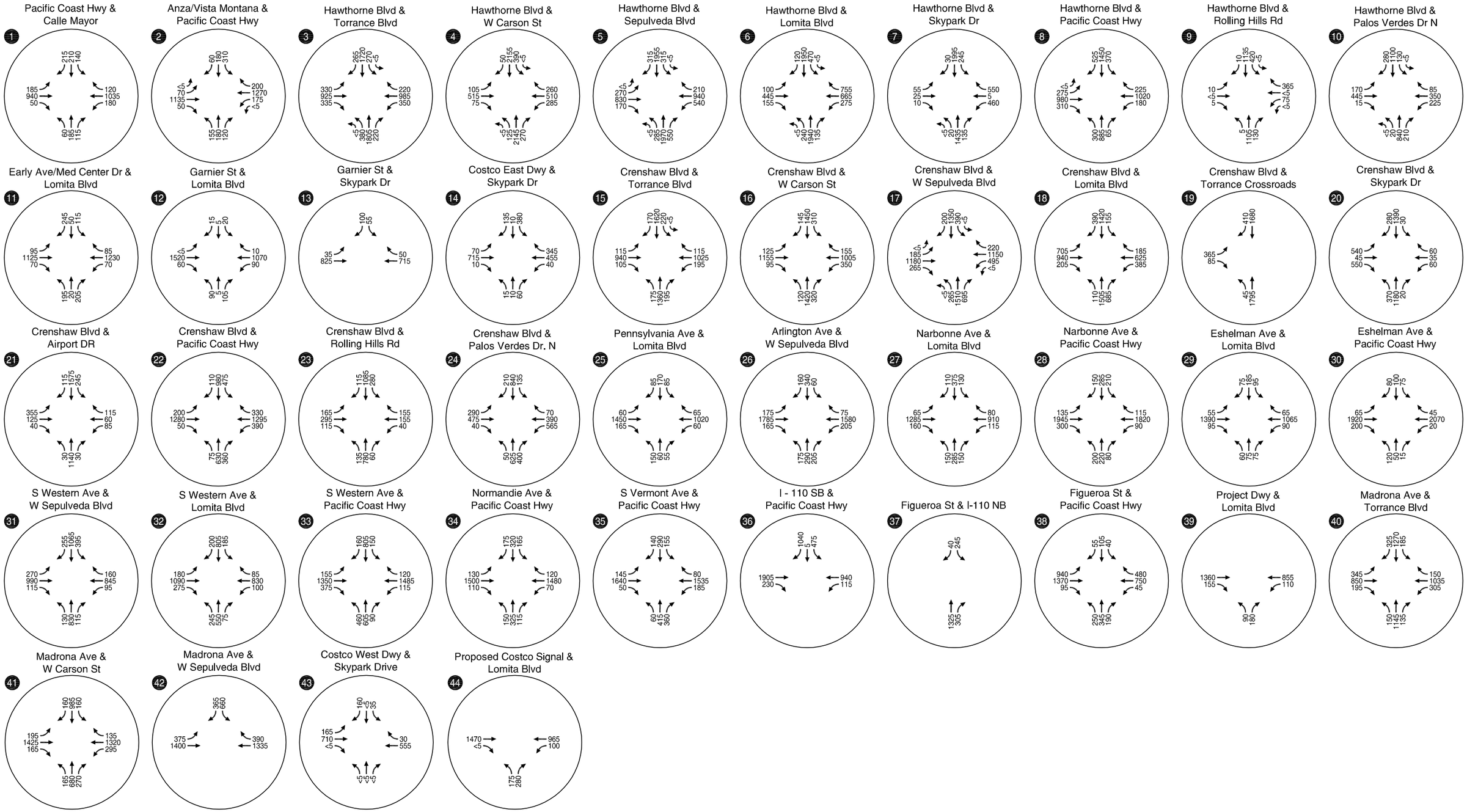

Year 2016 Cumulative Traffic Volumes
Weekday PM Peak Hour
Torrance, California

Figure
7

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MODIFIED PROJECT DEVELOPMENT PLAN

The Applicant proposes to modify the Approved Project to provide for the development of a 161,500 square-foot Costco warehouse with a car wash, 20-position fueling station, tire center and 75,000 square feet of medical office on the Project Site. Costco would vacate their 148,000-square-foot existing warehouse adjacent to the Project Site; this existing warehouse would be repurposed for future retail use. The site plan for the Modified Project is shown in Figure 2. The Costco warehouse, tire center, car wash, and fueling station would employ approximately 200 to 250 people.

Similar to the Approved Project, the Modified Project would be constructed in two phases. Phase I would include construction of the 161,500 square-foot Costco warehouse, together with a tire center and fueling station on an approximate 17.48-acre portion of the Project Site. The entire Project Site would be graded as part of Phase I and would require approximately 60,000 cubic yards of soil import and include over excavation and re-compaction of building pad areas.

Trip Generation

Trip generation at the existing Costco and the project site was calculated to account for changes associated with the relocation. As shown in Exhibit 1, analysis of the changes at the Project Site reflect the addition of the proposed Costco and fueling center, credit for the previously approved office uses (included within the cumulative analysis), and addition of retained Medical Office. As shown in Exhibit 2, analysis of changes on the existing Costco site accounts for the closure of the Costco and future repurposing of the vacated building shell. The combined number of new trips on the network is calculated as shown in Exhibit 3.

As this proposal affects two separate parcels, all trips for the elements identified in Exhibits 1 and 2 were individually assigned to the transportation network to accurately reflect the difference in access locations between the existing and project site and the separate trip distribution patterns of the office and Costco uses.

Exhibit 1: Project Site Trip Calculation

Exhibit 2: Existing Site Trip Calculation

Exhibit 3: Total Net New Trip Calculation

Based on this methodology, the proposed trip generation estimates are summarized in Table 9. As shown, the regional impacts include an increase in daily trips, a decrease in morning commute period trips, and a small increase in trips during the evening commute period reflecting the shift from the approved office uses to the Costco. The reduction in morning commute period trips reflect the limited amount of trips to and from the warehouse associated only with the fuel center and employee/delivery trips.

Table 9. Trip Generation Summary

	Land Use	Size (SF)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Exhibit 1	*Proposed Costco, Car Wash, and Fueling Station*								
	US Costco Warehouse w/ Fuel	161,500	11,690	385	212	173	1,155	559	596
	Pass-by Trips (34% AM, 35% PM)		(4,092)	(130)	(65)	(65)	(404)	(202)	(202)
	Costco Car Wash		1,050	-	-	-	110	55	55
	Internal Trips (80%)		(840)	-	-	-	(88)	(44)	(44)
	Net New Trips		7,808	255	147	108	773	368	405
	Approved Office Trip Generation (Certified EIR)								
	Office/Medical Office Net New Trips	351,209	(7,107)	(664)	(555)	(109)	(812)	(185)	(627)
	Retained Medical Office								
	Retained Medical Office Buildings (ITE 720)[1]	75,000	2,852 (fitted eqn)	179 (avg rate)	142	37	225 (fitted eqn)	63	162
Exhibit 2	*Vacated Existing Costco Warehouse (Skypark Drive)*								
	Existing Costco Warehouse w/ Fuel	148,000	(10,714)	(353)	(195)	(158)	(1,058)	(512)	(546)
	Pass-by Trips (34% AM, 35% PM)		3,750	120	60	60	346	173	173
	Net New Trips		(6,964)	(233)	(135)	(98)	(712)	(339)	(373)
	Repurposed Existing Warehouse								
	Discount Club (ITE 857)	148,000	6,186	73	51	22	618	309	309
Exhibit 3	*Net Site-Generated Trips*								
	Project Site Trips		3,553	(230)	(266)	36	186	246	(60)
	Existing Site Trips		(778)	(160)	(84)	(76)	(94)	(30)	(64)
	Total Net New Trips		**2,775**	**(390)**	**(350)**	**(40)**	**92**	**216**	**(124)**

[1]ITE's fitted equation was applied to daily and weekday p.m. peak hour trip rates for the medical office space based on the R^2 value, data surrounding the proposed building size, and guidance within the ITE *Trip Generation Handbook*.
[2]Proposed and Existing site trips were calculated as shown in Exhibits 1 and 2, respectively.
[3]Total net new trips were calculated as the sum of proposed and existing site trips.

As summarized in Table 9, the existing Costco site will see a decrease in trips onto Skypark Drive, whereas the Project Site will see an increase in trips accessing onto Lomita Boulevard. The impact of the changes are somewhat lessened by the connectivity that exists between Skypark Drive and Lomita Boulevard along the western property boundary. The following sections provide additional information on each of the components of the trip generation estimate.

Proposed Costco

While ITE data is available for a Discount Club land use, this data does not accurately reflect the specific characteristics of the proposed Costco and fueling center. KAI has maintained records of Costco trip generation studies conducted nationally and in compliance with the ITE Trip Generation methodology that better describes Costco trips and trip characteristics. This database generally shows the ITE methodology underestimates Costco trips, but many of the Costco trips are not new trips onto the system. Application of this use-specific data to the existing warehouse and the project site ensures an accurate assessment of trip generation from the Costco sites.

The applied trip generation rates include the fuel station and tire center as part of the calculated trip rate. In addition to the driveway trip rates, a pass-by trip reduction of 34-percent and 35-percent is applied during the a.m. and p.m. peak hours, respectively. These percentages are based on customer survey information.

Like the Costco Gasoline fuel stations, the Costco car wash is for members only and requires a Costco membership card for use. The car wash is typically staffed by two attendants who are trained to manage the circulation of cars both entering and exiting the car wash facility.

Trip generation data for Costco car washes was obtained from two locations (Seattle, Washington and Poway, California) where Costco has a car wash facility adjacent to a warehouse operating for a base period of time. At both sites, a month of transaction data was obtained that indicates the percentage of car wash trips that frequent the fuel station and/or the warehouse during their visit (i.e., the percentage of car wash trips internal to the site). The data indicates that an average of 55 vehicles were served at the car wash during the average weekday p.m. peak hour, but 80 percent (over 40 trips) were trips whose primary purpose was to visit the Costco warehouse. *Additional details on Costco trip generation characteristics are provided in Appendix "E."*

Proposed Medical Office

Development of the proposed Costco warehouse, fuel center, and associated parking will comprise approximately 17.4 acres of the 23.6 acre property, preserving 6.19 acres for office or medical office uses in the northwest corner of the site, as shown in Exhibit 2. Plans for this area show these buildings could accommodate up to 75,000 square-feet of office or medical office space in two-story buildings. This reflects a significant reduction in office space from the Certified EIR for the site, which assumed over 350,000 square-feet of office space within the overall site. The analysis presented herein assumes all of this office space is developed as the more trip-intensive medical office use.

Repurposing of Existing Costco

Relocation of Costco's operations from its existing location to new facilities on the Project Site will change traffic volumes that are currently on the transportation system. Prior to the opening of the new Costco, the existing Costco will be closed. The existing building will not be demolished and may be leased to other warehouse or retail tenants. Based on direction from City of Torrance staff, it was

assumed that a *Discount Club* would occupy the existing building. Trip generation estimates for the Discount Club are based on ITE Trip Generation estimates, and distribution patterns for this use were assumed to reflect the Costco distribution information and would be equally applicable for a more generalized Discount Club use. As ITE does not include customer survey data on pass-by trips, no reductions were applied to the *Discount Club* land use. Based on direction from City staff, it was conservatively assumed all trips with this repurposed building are new to the transportation system. This reflects a higher overall trip rate than other available ITE categories, such as the more general *Shopping Center* land use.

TRIP DISTRIBUTION

To properly account for the changes in traffic volumes in the immediate site vicinity, trips associated with all of the components summarized above were individually distributed onto the transportation system and assigned throughout the study area intersections, as summarized below.

Two separate trip distribution patterns were developed to account for the Costco and the medical office. The medical office distribution patterns were based directly on the Certified EIR. This distribution is shown in Exhibit 4, and highlights where inbound and outbound trips are traveling to and from. This distribution pattern was applied to the general and medical office uses.

The Costco trip distribution patterns reflect membership records from the existing Costco warehouse. The modified trip distribution pattern is expected to approximate a realistic travel shed and accurately reflect the specific turning needs at the site entrances. The trip distribution patterns for both the existing and proposed Costco sites are shown in Figure 8.

#% Trip Distribution

Estimated Costco Trip Distribution Pattern
Torrance, California

Figure
8

Coordinate System: NAD 1983 HARN StatePlane California V FIPS 0405 Feet

KIT_Portland\profile\17319 - Torrance CA Costco\gis\17319_TripDistribution.mxd - bkorporaal - 3:25 PM 5/23/2014

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

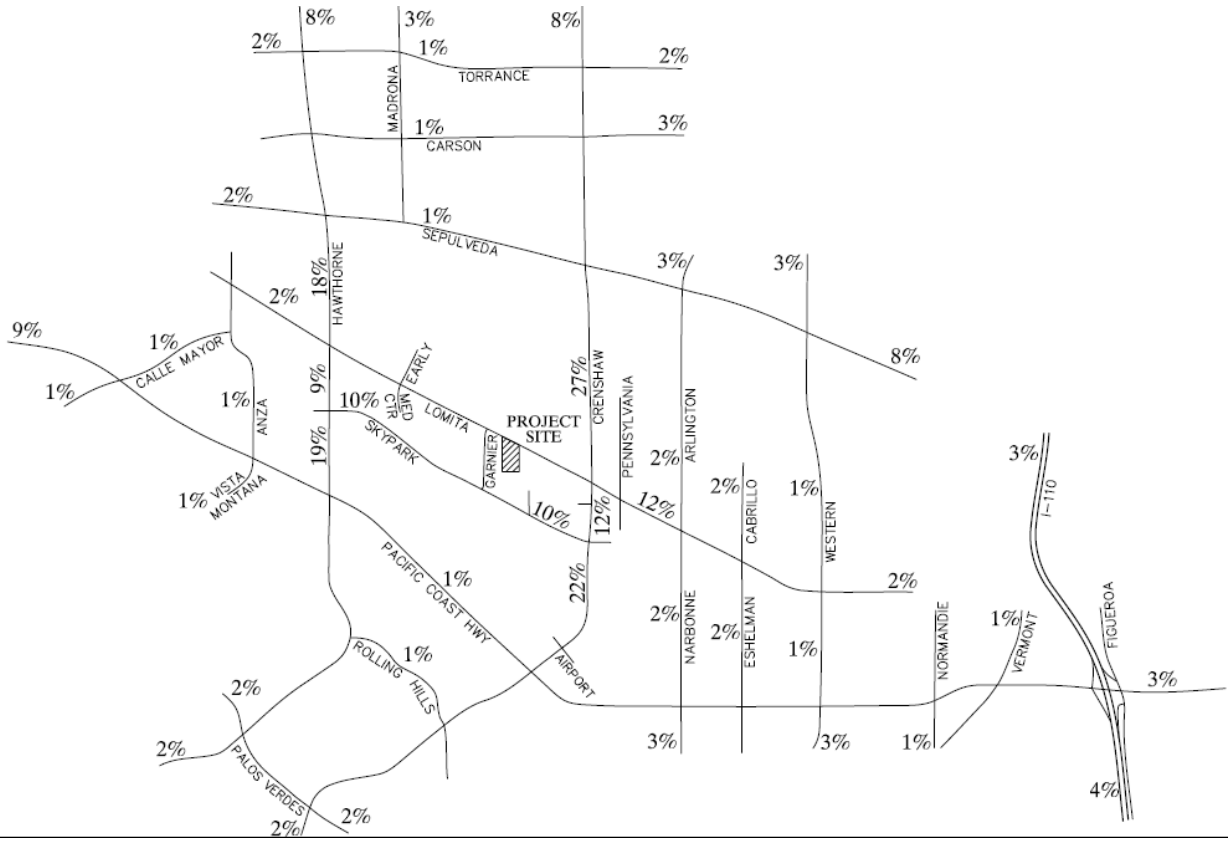


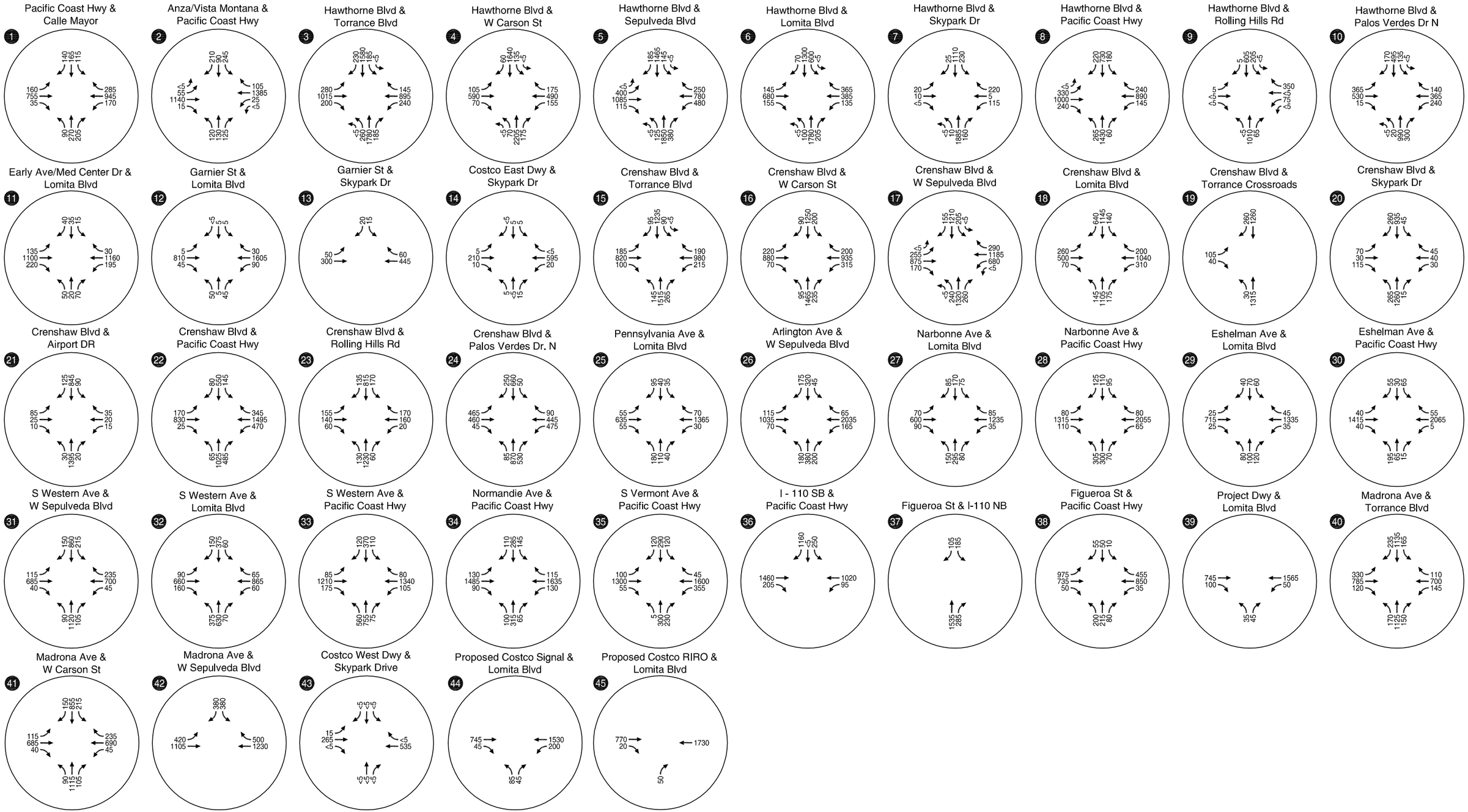
Exhibit 4. Medical Office Trip Distribution Pattern.

YEAR 2016 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

The cumulative plus project traffic conditions analysis forecasts how the study area's transportation system will operate in 2016 with development and occupancy of the Project Site and the changes to the existing Costco site.

The Year 2016 Cumulative traffic volumes during the weekday a.m. and p.m. peak hours were added with the site generated trips, as shown in Table 9. As this analysis assumes the approval conditions of the Approved Project, the Cumulative traffic volumes include Approved Project trips. As such, the Modified Project will provide the prior mitigation measures and the Approved Project and assesses whether additional significant impacts occur with the Proposed Project at any of the study area intersections. In some cases, the number of Approved Project trips is greater than the number of trips generated by the Modified Project, as indicated by a net decrease in the 2016 cumulative plus project scenario turning movement volumes.

The resultant volumes were used to conduct an operational analysis at each study intersection to determine the year 2016 cumulative plus project traffic levels of service, as shown in Figures 9 and 10. Tables 9 and 10 summarize the results of both the Cumulative and Cumulative Plus Project analysis for the weekday a.m. and p.m. peak hours. *Appendix "F" contains Project Impact Analysis Summary Tables that compare existing, 2016 Cumulative, and 2016 Cumulative Plus Project traffic conditions. Appendix "G" contains the year 2016 cumulative plus project traffic level-of-service worksheets.*



Year 2016 Cumulative Plus Project Traffic Volumes
Weekday AM Peak Hour
Torrance, California

Figure
9

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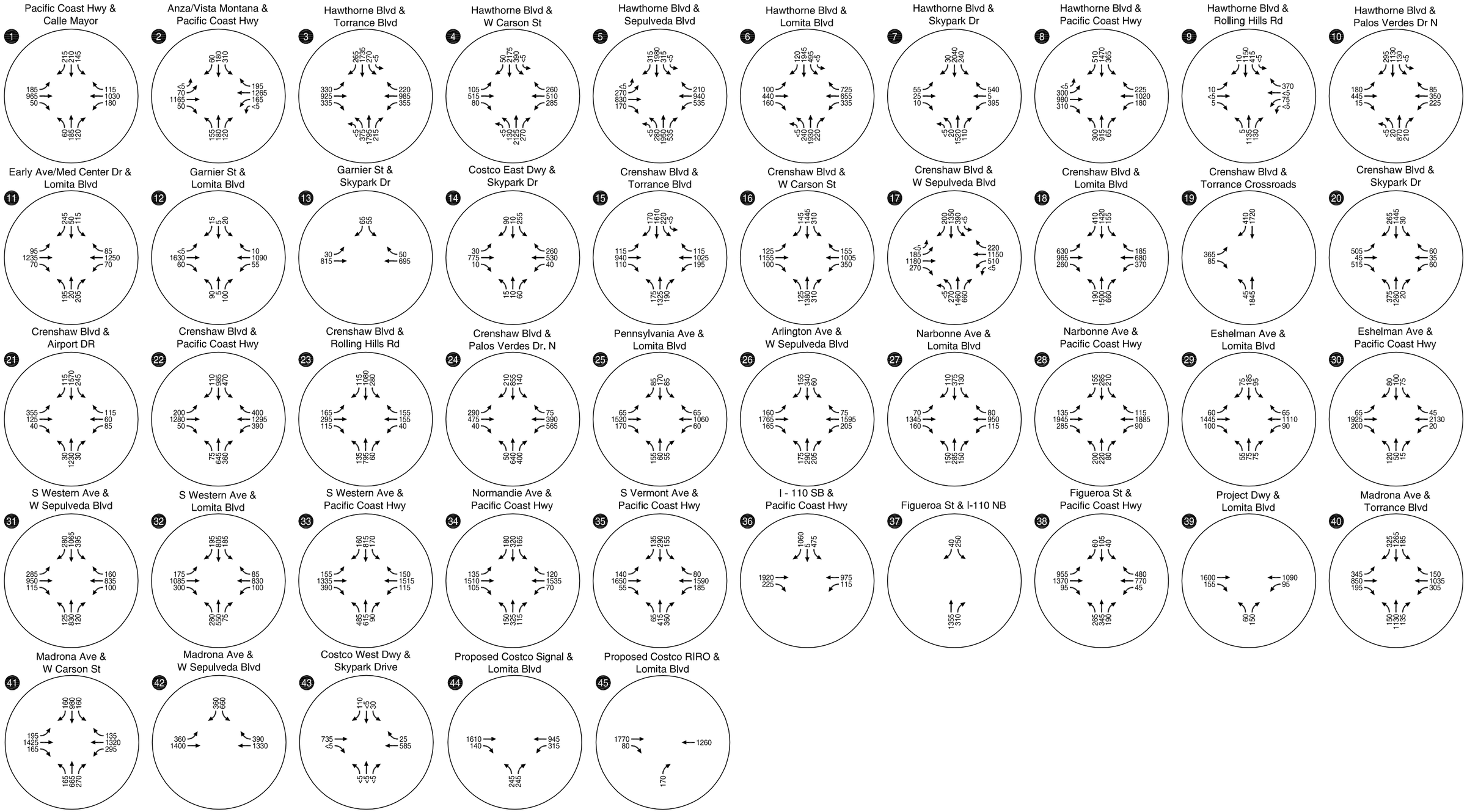


Year 2016 Cumulative Plus Project Traffic Volumes
Weekday PM Peak Hour
Torrance, California

Figure
10

Table 10. Year 2016 Cumulative and Cumulative Plus Project Traffic Conditions, Weekday AM Peak Hour

Intersection	ICU Methodology				ICU Percent Change (Decrease)	HCM Methodology				Delay Change (Decrease)	Jurisdiction	Approved Project Impact?	Modified Project Impact?
	Cumulative		Plus Project			Cumulative		Plus Project					
	ICU	LOS	ICU	LOS		Delay	LOS	Delay	LOS				
1. Calle Mayor & Pacific Coast Highway	85.5%	D	85.2%	D	(0.3%)	39.2	D	38.9	D	(0.30)	City of Torrance/Caltrans	No	No
2. Anza/Vista Montana Ave & PCH	82.8%	D	82.6%	D	(0.2%)	29.2	C	29.2	C	0.00	City of Torrance/Caltrans	No	No
3. Hawthorne Blvd & Torrance Blvd	95.8%	E	95.7%	E	(0.1%)	39.3	D	39.2	D	(0.10)	City of Torrance/Caltrans	No	No
4. Hawthorne Blvd & W Carson St	76.8%	C	76.6%	C	(0.2%)	24.0	C	23.8	C	(0.20)	City of Torrance/Caltrans	Yes	No
5. Hawthorne Blvd & W Sepulveda Blvd	88.0%	D	87.3%	D	(0.7%)	32.1	C	31.7	C	(0.40)	City of Torrance/Caltrans/CMP	No	No
6. Hawthorne Blvd & Lomita Blvd	97.8%	E	96.8%	E	(1.0%)	45.4	D	42.3	D	(3.10)	City of Torrance/Caltrans	Yes	No
7. Hawthorne Blvd & Skypark Drive	71.3%	C	68.2%	B	(3.1%)	23.7	C	22.2	C	(1.50)	City of Torrance/Caltrans	No	No
8. Hawthorne Blvd & Pacific Coast Highway	98.1%	E	95.0%	E	(3.1%)	51.8	D	48.4	D	(3.40)	City of Torrance/ Caltrans/CMP	Yes	No
9. Hawthorne Blvd & Rolling Hills Rd	70.9%	C	70.4%	C	(0.5%)	15.1	B	15.0	B	(0.10)	City of Torrance	No	No
10. Hawthorne Blvd & Palos Verdes Drive	93.7%	E	93.9%	E	0.2%						City of Rolling Hills Estates	No	No
11. Early Ave & Lomita Blvd	83.7%	D	81.4%	D	(2.3%)	39.4	D	38.0	D	(1.40)	City of Torrance	No	No
12. Garnier St & Lomita Blvd	68.8%	B	69.3%	B	0.5%	6.9	A	6.7	A	(0.20)	City of Torrance	No	No
13. Garnier St & Skypark Drive[1]	32.7%	A	30.9%	A	(1.8%)	12.8	B	12.2	B	(0.60)	City of Torrance	No	No
14. Existing Costco Dwy & Skypark Drive	44.5%	A	38.6%	A	(5.9%)	19.8	B	15.3	B	(4.50)	City of Torrance	No	No
15. Crenshaw Blvd & Torrance Blvd	87.9%	D	87.5%	D	(0.4%)	38.8	D	38.6	D	(0.20)	City of Torrance	No	No
16. Crenshaw Blvd & W Carson St	83.7%	D	83.4%	D	(0.3%)	40.3	D	40.0	D	(0.30)	City of Torrance	No	No
17. Crenshaw Blvd & W Sepulveda Blvd	93.0%	E	90.4%	E	(2.6%)	51.1	D	48.8	D	(2.30)	City of Torrance	Yes	No
18. Crenshaw Blvd & Lomita Blvd	99.1%	E	96.1%	E	(3.0%)	57.5	E	49.4	D	(8.10)	City of Torrance/City of Lomita	No	No
19. Crenshaw Blvd & Torrance Crossroads	41.1%	A	39.8%	A	(1.3%)	8.6	A	8.7	A	0.10	City of Torrance/City of Lomita	No	No
20. Crenshaw Blvd & Skypark Drive	58.8%	A	56.8%	A	(2.0%)	18.1	B	17.1	B	(1.00)	City of Torrance	No	No
21. Crenshaw Blvd & Airport Drive	57.6%	A	56.6%	A	(1.0%)	16.4	B	16.3	B	(0.10)	City of Torrance	No	No
22. Crenshaw Blvd & Pacific Coast Highway	93.1%	E	91.5%	E	(1.6%)	43.5	D	42.6	D	(0.90)	City of Torrance/Caltrans/CMP	Yes	No
23. Crenshaw Blvd & Rolling Hills Drive	70.9%	C	70.7%	C	(0.2%)	21.2	C	21.1	C	(0.10)	City of Torrance	No	No
24. Crenshaw Blvd & Palos Verdes Drive	74.5%	C	74.5%	C	0.0%						City of Rolling Hills Estates	No	No
25. Pennsylvania Ave & Lomita Blvd	94.7%	E	93.2%	E	(1.5%)						City of Lomita	Yes	No
26. Arlington Ave & W Sepulveda Blvd	96.1%	E	95.1%	E	(1.0%)	45.4	D	44.5	D	(0.90)	City of Torrance	Yes	No
27. Narbonne Ave & Lomita Blvd	80.1%	D	79.8%	C	(0.3%)						City of Lomita	Yes	No
28. Narbonne Ave & Pacific Coast Highway	91.7%	E	90.4%	E	(1.3%)	31.9	C	30.5	C	(1.40)	City of Lomita/Caltrans	Yes	No
29. Eshelman Ave & Lomita Blvd	68.7%	B	68.2%	B	(0.5%)						City of Lomita	No	No
30. Eshelman Ave & Pacific Coast Highway	71.5%	C	70.8%	C	(0.7%)	14.6	B	15.1	B	0.50	City of Lomita/Caltrans	Yes	No
31. S Western Ave & W Sepulveda Blvd	81.1%	D	80.3%	D	(0.8%)	39.6	D	39.0	D	(0.60)	Torrance/Los Angeles/ Caltrans/CMP	Yes	No
32. S Western Ave & Lomita Blvd	79.6%	C	80.0%	C	0.4%	33.0	C	33.0	C	0.00	City of Los Angeles/Caltrans/CMP	No	No
33. S Western Ave & Pacific Coast Highway	84.5%	D	84.0%	C	(0.5%)	46.7	D	46.5	D	(0.20)	City of Los Angeles/Caltrans	Yes	No
34. Normandie Ave & Pacific Coast Hwy	86.6%	D	86.0%	C	(0.6%)	24.1	C	23.7	C	(0.40)	City of Los Angeles/Caltrans	No	No
35. S Vermont Ave & Pacific Coast Highway	85.8%	D	85.6%	C	(0.2%)	35.2	D	35.2	D	0.00	City of Los Angeles/Caltrans	Yes	No
36. I-110 Ramps & Pacific Coast Highway	72.6%	C	72.3%	B	(0.3%)	30.2	C	30.0	C	(0.20)	City of Los Angeles/Caltrans	No	No
37. Figueroa St & I-110 NB Ramps[1]	58.6%	A	58.6%	A	0.0%	>50	F	>50	F	0.00	City of Los Angeles/Caltrans	Yes	No
38. Figueroa St & Pacific Coast Highway	85.8%	D	85.6%	D	(0.2%)	33.0	C	32.6	C	(0.40)	City of Los Angeles/Caltrans/CMP	Yes	No
39. Existing Private Dwy & Lomita Blvd[1]	53.9%	A	54.6%	A	0.7%	14.5	B	13.5	B	(1.00)	City of Torrance	No	No
40. Madrona Ave & Torrance Blvd	78.8%	C	78.7%	C	(0.1%)	35.4	D	35.3	D	(0.10)	City of Torrance	No	No
41. Madrona Ave & W Carson St	71.6%	C	71.5%	C	(0.1%)	30.0	C	29.9	C	(0.10)	City of Torrance	No	No
42. Madrona Ave & W Sepulveda Blvd	60.2%	B	60.1%	B	(0.1%)	15.7	B	15.7	B	0.00	City of Torrance	No	No
43. Existing W Costco Dwy & Skypark Dr[1]	33.2%	A	21.8%	A	(11.4%)	11.3	B	1.0	A	(10.30)	City of Torrance	-	No
44. Project Dwy & Lomita Blvd[1]	55.1%	A	53.9%	A	(1.20%)	12.8	B	9.6	B	(3.20)	City of Torrance	-	No
45. Proposed Costco Right-in, Right-out	-	-	51.1%	A	-	-	-	9.3	A	-	City of Torrance	-	No

[1] For unsignalized intersections, LOS is based on the critical (highest delay) stop-controlled approach

Table 11. Year 2016 Cumulative and Cumulative Plus Project Traffic Conditions, Weekday PM Peak Hour

Intersection	ICU Methodology				ICU Percent Change (Decrease)	HCM Methodology				Delay Change (Decrease)	Jurisdiction	Approved Project Impact?	Modified Project Impact?
	Cumulative		Plus Project			Cumulative		Plus Project					
	ICU	LOS	ICU	LOS		Delay	LOS	Delay	LOS				
1. Calle Mayor & Pacific Coast Highway	80.1%	D	80.0%	C	(0.10%)	36.8	D	36.9	D	0.10	City of Torrance/Caltrans	Yes	No
2. Anza/Vista Montana Ave & PCH	87.8%	D	88.2%	D	(0.40%)	39.7	D	40.2	D	0.50	City of Torrance/Caltrans	No	No
3. Hawthorne Blvd & Torrance Blvd	99.1%	E	99.0%	E	(0.10%)	45.8	D	45.8	D	0.00	City of Torrance/Caltrans	No	No
4. Hawthorne Blvd & W Carson St	85.8%	D	85.7%	D	(0.10%)	26.4	C	26.6	C	0.20	City of Torrance/Caltrans	Yes	No
5. Hawthorne Blvd & W Sepulveda Blvd	90.1%	E	90.2%	E	0.10	34.8	C	34.5	C	(0.30)	City of Torrance/ Caltrans/CMP	Yes	No
6. Hawthorne Blvd & Lomita Blvd	114.0%	F	113.9%	F	(0.10%)	60.9	E	***66.6***	***E***	**5.70**	City of Torrance/Caltrans	Yes	***Yes***
7. Hawthorne Blvd & Skypark Drive	89.0%	D	86.4%	D	(2.60%)	33.7	C	30.7	C	(3.00)	City of Torrance/Caltrans	Yes	No
8. Hawthorne Blvd & Pacific Coast Highway	99.5%	E	100.0%	E	0.50%	52.3	D	53.7	D	1.40	City of Torrance/ Caltrans/CMP	Yes	No
9. Hawthorne Blvd & Rolling Hills Rd	82.5%	D	83.3%	D	0.80%	18.3	B	18.4	B	0.10	City of Torrance	No	No
10. Hawthorne Blvd & Palos Verdes Drive	81.5%	D	82.3%	D	0.80%						City of Rolling Hills Estates	No	No
11. Early Ave & Lomita Blvd	92.6%	E	93.2%	E	0.60%	37.0	D	40.4	D	3.40	City of Torrance	No	No
12. Garnier St & Lomita Blvd	71.2%	C	69.6%	B	(1.60%)	19.4	B	17.4	B	(2.00)	City of Torrance	No	No
13. Garnier St & Skypark Drive[1]	38.0%	A	34.1%	A	(3.90%)	16.5	B	15.9	B	(0.60)	City of Torrance	No	No
14. Existing Costco Dwy & Skypark Drive	65.9%	B	60.6%	B	(5.30%)	27.5	C	23.5	C	(4.00)	City of Torrance	No	No
15. Crenshaw Blvd & Torrance Blvd	90.0%	D	89.9%	D	(0.10%)	42.2	D	41.9	D	(0.30)	City of Torrance	Yes	No
16. Crenshaw Blvd & W Carson St	88.5%	D	88.0%	D	(0.50%)	43.9	D	43.7	D	(0.20)	City of Torrance	Yes	No
17. Crenshaw Blvd & W Sepulveda Blvd	113.7%	F	112.0%	F	(1.70%)	59.7	E	58.4	E	(1.30)	City of Torrance	Yes	No
18. Crenshaw Blvd & Lomita Blvd	97.2%	E	97.0%	E	(0.20%)	53.4	D	55.0	D	1.60	City of Torrance/City of Lomita	Yes	No
19. Crenshaw Blvd & Torrance Crossroads	65.2%	B	65.2%	B	0.00%	15.5	B	15.7	B	0.20	City of Torrance/City of Lomita	No	No
20. Crenshaw Blvd & Skypark Drive	86.4%	D	85.9%	D	(0.50%)	31.8	C	29.5	C	(2.30)	City of Torrance	No	No
21. Crenshaw Blvd & Airport Drive	74.6%	C	76.2%	C	1.60%	30.4	C	30.8	C	0.40	City of Torrance	No	No
22. Crenshaw Blvd & Pacific Coast Highway	108.3%	F	108.1%	F	(0.20%)	66.3	E	66.2	E	(0.10)	City of Torrance/Caltrans/CMP	Yes	No
23. Crenshaw Blvd & Rolling Hills Drive	69.0%	B	69.3%	B	0.30%	22.2	C	22.2	C	0.00	City of Torrance	No	No
24. Crenshaw Blvd & Palos Verdes Drive	74.8%	C	75.2%	C	0.40%						City of Rolling Hills Estates	No	No
25. Pennsylvania Ave & Lomita Blvd	89.7%	D	***93.4%***	***E***	**3.70%**						City of Lomita	Yes	***Yes***
26. Arlington Ave & W Sepulveda Blvd	96.2%	E	96.0%	E	(0.20%)	48.5	D	47.8	D	(0.70)	City of Torrance	Yes	No
27. Narbonne Ave & Lomita Blvd	96.8%	E	***98.6%***	***E***	**1.80%**						City of Lomita	Yes	***Yes***
28. Narbonne Ave & Pacific Coast Highway	95.7%	E	95.5%	E	(0.20%)	31.3	C	31.0	C	(0.30)	City of Lomita/Caltrans	Yes	No
29. Eshelman Ave & Lomita Blvd	84.1%	D	85.9%	D	1.80%						City of Lomita	Yes	No
30. Eshelman Ave & Pacific Coast Highway	73.6%	C	74.3%	C	0.70%	17.7	B	17.7	B	0.00	City of Lomita/Caltrans	Yes	No
31. S Western Ave & W Sepulveda Blvd	98.2%	E	98.8%	E	0.60%	54.8	D	***55.5***	***E***	**0.70**	Torrance/Los Angeles/ Caltrans/CMP	Yes	***Yes***
32. S Western Ave & Lomita Blvd	88.2%	D	89.1%	D	0.90%	37.1	D	37.9	D	0.80	City of Los Angeles/Caltrans/CMP	No	No
33. S Western Ave & Pacific Coast Highway	98.3%	E	***99.6%***	***E***	**1.30%**	56.3	E	58.3	E	2.00	City of Los Angeles/Caltrans	Yes	***Yes***
34. Normandie Ave & Pacific Coast Hwy	85.4%	D	86.6%	D	1.20%	21.8	C	23.4	C	1.60	City of Los Angeles/Caltrans	No	No
35. S Vermont Ave & Pacific Coast Highway	86.8%	D	87.0%	D	0.20%	36.3	D	36.4	D	0.10	City of Los Angeles/Caltrans	Yes	No
36. I-110 Ramps & Pacific Coast Highway	83.7%	D	83.8%	D	0.10%	31.2	C	31.9	C	0.70	City of Los Angeles/Caltrans	Yes	No
37. Figueroa St & I-110 NB Ramps[1]	53.6%	A	54.6%	A	1.00%	>50	F	>50	F	0.00	City of Los Angeles/Caltrans	Yes	No
38. Figueroa St & Pacific Coast Highway	93.6%	E	94.3%	E	0.70%	30.4	C	32.0	C	1.60	City of Los Angeles/Caltrans/CMP	No	No
39. Existing Private Dwy & Lomita Blvd[1]	78.2%	C	77.0%	C	(1.20%)	31.1	D	24.3	C	(6.80)	City of Torrance	No	No
40. Madrona Ave & Torrance Blvd	82.3%	D	82.1%	D	(0.20%)	40.1	D	40.0	D	(0.10)	City of Torrance	No	No
41. Madrona Ave & W Carson St	88.6%	D	88.5%	D	(0.10%)	41.3	D	41.3	D	0.00	City of Torrance	No	No
42. Madrona Ave & W Sepulveda Blvd	68.0%	B	67.5%	C	(0.50%)	19.2	B	18.9	B	(0.30)	City of Torrance	No	No
43. Existing W Costco Dwy & Skypark Dr[1]	62.5%	B	59.5%	B	(0.30%)	12.9	B	11.8	B	(1.10)	City of Torrance	-	No
44. Project Dwy & Lomita Blvd[1]	72.0%	B	81.5%	D	9.5%	13.8	B	18.4	C	4.60	City of Torrance	-	No
45. Proposed Costco Right-in, Right-out	-	-	68.4%	C	-	36.8	D	12.1	B	-	City of Torrance	-	No

[1] For unsignalized intersections, LOS is based on the critical (highest delay) stop-controlled approach.

Summary of Results

Table 10 shows that during the weekday a.m. peak hour no additional intersections experience a significant impact. As previously discussed, the Modified Project generally reduces trips during the morning hours because of Costco's later opening time than what was estimated for office and medical Office uses within the Approved Project. In addition, traffic volumes on the system in 2014 are lower than those that were previously forecast for 2012 in the Approved EIR.

Table 11 summarizes the operations during the weekday p.m. peak hour. This table shows that five intersections experience a significant impact with the Modified Project. All of these intersections were previously identified as significantly impacted as part of the Certified EIR. Accordingly, further review was conducted to identify whether the mitigation measures identified in the Certified EIR remain adequate to mitigate this higher level of impact, or if additional mitigation measures would be necessary.

Section 6
Transportation Mitigation Measures

TRANSPORTATION MITIGATION MEASURES

SUMMARY OF OFF-SITE INTERSECTION IMPROVEMENTS

A summary of the operational analysis findings is presented below:

- The Modified Project does not impact any of the study intersections during the weekday a.m. peak hour, owing to the reduction in trips compared to those from the Approved Project.
- A total of 22 intersections were significantly impacted by the Approved Project, and improvements were identified to mitigate the impacts in Table 4-1 of the Certified EIR.
- The Cumulative Plus Project analysis for the Modified Project shows a significant impact at five intersections during the weekday p.m. peak hour. All five intersections were significantly impacted by the Approved Project. These intersections, mitigation measures, and adequacy of the mitigation measures are summarized in Tables 12 and 13.
- The severity of the impacts set forth in the Certified EIR will be exceeded by the Modified Project; however, no additional mitigations are necessary, other than those in the Certified EIR, to mitigate the impacts of the Modified Project back to the level of impact identified in the Certified EIR.
- While the improvement needs do not change, variances in trip generation and distribution patterns (along with modifications to projected traffic) alters the proportionate impact of the Modified Project from those of the Approved Project. Pro-rata shares at each of the significantly-impacted intersections will be determined based on these revised projections through discussions with the City of Torrance.
- Tables 12 and 13 summarize the intersection mitigations identified within the Certified EIR for the Approved Project and the updated analysis results for the Modified Project.

Table 12. Summary of Intersection Mitigations

Study Intersection	Approved Project*					Modified Project*		
	AM Impact?	PM Impact?	Project Share	Feasible Improvements	Will Feasible Improvements Mitigate Impacts?	AM Impact?	PM Impact?	Will Feasible Improvements Mitigate Impacts?
1. Calle Mayor & PCH	NO	YES	2%	None	-	NO	NO	-
2. Anza/Vista Montana & PCH	NO	NO	-	-	-	NO	NO	-
3. Hawthorne Blvd & Torrance Blvd	NO	YES	1%	Add EBR overlap	NO	NO	NO	-
4. Hawthorne Blvd & Carson Street	YES	YES	1%	None	NO	NO	NO	-
5. Hawthorne Blvd & Sepulveda Blvd	NO	YES	2%	Add 2nd NBR w/overlap	YES	NO	NO	-
6. Hawthorne Blvd & Lomita Blvd	YES	YES	3%	2nd NB LT Lane NB RT Lane 4th SB TH Lane WB RT w/overlap	NO	NO	YES	YES
7. Hawthorne Blvd & Skypark Dr	NO	YES	3%			NO	NO	-
8. Hawthorne Blvd & PCH	YES	YES	2%	NB RT w/overlap SB RT overlap WB RT w/overlap	YES	NO	NO	-
9. Hawthorne Blvd & Rolling Hills Rd	NO	NO	-	-	-	NO	NO	-
10. Hawthorne Blvd Palos Verdes Dr	NO	NO	-	-	-	NO	NO	-
11. Early Ave & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
12. Garnier St & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
13. Garnier St & Skypark St	NO	NO	-	-	-	NO	NO	-
14. Costco Dwy & Skypark Dr	NO	NO	-	-	-	NO	NO	-
15. Crenshaw Blvd & Torrance Blvd	NO	YES	1%	Add NBR w/overlap	NO	NO	NO	-
16. Crenshaw Blvd & Carson Street	NO	YES	1%	None	-	NO	NO	-
17. Crenshaw Blvd & Sepulveda Blvd	YES	YES	3%	Add NBR w/overlap	NO	NO	NO	-
18. Crenshaw Blvd & Lomita Blvd	NO	YES	5%	None	-	NO	NO	-
19. Crenshaw Blvd & Torrance Crossroads	NO	NO	-	-	-	NO	NO	-
20. Crenshaw Blvd & Skypark Dr	NO	NO	-	-	-	NO	NO	-
21. Crenshaw Blvd & Airport Dr	NO	NO	-	-	-	NO	NO	-
22. Crenshaw Blvd & PCH	YES	YES	2%	Add NBR overlap	NO	NO	NO	-
23. Crenshaw Blvd & Rolling Hills Rd	NO	NO	-	-	-	NO	NO	-
24. Crenshaw Blvd & Palos Verdes Dr	NO	NO	-	-	-	NO	NO	-
25. Pennsylvania Ave & Lomita Blvd	YES	YES	3%	Add NBL	NO	NO	YES	YES
26. Arlington Ave & Sepulveda Blvd	YES	YES	2%	Convert SBR to 2nd SBT	YES	NO	NO	-
27. Narbonne Ave & Lomita Blvd	YES	YES	2%	None	-	NO	YES	NO
28. Narbonne Ave & PCH	YES	YES	2%	None	-	NO	NO	-
29. Eshelman & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
30. Eshelman & PCH	YES	YES	2%	None	-	NO	NO	-
31. Western Ave & Sepulveda Blvd	YES	YES	1%	Add 2nd NBL	YES	NO	YES	YES
32. Western Ave & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
33. Western Ave & PCH	YES	YES	2%	Add 2nd SBL	NO	NO	YES	YES
34. Normandie Ave & PCH	NO	NO	-	-	-	NO	NO	-
35. Vermont Ave & PCH	YES	YES	1%	None	-	NO	NO	-
36. I-110 SB Ramps & PCH	NO	YES	1%	Convert SBR to SBL/SBR	YES	NO	NO	-
37. Figueroa St & I-110 NB Ramps	YES	YES	1%	Signalize intersection	YES	NO	NO	-
38. Figueroa St & PCH	YES	NO	1%	None	-	NO	NO	-
39. Existing Private Dwy & Lomita Blvd	NO	NO	-	-	-	NO	NO	-
40. Madrona Ave & Torrance Blvd	NO	NO	-	-	-	NO	NO	-
41.Madrona Ave & Carson St	NO	NO	-	-	-	NO	NO	-
42.Madrona Ave & Sepulveda Blvd	NO	NO	-	-	-	NO	NO	-
43. Existing W Costco Dwy & Skypark Dr	-	-	-	-	-	NO	NO	-
44. Proposed Costco Dwy & Lomita Blvd	-	-	-	-	-	NO	NO	-
45. Proposed Costco RIRO & Lomita Blvd	-	-	-	-	-	NO	NO	-

PCH = Pacific Coast Highway, RIRO = Right-in, Right-out, NB = Northbound, SB = Southbound, R = Right Turn Lane, L = Left-turn Lane
* Assumes all impacts identified in table are significant environmental impacts
[1] See Operational Results in Tables 13 and 14.

Table 13. Mitigated Year 2016 Cumulative Plus Project and Mitigated Traffic Conditions, Weekday PM Peak Hour ICU Analysis

Intersection	ICU Methodology						Jurisdiction	Modified Project Significant Impact After Mitigation?
	Cumulative		Plus Project		Mitigated			
	ICU	LOS	ICU	LOS	ICU	LOS		
25. Pennsylvania Ave & Lomita Blvd	89.7%	D	93.4%	E	89.7%	D	City of Lomita	No
27. Narbonne Ave & Lomita Blvd	96.8%	E	98.5%	E	-	-	City of Lomita	Yes
33. S Western Ave & Pacific Coast Highway	98.3%	E	99.4%	E	91.4%	E	City of Los Angeles/Caltrans	No

Table 14. Year 2016 Cumulative Plus Project and Mitigated Traffic Conditions, Weekday PM Peak Hour HCM Analysis

Intersection	HCM Methodology						Jurisdiction	Modified Project Significant Impact After Mitigation?
	Cumulative		Plus Project		Mitigated			
	ICU	LOS	Delay	LOS	Delay	LOS		
6. Hawthorne Blvd & Lomita Blvd	60.9	E	65.6	E	55.6	E	City of Torrance/Caltrans	No
31. S Western Ave & W Sepulveda Blvd	54.8	D	55.5	E	54.0	D	Torrance/Los Angeles/Caltrans/ CMP	No

As shown in Tables 13 and 14, feasible mitigations previously identified in the Certified EIR address impacts at four of the five intersections impacted by the Modified Project. At the Narbonne Avenue and Lomita Boulevard intersection, identified mitigations included the addition of a second northbound through lane and a third eastbound through lane. These improvements were not considered feasible as it would require the acquisition of additional right-of-way and demolition of existing buildings. Accordingly, the Modified Project does not change the original findings or recommendations at any of the off-site study intersections from those identified in the Certified EIR.

The City of Torrance Development Impact Fee (DIF) and pro rata shares of mitigations will be discussed with the City of Torrance, in accordance with jurisdiction requirements. *Mitigated Level of Service Worksheets are included in Appendix "H."*

SITE ACCESS AND CIRCULATION

Site Access

As shown in the site plan, there are three accesses proposed onto Lomita Boulevard and access is available along the western property boundary south to Skypark Drive. The central site intersection is designed to serve as the primary entrance, and is proposed to include three outbound lanes and two inbound lanes at a new signalized "T" intersection. Design of this intersection will include dual northbound (outbound) left-turn lanes and a single right-turn lane. Pedestrian accommodations are proposed for all approaches.

To accommodate right-turn maneuvers at the traffic signal, a right-turn lane with overlap signal phasing (and restricted westbound U-turns) is proposed. This design will allow outbound vehicles turning right to turn during the red phase and while the westbound left-turn signal is green. With this configuration the intersection will adequately serve Costco demands during the peak weekday and weekend periods. Intersection queue storage is provided to serve 95th percentile queues forecast during the weekday p.m. peak period. *Queuing Analysis Worksheets are included in Appendix "I."*

Minor modifications are proposed to the existing westernmost full-access unsignalized entrance onto Lomita Boulevard. This will include a striped three-lane cross-section providing a separate northbound right- and left-turn lane. It is expected that the intersection will benefit from the gaps in the traffic flow from the adjacent signal, but northbound motorists turning left during the peak periods will largely utilize the new signal. The provision of separate left- and right-turn lanes will allow right-turning vehicles to bypass the left-turn queue.

East of the fueling center a right-in, right-out is proposed. This connection will help to offload the demands at the new traffic signal serving the heavier eastbound movements. Channelization at the access will restrict the driveway to right-in, right-out maneuvers. Provision of this access will also help to relieve the demands at the internal all-way stop-controlled intersection.

Internal Site Circulation

Internal circulation was evaluated to ensure that the site provides sufficient on-site circulation for pedestrian movements and internal traffic. The Costco warehouse, car wash, tire center, and fueling station layout were coordinated with the overall project team to accomplish the following:

- Discourage vehicular travel near the Costco entrance to limit pedestrian and vehicular conflicts to those that are loading large merchandise.
- Align drive aisles throughout the parking area and design intersections with perpendicular approach angles.
- Extend the driveway throat depth at all accesses to meet the queuing needs and adequately disperse entering and exiting traffic.
- Provide pedestrian pathways wide enough to accommodate shopping carts and hand trucks from periphery parking areas to the front door of the warehouse.
- Design the Costco warehouse loading bays with adequate maneuver space for the WB67 trucks that serve the site.
- Maximize queue storage at the fueling center and provide a site layout that can accommodate fuel deliveries to the tanks during hours of operation with minimal conflict to the fueling operations.
- Provide cart returns throughout the parking area to encourage use of the cart corrals.

The Costco site plan incorporates the concepts shown above while balancing connectivity, access, landscaping, utility, and drainage needs. The site has been designed to accommodate typical peak parking demands both on weekdays and weekends.

Section 7
Conclusions and Recommendations

CONCLUSIONS AND RECOMMENDATIONS

The results of the traffic impact analysis indicate that with incorporation of the access recommendations as shown in the attached site plan, the development of the Modified Project will not result in any new or substantially increased significant impacts beyond those disclosed in the Certified EIR for the Approved Project. Additional details on the findings and recommendations are presented below.

The analysis assumes all trips associated with the Approved Project are included in the Modified Project's cumulative volume scenario and that all proportional share contributions will be fulfilled for mitigations identified in the Certified EIR. In accordance with the California Environmental Quality Act (CEQA), the cumulative scenario operations are compared to cumulative plus project conditions to identify whether the proposed modifications to the development program result in any new significant environmental impacts or a substantial increase in the severity of impacts set forth in the Certified EIR.

This traffic analysis accounts for the changes to the traffic resulting from the proposed modifications to the Approved Project and for traffic volumes and travel patterns that have changed since the Certified EIR was completed. This traffic analysis assesses the incremental difference in trips between the Approved Project and the Modified Project.

This analysis assumes all trips associated with the Approved Project are included in the Modified Project's cumulative volume scenario and that all proportional share contributions will be fulfilled for mitigations identified in the Certified EIR. In accordance with the California Environmental Quality Act (CEQA), the cumulative without project (Cumulative) scenario operations are compared to cumulative plus project conditions to identify whether the proposed modifications to the development program result in any new significant environmental impacts or a substantial increase in the severity of impacts set forth in the Certified EIR.

This study concludes that the severity of the impacts set forth in the Certified EIR will be exceeded by the Modified Project at five intersections; however, no additional mitigations are necessary, other than those in the Certified EIR, to mitigate the impacts of the Modified Project back to the level of impact identified in the Certified EIR.

FINDINGS

Year 2014 Existing Conditions

- Frontage improvements are in place along Lomita Boulevard including bicycle lanes and sidewalks. Transit service is present along Lomita Boulevard.
- New traffic counts were obtained in January 2014 at all 44 study intersections; existing 2014 traffic volumes are generally lower than those projected for 2012 in the Certified EIR.
- The existing Costco site and proposed relocation site are linked by a drive aisle connection along the western property boundaries.

Year 2016 Cumulative Traffic Conditions

- Year 2016 cumulative traffic conditions include trips from approved and pending land use applications identified by City of Torrance staff as well as an adjustment for ambient growth. The cumulative analysis includes the Approved Project trips on the relocation site.

Proposed Development Plan

- The new Costco facilities will include a larger warehouse with a car wash, 20-position fueling station, and some remaining land that could accommodate approximately 75,000 square-feet of office or medical office uses in two-story buildings. The relocation would include the closure of the adjacent Costco site, with the potential repurposing of the building.
- Primary access to the new Costco site would be at a new signalized intersection on Lomita Boulevard. A new right-in, right-out access is proposed east of the fuel center, and the Project Site will have access to the existing connection between Lomita Boulevard and Skypark Drive along the western property boundary.
- Trips from the Costco were estimated based on the potential changes to both affected parcels. This includes closure of the existing Costco and repurposing of the building shell, addition of the new Costco, and development of up to 75,000 square-feet of medical office uses. The net change to the system is a decrease of 394 trips during the weekday a.m. peak hour and the addition of 61 trips during the weekday p.m. peak hour. The varying in and out splits, changes in distribution patterns, and routing between the parcels was accounted for within the analysis.

Year 2016 Cumulative Plus Project Traffic Conditions

- All 44 off-site intersections assessed in the Certified EIR were reviewed. This showed that five of the 22 intersections previously identified with a significant impact will continue to show a significant impact with the revised traffic volumes, Approved Project traffic, and growth factors.
- At the five significantly-affected intersections, the same recommendations previously identified in the Certified EIR will continue to be adequate to mitigate the impact of the Modified Project, with the exception of one intersection for which the Certified EIR found no feasible mitigation.

As with the Approved Project, the impact of the Modified Project would be significant and unavoidable.

- The Modified Project will not create impacts to the pedestrian, bicycle, or transit systems in the area. Planned connectivity between the site and the multimodal infrastructure along Lomita Boulevard will further promote these travel options.

On-Site Circulation/Site Access Operations

- The proposed access locations and sizing shown within the project site plan has been designed to accommodate traffic demands from the Costco, car wash, fuel center, and office uses.
- Truck routes and circulation have been reviewed for the Costco, car wash, and fuel center and can be accommodated within the site.
- Pedestrian walkways shown in the site plan connect the parking areas to the building entrance, and the Costco to the adjacent office buildings.

RECOMMENDATIONS

The following list summarizes the transportation mitigation measures recommended as part of Modified Project.

- Previously identified mitigation measures from the Approved EIR and subsequent approval conditions will be required.
- Costco should contribute its Development Impact Fee for additional impacts from the Modified Project to the City of Torrance based on City policy.
- Pro rata shares of mitigations should be developed with the City of Torrance and other affected agencies in accordance with jurisdictional requirements for additional impacts from the Modified Project.
- A new traffic signal should be constructed at the main entrance. The traffic signal should include dual northbound left-turn lanes, a separate northbound right-turn lane with overlap signal phasing, and restriction of the westbound U-turn. Additional design details should be coordinated with City of Torrance staff within the design process.
- The unsignalized western access should be restriped to include a separate northbound left- and right-turn lane.
- A new right-in, right-out access should be constructed east of the proposed fueling station. This should include a raised median to enforce the movement restriction.
- Monument signs, utilities, and landscaping should be located outside of the sight-distance triangles to maintain a clear view of oncoming vehicles at the site access points and at internal intersections.

APPENDICES

Appendix A: Traffic Count Worksheets

Appendix B: Year 2014 Existing Conditions Level of Service Worksheets

Appendix C: Approved and Planned Development Trips

Appendix D: Year 2016 Cumulative Analysis Level of Service Worksheets

Appendix E: Costco Trip Generation Data

Appendix F: Project Impact Analysis Summary Tables

Appendix G: Year 2016 Cumulative Plus Project Level of Service Worksheets

Appendix H: Mitigated Year 2016 Level of Service Worksheets and Supporting Data

Appendix I: Queuing Analysis Worksheets

Appendix A Traffic Count Worksheets

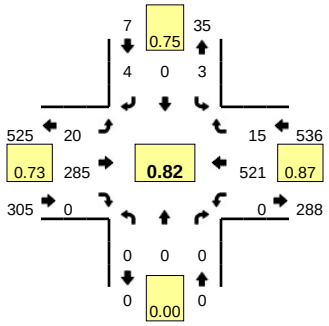
Type of peak hour being reported: Intersection Peak

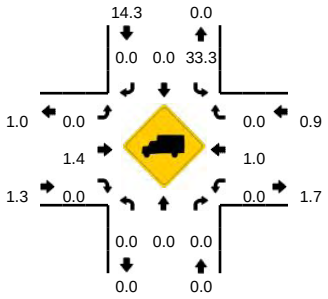
Method for determining peak hour: Total Entering Volume

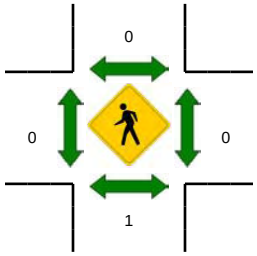
LOCATION: Costco West Dwy (unsignalized) -- Skypark Dr
CITY/STATE: Torrance, CA

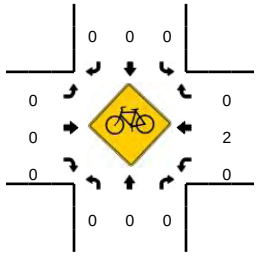
QC JOB #: 12003685
DATE: Thu, Jan 09 2014

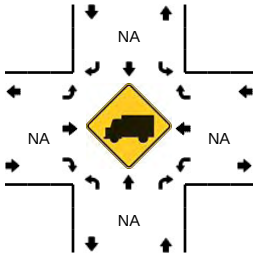
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

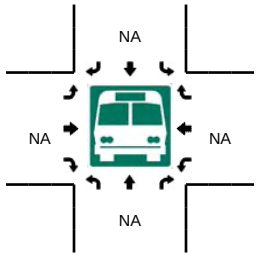












5-Min Count Period Beginning At	Costco West Dwy (unsignalized) (Northbound)				Costco West Dwy (unsignalized) (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	2	0	0	18	0	0	0	38	2	0	61	
7:05 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	34	1	0	42	
7:10 AM	0	0	0	0	0	0	0	0	0	18	0	0	0	28	1	0	47	
7:15 AM	0	0	0	0	1	0	0	0	0	15	0	0	0	30	0	0	46	
7:20 AM	0	0	0	0	0	0	1	0	0	9	0	0	0	32	2	0	44	
7:25 AM	0	0	0	0	0	0	0	0	0	10	0	0	0	47	0	0	57	
7:30 AM	0	0	0	0	1	0	1	0	0	14	0	0	0	45	2	0	63	
7:35 AM	0	0	0	0	0	0	0	0	2	17	0	0	0	51	1	0	71	
7:40 AM	0	0	0	0	0	0	0	0	2	17	0	0	0	59	0	0	78	
7:45 AM	0	0	0	0	0	0	0	0	0	16	0	0	0	47	3	0	66	
7:50 AM	0	0	0	0	0	0	1	0	3	26	0	0	0	54	2	0	86	
7:55 AM	0	0	0	0	0	0	1	0	1	21	0	0	0	51	1	0	75	736
8:00 AM	0	0	0	0	0	0	0	0	5	19	0	0	0	36	1	0	61	736
8:05 AM	0	0	0	0	1	0	1	0	0	18	0	0	0	41	0	0	61	755
8:10 AM	0	0	0	0	0	0	1	0	0	11	0	0	0	43	2	0	57	765
8:15 AM	0	0	0	0	0	0	0	0	0	27	0	0	0	44	1	0	72	791
8:20 AM	0	0	0	0	0	0	0	0	1	21	0	0	0	40	1	0	63	810
8:25 AM	0	0	0	0	0	0	0	0	2	15	0	0	0	51	1	0	69	822
8:30 AM	0	0	0	0	1	0	0	0	2	18	0	0	0	42	1	0	64	823
8:35 AM	0	0	0	0	0	0	1	0	2	31	0	0	0	30	1	0	65	817
8:40 AM	0	0	0	0	1	0	0	0	4	25	0	0	0	46	3	0	79	818
8:45 AM	0	0	0	0	0	0	1	0	3	32	0	0	0	51	0	0	87	839
8:50 AM	0	0	0	0	0	0	0	0	0	33	0	0	0	42	2	0	77	830
8:55 AM	0	0	0	0	0	0	0	0	1	35	0	0	0	55	2	0	93	848

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	4	0	16	400	0	0	0	592	16	0	1028
Heavy Trucks	0	0	0		0	0	0		0	4	0		0	8	0		12
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

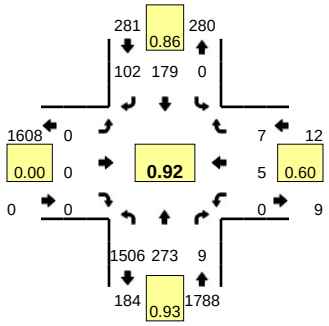
Type of peak hour being reported: Intersection Peak

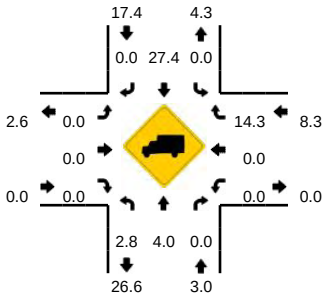
Method for determining peak hour: Total Entering Volume

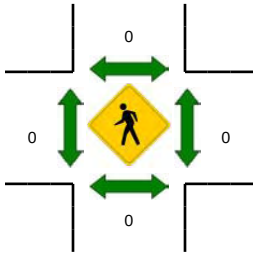
LOCATION: Figueroa St -- I-110 NB On-Ramp
CITY/STATE: Los Angeles, CA

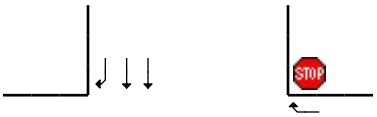
QC JOB #: 12003683
DATE: Thu, Jan 16 2014

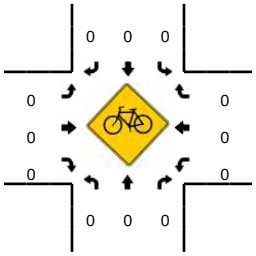
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

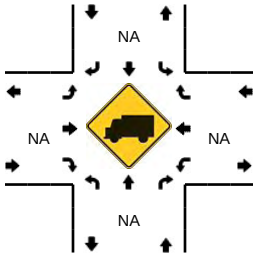


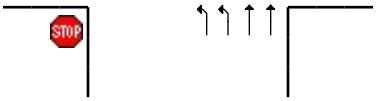


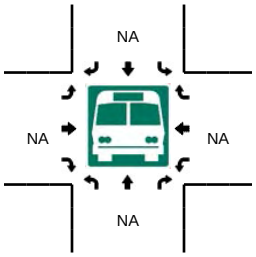












5-Min Count Period Beginning At	Figueroa St (Northbound)				Figueroa St (Southbound)				I-110 NB On-Ramp (Eastbound)				I-110 NB On-Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	121	23	2	0	0	3	5	0	0	0	0	0	0	1	0	0	155	
7:05 AM	134	18	5	0	0	5	10	0	0	0	0	0	0	1	0	0	173	
7:10 AM	123	20	1	0	0	14	11	0	0	0	0	0	0	0	0	0	169	
7:15 AM	131	25	0	1	0	9	8	0	0	0	0	0	0	1	1	0	176	
7:20 AM	120	10	1	0	0	12	8	0	0	0	0	0	0	1	2	0	154	
7:25 AM	113	19	2	1	0	11	15	0	0	0	0	0	0	0	0	0	161	
7:30 AM	141	20	0	0	0	13	3	0	0	0	0	0	0	0	0	0	177	
7:35 AM	131	29	1	1	0	18	7	0	0	0	0	0	0	0	2	0	189	
7:40 AM	97	21	2	0	0	18	6	0	0	0	0	0	0	0	0	0	144	
7:45 AM	129	32	1	2	0	21	8	0	0	0	0	0	0	1	0	0	194	
7:50 AM	130	26	1	0	0	21	8	0	0	0	0	0	0	1	0	0	187	
7:55 AM	136	29	0	0	0	12	7	0	0	0	0	0	0	0	0	0	184	2063
8:00 AM	107	18	0	0	0	18	10	0	0	0	0	0	0	1	0	0	154	2062
8:05 AM	143	24	0	0	0	12	11	0	0	0	0	0	0	0	2	0	192	2081
8:10 AM	98	19	1	0	0	12	7	0	0	0	0	0	0	0	0	0	137	2049
8:15 AM	122	10	0	0	0	10	4	0	0	0	0	0	0	1	0	0	147	2020
8:20 AM	120	18	1	0	0	9	5	0	0	0	0	0	0	1	1	0	155	2021
8:25 AM	136	21	1	0	0	3	7	0	0	0	0	0	0	1	1	0	170	2030
8:30 AM	98	24	0	0	0	13	6	0	0	0	0	0	0	0	0	0	141	1994
8:35 AM	103	17	0	0	0	6	5	0	0	0	0	0	0	0	0	0	131	1936
8:40 AM	129	14	0	0	0	9	4	0	0	0	0	0	0	0	1	0	157	1949
8:45 AM	122	17	0	0	0	10	5	0	0	0	0	0	0	0	1	0	155	1910
8:50 AM	92	19	1	0	0	5	1	0	0	0	0	0	0	0	0	0	118	1841
8:55 AM	116	12	0	0	0	10	3	0	0	0	0	0	0	0	0	0	141	1798

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	1580	348	8	8	0	216	92	0	0	0	0	0	0	8	0	0	2260
Heavy Trucks	32	4	0		0	60	0		0	0	0		0	0	0		96
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

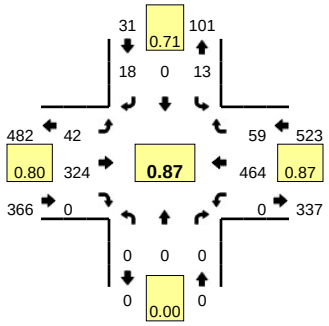
Type of peak hour being reported: Intersection Peak

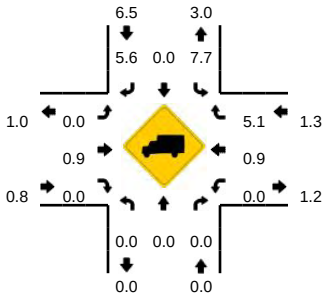
Method for determining peak hour: Total Entering Volume

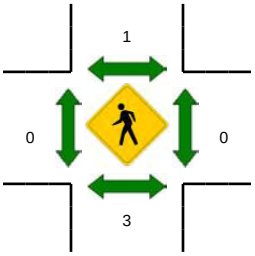
LOCATION: Garnier St -- Skypark Dr
CITY/STATE: Torrance, CA

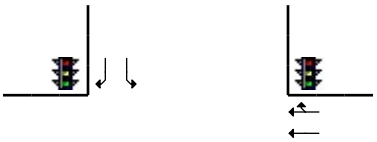
QC JOB #: 12003681
DATE: Thu, Jan 09 2014

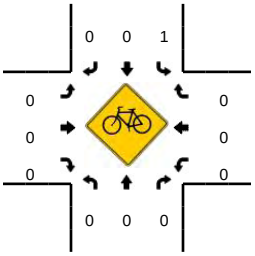
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

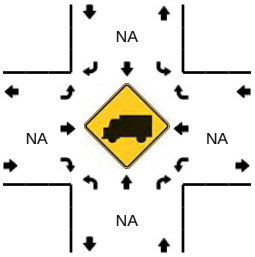


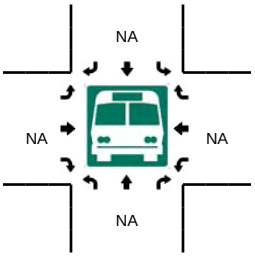












5-Min Count Period Beginning At	Garnier St (Northbound)				Garnier St (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	4	0	2	19	0	0	0	32	8	0	66	
7:05 AM	0	0	0	0	1	0	2	0	1	7	0	0	0	29	3	0	43	
7:10 AM	0	0	0	0	0	0	1	0	0	14	0	0	0	28	5	0	48	
7:15 AM	0	0	0	0	0	0	3	0	0	17	0	0	0	22	1	0	43	
7:20 AM	0	0	0	0	2	0	0	0	2	8	0	0	0	39	2	0	53	
7:25 AM	0	0	0	0	0	0	1	0	2	10	0	0	0	39	4	0	56	
7:30 AM	0	0	0	0	0	0	5	0	2	16	0	0	0	35	9	0	67	
7:35 AM	0	0	0	0	0	0	2	0	4	18	0	0	0	38	5	0	67	
7:40 AM	0	0	0	0	0	0	0	0	2	17	0	0	0	43	7	0	69	
7:45 AM	0	0	0	0	1	0	1	0	1	17	0	0	0	58	5	0	83	
7:50 AM	0	0	0	0	4	0	1	0	2	33	0	0	0	45	4	0	89	
7:55 AM	0	0	0	0	1	0	4	0	1	18	0	0	0	42	5	0	71	755
8:00 AM	0	0	0	0	0	0	2	0	5	31	0	0	0	42	3	0	83	772
8:05 AM	0	0	0	0	1	0	2	0	6	19	0	0	0	32	10	0	70	799
8:10 AM	0	0	0	0	0	0	2	0	3	25	0	0	0	46	6	0	82	833
8:15 AM	0	0	0	0	0	0	1	0	0	27	0	0	0	35	9	0	72	862
8:20 AM	0	0	0	0	3	0	0	0	2	21	0	0	0	34	3	0	63	872
8:25 AM	0	0	0	0	0	0	2	0	4	14	0	0	0	40	3	0	63	879
8:30 AM	0	0	0	0	0	0	2	0	7	23	0	0	0	45	4	0	81	893
8:35 AM	0	0	0	0	2	0	0	0	0	31	0	0	0	31	2	0	66	892
8:40 AM	0	0	0	0	2	0	0	0	4	40	0	0	0	28	3	0	77	900
8:45 AM	0	0	0	0	3	0	2	0	2	29	0	0	0	44	9	0	89	906
8:50 AM	0	0	0	0	1	0	0	0	3	37	0	0	0	42	7	0	90	907
8:55 AM	0	0	0	0	1	0	5	0	6	27	0	0	0	45	0	0	84	920

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	20	0	28	0	44	372	0	0	0	524	64	0	1052
Heavy Trucks	0	0	0		0	0	0		0	4	0		0	4	8		16
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		1	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

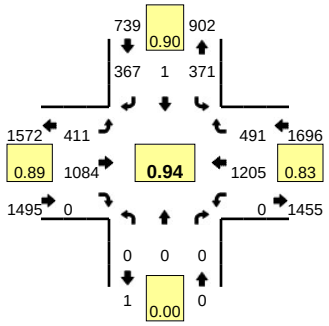
Type of peak hour being reported: Intersection Peak

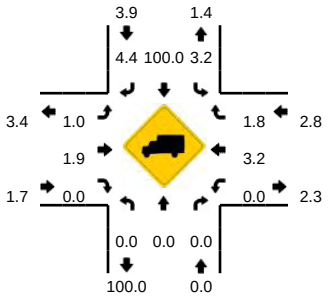
Method for determining peak hour: Total Entering Volume

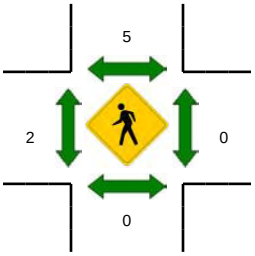
LOCATION: Madrona Ave -- Sepulveda Blvd
CITY/STATE: Torrance, CA

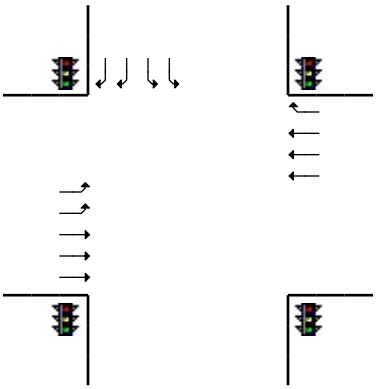
QC JOB #: 12003679
DATE: Thu, Jan 09 2014

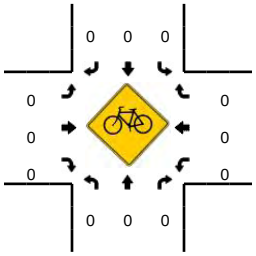
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

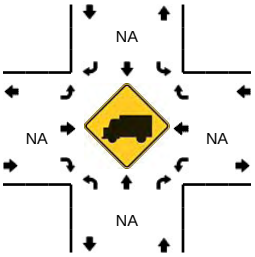


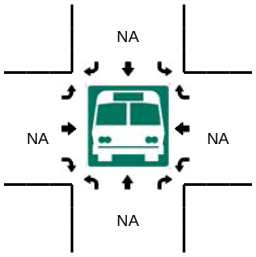












5-Min Count Period Beginning At	Madrona Ave (Northbound)				Madrona Ave (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	6	0	10	0	5	45	0	0	0	74	19	0	159	
7:05 AM	0	0	0	0	13	0	18	0	19	56	0	0	0	39	17	0	162	
7:10 AM	0	0	0	0	12	0	13	0	19	44	0	0	0	66	27	0	181	
7:15 AM	0	0	0	0	17	0	25	0	30	42	0	0	0	82	33	0	229	
7:20 AM	0	0	0	0	12	0	14	0	12	53	0	0	0	81	28	0	200	
7:25 AM	0	0	0	0	22	0	18	0	29	45	0	0	0	104	25	0	243	
7:30 AM	0	0	0	0	13	0	17	0	25	53	0	0	0	89	36	0	233	
7:35 AM	0	0	0	0	35	0	40	0	30	74	0	0	0	145	39	0	363	
7:40 AM	0	0	0	0	16	0	18	0	33	58	0	0	0	115	30	0	270	
7:45 AM	0	0	0	0	42	0	32	0	42	78	0	0	0	146	52	0	392	
7:50 AM	0	0	0	0	37	0	36	0	32	92	0	0	0	98	64	0	359	
7:55 AM	0	0	0	0	36	0	31	0	32	68	0	0	0	78	47	0	292	3083
8:00 AM	0	0	0	0	22	0	19	0	40	120	0	0	0	111	43	0	355	3279
8:05 AM	0	0	0	0	40	0	29	0	37	101	0	0	0	87	39	0	333	3450
8:10 AM	0	0	0	0	17	0	19	0	29	100	0	0	0	94	37	0	296	3565
8:15 AM	0	0	0	0	31	1	37	0	30	102	0	0	0	95	44	0	340	3676
8:20 AM	0	0	0	0	26	0	24	0	17	84	0	0	0	65	26	0	242	3718
8:25 AM	0	0	0	0	35	0	42	0	39	69	0	0	0	108	46	0	339	3814
8:30 AM	0	0	0	0	31	0	26	0	27	111	0	0	0	120	22	0	337	3918
8:35 AM	0	0	0	0	32	0	39	0	31	82	0	0	0	115	33	0	332	3887
8:40 AM	0	0	0	0	22	0	33	0	55	77	0	0	0	88	38	0	313	3930
8:45 AM	0	0	0	0	36	0	41	0	38	104	0	0	0	102	34	0	355	3893
8:50 AM	0	0	0	0	24	0	18	0	24	96	0	0	0	108	37	0	307	3841
8:55 AM	0	0	0	0	32	0	25	0	32	52	0	0	0	113	34	0	288	3837

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	460	0	396	0	424	952	0	0	0	1288	652	0	4172
Heavy Trucks	0	0	0		12	0	16		0	8	0		0	28	12		76
Pedestrians		0				8				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

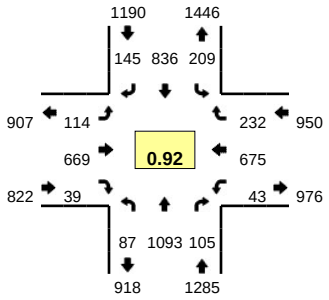
Type of peak hour being reported: Intersection Peak

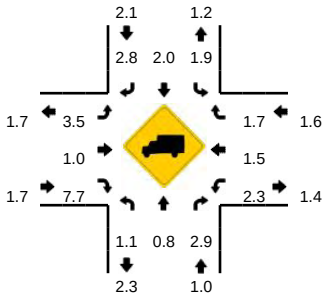
Method for determining peak hour: Total Entering Volume

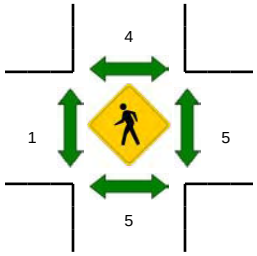
LOCATION: Madrona Ave -- Carson St
CITY/STATE: Torrance, CA

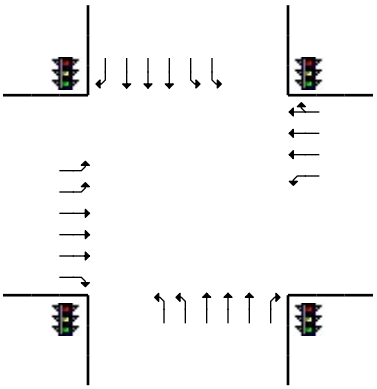
QC JOB #: 12003677
DATE: Thu, Jan 09 2014

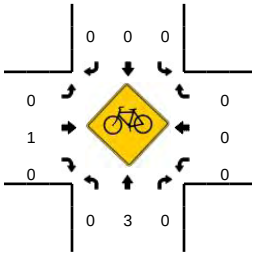
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

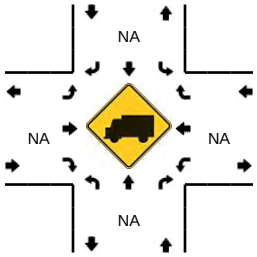


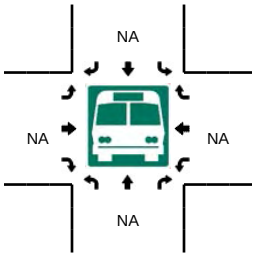












15-Min Count Period Beginning At	Madrona Ave (Northbound)				Madrona Ave (Southbound)				Carson St (Eastbound)				Carson St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	6	125	10	0	19	82	22	1	17	61	3	0	6	99	43	0	494	
7:15 AM	10	167	18	0	39	105	16	0	19	91	5	0	4	124	60	0	658	
7:30 AM	22	260	17	0	38	174	27	1	14	83	1	0	8	167	53	0	865	
7:45 AM	22	318	15	0	42	206	36	2	31	194	10	0	10	185	78	0	1149	3166
8:00 AM	21	280	25	0	57	203	40	3	25	146	12	0	6	149	49	0	1016	3688
8:15 AM	15	243	32	0	44	193	31	1	26	170	9	0	11	166	52	0	993	4023
8:30 AM	29	252	33	0	59	234	38	1	32	159	8	0	16	175	53	0	1089	4247
8:45 AM	25	199	26	0	40	185	34	1	32	151	13	0	21	199	50	0	976	4074

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	88	1272	60	0	168	824	144	8	124	776	40	0	40	740	312	0	4596
Heavy Trucks	0	4	0		0	24	8		0	0	0		0	0	4		40
Pedestrians		16				8				4				12			40
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/5/2014 1:26 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

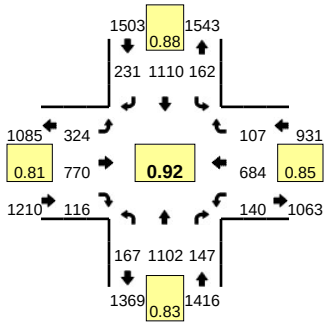
Type of peak hour being reported: Intersection Peak

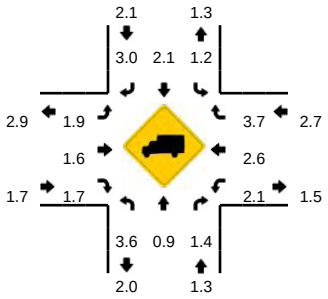
Method for determining peak hour: Total Entering Volume

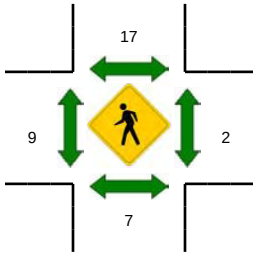
LOCATION: Madrona Ave -- Torrance Blvd
CITY/STATE: Torrance, CA

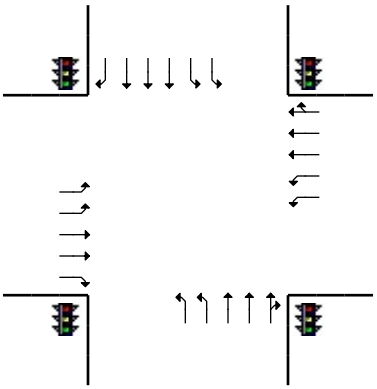
QC JOB #: 12003675
DATE: Thu, Jan 09 2014

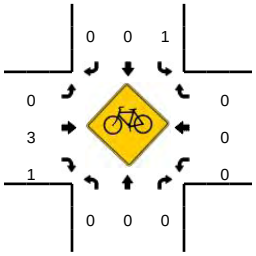
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

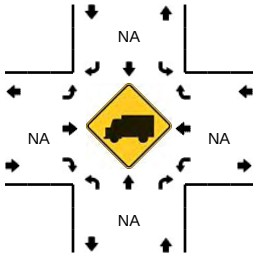


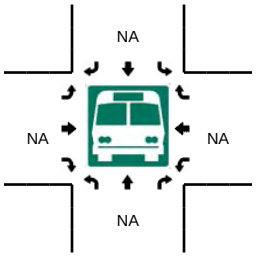












5-Min Count Period Beginning At	Madrona Ave (Northbound)				Madrona Ave (Southbound)				Torrance Blvd (Eastbound)				Torrance Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	58	3	0	4	37	12	1	12	29	3	1	3	27	5	0	198	
7:05 AM	5	48	1	0	4	39	8	1	19	26	4	0	4	30	6	0	195	
7:10 AM	11	67	1	0	3	47	6	0	9	47	4	0	5	66	6	0	272	
7:15 AM	7	66	4	0	6	50	14	1	21	38	8	0	1	39	5	0	260	
7:20 AM	14	83	2	0	9	53	13	0	14	41	3	0	0	46	7	0	285	
7:25 AM	12	54	1	0	13	45	18	1	16	21	4	0	6	43	5	0	239	
7:30 AM	10	92	9	0	6	64	16	0	9	62	4	0	5	75	4	0	356	
7:35 AM	14	78	9	0	4	82	23	1	24	67	8	0	13	79	5	0	407	
7:40 AM	13	73	5	0	9	56	9	0	17	70	4	0	9	87	4	0	356	
7:45 AM	17	108	15	1	14	115	28	0	23	31	11	1	10	61	7	0	442	
7:50 AM	18	101	15	0	6	68	10	0	36	86	11	0	6	88	10	0	455	
7:55 AM	13	111	26	1	9	118	26	1	34	61	16	1	16	37	3	0	473	3938
8:00 AM	16	85	25	1	10	59	14	2	33	89	11	0	13	57	7	0	422	4162
8:05 AM	7	108	18	0	13	117	13	2	30	66	11	0	11	69	15	0	480	4447
8:10 AM	18	83	6	0	11	70	15	2	27	82	7	0	8	53	8	0	390	4565
8:15 AM	9	95	14	0	15	102	17	1	26	24	6	0	19	42	9	0	379	4684
8:20 AM	18	95	3	0	14	76	11	2	22	72	9	0	11	59	5	0	397	4796
8:25 AM	8	77	5	0	18	108	28	2	20	59	8	1	12	23	7	0	376	4933
8:30 AM	14	87	6	0	10	90	20	2	22	57	10	1	11	53	9	0	392	4969
8:35 AM	15	58	8	0	14	106	28	2	29	72	8	1	17	67	17	0	442	5004
8:40 AM	11	94	6	0	12	81	21	0	16	71	8	1	6	75	10	0	412	5060
8:45 AM	18	92	5	0	13	114	27	1	21	49	11	1	20	44	9	0	425	5043
8:50 AM	14	95	8	0	8	64	16	1	22	61	10	0	11	75	12	0	397	4985
8:55 AM	13	50	8	0	16	89	29	3	26	42	7	0	16	31	5	0	335	4847

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	144	1216	276	8	128	1176	212	20	388	864	152	4	160	652	100	0	5500
Heavy Trucks	4	28	0		8	12	20		4	8	4		4	16	8		116
Pedestrians		16				16				12				8			52
Bicycles	0	0	0		1	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

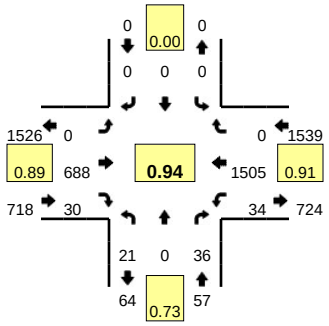
Type of peak hour being reported: Intersection Peak

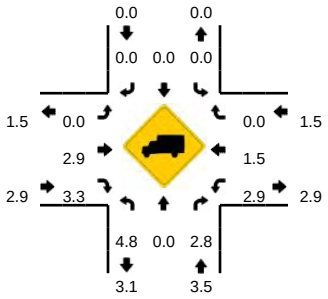
Method for determining peak hour: Total Entering Volume

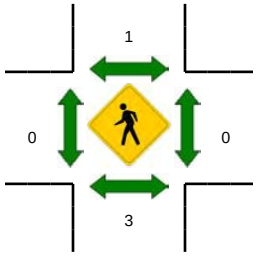
LOCATION: Project Dwy -- Lomita Blvd
CITY/STATE: Torrance, CA

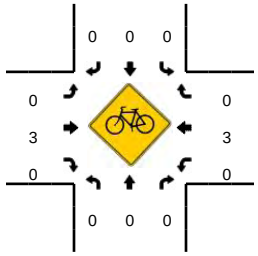
QC JOB #: 12003673
DATE: Thu, Jan 09 2014

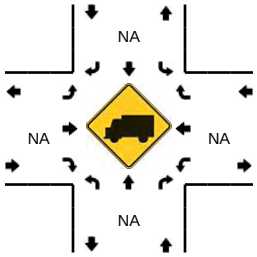
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 8:20 AM -- 8:35 AM

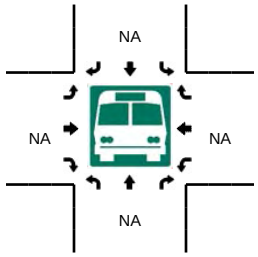












5-Min Count Period Beginning At	Project Dwy (Northbound)				Project Dwy (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	0	2	0	0	0	0	0	0	31	0	0	0	104	0	0	140	
7:05 AM	0	0	1	0	0	0	0	0	0	34	2	0	0	101	0	0	138	
7:10 AM	2	0	5	0	0	0	0	0	0	22	5	0	0	84	0	0	118	
7:15 AM	0	0	0	0	0	0	0	0	0	38	1	0	1	80	0	0	120	
7:20 AM	3	0	1	0	0	0	0	0	0	28	3	0	1	117	0	0	153	
7:25 AM	0	0	1	0	0	0	0	0	0	17	1	0	2	105	0	0	126	
7:30 AM	0	0	0	0	0	0	0	0	0	47	2	0	0	150	0	0	199	
7:35 AM	3	0	3	0	0	0	0	0	0	52	1	0	1	122	0	0	182	
7:40 AM	0	0	3	0	0	0	0	0	0	66	4	0	4	147	0	0	224	
7:45 AM	0	0	3	0	0	0	0	0	0	34	2	0	2	110	0	0	151	
7:50 AM	1	0	4	0	0	0	0	0	0	48	4	0	4	144	0	0	205	
7:55 AM	2	0	1	0	0	0	0	0	0	49	2	0	2	120	0	0	176	1932
8:00 AM	2	0	7	0	0	0	0	0	0	63	1	0	2	154	0	0	229	2021
8:05 AM	2	0	5	0	0	0	0	0	0	58	6	0	6	105	0	0	182	2065
8:10 AM	1	0	3	0	0	0	0	0	0	61	3	0	2	97	0	0	167	2114
8:15 AM	2	0	3	0	0	0	0	0	0	51	3	0	1	110	0	0	170	2164
8:20 AM	2	0	3	0	0	0	0	0	0	67	3	0	0	146	0	0	221	2232
8:25 AM	0	0	3	0	0	0	0	0	0	73	1	0	2	118	0	0	197	2303
8:30 AM	2	0	1	0	0	0	0	0	0	54	4	0	6	133	0	0	200	2304
8:35 AM	2	0	2	0	0	0	0	0	0	43	1	0	3	132	0	0	183	2305
8:40 AM	3	0	3	0	0	0	0	0	0	43	1	0	3	136	0	0	189	2270
8:45 AM	2	0	1	0	0	0	0	0	0	78	1	0	3	110	0	0	195	2314
8:50 AM	3	0	3	0	0	0	0	0	0	53	1	0	3	105	0	0	168	2277
8:55 AM	0	0	2	0	0	0	0	0	0	47	1	0	4	117	0	0	171	2272

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	28	0	0	0	0	0	0	776	32	0	32	1588	0	0	2472
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	24	0		44
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

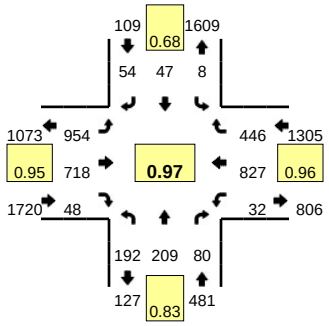
Type of peak hour being reported: Intersection Peak

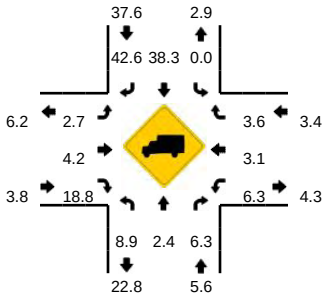
Method for determining peak hour: Total Entering Volume

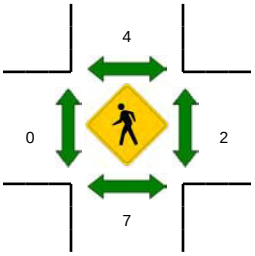
LOCATION: Figueroa St -- Pacific Coast Hwy
CITY/STATE: Los Angeles, CA

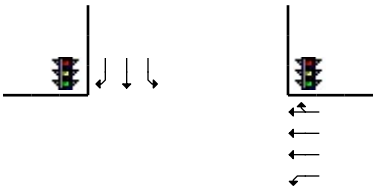
QC JOB #: 12003671
DATE: Thu, Jan 09 2014

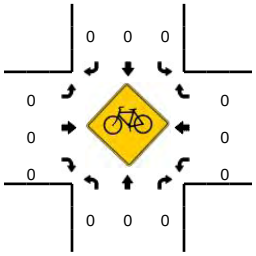
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

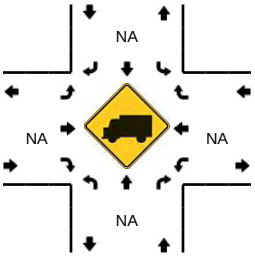


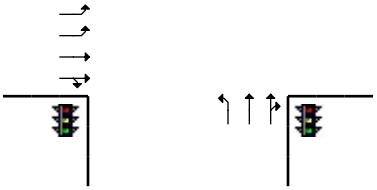


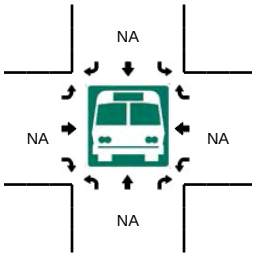












5-Min Count Period Beginning At	Figueroa St (Northbound)				Figueroa St (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	8	16	1	0	0	0	2	0	82	39	2	0	0	55	26	0	231	
7:05 AM	9	16	4	0	2	8	1	0	61	43	4	0	1	48	45	0	242	
7:10 AM	16	14	6	0	0	1	1	0	96	44	5	0	4	54	43	0	284	
7:15 AM	21	19	4	0	0	4	7	0	74	49	7	0	2	60	35	0	282	
7:20 AM	12	15	1	0	0	0	4	0	66	61	8	0	1	72	42	0	282	
7:25 AM	8	12	1	0	0	2	4	0	75	75	4	0	1	76	46	0	304	
7:30 AM	18	15	6	0	1	4	11	0	87	51	2	0	0	81	42	0	318	
7:35 AM	14	15	8	0	0	3	7	0	76	53	4	0	1	59	34	0	274	
7:40 AM	11	19	1	0	1	9	9	0	84	59	5	0	2	66	43	0	309	
7:45 AM	32	28	8	0	2	6	6	0	70	51	0	0	5	62	38	0	308	
7:50 AM	13	11	9	0	0	3	0	0	70	82	2	0	6	80	38	0	314	
7:55 AM	8	17	5	0	1	4	2	0	74	71	4	0	4	75	33	0	298	3446
8:00 AM	17	19	15	0	2	5	2	0	87	57	7	0	4	50	30	0	295	3510
8:05 AM	20	22	12	0	0	5	1	0	91	52	6	0	3	71	33	0	316	3584
8:10 AM	23	17	9	0	0	3	3	0	85	52	4	0	2	50	32	0	280	3580
8:15 AM	16	19	5	0	1	3	5	0	89	54	2	0	3	85	35	0	317	3615
8:20 AM	12	15	7	0	2	3	5	0	69	49	0	0	1	74	42	0	279	3612
8:25 AM	16	19	10	0	3	3	7	0	75	52	6	0	1	74	37	0	303	3611
8:30 AM	15	14	2	0	2	4	3	0	80	54	4	0	1	55	36	0	270	3563
8:35 AM	10	15	5	0	1	9	5	0	70	49	2	0	3	48	29	0	246	3535
8:40 AM	19	22	6	0	0	2	0	0	87	53	4	0	2	60	26	0	281	3507
8:45 AM	15	20	8	0	1	4	4	0	67	49	4	0	1	43	22	0	238	3437
8:50 AM	14	13	10	0	0	0	1	0	76	64	6	0	2	76	38	0	300	3423
8:55 AM	12	18	7	0	3	6	1	0	58	52	2	0	1	35	15	0	210	3335

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	224	232	72	0	12	72	60	0	896	768	28	0	52	832	476	0	3724
Heavy Trucks	16	8	8		0	28	36		20	52	4		4	20	24		220
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

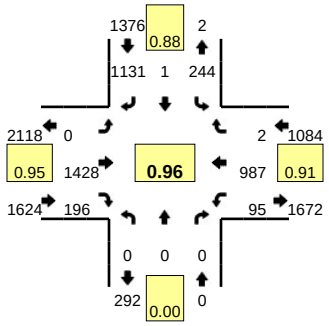
Type of peak hour being reported: Intersection Peak

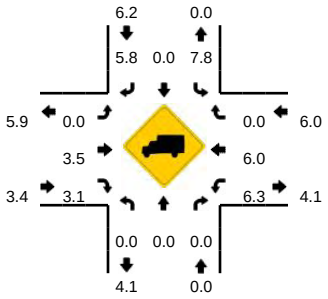
Method for determining peak hour: Total Entering Volume

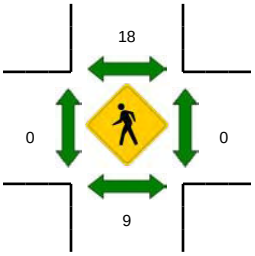
LOCATION: W Pacific Coast Hwy -- I-110 SB
CITY/STATE: Los Angeles, CA

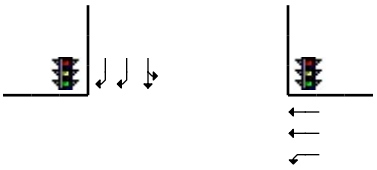
QC JOB #: 12003669
DATE: Thu, Jan 09 2014

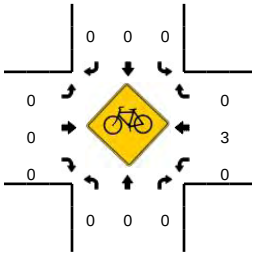
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

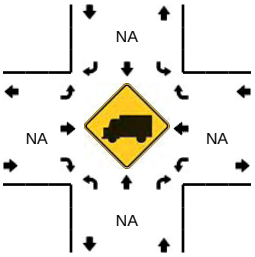


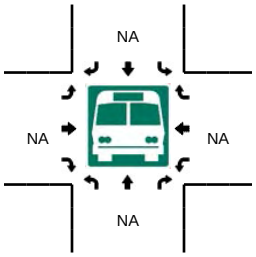












5-Min Count Period Beginning At	W Pacific Coast Hwy (Northbound)				W Pacific Coast Hwy (Southbound)				I-110 SB (Eastbound)				I-110 SB (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	20	0	88	0	0	102	10	0	7	64	0	0	291	
7:05 AM	0	0	0	0	20	0	75	0	0	85	13	0	5	59	0	0	257	
7:10 AM	0	0	0	0	11	0	68	0	0	127	12	0	9	76	5	0	308	
7:15 AM	0	0	0	0	22	1	99	0	0	116	17	0	9	78	0	0	342	
7:20 AM	0	0	0	0	30	0	105	0	0	120	19	0	7	70	0	0	351	
7:25 AM	0	0	0	0	28	0	93	0	0	110	6	0	6	72	0	0	315	
7:30 AM	0	0	0	0	23	0	82	0	0	104	21	0	8	89	0	0	327	
7:35 AM	0	0	0	0	14	0	77	0	0	109	21	0	17	75	0	0	313	
7:40 AM	0	0	0	0	12	0	99	0	0	134	19	0	6	98	0	0	368	
7:45 AM	0	0	0	0	14	0	92	0	0	99	18	0	11	93	0	0	327	
7:50 AM	0	0	0	0	32	0	113	0	0	129	22	0	8	67	0	0	371	
7:55 AM	0	0	0	0	28	0	114	0	0	122	11	0	6	73	0	0	354	3924
8:00 AM	0	0	0	0	13	0	79	0	0	115	4	0	9	80	2	0	302	3935
8:05 AM	0	0	0	0	7	0	82	0	0	144	21	0	6	102	0	0	362	4040
8:10 AM	0	0	0	0	21	0	96	0	0	126	17	0	2	90	0	0	352	4084
8:15 AM	0	0	0	0	11	0	87	0	0	122	11	0	12	82	0	0	325	4067
8:20 AM	0	0	0	0	11	0	108	0	0	109	16	0	7	62	0	0	313	4029
8:25 AM	0	0	0	0	26	0	93	0	0	91	8	0	6	82	0	0	306	4020
8:30 AM	0	0	0	0	24	0	90	0	0	93	12	0	8	73	0	0	300	3993
8:35 AM	0	0	0	0	21	0	77	0	0	100	17	0	10	63	0	0	288	3968
8:40 AM	0	0	0	0	20	1	78	0	0	123	15	0	12	89	0	0	338	3938
8:45 AM	0	0	0	0	10	1	81	0	0	116	12	0	9	60	0	0	289	3900
8:50 AM	0	0	0	0	20	0	104	0	0	113	7	0	10	60	0	0	314	3843
8:55 AM	0	0	0	0	22	1	86	0	0	93	12	0	10	55	0	0	279	3768

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	232	0	1216	0	0	1448	236	0	100	1032	0	0	4264
Heavy Trucks	0	0	0		32	0	60		0	72	4		8	68	0		244
Pedestrians		16				20				0				0			36
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

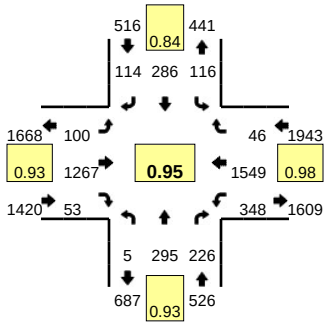
LOCATION: S Vermont Ave -- Pacific Coast Hwy

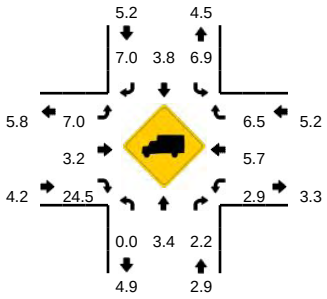
CITY/STATE: Los Angeles, CA

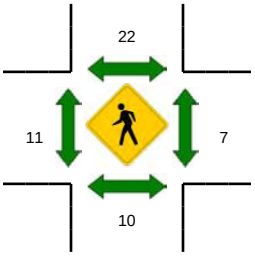
QC JOB #: 12003667

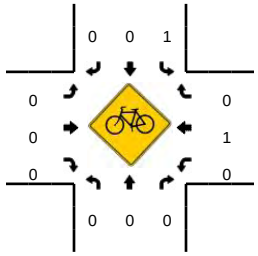
DATE: Thu, Jan 09 2014

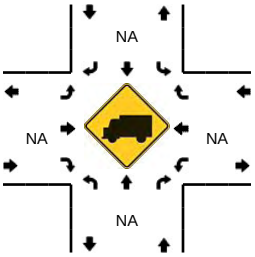
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

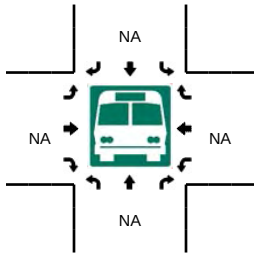












5-Min Count Period Beginning At	S Vermont Ave (Northbound)				S Vermont Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	17	20	0	5	18	6	0	11	75	2	0	19	117	1	0	291	
7:05 AM	2	11	20	0	9	14	7	0	11	65	2	0	20	93	4	0	258	
7:10 AM	0	18	16	0	4	17	10	0	5	133	3	0	30	121	1	0	358	
7:15 AM	1	13	15	0	4	14	4	0	8	106	6	0	22	129	1	0	323	
7:20 AM	1	17	12	0	10	31	12	0	6	90	3	0	31	118	2	0	333	
7:25 AM	3	19	20	0	5	21	5	0	7	94	2	0	27	149	1	0	353	
7:30 AM	0	17	12	0	16	20	9	0	6	98	2	0	31	134	1	0	346	
7:35 AM	0	15	30	0	9	24	15	0	6	85	7	0	23	129	4	0	347	
7:40 AM	0	32	19	0	8	28	11	0	16	115	3	0	21	120	0	0	373	
7:45 AM	0	19	10	0	11	36	12	0	5	86	2	0	38	125	6	0	350	
7:50 AM	0	31	27	0	8	35	4	0	6	136	6	0	35	125	5	0	418	
7:55 AM	0	32	10	0	13	13	6	0	4	137	3	0	29	134	5	0	386	4136
8:00 AM	0	25	18	0	8	18	8	0	4	84	7	0	32	130	2	0	336	4181
8:05 AM	1	24	22	0	7	15	6	0	13	115	5	0	30	132	2	0	372	4295
8:10 AM	1	13	25	0	11	28	11	0	8	107	6	0	29	135	4	0	378	4315
8:15 AM	0	31	13	0	6	27	13	0	12	110	3	0	24	122	7	0	368	4360
8:20 AM	0	27	22	0	9	22	8	0	10	101	5	0	30	133	6	0	373	4400
8:25 AM	3	29	18	0	10	20	11	0	10	93	4	0	26	130	4	0	358	4405
8:30 AM	1	22	12	0	9	17	9	0	3	100	6	0	23	137	3	0	342	4401
8:35 AM	3	18	18	0	9	13	4	0	9	87	4	0	22	115	3	0	305	4359
8:40 AM	1	18	19	0	6	18	12	0	7	112	3	0	31	100	2	0	329	4315
8:45 AM	0	28	19	0	10	15	6	0	7	108	8	0	24	104	4	0	333	4298
8:50 AM	2	15	11	0	12	31	13	0	10	73	8	0	27	117	8	0	327	4207
8:55 AM	4	23	19	0	7	26	10	0	6	98	8	0	21	112	2	0	336	4157

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	328	188	0	128	336	88	0	60	1436	44	0	408	1536	64	0	4616
Heavy Trucks	0	16	4		4	12	12		0	56	12		12	72	8		208
Pedestrians		16				24				8				12			60
Bicycles	0	0	0		1	0	0		0	0	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

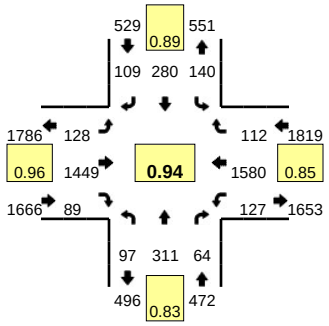
Type of peak hour being reported: Intersection Peak

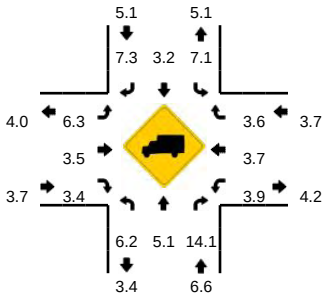
Method for determining peak hour: Total Entering Volume

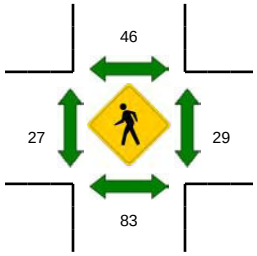
LOCATION: Normandie Ave -- Pacific Coast Hwy
CITY/STATE: Los Angeles, CA

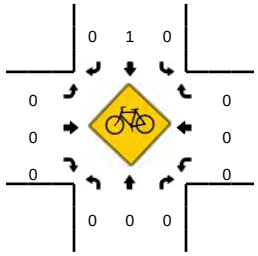
QC JOB #: 12003665
DATE: Thu, Jan 23 2014

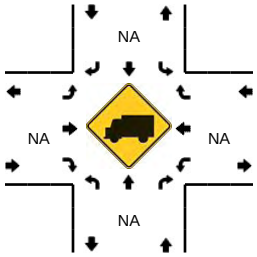
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

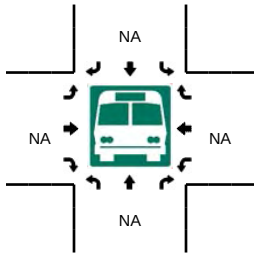












5-Min Count Period Beginning At	Normandie Ave (Northbound)				Normandie Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	7	20	4	0	11	6	3	0	10	91	3	0	9	135	14	0	313	
7:05 AM	5	13	9	0	8	17	9	0	8	104	3	0	6	132	8	0	322	
7:10 AM	2	25	3	0	12	19	6	0	10	114	7	0	10	97	6	0	311	
7:15 AM	10	8	6	0	4	11	6	0	17	99	7	0	16	96	7	0	287	
7:20 AM	5	15	4	0	8	17	7	0	11	122	7	0	8	131	11	0	346	
7:25 AM	4	19	8	0	10	27	3	0	8	105	5	0	14	116	11	0	330	
7:30 AM	4	20	5	0	16	23	13	0	9	139	8	0	10	152	13	0	412	
7:35 AM	12	27	5	0	6	17	13	0	12	112	9	0	9	161	6	0	389	
7:40 AM	12	17	5	0	12	31	7	0	11	107	7	0	7	165	8	0	389	
7:45 AM	11	30	3	0	9	19	13	0	11	117	14	0	7	165	12	0	411	
7:50 AM	4	29	3	0	9	38	9	0	13	134	8	0	15	124	13	0	399	
7:55 AM	7	29	4	0	7	28	7	0	6	131	3	0	6	118	12	0	358	4267
8:00 AM	12	35	1	0	22	20	11	0	15	119	3	0	12	94	10	0	354	4308
8:05 AM	10	30	11	0	20	25	7	0	13	112	11	0	16	113	2	0	370	4356
8:10 AM	10	35	6	0	11	17	9	0	10	132	7	0	14	114	9	0	374	4419
8:15 AM	6	25	9	0	10	18	10	0	9	119	7	0	9	127	5	0	354	4486
8:20 AM	8	30	5	0	10	20	8	0	9	125	10	0	6	98	6	0	335	4475
8:25 AM	6	22	5	0	14	18	12	0	6	118	10	0	12	101	1	0	325	4470
8:30 AM	8	23	2	0	11	15	2	0	11	97	9	0	18	106	4	0	306	4364
8:35 AM	12	18	11	0	3	14	7	0	4	106	6	0	8	99	5	0	293	4268
8:40 AM	11	19	4	0	10	25	2	0	14	108	9	0	14	121	7	0	344	4223
8:45 AM	8	16	6	0	18	8	6	0	6	88	4	0	13	96	8	0	277	4089
8:50 AM	5	21	9	0	3	20	10	0	2	72	4	0	10	130	10	0	296	3986
8:55 AM	7	12	6	0	8	14	2	0	4	93	4	0	9	91	6	0	256	3884

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	304	44	0	120	352	116	0	140	1432	116	0	116	1816	132	0	4796
Heavy Trucks	4	12	8		4	12	4		4	72	4		16	56	0		196
Pedestrians		104				56				32				20			212
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

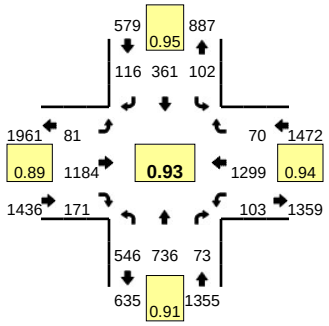
LOCATION: S Western Ave -- Pacific Coast Hwy

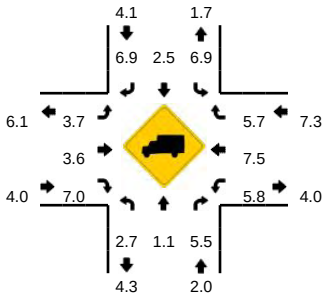
CITY/STATE: Los Angeles, CA

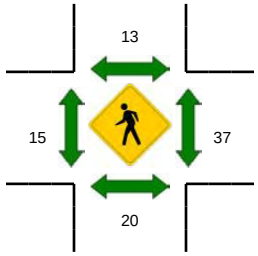
QC JOB #: 12003663

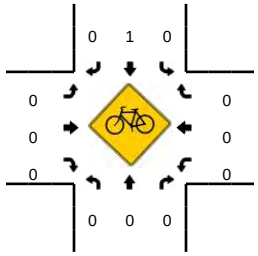
DATE: Thu, Jan 09 2014

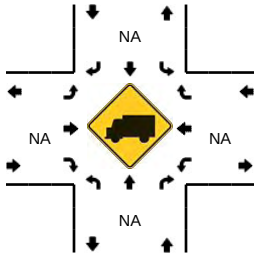
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 8:10 AM -- 8:25 AM

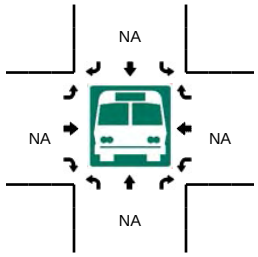












5-Min Count Period Beginning At	S Western Ave (Northbound)				S Western Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	28	22	3	0	4	9	5	0	7	66	10	0	5	106	3	0	268	
7:05 AM	37	51	5	0	8	12	2	0	3	93	10	0	6	81	7	0	315	
7:10 AM	21	55	9	0	6	25	2	0	14	76	10	0	5	92	7	0	322	
7:15 AM	28	44	5	0	0	15	3	0	3	96	8	0	7	100	1	0	310	
7:20 AM	34	43	4	0	3	21	8	0	4	90	15	0	2	141	6	0	371	
7:25 AM	56	56	3	0	10	31	3	0	1	79	13	0	8	124	2	0	386	
7:30 AM	47	59	8	0	8	27	12	0	7	55	14	0	5	101	11	0	354	
7:35 AM	42	45	6	0	6	27	12	0	7	101	16	0	7	121	7	0	397	
7:40 AM	47	60	7	0	9	40	15	0	7	78	12	0	5	113	4	0	397	
7:45 AM	54	61	6	0	10	24	8	0	10	105	14	0	16	105	8	0	421	
7:50 AM	53	65	4	0	8	40	7	0	6	89	17	0	4	114	6	0	413	
7:55 AM	39	55	3	0	10	14	9	0	8	112	16	0	11	85	7	0	369	4323
8:00 AM	41	47	5	0	11	35	8	0	5	83	11	0	11	106	4	0	367	4422
8:05 AM	48	67	7	0	6	30	7	0	2	97	12	0	6	117	9	0	408	4515
8:10 AM	44	67	6	0	5	39	7	0	8	131	17	0	8	105	1	0	438	4631
8:15 AM	52	70	11	0	11	29	10	0	6	109	14	0	14	108	9	0	443	4764
8:20 AM	46	74	5	0	10	33	12	0	4	111	14	0	11	104	3	0	427	4820
8:25 AM	40	74	6	0	6	23	5	0	10	70	12	0	3	95	5	0	349	4783
8:30 AM	40	51	7	0	10	27	16	0	8	98	16	0	7	126	7	0	413	4842
8:35 AM	41	59	1	0	10	36	8	0	8	61	15	0	7	102	12	0	360	4805
8:40 AM	41	44	15	0	8	26	14	0	9	120	13	0	10	85	10	0	395	4803
8:45 AM	41	72	5	0	10	24	6	0	4	102	18	0	3	91	9	0	385	4767
8:50 AM	44	62	9	0	8	37	12	0	7	103	24	0	7	94	7	0	414	4768
8:55 AM	39	50	6	0	13	31	17	0	16	111	17	0	8	99	11	0	418	4817

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	568	844	88	0	104	404	116	0	72	1404	180	0	132	1268	52	0	5232
Heavy Trucks	12	12	0		4	0	8		8	32	4		8	96	4		188
Pedestrians		16				24				4				28			72
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

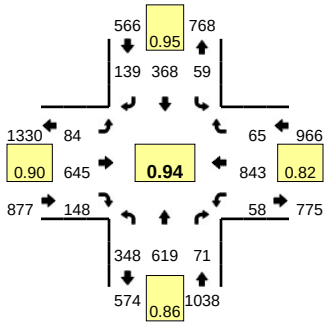
Type of peak hour being reported: Intersection Peak

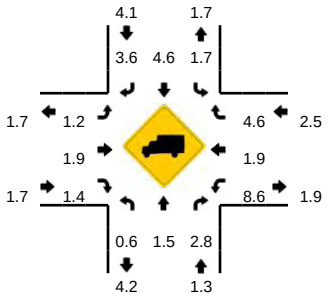
Method for determining peak hour: Total Entering Volume

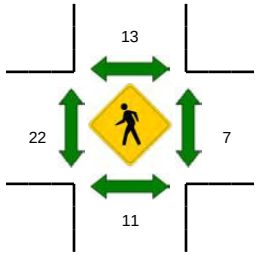
LOCATION: S Western Ave -- Lomita Blvd
CITY/STATE: Los Angeles, CA

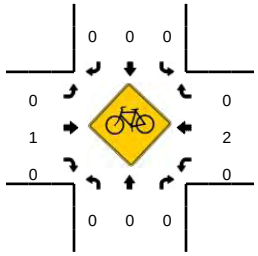
QC JOB #: 12003661
DATE: Thu, Jan 09 2014

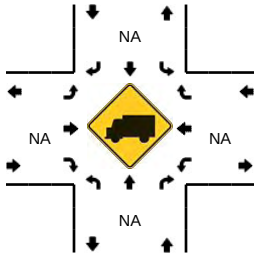
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

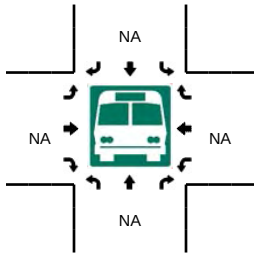












5-Min Count Period Beginning At	S Western Ave (Northbound)				S Western Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	8	28	8	0	8	13	10	0	7	36	5	0	2	77	2	0	204	
7:05 AM	16	55	1	0	2	15	9	0	8	37	8	0	2	51	4	0	208	
7:10 AM	18	40	6	0	6	21	15	0	10	46	6	0	2	63	2	0	235	
7:15 AM	22	39	7	0	3	19	9	0	9	30	9	0	0	66	5	0	218	
7:20 AM	16	51	4	0	1	25	5	0	5	56	9	0	3	100	9	0	284	
7:25 AM	27	60	3	0	6	30	8	0	10	32	8	0	1	51	5	0	241	
7:30 AM	15	35	9	0	9	13	9	0	5	62	10	0	3	98	3	0	271	
7:35 AM	39	52	4	0	7	36	16	0	6	44	14	0	3	71	5	0	297	
7:40 AM	23	52	7	0	3	31	11	0	5	62	10	0	7	102	5	0	318	
7:45 AM	34	47	6	0	1	28	8	0	9	64	13	0	5	85	6	0	306	
7:50 AM	35	40	4	0	2	26	7	0	7	66	12	0	4	84	6	0	293	
7:55 AM	37	56	9	0	2	34	15	0	6	49	7	0	0	52	9	0	276	3151
8:00 AM	23	39	3	0	6	20	7	0	3	48	16	0	4	54	2	0	225	3172
8:05 AM	19	53	5	0	7	39	13	0	6	55	9	0	8	41	2	0	257	3221
8:10 AM	27	54	9	0	4	27	11	0	5	68	17	0	2	70	8	0	302	3288
8:15 AM	32	76	10	0	9	31	10	0	8	36	11	0	6	57	3	0	289	3359
8:20 AM	18	57	5	0	5	34	18	0	9	60	12	0	7	75	10	0	310	3385
8:25 AM	38	64	5	0	4	29	10	0	10	33	15	0	6	77	4	0	295	3439
8:30 AM	23	29	4	0	9	33	13	0	10	60	12	0	6	75	5	0	279	3447
8:35 AM	28	59	8	0	2	26	14	0	10	48	20	0	13	60	6	0	294	3444
8:40 AM	18	61	9	0	8	38	8	0	13	51	10	0	5	63	10	0	294	3420
8:45 AM	23	51	8	0	7	22	9	0	10	35	13	0	4	80	9	0	271	3385
8:50 AM	17	68	8	0	4	35	16	0	13	67	21	0	5	79	4	0	337	3429
8:55 AM	21	60	6	0	6	44	11	0	10	43	12	0	6	70	4	0	293	3446

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	384	604	68	0	44	380	140	0	80	680	148	0	60	1032	64	0	3684
Heavy Trucks	0	4	4		0	32	0		0	4	8		12	20	4		88
Pedestrians		8				12				20				8			48
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

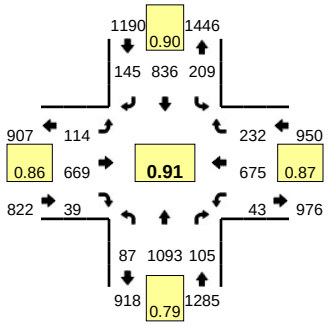
Type of peak hour being reported: Intersection Peak

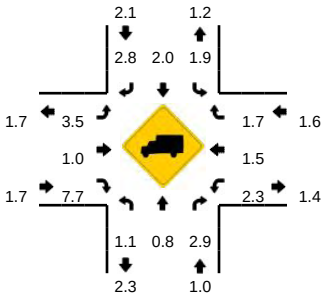
Method for determining peak hour: Total Entering Volume

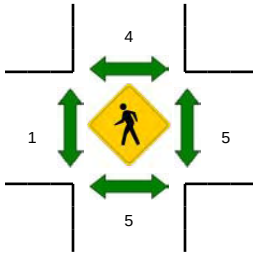
LOCATION: S Western Ave -- Sepulveda Blvd
CITY/STATE: Los Angeles, CA

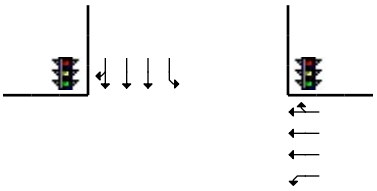
QC JOB #: 12003659
DATE: Thu, Jan 09 2014

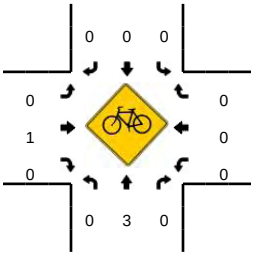
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

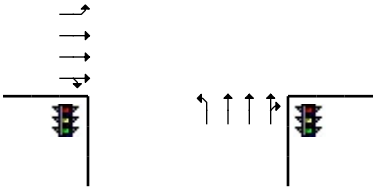


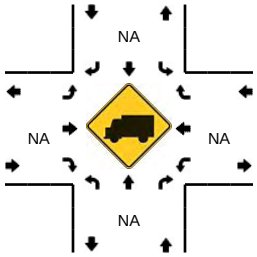


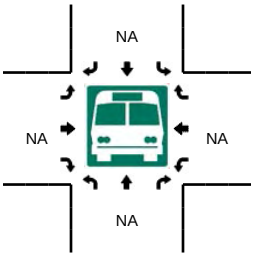












5-Min Count Period Beginning At	S Western Ave (Northbound)				S Western Ave (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	46	3	0	2	25	7	1	3	17	3	0	1	22	6	0	138	
7:05 AM	2	28	4	0	7	21	4	0	9	28	0	0	3	50	20	0	176	
7:10 AM	2	51	3	0	10	36	11	0	5	16	0	0	2	27	17	0	180	
7:15 AM	3	51	9	0	18	29	3	0	7	24	1	0	1	32	18	0	196	
7:20 AM	3	73	5	0	13	49	6	0	8	29	0	0	2	30	21	0	239	
7:25 AM	4	43	4	0	8	27	7	0	4	38	4	0	1	62	21	0	223	
7:30 AM	6	94	3	0	9	51	9	1	3	19	0	0	1	44	14	0	254	
7:35 AM	5	73	7	0	14	57	9	0	8	41	0	0	2	70	19	0	305	
7:40 AM	11	93	7	0	15	66	9	0	3	23	1	0	5	53	20	0	306	
7:45 AM	5	83	2	0	10	48	8	0	15	74	3	0	3	76	30	0	357	
7:50 AM	11	131	6	0	24	103	15	0	7	51	4	0	5	55	24	0	436	
7:55 AM	6	104	7	0	8	55	13	2	9	69	3	0	2	54	24	0	356	3166
8:00 AM	8	126	8	0	18	72	15	2	3	41	3	0	1	56	17	0	370	3398
8:05 AM	5	63	9	0	15	59	11	1	15	65	4	0	3	66	21	0	337	3559
8:10 AM	8	91	8	0	24	72	14	0	7	40	5	0	2	27	11	0	309	3688
8:15 AM	5	69	7	0	17	51	8	0	14	85	3	0	4	63	24	0	350	3842
8:20 AM	7	95	13	0	17	81	14	0	6	26	3	0	0	31	12	0	305	3908
8:25 AM	3	79	12	0	10	61	9	1	6	59	3	0	7	72	16	0	338	4023
8:30 AM	14	101	10	0	23	93	12	1	11	58	2	0	2	45	11	0	383	4152
8:35 AM	6	50	9	0	12	51	15	0	14	59	2	0	10	76	27	0	331	4178
8:40 AM	9	101	14	0	24	90	11	0	7	42	4	0	4	54	15	0	375	4247
8:45 AM	7	59	9	0	9	53	9	0	14	56	5	0	5	78	19	0	323	4213
8:50 AM	14	92	8	0	20	81	16	1	12	43	4	0	4	49	16	0	360	4137
8:55 AM	4	48	9	0	11	51	9	0	6	52	4	0	12	72	15	0	293	4074

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	100	1444	84	0	200	920	172	16	76	644	40	0	32	660	260	0	4648
Heavy Trucks	0	16	0		4	28	8		4	0	0		0	20	8		88
Pedestrians		12				4				4				4			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

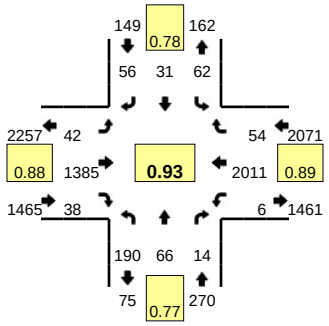
Type of peak hour being reported: Intersection Peak

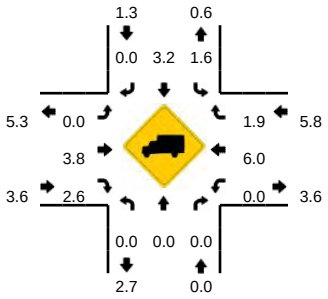
Method for determining peak hour: Total Entering Volume

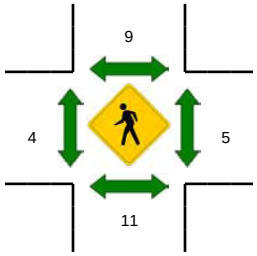
LOCATION: Eshelman Ave -- Pacific Coast Hwy
CITY/STATE: Lomita, CA

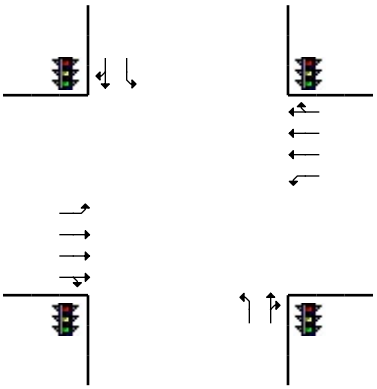
QC JOB #: 12003657
DATE: Thu, Jan 09 2014

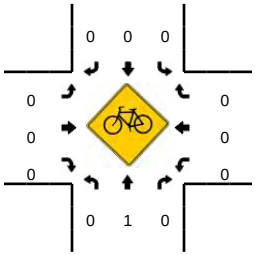
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

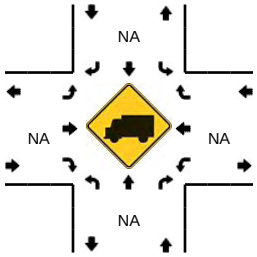


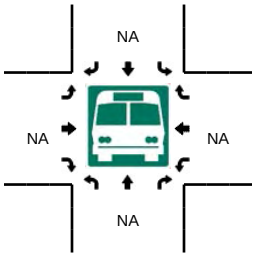












5-Min Count Period Beginning At	Eshelman Ave (Northbound)				Eshelman Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	15	3	2	0	2	2	7	0	2	63	2	0	0	117	4	0	219	
7:05 AM	8	3	0	0	2	4	4	0	1	106	0	0	0	131	2	0	261	
7:10 AM	8	0	1	0	2	2	1	0	3	104	1	0	0	147	2	0	271	
7:15 AM	10	2	2	0	0	0	1	0	2	99	3	0	0	119	3	0	241	
7:20 AM	12	4	3	0	2	1	5	0	4	89	1	0	1	150	4	0	276	
7:25 AM	11	7	3	0	3	0	5	0	1	78	3	0	0	149	3	0	263	
7:30 AM	12	2	0	0	5	4	2	0	7	118	1	0	0	207	8	0	366	
7:35 AM	28	12	0	0	9	2	6	0	2	110	4	0	1	153	9	0	336	
7:40 AM	24	8	5	0	6	5	6	0	6	98	3	0	0	194	9	0	364	
7:45 AM	11	2	0	0	7	2	5	0	5	107	3	0	0	132	3	0	277	
7:50 AM	10	0	1	0	4	2	4	0	2	120	3	0	0	219	8	0	373	
7:55 AM	9	6	1	0	11	2	5	0	9	102	4	0	1	129	3	0	282	3529
8:00 AM	8	10	0	0	4	2	2	0	0	119	2	0	0	171	2	0	320	3630
8:05 AM	17	4	2	0	5	2	5	0	2	110	3	0	0	157	2	0	309	3678
8:10 AM	17	6	3	0	3	1	5	0	1	161	4	0	2	157	3	0	363	3770
8:15 AM	23	3	1	0	4	3	5	0	0	133	7	0	0	161	0	0	340	3869
8:20 AM	16	4	0	0	2	1	5	0	5	122	3	0	0	158	4	0	320	3913
8:25 AM	15	9	1	0	2	5	6	0	3	85	1	0	2	173	3	0	305	3955
8:30 AM	17	3	1	0	1	1	6	0	2	119	9	0	0	141	1	0	301	3890
8:35 AM	18	5	1	0	2	1	4	0	0	112	2	0	1	179	6	0	331	3885
8:40 AM	8	3	0	0	3	1	3	0	0	128	4	0	1	151	1	0	303	3824
8:45 AM	14	6	3	0	2	2	9	0	4	124	4	0	1	132	1	0	302	3849
8:50 AM	12	5	1	0	8	1	5	0	1	133	5	0	1	127	3	0	302	3778
8:55 AM	7	6	0	0	5	4	6	0	1	128	6	0	1	179	3	0	346	3842

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	256	88	20	0	80	44	56	0	60	1304	32	0	4	2216	104	0	4264
Heavy Trucks	0	0	0		0	4	0		0	44	4		0	168	4		224
Pedestrians		12				4				0				4			20
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

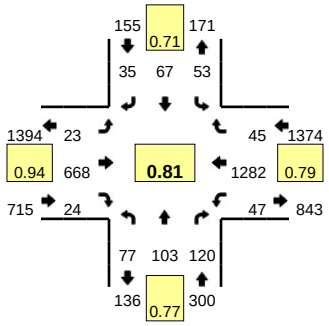
Type of peak hour being reported: Intersection Peak

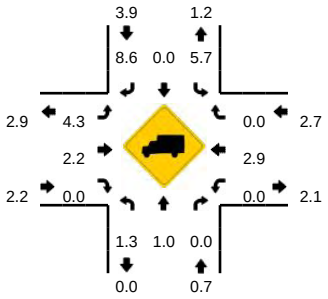
Method for determining peak hour: Total Entering Volume

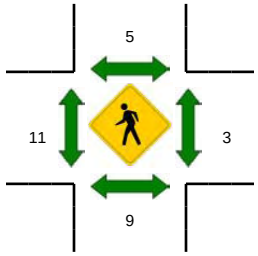
LOCATION: Eshelman Ave -- Lomita Blvd
CITY/STATE: Lomita, CA

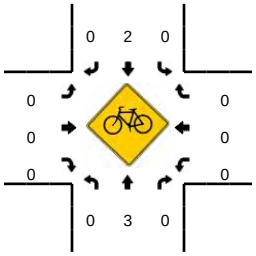
QC JOB #: 12003655
DATE: Thu, Jan 09 2014

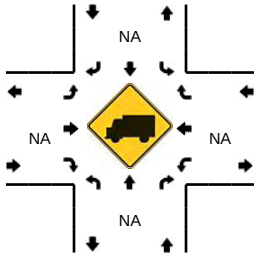
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

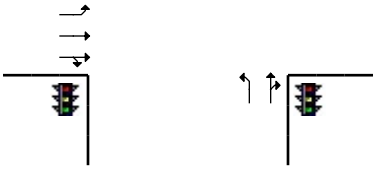


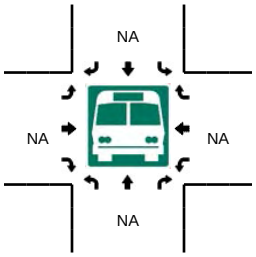












5-Min Count Period Beginning At	Eshelman Ave (Northbound)				Eshelman Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	7	4	3	0	3	2	5	0	0	31	1	0	2	77	2	0	137	
7:05 AM	6	3	10	0	2	0	1	0	1	45	3	0	2	66	2	0	141	
7:10 AM	5	6	3	0	0	3	2	0	0	34	0	0	1	76	5	0	135	
7:15 AM	3	4	13	0	6	1	4	0	1	39	4	0	9	93	2	0	179	
7:20 AM	4	1	11	0	3	3	4	0	2	42	1	0	5	107	3	0	186	
7:25 AM	3	5	8	0	1	8	1	0	1	43	2	0	8	79	4	0	163	
7:30 AM	7	10	13	0	3	4	2	0	0	51	0	0	13	92	2	0	197	
7:35 AM	9	10	16	0	7	10	2	0	1	45	2	0	8	129	4	0	243	
7:40 AM	11	15	6	0	5	11	7	0	0	77	2	0	4	140	5	0	283	
7:45 AM	7	11	15	0	4	6	4	0	2	65	2	0	4	134	5	0	259	
7:50 AM	7	12	15	0	2	7	1	0	2	45	4	0	2	110	7	0	214	
7:55 AM	6	6	7	0	5	5	5	0	4	57	0	0	4	100	2	1	202	2339
8:00 AM	4	13	8	0	6	6	3	0	0	59	0	0	2	74	3	1	179	2381
8:05 AM	5	7	13	0	4	0	2	0	5	54	2	0	2	86	4	0	184	2424
8:10 AM	8	4	9	0	2	7	1	0	1	54	3	0	0	85	2	0	176	2465
8:15 AM	2	6	6	0	2	3	2	0	2	60	4	0	2	96	5	0	190	2476
8:20 AM	6	3	7	0	5	7	3	0	1	48	3	0	3	98	2	0	186	2476
8:25 AM	5	6	5	0	8	1	3	0	5	53	2	0	1	138	4	0	231	2544
8:30 AM	6	5	9	0	7	5	2	0	1	69	0	0	0	90	3	0	197	2544
8:35 AM	7	4	6	0	6	1	5	0	4	57	1	0	4	116	3	0	214	2515
8:40 AM	5	7	7	0	12	5	5	0	5	41	2	0	0	84	5	0	178	2410
8:45 AM	5	5	5	0	5	5	6	0	4	62	4	0	3	93	4	0	201	2352
8:50 AM	7	3	7	0	5	5	2	0	2	69	5	0	2	118	2	0	227	2365
8:55 AM	7	4	4	0	7	3	1	0	4	40	1	0	4	82	3	0	160	2323

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	144	148	0	64	108	52	0	12	748	24	0	64	1612	56	0	3140
Heavy Trucks	4	0	0		4	0	0		0	12	0		0	28	0		48
Pedestrians		8				0				0				0			8
Bicycles	0	2	0		0	0	0		0	0	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

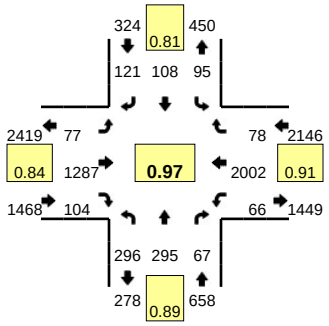
Type of peak hour being reported: Intersection Peak

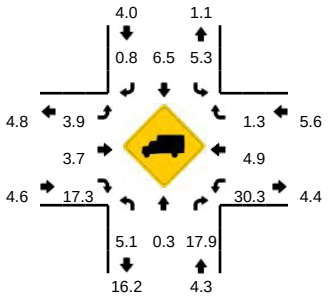
Method for determining peak hour: Total Entering Volume

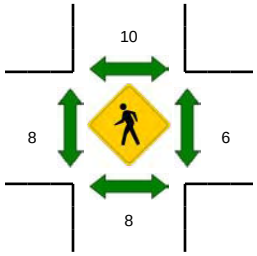
LOCATION: Narbonne Ave -- Pacific Coast Hwy
CITY/STATE: Lomita, CA

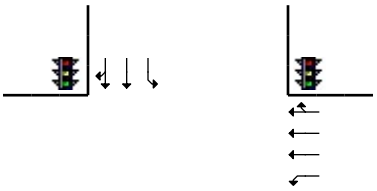
QC JOB #: 12003653
DATE: Thu, Jan 09 2014

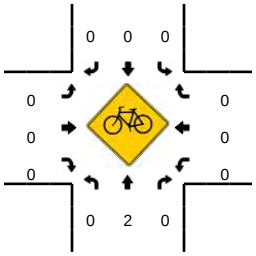
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

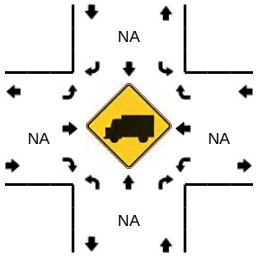


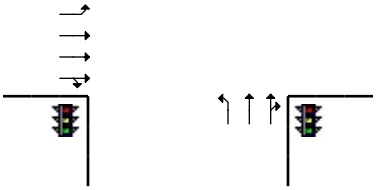


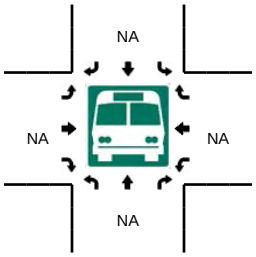












5-Min Count Period Beginning At	Narbonne Ave (Northbound)				Narbonne Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	12	8	6	0	3	10	3	0	0	64	2	0	5	123	4	0	240	
7:05 AM	11	7	9	0	5	3	4	0	0	94	5	0	2	148	8	0	296	
7:10 AM	18	11	9	0	3	8	4	0	4	83	7	0	5	111	8	0	271	
7:15 AM	18	16	3	0	8	3	2	0	2	93	8	0	3	144	5	0	305	
7:20 AM	21	19	10	0	7	4	9	0	3	76	5	0	3	143	10	0	310	
7:25 AM	25	13	6	0	3	3	8	0	1	81	9	0	6	175	4	0	334	
7:30 AM	23	15	3	0	7	5	5	0	4	101	8	0	1	170	2	0	344	
7:35 AM	27	22	2	0	9	8	12	0	0	89	9	0	3	202	5	0	388	
7:40 AM	27	20	10	0	7	8	12	0	9	94	9	0	3	183	2	0	384	
7:45 AM	34	38	2	0	4	9	14	0	0	92	9	0	6	190	7	0	405	
7:50 AM	21	24	5	0	10	14	8	0	5	116	7	0	4	171	8	0	393	
7:55 AM	29	25	6	0	6	9	10	0	7	84	6	0	6	184	12	0	384	4054
8:00 AM	31	26	4	0	7	9	5	0	7	95	6	0	4	112	2	0	308	4122
8:05 AM	17	22	9	0	9	2	6	0	6	146	6	0	5	169	11	0	408	4234
8:10 AM	20	18	3	0	5	6	11	0	6	107	6	0	4	155	4	0	345	4308
8:15 AM	21	12	5	0	6	4	10	0	10	158	15	0	8	174	6	0	429	4432
8:20 AM	31	23	7	0	13	11	9	0	3	78	12	0	5	155	7	0	354	4476
8:25 AM	17	36	6	0	7	8	7	0	9	107	9	0	11	184	5	0	406	4548
8:30 AM	31	30	6	0	12	13	13	0	6	80	10	0	5	148	6	0	360	4564
8:35 AM	17	21	4	0	9	15	16	0	9	130	9	0	5	177	8	0	420	4596
8:40 AM	23	16	5	0	6	8	9	0	5	101	8	0	5	171	4	0	361	4573
8:45 AM	24	21	3	0	9	7	9	0	8	139	6	0	5	131	7	0	369	4537
8:50 AM	19	21	8	0	13	11	16	0	9	110	16	0	2	153	6	0	384	4528
8:55 AM	18	37	8	0	8	10	10	0	10	95	7	0	5	139	11	0	358	4502

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	276	284	72	0	104	92	104	0	88	1372	144	0	96	2052	72	0	4756
Heavy Trucks	24	0	16		12	12	4		4	64	28		28	96	0		288
Pedestrians		8				4				8				4			24
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

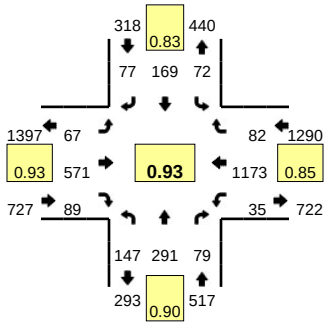
Type of peak hour being reported: Intersection Peak

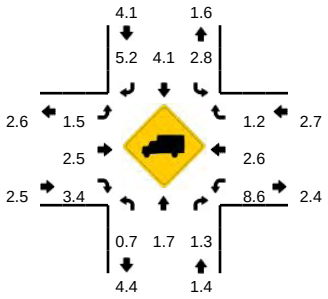
Method for determining peak hour: Total Entering Volume

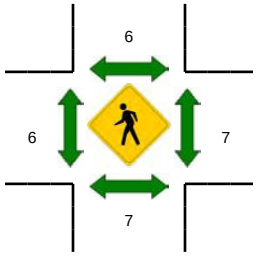
LOCATION: Narbonne Ave -- Lomita Blvd
CITY/STATE: Lomita, CA

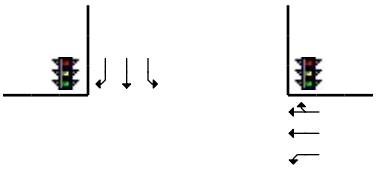
QC JOB #: 12003651
DATE: Thu, Jan 09 2014

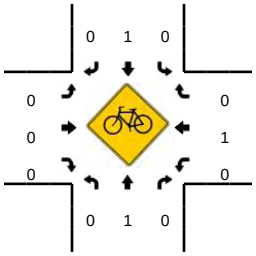
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 8:25 AM -- 8:40 AM

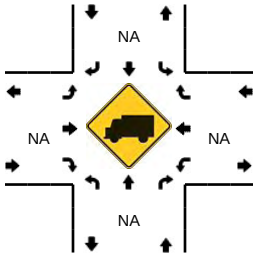


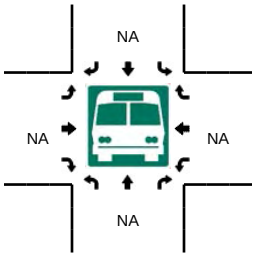












5-Min Count Period Beginning At	Narbonne Ave (Northbound)				Narbonne Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	9	10	5	0	1	4	4	0	3	31	3	0	1	86	1	0	158	
7:05 AM	6	8	6	0	5	4	7	0	2	30	1	0	7	84	5	0	165	
7:10 AM	9	10	3	0	0	5	10	0	3	32	2	0	3	68	1	0	146	
7:15 AM	13	13	6	0	4	5	3	0	1	35	2	0	3	89	3	0	177	
7:20 AM	9	25	6	0	3	4	4	0	5	35	7	0	4	88	5	0	195	
7:25 AM	24	26	3	0	4	10	4	0	4	32	4	0	1	94	5	0	211	
7:30 AM	11	17	8	0	5	11	10	0	7	42	4	0	2	98	3	0	218	
7:35 AM	17	23	5	0	6	7	2	0	2	34	4	0	2	110	7	0	219	
7:40 AM	17	24	2	0	2	14	3	0	5	42	2	0	3	105	10	0	229	
7:45 AM	7	31	10	0	4	11	6	0	5	57	5	0	3	126	2	0	267	
7:50 AM	24	20	7	0	7	7	5	0	3	36	7	0	7	115	13	0	251	
7:55 AM	12	31	3	0	7	20	8	0	9	47	6	0	2	90	11	0	246	2482
8:00 AM	9	26	7	0	3	17	5	0	4	50	8	0	0	94	10	0	233	2557
8:05 AM	11	22	8	0	13	6	4	0	4	46	8	0	2	70	8	0	202	2594
8:10 AM	10	27	4	0	4	17	5	0	6	42	5	0	1	81	2	0	204	2652
8:15 AM	5	18	8	0	4	6	10	0	7	54	5	0	7	92	5	0	221	2696
8:20 AM	20	19	3	0	7	16	5	0	7	45	14	0	0	90	5	0	231	2732
8:25 AM	8	25	5	0	5	22	9	0	6	39	14	0	3	83	9	0	228	2749
8:30 AM	15	16	13	0	6	14	4	0	5	66	8	0	2	128	1	0	278	2809
8:35 AM	9	32	9	0	10	19	13	0	6	47	7	0	5	99	6	0	262	2852
8:40 AM	16	29	3	0	8	25	8	0	3	35	8	0	3	80	3	0	221	2844
8:45 AM	7	21	0	0	4	13	9	0	11	52	6	0	8	81	10	0	222	2799
8:50 AM	15	17	6	0	10	16	8	0	4	67	4	0	6	98	7	0	258	2806
8:55 AM	16	21	9	0	4	23	7	0	6	37	7	0	3	89	7	0	229	2789

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	128	292	108	0	84	220	104	0	68	608	116	0	40	1240	64	0	3072
Heavy Trucks	0	8	0		4	12	8		0	28	0		8	40	0		108
Pedestrians		8				8				0				8			24
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

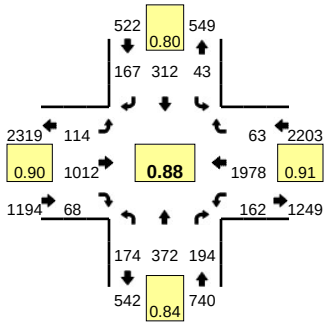
Type of peak hour being reported: Intersection Peak

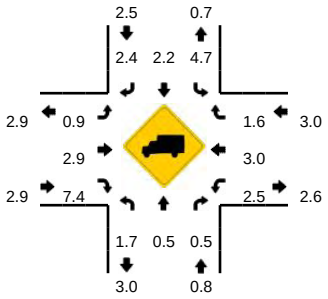
Method for determining peak hour: Total Entering Volume

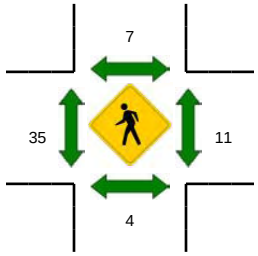
LOCATION: Arlington Ave -- Sepulveda Blvd
CITY/STATE: Torrance, CA

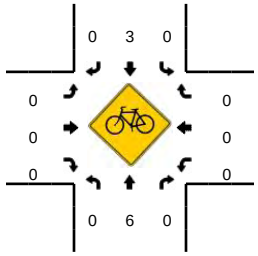
QC JOB #: 12003649
DATE: Thu, Jan 09 2014

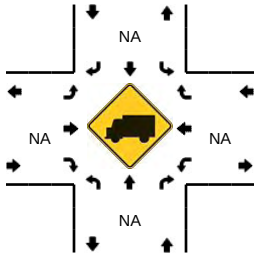
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

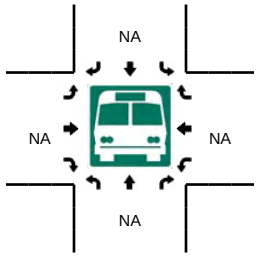












5-Min Count Period Beginning At	Arlington Ave (Northbound)				Arlington Ave (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	7	4	12	0	0	11	5	0	3	55	4	0	8	122	4	0	235	
7:05 AM	9	10	13	0	3	13	6	0	3	47	3	0	4	85	1	0	197	
7:10 AM	6	13	9	0	1	7	10	0	4	77	4	0	11	143	2	0	287	
7:15 AM	11	23	14	0	2	14	7	0	5	61	4	0	5	121	5	0	272	
7:20 AM	8	16	15	0	0	17	5	0	6	69	2	0	8	169	3	0	318	
7:25 AM	14	28	15	0	1	14	18	0	2	52	3	0	8	162	3	0	320	
7:30 AM	12	17	15	0	1	15	14	0	9	69	3	0	10	151	4	0	320	
7:35 AM	19	29	14	0	6	17	10	0	3	71	4	0	7	182	5	0	367	
7:40 AM	10	50	11	0	0	32	20	0	17	99	6	0	16	173	6	0	440	
7:45 AM	14	32	22	0	7	27	18	0	11	81	3	0	12	195	6	0	428	
7:50 AM	14	50	17	0	2	34	26	0	13	100	7	0	16	167	7	0	453	
7:55 AM	9	39	17	0	10	33	10	0	11	58	3	0	14	189	1	0	394	4031
8:00 AM	14	22	14	0	1	21	7	0	7	108	9	0	15	159	2	0	379	4175
8:05 AM	20	38	18	0	2	31	12	0	8	71	5	0	11	130	4	0	350	4328
8:10 AM	10	19	14	0	4	32	8	0	12	99	4	0	17	160	5	0	384	4425
8:15 AM	15	27	19	0	1	19	11	0	4	58	9	0	13	157	7	0	340	4493
8:20 AM	15	19	10	0	6	20	14	0	13	87	5	0	18	148	4	0	359	4534
8:25 AM	17	28	23	0	2	23	15	0	7	73	4	0	6	163	11	0	372	4586
8:30 AM	17	19	15	0	2	23	16	0	8	107	9	0	17	155	5	0	393	4659
8:35 AM	17	23	12	0	9	22	16	0	7	83	9	0	11	141	0	0	350	4642
8:40 AM	15	21	19	0	3	17	16	0	9	87	11	0	19	137	4	0	358	4560
8:45 AM	12	26	14	0	8	22	12	0	5	71	5	0	8	173	4	0	360	4492
8:50 AM	14	23	15	0	7	12	17	0	13	97	6	0	13	142	5	0	364	4403
8:55 AM	12	22	16	0	8	16	20	0	9	89	7	0	5	146	5	0	355	4364

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	528	200	0	36	372	256	0	164	1120	64	0	176	2140	76	0	5284
Heavy Trucks	0	4	0		0	8	4		0	32	4		4	68	0		124
Pedestrians		8				16				68				24			116
Bicycles	0	3	0		0	1	0		0	0	0		0	0	0		4
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

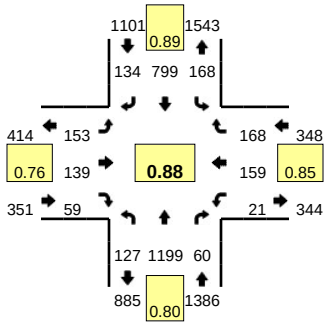
Type of peak hour being reported: Intersection Peak

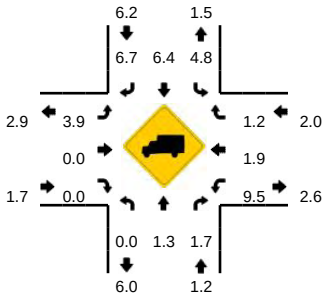
Method for determining peak hour: Total Entering Volume

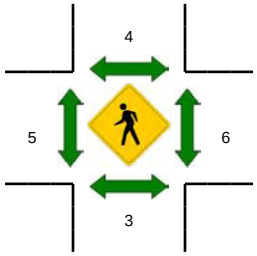
LOCATION: Crenshaw Blvd -- Rolling Hills Rd
CITY/STATE: Torrance, CA

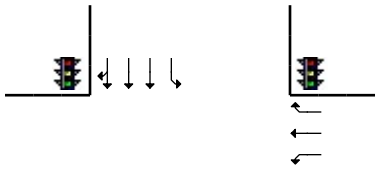
QC JOB #: 12003647
DATE: Thu, Jan 09 2014

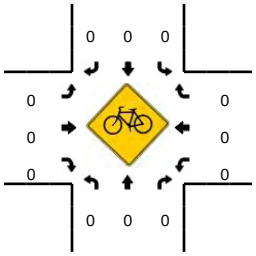
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

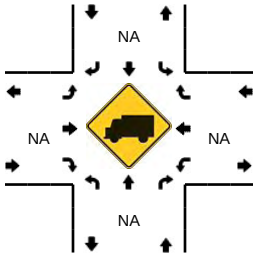


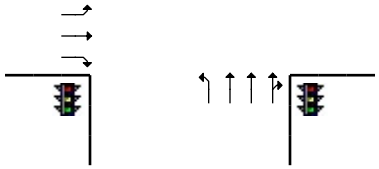


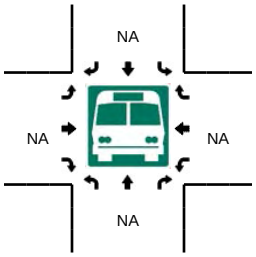












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Rolling Hills Rd (Eastbound)				Rolling Hills Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	36	1	0	7	36	8	0	11	3	1	0	1	9	13	0	128	
7:05 AM	0	67	0	0	6	48	2	0	3	1	1	0	0	3	8	0	139	
7:10 AM	7	59	2	0	3	43	9	0	9	6	0	0	1	17	11	0	167	
7:15 AM	2	50	0	0	10	35	6	0	6	6	5	0	2	19	16	0	157	
7:20 AM	3	48	1	0	8	33	3	0	9	9	6	0	3	24	10	0	157	
7:25 AM	9	74	4	0	20	72	7	1	4	3	9	0	0	9	12	0	224	
7:30 AM	7	53	5	0	6	60	7	0	11	11	4	0	0	17	8	0	189	
7:35 AM	7	86	5	1	11	99	3	0	5	10	7	0	1	9	8	0	252	
7:40 AM	11	69	4	0	10	58	13	1	3	15	15	0	1	16	8	0	224	
7:45 AM	17	88	10	1	17	88	15	1	13	12	14	0	3	16	14	0	309	
7:50 AM	15	81	12	0	7	66	9	1	20	16	8	0	4	15	21	0	275	
7:55 AM	12	133	9	1	15	69	9	5	10	12	4	0	2	13	10	0	304	2525
8:00 AM	7	120	4	0	10	61	13	2	11	22	3	0	1	21	16	0	291	2688
8:05 AM	17	130	9	0	19	72	9	4	13	12	4	0	1	8	15	0	313	2862
8:10 AM	6	85	4	0	6	46	5	2	15	8	4	0	1	17	9	0	208	2903
8:15 AM	7	106	3	0	13	66	14	3	10	4	2	0	1	8	10	0	247	2993
8:20 AM	5	83	3	2	7	68	10	0	10	9	5	0	1	18	19	0	240	3076
8:25 AM	8	92	0	0	16	86	17	3	7	9	8	0	3	9	10	0	268	3120
8:30 AM	4	82	0	0	12	55	14	1	17	11	0	0	1	11	15	0	223	3154
8:35 AM	12	120	4	1	10	68	10	0	11	13	1	0	1	6	12	0	269	3171
8:40 AM	11	79	2	1	13	54	9	1	16	11	6	0	2	17	17	0	239	3186
8:45 AM	4	131	8	0	8	95	11	3	11	10	3	0	0	10	13	0	307	3184
8:50 AM	2	79	4	0	10	53	8	1	11	17	3	0	3	19	18	0	228	3137
8:55 AM	3	108	3	0	13	65	13	0	8	14	4	0	0	18	21	0	270	3103

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	144	1532	88	4	176	808	124	44	136	184	44	0	16	168	164	0	3632
Heavy Trucks	0	8	4		16	72	8		4	0	0		4	0	0		116
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

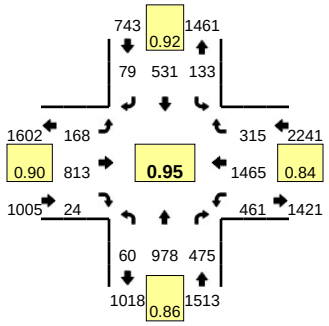
Type of peak hour being reported: Intersection Peak

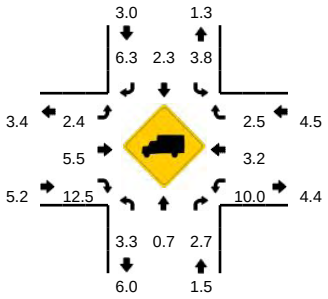
Method for determining peak hour: Total Entering Volume

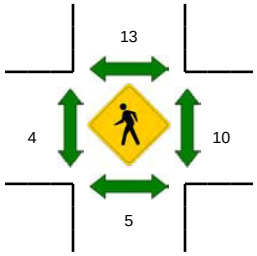
LOCATION: Crenshaw Blvd -- Pacific Coast Hwy
CITY/STATE: Torrance, CA

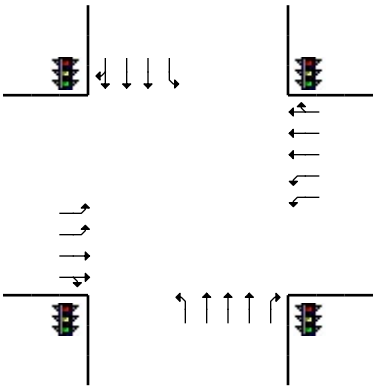
QC JOB #: 12003645
DATE: Thu, Jan 09 2014

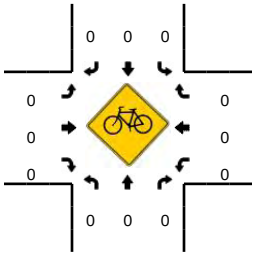
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 8:40 AM -- 8:55 AM

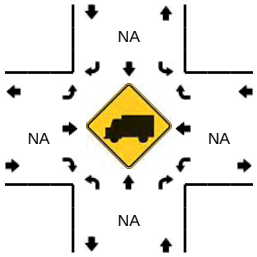


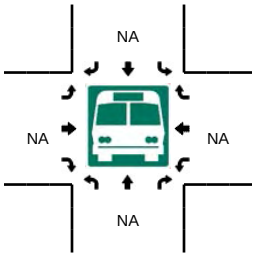












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	46	22	0	10	36	4	0	7	38	0	0	33	75	18	0	299	
7:05 AM	3	32	19	0	6	19	3	0	8	60	1	0	27	90	30	0	298	
7:10 AM	2	61	32	0	2	13	7	0	6	56	1	0	23	113	23	0	339	
7:15 AM	2	61	14	0	9	37	4	0	12	49	1	0	14	92	22	0	317	
7:20 AM	1	42	20	0	3	23	7	0	7	55	0	0	24	151	27	0	360	
7:25 AM	1	32	19	0	6	31	3	0	10	60	0	0	47	122	30	0	361	
7:30 AM	8	84	24	0	8	42	5	0	8	54	2	0	29	123	21	0	408	
7:35 AM	3	50	29	0	7	49	8	0	6	64	1	0	49	164	22	0	452	
7:40 AM	3	75	27	0	11	45	4	0	9	51	2	0	43	152	33	0	455	
7:45 AM	1	51	25	0	8	27	4	0	10	82	3	0	46	172	42	0	471	
7:50 AM	7	74	35	0	12	20	7	0	17	60	2	0	52	131	26	0	443	
7:55 AM	5	99	30	0	10	60	1	0	10	53	2	0	35	122	24	0	451	4654
8:00 AM	8	95	36	0	8	37	6	0	13	63	2	0	45	123	38	0	474	4829
8:05 AM	3	105	58	0	13	47	5	0	13	65	1	0	36	115	33	0	494	5025
8:10 AM	4	60	36	0	12	33	8	0	16	98	2	0	23	120	24	0	436	5122
8:15 AM	2	58	47	0	21	39	7	0	13	68	0	0	42	87	22	0	406	5211
8:20 AM	1	99	30	0	9	51	11	0	15	50	2	0	51	128	23	0	470	5321
8:25 AM	4	77	33	0	4	61	0	0	15	60	1	0	45	140	29	0	469	5429
8:30 AM	4	61	26	1	7	40	11	0	15	70	6	0	38	125	20	0	424	5445
8:35 AM	9	80	40	1	12	35	6	0	16	68	2	0	24	129	15	0	437	5430
8:40 AM	6	83	46	0	17	53	12	0	11	69	0	0	36	119	30	0	482	5457
8:45 AM	6	86	60	0	9	32	5	0	18	71	3	0	55	134	30	0	509	5495
8:50 AM	6	75	33	0	11	43	7	0	13	78	3	0	31	123	27	0	450	5502
8:55 AM	5	44	33	0	13	38	7	0	19	82	4	0	24	90	22	0	381	5432

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	72	976	556	0	148	512	96	0	168	872	24	0	488	1504	348	0	5764
Heavy Trucks	0	4	8		4	8	4		4	48	0		44	56	0		180
Pedestrians		8				4				8				8			28
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

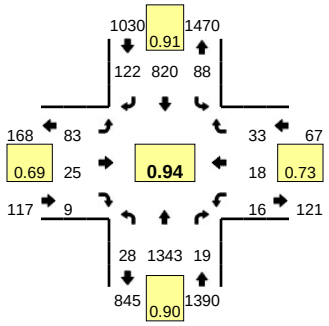
Type of peak hour being reported: Intersection Peak

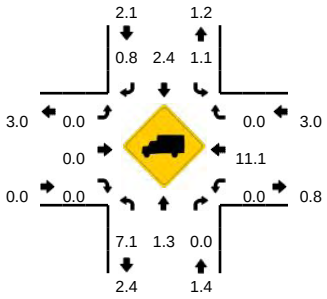
Method for determining peak hour: Total Entering Volume

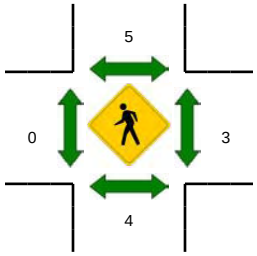
LOCATION: Crenshaw Blvd -- Airport Dr
CITY/STATE: Torrance, CA

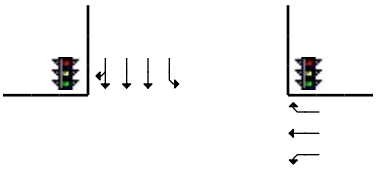
QC JOB #: 12003643
DATE: Thu, Jan 09 2014

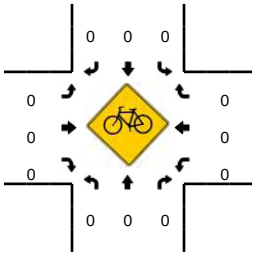
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

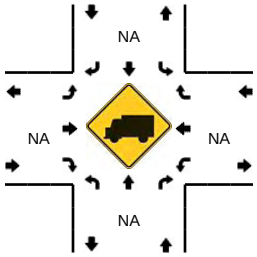


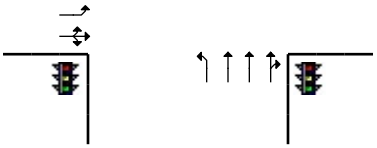


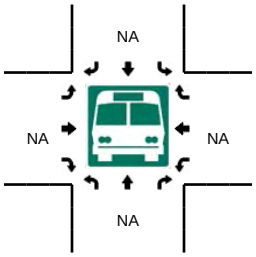












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Airport Dr (Eastbound)				Airport Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	64	0	0	0	44	14	2	1	0	0	0	2	0	3	0	131	
7:05 AM	1	67	0	0	0	40	14	0	6	1	1	0	1	0	0	0	131	
7:10 AM	0	86	1	0	1	29	15	1	11	0	1	0	1	1	0	0	147	
7:15 AM	0	83	0	0	2	39	17	1	4	2	0	0	1	0	1	0	150	
7:20 AM	1	81	1	0	2	56	18	1	7	1	0	0	2	1	0	0	171	
7:25 AM	0	92	0	0	3	44	8	1	9	1	1	0	0	0	0	0	159	
7:30 AM	5	84	2	0	5	49	7	2	2	0	0	0	0	0	0	0	156	
7:35 AM	0	69	0	0	3	64	7	0	5	1	0	0	5	1	0	0	155	
7:40 AM	2	112	1	0	5	77	5	1	6	1	0	0	1	2	4	0	217	
7:45 AM	1	111	0	0	3	44	8	1	7	4	1	0	1	1	1	0	183	
7:50 AM	1	115	3	0	3	50	10	1	8	1	0	0	1	1	0	0	194	
7:55 AM	0	111	1	0	10	82	11	1	4	3	1	0	0	1	0	0	225	2019
8:00 AM	4	123	1	0	4	57	9	0	2	2	0	0	2	0	3	0	207	2095
8:05 AM	2	138	1	0	10	64	12	2	10	1	1	0	2	0	1	0	244	2208
8:10 AM	3	120	1	0	4	86	7	1	10	3	0	0	2	1	3	0	241	2302
8:15 AM	3	86	0	0	5	47	9	0	8	3	0	0	1	4	5	0	171	2323
8:20 AM	6	123	0	0	8	76	8	1	2	0	0	0	0	0	3	0	227	2379
8:25 AM	0	100	1	0	8	73	14	1	4	0	1	0	3	2	2	0	209	2429
8:30 AM	4	105	4	0	8	73	14	0	1	1	1	0	2	2	7	0	222	2495
8:35 AM	1	119	5	0	3	67	13	1	12	4	1	0	1	2	2	0	231	2571
8:40 AM	2	115	3	0	6	71	7	0	9	1	0	0	0	4	3	0	221	2575
8:45 AM	3	112	0	0	6	59	10	2	10	1	2	0	0	1	2	0	208	2600
8:50 AM	0	91	2	0	5	65	8	2	11	6	2	0	3	1	2	0	198	2604
8:55 AM	1	86	1	0	10	75	11	2	10	0	2	0	0	1	0	0	199	2578

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	1524	12	0	72	828	112	12	88	24	4	0	24	4	28	0	2768
Heavy Trucks	0	16	0		0	24	0		0	0	0		0	0	0		40
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

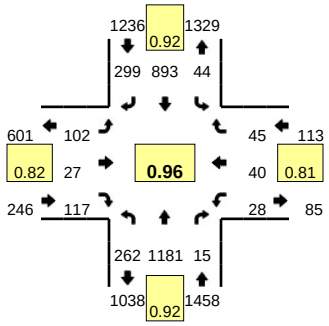
Type of peak hour being reported: Intersection Peak

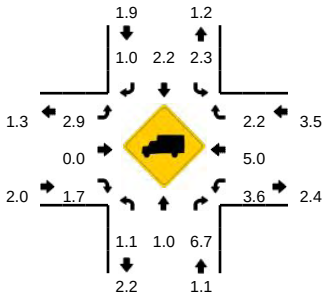
Method for determining peak hour: Total Entering Volume

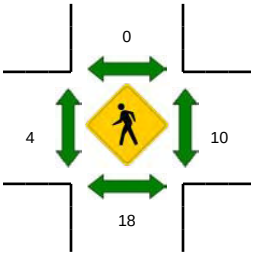
LOCATION: Crenshaw Blvd -- Skypark Dr
CITY/STATE: Torrance, CA

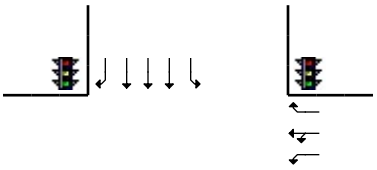
QC JOB #: 12003641
DATE: Thu, Jan 09 2014

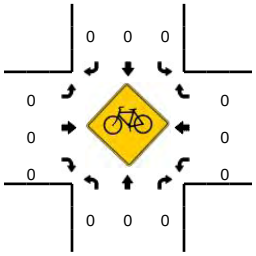
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

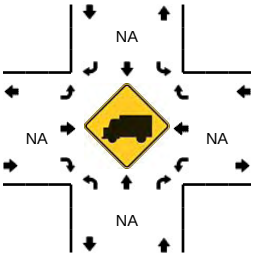


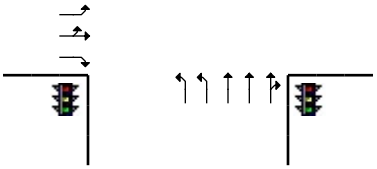


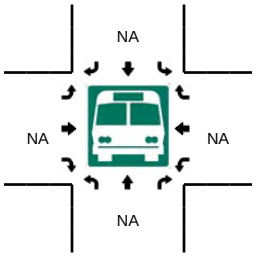












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	23	46	0	0	3	45	22	0	6	4	8	0	3	3	5	0	168	
7:05 AM	16	59	6	0	2	58	22	0	4	1	1	0	1	4	3	0	177	
7:10 AM	12	58	1	0	0	42	14	0	10	2	3	0	0	1	1	0	144	
7:15 AM	10	69	1	0	4	55	19	0	4	1	12	0	3	3	2	0	183	
7:20 AM	14	67	0	0	3	60	26	0	6	0	8	0	1	1	7	0	193	
7:25 AM	18	65	0	0	4	56	29	0	4	0	4	0	2	2	4	0	188	
7:30 AM	19	83	0	0	11	57	26	0	4	1	9	0	2	3	2	0	217	
7:35 AM	18	59	2	0	1	64	27	0	4	1	6	0	1	8	2	0	193	
7:40 AM	25	67	1	0	2	74	35	0	7	0	2	0	3	3	8	0	227	
7:45 AM	22	97	1	0	6	58	32	0	3	1	8	0	3	6	2	0	239	
7:50 AM	17	67	3	0	2	44	36	0	13	3	4	0	4	3	3	0	199	
7:55 AM	27	105	0	0	6	94	26	0	8	3	11	0	1	3	2	0	286	2414
8:00 AM	28	101	2	0	4	67	23	0	12	4	5	0	1	2	3	0	252	2498
8:05 AM	21	104	0	0	4	80	23	0	5	2	7	0	2	3	4	0	255	2576
8:10 AM	27	113	2	0	8	78	21	0	8	1	11	0	3	3	6	0	281	2713
8:15 AM	18	87	1	0	2	55	22	0	7	2	10	0	3	2	5	0	214	2744
8:20 AM	14	88	1	0	1	80	26	0	9	3	9	0	5	7	4	0	247	2798
8:25 AM	18	105	2	0	2	83	32	0	5	1	6	0	4	3	4	0	265	2875
8:30 AM	29	82	1	0	3	81	29	1	6	3	12	0	0	3	4	0	254	2912
8:35 AM	14	103	0	0	4	68	23	0	11	3	7	0	4	4	2	0	243	2962
8:40 AM	21	94	2	0	4	66	27	0	5	0	12	0	4	4	3	0	242	2977
8:45 AM	23	103	2	0	5	75	28	0	10	1	13	0	1	5	4	0	270	3008
8:50 AM	22	96	2	0	0	66	19	0	16	4	14	0	0	1	4	0	244	3053
8:55 AM	25	82	5	0	1	93	36	1	3	1	10	0	4	3	6	0	270	3037

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	304	1240	8	0	56	964	288	0	100	36	92	0	16	32	36	0	3172
Heavy Trucks	0	12	0		0	16	0		8	0	4		0	0	0		40
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

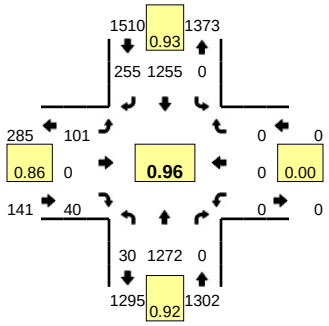
Type of peak hour being reported: Intersection Peak

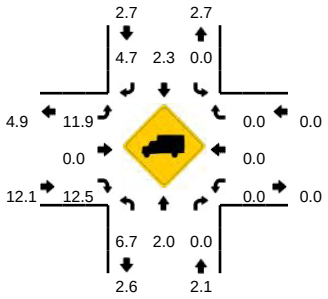
Method for determining peak hour: Total Entering Volume

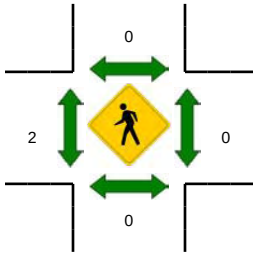
LOCATION: Crenshaw Blvd -- Torrance Crossroads Shopping Center
CITY/STATE: Torrance, CA

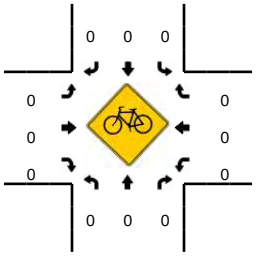
QC JOB #: 12003639
DATE: Thu, Jan 09 2014

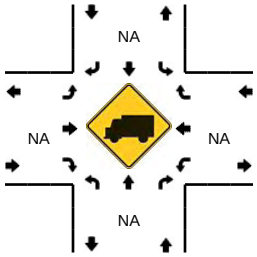
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 8:40 AM -- 8:55 AM

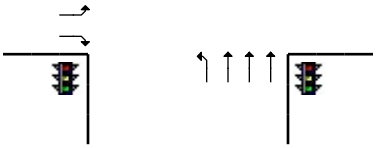


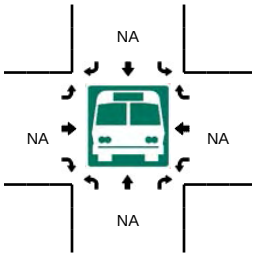












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Torrance Crossroads Shopping Center (Eastbound)				Torrance Crossroads Shopping Center (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	61	0	0	0	67	16	0	6	0	0	0	0	0	0	0	152	
7:05 AM	2	49	0	0	0	84	13	0	6	0	2	0	0	0	0	0	156	
7:10 AM	1	68	0	0	0	78	13	0	3	0	3	0	0	0	0	0	166	
7:15 AM	1	89	0	0	0	79	8	0	6	0	1	0	0	0	0	0	184	
7:20 AM	2	70	0	0	0	83	15	0	7	0	3	0	0	0	0	0	180	
7:25 AM	0	54	0	0	0	82	23	0	5	0	5	0	0	0	0	0	169	
7:30 AM	3	85	0	0	0	103	21	0	4	0	4	0	0	0	0	0	220	
7:35 AM	0	68	0	0	0	93	17	0	11	0	1	0	0	0	0	0	190	
7:40 AM	5	70	0	0	0	119	23	0	8	0	2	0	0	0	0	0	227	
7:45 AM	3	106	0	0	0	82	14	0	6	0	0	0	0	0	0	0	211	
7:50 AM	4	83	0	0	0	109	15	0	5	0	2	0	0	0	0	0	218	
7:55 AM	4	96	0	0	0	108	25	0	12	0	4	0	0	0	0	0	249	2322
8:00 AM	4	118	0	0	0	116	26	0	5	0	4	0	0	0	0	0	273	2443
8:05 AM	0	98	0	0	0	95	14	0	10	0	4	0	0	0	0	0	221	2508
8:10 AM	2	119	0	0	0	105	21	0	6	0	2	0	0	0	0	0	255	2597
8:15 AM	4	94	0	0	0	78	23	0	9	0	3	0	0	0	0	0	211	2624
8:20 AM	2	98	0	0	0	134	19	0	7	0	3	0	0	0	0	0	263	2707
8:25 AM	3	106	0	0	0	83	19	0	13	0	2	0	0	0	0	0	226	2764
8:30 AM	2	85	0	0	0	130	21	0	4	0	2	0	0	0	0	0	244	2788
8:35 AM	4	110	0	0	0	94	19	0	11	0	5	0	0	0	0	0	243	2841
8:40 AM	2	108	0	0	0	105	19	0	8	0	3	0	0	0	0	0	245	2859
8:45 AM	1	120	0	0	0	88	26	0	10	0	4	0	0	0	0	0	249	2897
8:50 AM	2	120	0	0	0	119	23	0	6	0	4	0	0	0	0	0	274	2953
8:55 AM	3	67	0	0	0	108	31	0	3	0	3	0	0	0	0	0	215	2919

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	1392	0	0	0	1248	272	0	96	0	44	0	0	0	0	0	3072
Heavy Trucks	0	32	0		0	28	4		4	0	8		0	0	0		76
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

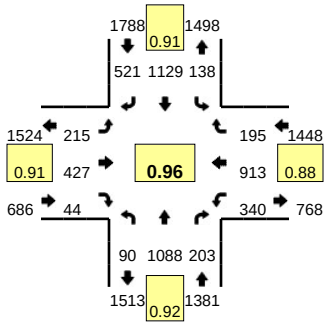
Type of peak hour being reported: Intersection Peak

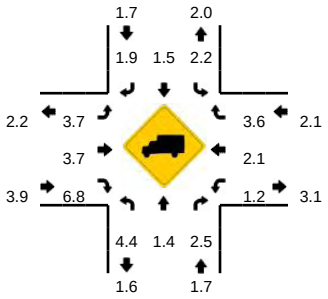
Method for determining peak hour: Total Entering Volume

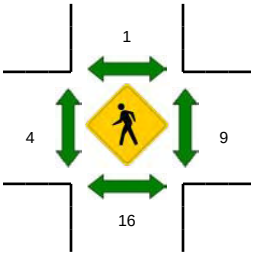
LOCATION: Crenshaw Blvd -- Lomita Blvd
CITY/STATE: Lomita, CA

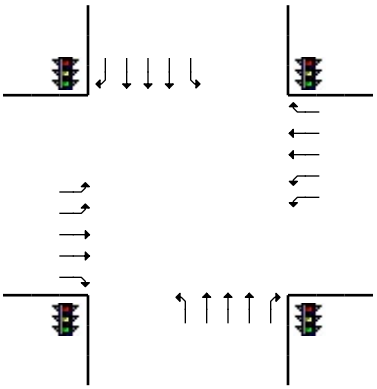
QC JOB #: 12003637
DATE: Thu, Jan 09 2014

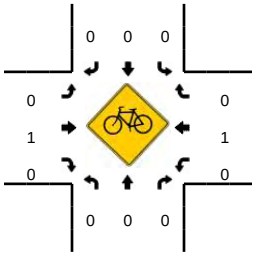
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

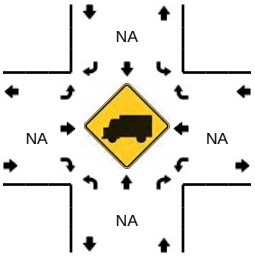


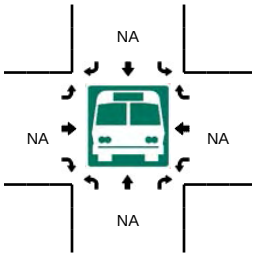












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	39	9	0	4	37	24	0	13	23	0	0	32	66	12	0	264	
7:05 AM	5	57	3	0	2	84	26	0	10	19	3	0	28	50	14	0	301	
7:10 AM	2	55	9	0	8	61	30	0	11	16	1	0	16	69	17	0	295	
7:15 AM	3	84	15	0	9	76	44	0	9	25	0	0	19	44	13	0	341	
7:20 AM	3	41	9	0	7	73	25	0	4	20	3	0	28	95	19	0	327	
7:25 AM	9	62	7	0	7	75	43	0	7	16	2	0	25	70	15	0	338	
7:30 AM	9	74	4	0	7	81	37	0	7	34	3	0	37	103	19	0	415	
7:35 AM	6	66	11	0	4	82	57	0	14	30	5	0	34	59	13	0	381	
7:40 AM	4	50	9	0	8	66	37	0	27	42	2	0	47	104	13	0	409	
7:45 AM	7	105	14	0	2	85	42	0	15	24	0	0	27	75	20	0	416	
7:50 AM	7	48	12	0	9	69	34	0	21	40	1	0	38	106	13	0	398	
7:55 AM	7	103	13	0	5	134	50	0	17	28	2	0	26	80	19	0	484	4369
8:00 AM	8	77	21	0	12	77	47	0	13	49	4	0	30	103	14	0	455	4560
8:05 AM	7	120	20	0	10	113	43	0	22	31	6	0	16	42	15	0	445	4704
8:10 AM	8	78	18	0	15	68	27	0	22	43	2	0	35	84	14	0	414	4823
8:15 AM	7	97	10	0	6	90	37	0	17	32	6	0	23	58	23	0	406	4888
8:20 AM	8	77	12	0	15	96	41	0	16	37	1	0	35	99	20	0	457	5018
8:25 AM	8	112	14	0	11	110	53	0	20	25	6	0	29	54	12	0	454	5134
8:30 AM	10	52	19	0	13	75	45	0	23	52	3	0	27	103	14	0	436	5155
8:35 AM	6	107	17	0	12	93	51	0	14	26	3	0	33	62	17	0	441	5215
8:40 AM	7	81	13	0	13	74	34	0	13	31	1	0	36	95	18	0	416	5222
8:45 AM	7	115	24	0	10	122	49	0	15	31	2	0	20	56	11	0	462	5268
8:50 AM	7	69	22	0	16	77	44	0	23	42	8	0	30	77	18	0	433	5303
8:55 AM	8	69	15	0	12	124	47	0	14	28	3	0	32	66	17	0	435	5254

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	88	1200	216	0	108	1296	560	0	208	432	48	0	288	900	192	0	5536
Heavy Trucks	0	12	8		0	32	8		8	8	4		4	4	12		100
Pedestrians		12				0				12				4			28
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

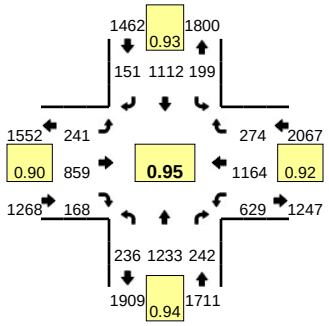
Type of peak hour being reported: Intersection Peak

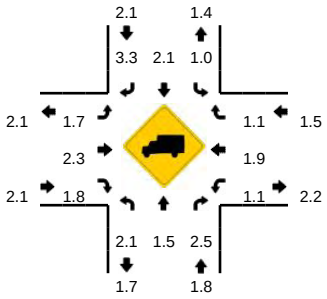
Method for determining peak hour: Total Entering Volume

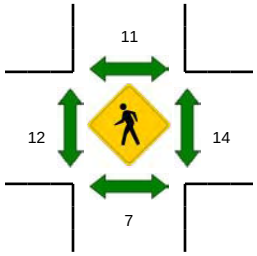
LOCATION: Crenshaw Blvd -- Sepulveda Blvd
CITY/STATE: Torrance, CA

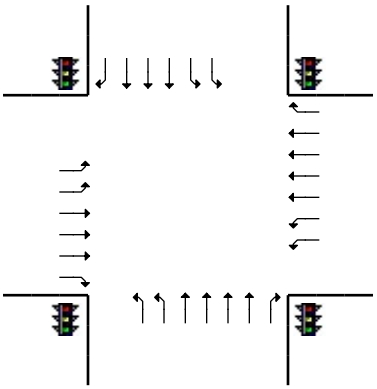
QC JOB #: 12003635
DATE: Thu, Jan 09 2014

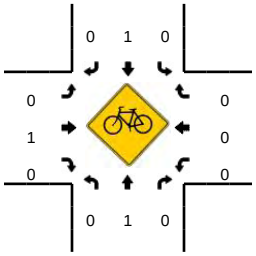
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

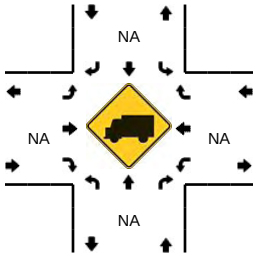


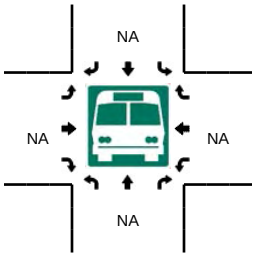












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	37	16	0	3	52	8	0	9	29	3	0	45	55	12	1	270	
7:05 AM	19	62	20	0	1	54	5	2	7	57	6	0	33	45	9	0	320	
7:10 AM	12	78	23	0	7	56	6	1	12	45	5	0	65	79	15	0	404	
7:15 AM	16	70	14	0	14	56	5	2	4	45	5	0	34	80	14	0	359	
7:20 AM	6	69	10	0	8	57	3	2	15	49	5	0	63	87	21	0	395	
7:25 AM	15	102	11	0	6	76	5	2	11	39	8	0	47	99	15	0	436	
7:30 AM	10	89	17	0	5	46	7	3	14	43	7	0	64	101	16	0	422	
7:35 AM	26	101	18	0	11	66	9	4	19	85	5	0	45	133	21	0	543	
7:40 AM	16	114	19	0	6	55	9	4	21	60	12	0	63	103	17	1	500	
7:45 AM	25	121	19	0	8	73	10	1	18	87	14	1	47	133	17	0	574	
7:50 AM	19	107	24	0	8	120	10	7	15	64	13	0	69	101	23	0	580	
7:55 AM	26	101	22	0	13	98	10	4	9	73	15	0	49	107	31	1	559	5362
8:00 AM	15	80	17	0	8	102	9	5	20	40	11	0	58	89	28	0	482	5574
8:05 AM	17	135	29	0	16	89	14	6	15	84	10	0	33	92	19	0	559	5813
8:10 AM	16	110	13	0	14	63	7	4	22	59	15	0	63	82	20	0	488	5897
8:15 AM	24	91	20	0	13	113	13	7	9	71	15	0	47	96	22	0	541	6079
8:20 AM	18	87	20	0	8	66	15	3	37	63	14	0	68	89	29	0	517	6201
8:25 AM	26	103	24	1	13	104	10	4	21	89	15	0	47	91	20	0	568	6333
8:30 AM	15	102	21	0	15	95	13	5	25	59	11	0	55	94	30	0	540	6451
8:35 AM	20	105	16	0	18	99	23	4	18	86	22	1	38	85	19	0	554	6462
8:40 AM	14	91	17	0	11	90	17	4	30	84	13	0	54	105	16	0	546	6508
8:45 AM	23	92	23	0	11	94	19	5	31	63	16	0	45	103	19	0	544	6478
8:50 AM	12	88	22	0	15	95	17	3	21	90	13	0	71	109	29	0	585	6483
8:55 AM	15	104	24	0	17	78	12	4	23	72	20	0	38	103	12	0	522	6446

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	280	1316	260	0	116	1164	120	48	168	896	168	4	660	1364	284	4	6852
Heavy Trucks	4	28	0		0	4	12		0	16	4		0	28	0		96
Pedestrians		12				4				16				20			52
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

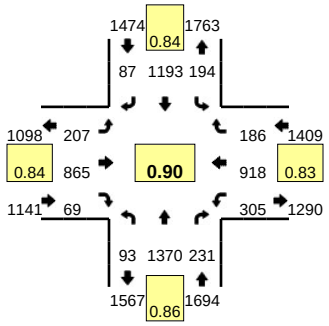
Type of peak hour being reported: Intersection Peak

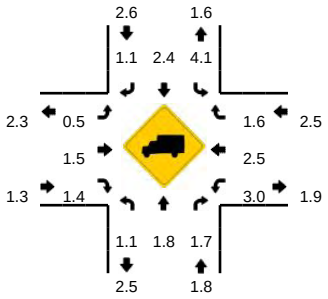
Method for determining peak hour: Total Entering Volume

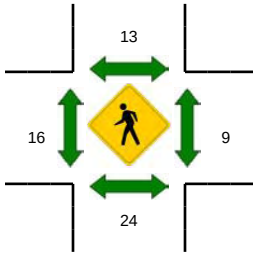
LOCATION: Crenshaw Blvd -- Carson St
CITY/STATE: Torrance, CA

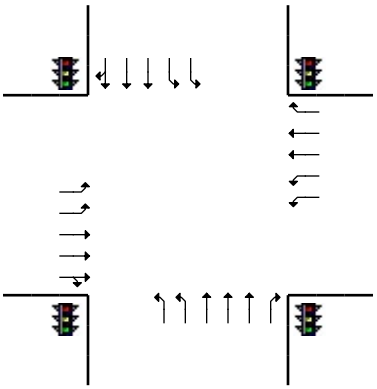
QC JOB #: 12003633
DATE: Thu, Jan 09 2014

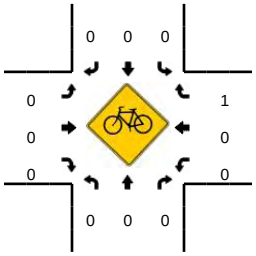
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

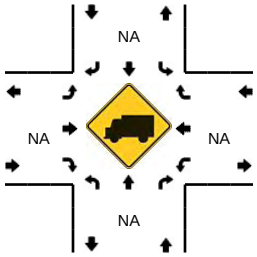


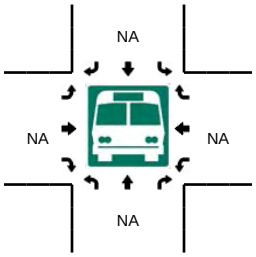












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Carson St (Eastbound)				Carson St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	78	8	0	6	40	10	0	6	43	2	0	20	40	18	0	273	
7:05 AM	4	69	10	0	3	36	6	0	5	34	0	0	8	44	6	0	225	
7:10 AM	4	56	14	0	5	71	3	0	10	29	2	0	18	51	13	0	276	
7:15 AM	7	76	18	0	5	58	3	0	4	44	0	0	12	38	10	0	275	
7:20 AM	3	114	18	0	4	74	5	0	12	37	1	0	14	45	10	0	337	
7:25 AM	8	59	15	0	12	51	2	0	11	50	5	0	7	79	22	0	321	
7:30 AM	3	117	19	0	12	96	7	0	15	45	2	0	25	41	11	0	393	
7:35 AM	3	94	18	0	19	49	3	0	8	56	5	0	19	91	13	0	378	
7:40 AM	8	146	36	0	12	71	7	0	10	44	2	0	34	69	10	0	449	
7:45 AM	9	110	25	0	35	76	3	0	13	109	1	0	24	112	15	0	532	
7:50 AM	6	134	28	0	23	118	9	0	25	74	2	0	40	70	11	0	540	
7:55 AM	8	85	23	0	33	92	4	0	12	100	5	0	28	104	24	0	518	4517
8:00 AM	2	131	22	0	16	131	12	0	14	48	5	0	40	72	20	0	513	4757
8:05 AM	9	94	16	0	19	72	4	0	14	82	7	0	21	83	21	0	442	4974
8:10 AM	3	136	15	0	8	110	11	0	23	60	3	0	20	57	17	0	463	5161
8:15 AM	8	120	20	0	11	91	7	0	12	87	3	0	14	78	20	0	471	5357
8:20 AM	7	126	14	0	7	88	7	0	27	74	5	0	28	48	13	0	444	5464
8:25 AM	13	85	12	0	6	97	12	0	14	56	12	0	22	83	11	0	423	5566
8:30 AM	9	129	19	0	7	97	7	0	17	37	5	0	29	49	11	0	416	5589
8:35 AM	12	94	12	0	13	85	5	0	18	99	7	0	16	103	12	0	476	5687
8:40 AM	7	126	25	0	16	136	6	0	18	39	14	0	23	59	11	0	480	5718
8:45 AM	9	76	10	0	25	58	6	0	12	75	4	0	14	80	12	0	381	5567
8:50 AM	7	134	25	0	8	115	7	0	23	53	2	0	21	58	10	0	463	5490
8:55 AM	6	80	15	0	10	76	4	0	11	66	8	0	16	84	9	0	385	5357

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	92	1316	304	0	364	1144	64	0	200	1132	32	0	368	1144	200	0	6360
Heavy Trucks	0	20	4		8	12	0		0	4	0		4	12	0		64
Pedestrians		48				32				32				12			124
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

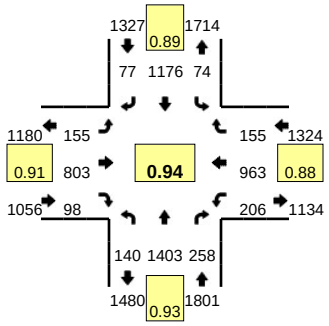
Type of peak hour being reported: Intersection Peak

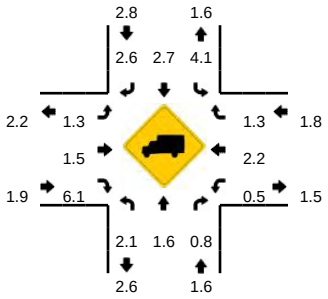
Method for determining peak hour: Total Entering Volume

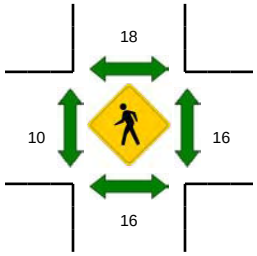
LOCATION: Crenshaw Blvd -- Torrance Blvd
CITY/STATE: Torrance, CA

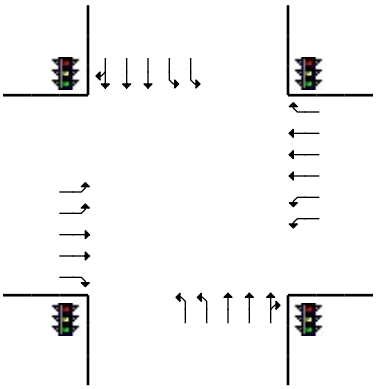
QC JOB #: 12003631
DATE: Thu, Jan 09 2014

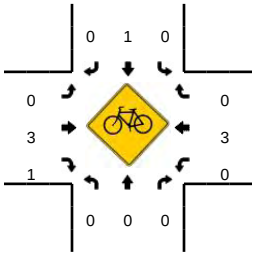
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

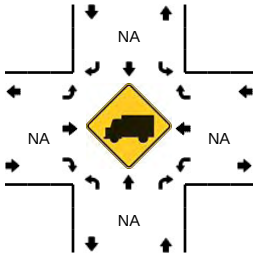


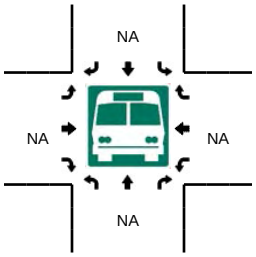












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Torrance Blvd (Eastbound)				Torrance Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	65	6	0	6	41	2	0	6	33	6	0	3	46	5	0	224	
7:05 AM	7	85	12	0	5	59	4	0	12	17	2	0	6	38	12	0	259	
7:10 AM	5	48	8	0	0	61	6	0	8	47	4	0	7	68	13	0	275	
7:15 AM	8	114	11	0	1	69	2	0	12	36	3	0	15	39	3	0	313	
7:20 AM	4	71	15	0	3	47	3	1	5	45	6	0	7	79	7	0	293	
7:25 AM	15	89	13	0	2	83	3	0	8	36	7	0	13	76	9	0	354	
7:30 AM	12	115	14	0	7	73	9	0	12	68	2	0	7	81	10	0	410	
7:35 AM	8	114	12	0	4	55	13	0	12	48	8	0	17	77	9	0	377	
7:40 AM	12	124	14	0	6	74	5	1	6	74	6	0	18	111	11	0	462	
7:45 AM	13	130	13	0	4	94	6	0	18	55	8	0	25	82	11	0	459	
7:50 AM	16	111	32	0	9	146	9	0	12	56	5	0	13	102	16	0	527	
7:55 AM	21	114	22	0	6	95	3	0	16	70	8	0	22	82	13	0	472	4425
8:00 AM	11	117	21	0	5	91	6	0	14	74	4	0	17	79	20	0	459	4660
8:05 AM	16	96	20	0	5	75	2	0	12	98	16	0	9	88	15	0	452	4853
8:10 AM	6	148	23	0	5	121	8	0	13	65	7	0	11	80	12	0	499	5077
8:15 AM	13	97	22	0	4	70	4	0	21	64	4	0	16	85	12	0	412	5176
8:20 AM	8	142	25	0	7	115	10	0	7	42	6	0	23	47	5	0	437	5320
8:25 AM	11	85	16	0	12	70	6	0	5	88	9	0	14	75	17	0	408	5374
8:30 AM	7	129	27	0	6	106	8	0	7	65	4	0	9	61	10	0	439	5403
8:35 AM	8	99	15	0	5	84	4	0	15	63	15	0	25	110	16	0	459	5485
8:40 AM	10	135	22	0	5	109	11	1	15	63	12	0	22	72	8	0	485	5508
8:45 AM	8	73	20	0	5	78	5	0	18	86	14	0	20	83	5	0	415	5464
8:50 AM	9	129	24	0	7	74	6	0	9	63	3	0	13	55	8	0	400	5337
8:55 AM	10	75	20	0	9	69	7	0	12	82	6	0	20	74	6	0	390	5255

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	200	1420	268	0	76	1340	72	0	184	724	84	0	240	1064	160	0	5832
Heavy Trucks	4	20	0		0	32	0		0	16	0		0	28	0		100
Pedestrians		16				16				12				24			68
Bicycles	0	0	0		0	1	0		0	1	0		0	2	0		4
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

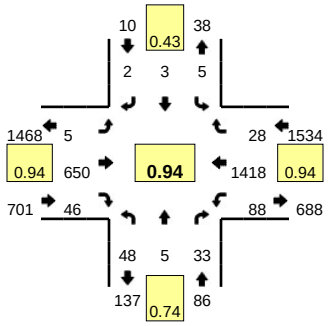
Type of peak hour being reported: Intersection Peak

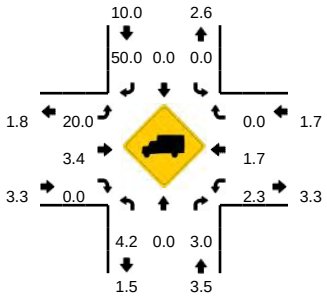
Method for determining peak hour: Total Entering Volume

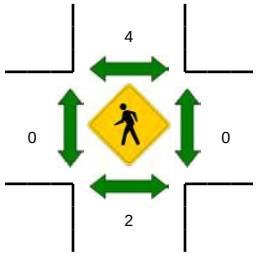
LOCATION: Garnier St -- Lomita Blvd
CITY/STATE: Torrance, CA

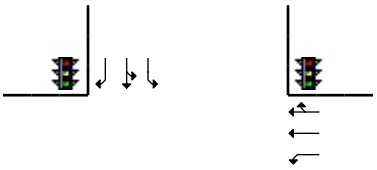
QC JOB #: 12003627
DATE: Thu, Jan 09 2014

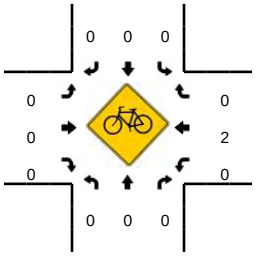
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

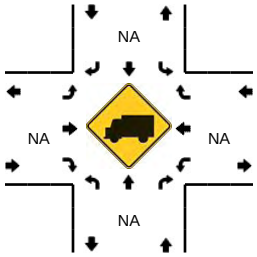


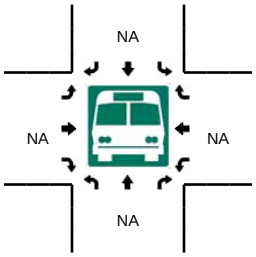












5-Min Count Period Beginning At	Garnier St (Northbound)				Garnier St (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	1	1	0	0	0	0	0	0	34	1	0	4	80	1	0	124	
7:05 AM	2	0	0	0	0	0	1	0	1	29	3	0	4	95	0	0	135	
7:10 AM	3	0	0	0	1	0	0	0	1	30	3	0	7	85	0	0	130	
7:15 AM	1	0	1	0	0	0	0	0	0	30	2	0	8	83	0	0	125	
7:20 AM	1	0	3	0	0	1	0	0	0	29	2	0	5	96	0	0	137	
7:25 AM	2	0	1	0	0	0	0	0	0	30	2	0	4	116	0	0	155	
7:30 AM	4	0	2	0	0	0	0	0	0	44	3	1	6	130	2	0	192	
7:35 AM	2	1	2	0	0	0	0	0	0	49	1	0	5	128	0	0	188	
7:40 AM	7	2	2	0	0	0	0	0	0	68	4	0	5	132	0	0	220	
7:45 AM	2	1	2	0	1	1	0	0	0	32	2	0	5	125	1	0	172	
7:50 AM	4	0	1	0	0	2	0	0	0	64	4	0	5	122	0	0	202	
7:55 AM	5	0	0	0	0	0	0	0	1	62	5	0	10	128	2	0	213	1993
8:00 AM	0	0	2	0	0	0	0	0	2	47	4	0	13	127	2	0	197	2066
8:05 AM	8	1	4	0	0	0	0	0	0	65	4	0	15	110	3	0	210	2141
8:10 AM	3	0	6	0	0	0	0	0	0	50	2	0	2	77	4	0	144	2155
8:15 AM	7	0	2	0	0	0	2	0	0	57	0	0	7	113	2	0	190	2220
8:20 AM	2	1	1	0	1	0	0	0	0	61	6	0	6	120	4	0	202	2285
8:25 AM	1	0	3	0	2	0	0	0	1	50	6	0	7	115	4	0	189	2319
8:30 AM	4	0	6	0	1	0	0	0	1	50	5	0	7	118	3	0	195	2322
8:35 AM	5	0	4	0	0	0	0	0	0	44	4	0	6	131	3	0	197	2331
8:40 AM	5	0	2	0	0	0	1	0	0	33	6	0	5	124	1	0	177	2288
8:45 AM	5	1	2	0	0	0	0	0	2	71	7	0	5	99	5	0	197	2313
8:50 AM	11	0	1	0	1	0	2	0	4	56	2	0	4	104	6	0	191	2302
8:55 AM	3	0	1	0	1	1	5	0	4	49	11	0	9	109	6	0	199	2288

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	52	4	24	0	0	0	0	0	12	696	52	0	152	1460	28	0	2480
Heavy Trucks	8	0	0		0	0	0		4	28	0		4	8	0		52
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

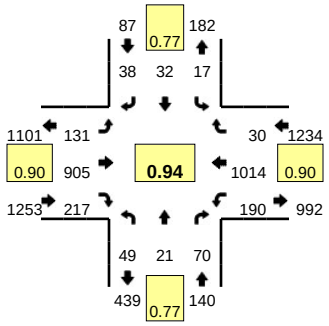
LOCATION: Early Ave/Medical Center Dr -- Lomita Blvd

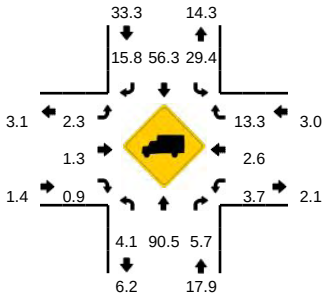
QC JOB #: 12003625

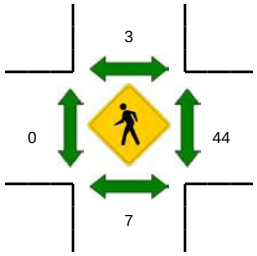
CITY/STATE: Torrance, CA

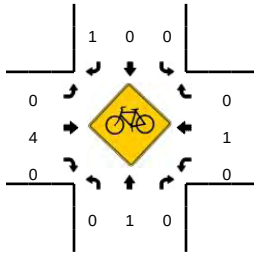
DATE: Thu, Jan 09 2014

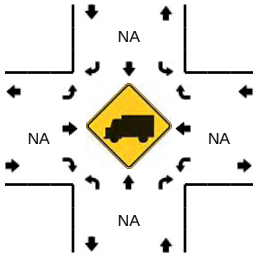
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

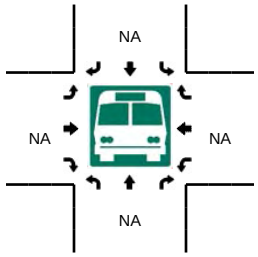












5-Min Count Period Beginning At	Early Ave/Medical Center Dr (Northbound)				Early Ave/Medical Center Dr (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	1	4	0	2	3	2	0	14	43	7	0	8	52	4	0	142	
7:05 AM	0	2	4	0	2	1	3	0	8	36	7	0	11	52	6	0	132	
7:10 AM	1	2	8	0	2	2	1	0	4	36	11	0	4	42	1	0	114	
7:15 AM	0	2	3	0	0	1	5	0	9	25	9	0	4	54	3	0	115	
7:20 AM	0	0	2	0	3	2	1	0	7	40	2	0	8	58	6	0	129	
7:25 AM	1	2	5	0	2	1	4	0	2	27	9	0	10	77	2	0	142	
7:30 AM	5	1	8	0	0	1	2	0	10	49	6	0	11	93	10	0	196	
7:35 AM	5	3	6	0	2	3	3	0	9	46	10	0	10	112	2	0	211	
7:40 AM	5	1	14	0	3	2	4	0	15	62	12	0	9	105	1	0	233	
7:45 AM	2	3	6	0	0	3	3	0	15	61	13	0	11	90	7	0	214	
7:50 AM	4	1	9	0	0	3	2	0	19	61	11	0	12	66	4	0	192	
7:55 AM	4	2	5	0	3	1	1	0	21	79	16	0	14	76	6	0	228	2048
8:00 AM	3	2	8	0	3	2	6	0	15	79	17	0	13	106	2	0	256	2162
8:05 AM	6	1	7	0	1	3	6	0	9	81	7	0	16	77	1	0	215	2245
8:10 AM	2	1	1	0	1	3	5	0	13	63	12	0	12	48	4	0	165	2296
8:15 AM	4	2	7	0	1	1	4	0	15	68	17	0	15	79	4	0	217	2398
8:20 AM	0	1	3	0	1	3	3	0	12	87	22	0	16	103	1	0	252	2521
8:25 AM	6	2	8	0	1	4	2	0	18	58	14	0	16	63	1	0	193	2572
8:30 AM	3	2	8	0	2	3	4	0	10	63	17	0	14	86	5	0	217	2593
8:35 AM	3	2	2	0	3	2	1	0	12	67	19	0	20	103	3	0	237	2619
8:40 AM	1	3	8	0	0	2	3	0	4	87	18	0	17	89	5	0	237	2623
8:45 AM	3	1	5	0	1	4	0	0	6	77	20	0	18	85	0	0	220	2629
8:50 AM	12	2	7	0	1	4	1	0	7	78	21	0	17	83	2	0	235	2672
8:55 AM	6	2	6	0	2	1	3	0	10	97	33	0	16	92	2	0	270	2714

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	84	20	72	0	16	36	16	0	92	1008	296	0	204	1040	16	0	2900
Heavy Trucks	4	20	0		0	20	4		0	24	4		0	32	0		108
Pedestrians		20				0				0				52			72
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

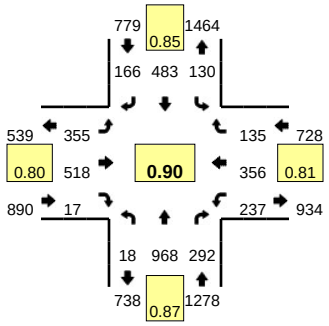
LOCATION: Hawthorne Blvd -- Palos Verdes Dr N

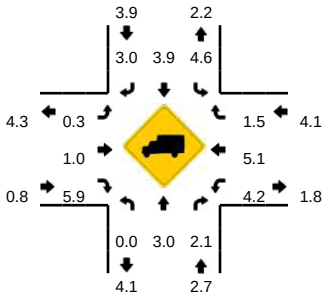
CITY/STATE: Rolling Hills Estates, CA

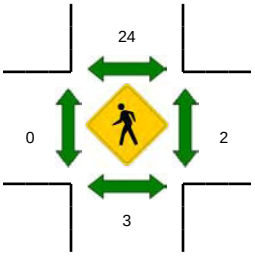
QC JOB #: 12003623

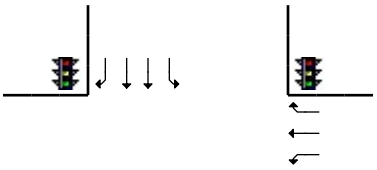
DATE: Thu, Jan 09 2014

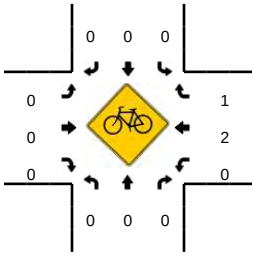
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

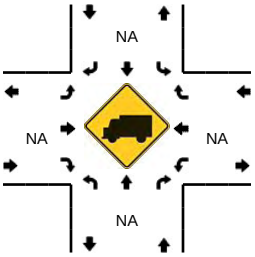


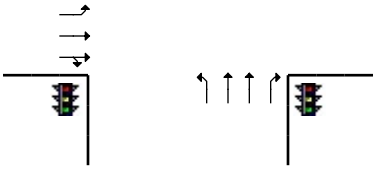


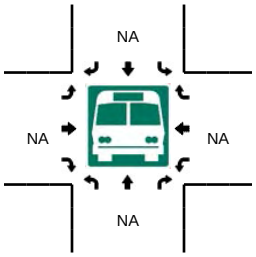












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Palos Verdes Dr N (Eastbound)				Palos Verdes Dr N (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	43	17	0	6	21	1	0	27	36	1	0	17	15	7	0	192	
7:05 AM	1	48	22	0	5	18	8	0	13	27	1	0	14	29	3	0	189	
7:10 AM	1	56	17	0	5	20	6	0	12	23	0	0	11	10	8	0	169	
7:15 AM	1	46	13	0	6	34	8	0	15	41	3	0	24	16	9	0	216	
7:20 AM	2	71	17	0	5	25	7	0	23	32	0	0	12	27	10	0	231	
7:25 AM	1	57	16	0	7	33	7	1	16	33	1	0	18	29	7	0	226	
7:30 AM	2	80	22	0	15	41	13	0	12	33	0	0	19	18	3	0	258	
7:35 AM	3	41	21	0	8	26	8	0	18	65	1	0	31	42	5	0	269	
7:40 AM	1	88	26	0	25	31	12	0	36	54	5	0	23	24	9	0	334	
7:45 AM	1	38	27	0	13	54	16	0	26	73	0	0	29	43	9	0	329	
7:50 AM	4	86	31	0	9	48	19	0	27	58	0	0	29	28	13	0	352	
7:55 AM	2	90	32	0	6	46	22	0	31	33	2	0	25	38	16	0	343	3108
8:00 AM	0	103	25	0	7	34	17	0	30	43	0	0	16	31	8	0	314	3230
8:05 AM	0	60	24	0	1	21	13	0	34	39	1	0	18	45	8	0	264	3305
8:10 AM	1	85	34	0	13	41	9	1	30	31	0	0	15	22	10	0	292	3428
8:15 AM	0	84	17	1	6	28	12	0	29	47	1	0	13	24	14	0	276	3488
8:20 AM	3	74	21	0	12	59	10	0	30	49	1	0	15	17	8	0	299	3556
8:25 AM	0	91	26	0	15	62	18	4	16	20	2	0	8	20	13	0	295	3625
8:30 AM	3	94	17	0	6	33	9	1	31	31	2	0	24	38	14	0	303	3670
8:35 AM	2	75	12	0	11	26	9	0	35	40	3	0	22	26	13	0	274	3675
8:40 AM	2	81	19	0	7	46	10	1	31	34	1	0	9	30	6	0	277	3618
8:45 AM	0	79	19	1	4	48	9	0	28	35	0	0	11	31	4	0	269	3558
8:50 AM	0	96	22	0	4	41	10	0	32	47	1	0	16	23	9	0	301	3507
8:55 AM	1	59	19	0	6	54	8	1	21	37	3	0	10	52	10	0	281	3445

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	856	360	0	112	592	228	0	336	656	8	0	332	436	152	0	4096
Heavy Trucks	0	20	12		12	4	12		0	4	4		8	16	8		100
Pedestrians		4				4				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

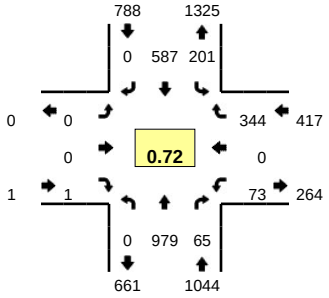
Type of peak hour being reported: Intersection Peak

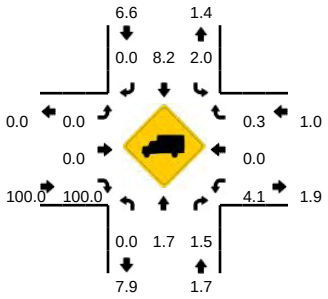
Method for determining peak hour: Total Entering Volume

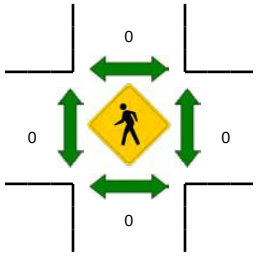
LOCATION: Hawthorne Blvd -- Rolling Hills Rd
CITY/STATE: Torrance, CA

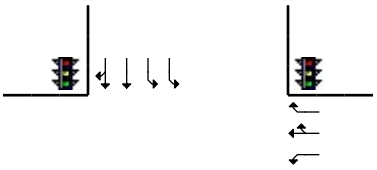
QC JOB #: 12003621
DATE: Thu, Jan 09 2014

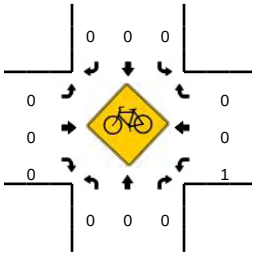
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

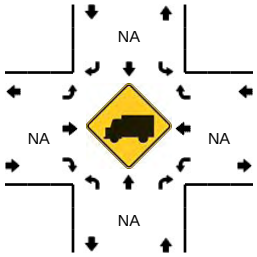


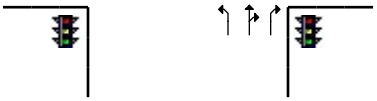


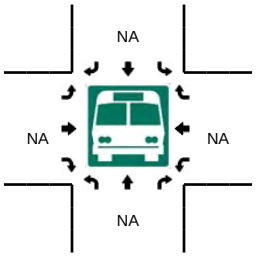












15-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Rolling Hills Rd (Eastbound)				Rolling Hills Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	86	4	0	5	26	0	1	0	0	0	0	1	0	20	0	143	
7:15 AM	0	100	1	0	7	39	0	1	0	0	0	0	2	0	24	0	174	
7:30 AM	0	146	3	0	6	46	0	0	0	0	0	0	8	0	26	1	236	
7:45 AM	0	175	4	0	14	98	1	1	0	0	0	0	9	0	39	0	341	894
8:00 AM	0	218	13	0	23	80	0	0	0	0	1	0	7	0	35	0	377	1128
8:15 AM	0	247	10	0	37	126	0	0	0	0	0	0	15	0	71	0	506	1460
8:30 AM	0	234	11	0	61	172	0	0	0	0	0	0	17	0	96	0	591	1815
8:45 AM	0	280	31	0	78	209	0	2	0	0	0	0	34	0	142	0	776	2250

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1120	124	0	312	836	0	8	0	0	0	0	136	0	568	0	3104
Heavy Trucks	0	12	4		0	44	0		0	0	0		8	0	4		72
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/5/2014 1:26 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

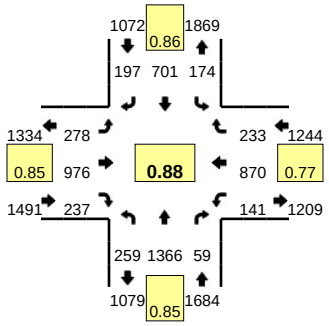
Type of peak hour being reported: Intersection Peak

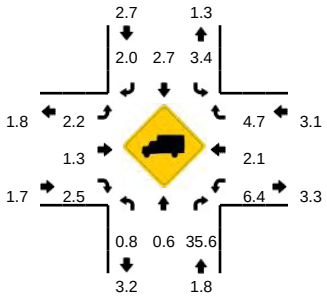
Method for determining peak hour: Total Entering Volume

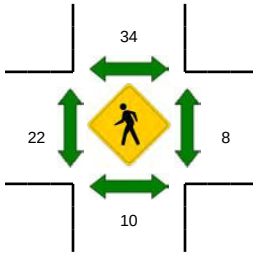
LOCATION: Hawthorne Blvd -- Pacific Coast Hwy
CITY/STATE: Torrance, CA

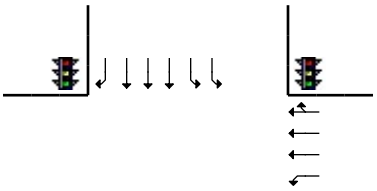
QC JOB #: 12003619
DATE: Thu, Jan 09 2014

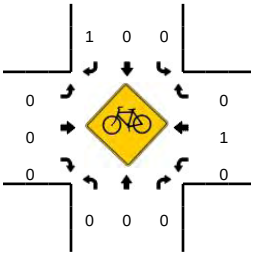
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

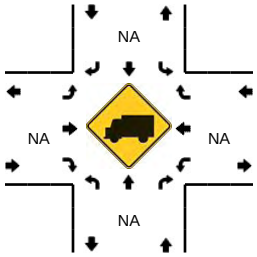


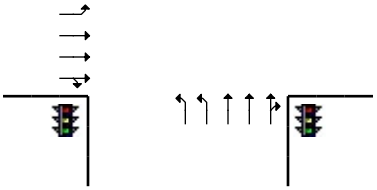


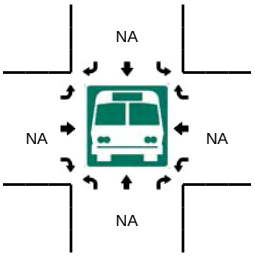












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	15	83	0	0	10	31	11	0	14	63	7	0	1	49	19	0	303	
7:05 AM	20	60	1	0	3	14	7	0	16	38	6	1	5	47	8	0	226	
7:10 AM	20	73	4	0	12	42	11	0	10	56	10	0	4	48	15	0	305	
7:15 AM	9	32	1	0	13	46	15	0	23	48	19	0	6	36	7	0	255	
7:20 AM	20	91	2	0	8	33	8	0	11	61	12	0	2	89	22	0	359	
7:25 AM	18	124	4	0	16	47	14	0	17	42	16	0	8	57	12	0	375	
7:30 AM	22	94	2	0	11	35	9	0	16	65	23	0	10	99	21	0	407	
7:35 AM	21	89	1	0	8	44	37	0	11	70	27	0	12	131	20	0	471	
7:40 AM	35	68	1	0	5	42	28	0	22	73	22	0	11	119	20	0	446	
7:45 AM	47	144	2	0	14	69	38	0	21	83	20	0	9	99	15	0	561	
7:50 AM	35	124	3	0	4	72	20	0	28	87	19	0	11	90	21	0	514	
7:55 AM	24	114	4	0	26	45	22	0	29	94	30	0	12	77	14	0	491	4713
8:00 AM	17	123	4	0	14	62	12	0	25	101	18	0	12	55	14	0	457	4867
8:05 AM	30	106	8	0	13	52	15	0	19	100	26	0	7	51	15	0	442	5083
8:10 AM	13	119	8	0	8	34	12	0	25	77	16	4	17	55	19	0	407	5185
8:15 AM	14	104	2	0	11	69	9	0	26	85	16	0	9	66	24	0	435	5365
8:20 AM	9	69	4	0	19	54	15	0	21	80	21	2	15	86	8	0	403	5409
8:25 AM	14	104	4	0	17	62	9	0	17	71	13	0	10	77	25	0	423	5457
8:30 AM	14	111	10	0	13	47	14	0	15	64	12	2	20	68	20	0	410	5460
8:35 AM	17	126	5	0	17	63	21	0	22	66	24	0	10	71	29	0	471	5460
8:40 AM	25	122	5	0	18	72	10	0	22	68	22	0	9	75	29	0	477	5491
8:45 AM	15	142	8	0	14	50	16	0	18	58	21	0	8	79	15	0	444	5374
8:50 AM	16	107	8	0	9	69	17	0	19	80	24	1	6	74	23	0	453	5313
8:55 AM	16	143	6	0	17	69	20	0	19	71	18	0	11	53	13	0	456	5278

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	424	1528	36	0	176	744	320	0	312	1056	276	0	128	1064	200	0	6264
Heavy Trucks	4	4	8		0	12	0		0	4	0		12	20	8		72
Pedestrians		8				32				32				4			76
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

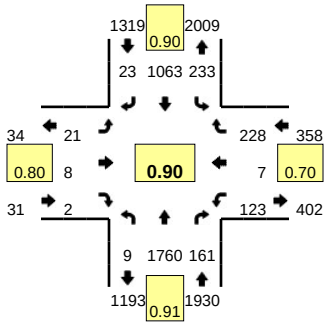
Type of peak hour being reported: Intersection Peak

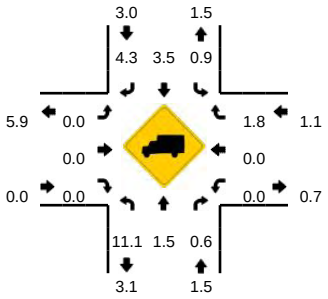
Method for determining peak hour: Total Entering Volume

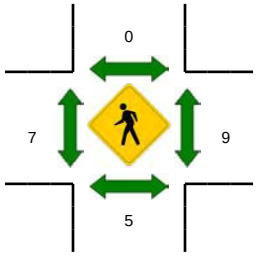
LOCATION: Hawthorne Blvd -- Skypark Dr
CITY/STATE: Torrance, CA

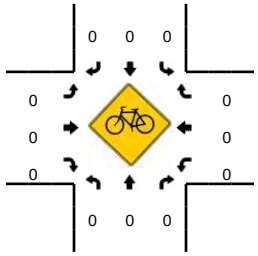
QC JOB #: 12003617
DATE: Thu, Jan 09 2014

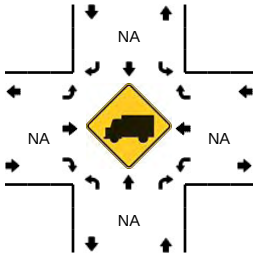
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

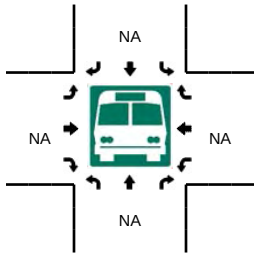












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	91	7	0	19	49	2	0	0	0	0	0	4	0	7	0	179	
7:05 AM	0	102	11	0	0	44	0	0	3	0	0	0	10	0	10	0	180	
7:10 AM	0	79	6	0	11	46	1	0	1	0	0	0	3	0	5	0	152	
7:15 AM	1	104	9	0	5	76	2	0	0	0	0	0	4	1	6	0	208	
7:20 AM	0	128	9	0	7	63	1	0	0	0	0	0	5	0	9	0	222	
7:25 AM	1	104	7	0	10	71	1	0	2	0	0	0	5	0	6	0	207	
7:30 AM	0	159	10	0	13	77	0	0	1	0	0	0	11	0	14	0	285	
7:35 AM	0	101	3	0	15	81	0	0	2	1	0	0	19	0	5	0	227	
7:40 AM	0	136	15	0	5	98	2	0	1	0	0	0	8	1	8	0	274	
7:45 AM	0	147	16	0	14	90	3	0	1	2	0	0	9	0	15	0	297	
7:50 AM	0	123	6	0	19	98	1	1	1	0	0	0	9	0	13	0	271	
7:55 AM	0	168	17	0	21	117	3	0	2	0	0	0	7	0	9	0	344	2846
8:00 AM	1	150	16	1	17	63	1	0	1	0	0	0	11	0	12	0	273	2940
8:05 AM	0	137	10	0	15	108	3	0	2	0	0	0	7	0	14	0	296	3056
8:10 AM	0	145	10	0	6	62	1	0	0	2	0	0	5	0	23	0	254	3158
8:15 AM	0	135	11	0	22	77	5	0	1	1	0	0	16	2	10	0	280	3230
8:20 AM	0	151	11	1	26	106	2	0	3	1	0	0	10	0	17	0	328	3336
8:25 AM	0	140	8	0	18	84	0	0	1	2	0	0	5	2	17	0	277	3406
8:30 AM	2	115	6	1	14	74	0	0	3	0	0	0	9	1	13	0	238	3359
8:35 AM	1	133	21	0	31	112	0	0	3	0	0	0	17	1	20	0	339	3471
8:40 AM	0	207	11	0	16	86	0	0	3	0	0	0	6	0	13	0	342	3539
8:45 AM	0	139	16	0	14	72	3	0	2	2	0	0	16	1	37	0	302	3544
8:50 AM	0	118	19	1	32	93	3	0	2	0	1	0	9	0	25	0	303	3576
8:55 AM	0	190	22	1	22	126	5	0	0	0	1	0	12	0	27	0	406	3638

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1788	228	8	272	1164	44	0	16	8	8	0	148	4	356	0	4044
Heavy Trucks	0	16	0		4	32	0		0	0	0		0	0	8		60
Pedestrians		16				0				20				16			52
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

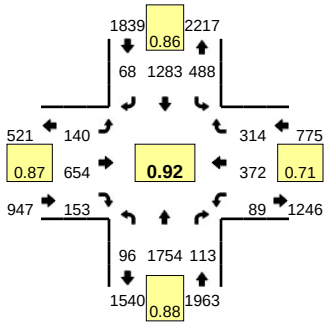
LOCATION: Hawthorne Blvd -- Lomita Blvd

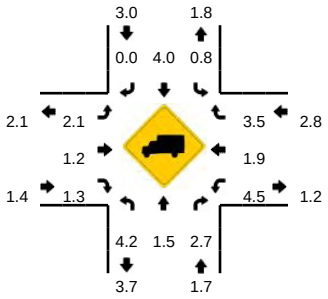
CITY/STATE: Torrance, CA

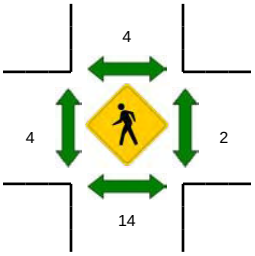
QC JOB #: 12003615

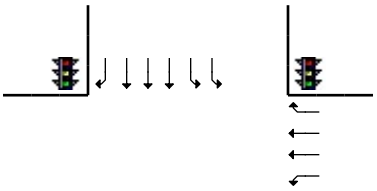
DATE: Thu, Jan 09 2014

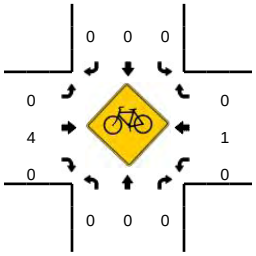
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

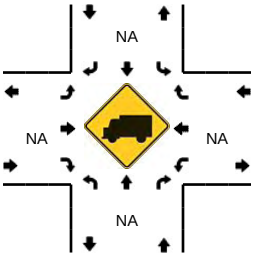


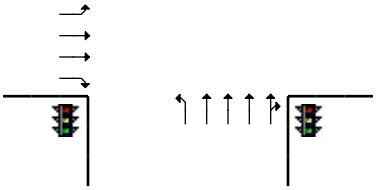


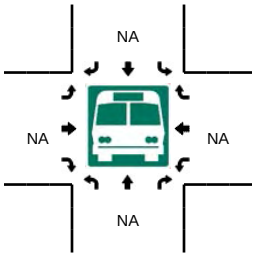












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	125	6	0	19	61	2	0	4	16	3	0	4	15	18	0	278	
7:05 AM	6	61	3	0	35	35	2	0	5	27	2	0	3	13	24	0	216	
7:10 AM	2	120	4	1	26	71	0	1	6	24	8	0	3	15	15	0	296	
7:15 AM	3	80	4	1	14	58	3	0	3	28	5	0	9	13	23	0	244	
7:20 AM	8	135	6	0	24	95	5	0	4	13	6	0	1	20	25	0	342	
7:25 AM	3	103	1	1	17	80	3	0	12	26	5	0	6	32	23	0	312	
7:30 AM	4	127	3	0	29	82	3	3	7	40	9	0	2	38	19	0	366	
7:35 AM	2	158	6	0	20	106	5	0	3	29	12	0	8	44	30	0	423	
7:40 AM	3	91	6	1	31	81	11	0	12	49	8	0	16	67	32	0	408	
7:45 AM	7	161	5	1	35	126	11	1	11	52	9	0	9	52	23	0	503	
7:50 AM	4	123	10	1	33	116	12	0	14	67	21	0	15	50	30	0	496	
7:55 AM	8	159	10	0	58	132	11	1	7	66	13	0	2	20	21	0	508	4392
8:00 AM	5	172	6	1	34	103	5	0	17	61	10	0	6	34	30	0	484	4598
8:05 AM	6	99	9	0	40	88	2	1	16	59	15	0	7	31	29	0	402	4784
8:10 AM	4	181	10	1	34	107	5	1	16	45	9	0	4	20	13	0	450	4938
8:15 AM	6	140	11	2	31	102	4	0	13	49	12	0	6	23	30	0	429	5123
8:20 AM	10	127	11	0	51	94	8	2	5	68	17	0	11	30	24	0	458	5239
8:25 AM	6	153	17	2	48	118	2	2	9	45	15	0	5	19	18	0	459	5386
8:30 AM	2	114	6	2	28	114	3	0	9	38	12	0	7	17	17	0	369	5389
8:35 AM	12	128	8	3	39	86	0	0	13	64	12	0	10	54	41	0	470	5436
8:40 AM	11	197	10	2	48	97	5	1	10	40	8	0	7	22	38	0	496	5524
8:45 AM	9	174	8	1	34	119	4	0	5	57	12	0	10	26	33	0	492	5513
8:50 AM	12	114	13	4	36	96	2	0	15	73	19	0	16	26	30	0	456	5473
8:55 AM	14	126	13	0	61	139	5	0	4	50	19	0	11	33	32	0	507	5472

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	76	1772	100	8	504	1496	136	8	128	740	172	0	104	488	296	0	6028
Heavy Trucks	4	32	0		0	60	0		0	12	4		0	8	8		128
Pedestrians		28				8				8				0			44
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

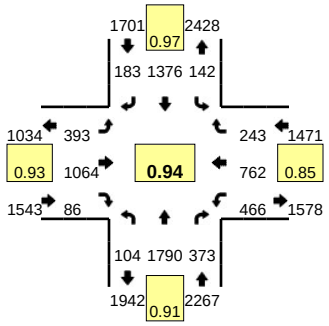
Type of peak hour being reported: Intersection Peak

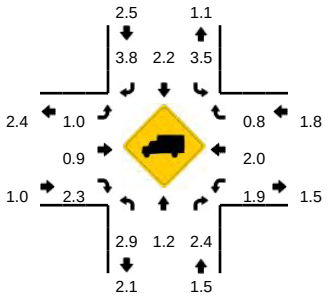
Method for determining peak hour: Total Entering Volume

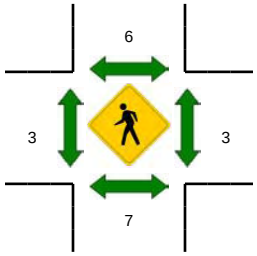
LOCATION: Hawthorne Blvd -- Sepulveda Blvd
CITY/STATE: Torrance, CA

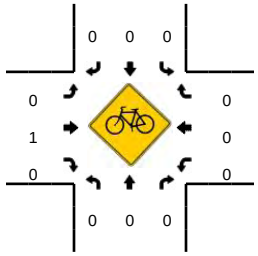
QC JOB #: 12003613
DATE: Thu, Jan 09 2014

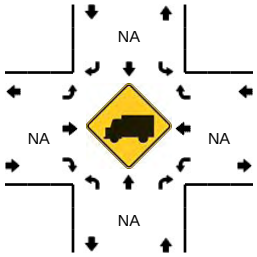
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 8:40 AM -- 8:55 AM

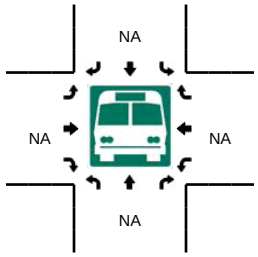












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	91	7	0	4	60	7	0	17	48	4	0	28	50	21	0	339	
7:05 AM	7	131	14	0	5	61	1	0	16	28	2	0	18	29	11	0	323	
7:10 AM	4	79	14	1	1	52	11	0	17	47	7	0	26	35	16	0	310	
7:15 AM	5	119	17	0	9	74	4	1	14	39	4	0	17	49	8	0	360	
7:20 AM	8	108	12	0	3	58	8	0	21	42	4	0	32	58	15	0	369	
7:25 AM	4	162	15	0	9	111	5	0	12	45	7	0	20	30	17	0	437	
7:30 AM	11	120	23	0	8	69	5	0	33	38	4	0	30	70	18	0	429	
7:35 AM	6	125	27	1	15	87	13	0	19	78	8	0	19	92	15	0	505	
7:40 AM	13	164	18	0	5	86	14	0	21	48	4	0	33	84	15	0	505	
7:45 AM	5	104	22	0	11	81	11	0	46	85	5	0	42	96	33	0	541	
7:50 AM	11	148	26	0	15	139	19	0	25	73	7	0	37	84	30	0	614	
7:55 AM	9	163	26	0	7	120	18	0	41	66	8	0	51	61	17	0	587	5319
8:00 AM	2	138	30	1	15	123	27	0	24	112	10	0	20	53	18	0	573	5553
8:05 AM	17	207	25	1	11	76	14	0	33	77	11	0	34	64	20	0	590	5820
8:10 AM	7	116	27	2	12	86	11	1	39	103	7	0	48	65	15	0	539	6049
8:15 AM	5	134	39	1	15	104	15	0	26	106	6	0	34	54	22	1	562	6251
8:20 AM	10	190	23	0	16	161	15	0	25	72	2	0	34	40	20	0	608	6490
8:25 AM	7	93	42	2	11	88	15	0	37	79	7	0	51	62	21	0	515	6568
8:30 AM	3	116	32	3	3	95	14	0	35	111	6	0	38	86	26	0	568	6707
8:35 AM	3	146	24	2	17	161	14	0	25	71	4	0	31	64	26	0	588	6790
8:40 AM	11	156	40	0	5	90	13	0	46	86	6	0	57	60	14	0	584	6869
8:45 AM	7	162	38	3	14	102	14	0	32	114	15	0	29	89	27	0	646	6974
8:50 AM	8	169	27	0	14	170	13	1	30	67	4	0	38	64	17	0	622	6982
8:55 AM	8	134	21	3	8	123	7	0	32	68	9	0	51	43	29	0	536	6931

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	104	1948	420	12	132	1448	160	4	432	1068	100	0	496	852	232	0	7408
Heavy Trucks	4	20	12		4	40	4		4	20	0		8	24	0		140
Pedestrians		12				8				0				4			24
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

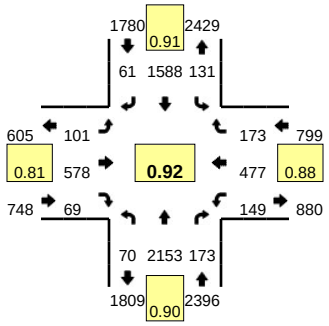
LOCATION: Hawthorne Blvd -- W Carson St

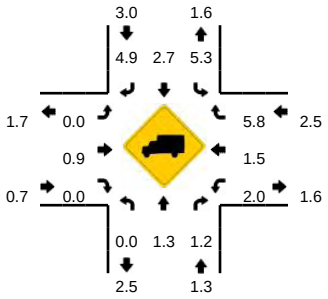
CITY/STATE: Torrance, CA

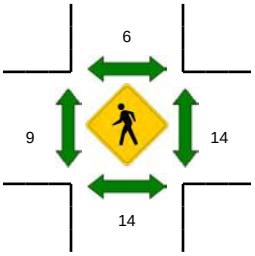
QC JOB #: 12003611

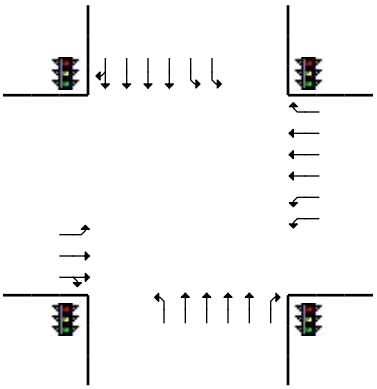
DATE: Thu, Jan 09 2014

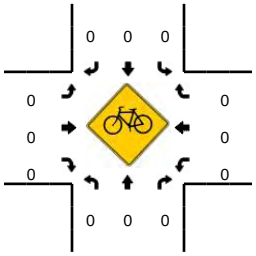
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

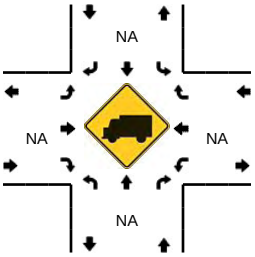


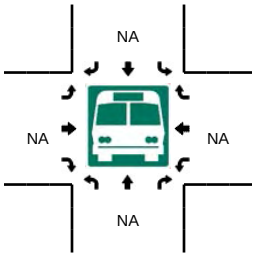












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				W Carson St (Eastbound)				W Carson St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	117	6	0	6	72	1	0	3	14	6	0	10	13	5	0	255	
7:05 AM	2	164	6	1	6	70	2	2	5	22	4	0	3	17	13	0	317	
7:10 AM	1	108	8	0	2	56	2	1	5	12	2	0	13	14	10	0	234	
7:15 AM	4	113	3	0	7	86	2	0	7	26	5	0	4	16	14	0	287	
7:20 AM	2	154	8	1	5	71	1	0	9	20	2	0	5	9	4	0	291	
7:25 AM	6	124	3	0	11	95	3	1	3	32	3	0	5	36	18	0	340	
7:30 AM	3	215	7	0	5	106	5	0	10	15	4	0	6	34	8	0	418	
7:35 AM	3	146	11	2	5	75	7	0	9	32	2	0	15	40	13	0	360	
7:40 AM	3	175	8	0	16	135	6	1	3	38	5	0	10	40	10	0	450	
7:45 AM	6	177	10	0	10	117	5	0	7	40	3	0	17	37	15	0	444	
7:50 AM	10	160	10	1	13	130	11	1	9	77	8	0	14	61	12	0	517	
7:55 AM	6	216	16	0	7	168	10	0	7	48	3	0	7	38	16	0	542	4455
8:00 AM	3	165	9	0	8	146	5	0	14	59	7	0	13	45	10	0	484	4684
8:05 AM	8	229	12	0	17	129	8	0	13	40	12	0	9	41	14	0	532	4899
8:10 AM	3	173	17	1	6	94	5	0	11	36	3	0	21	31	14	0	415	5080
8:15 AM	5	151	14	0	8	136	1	0	7	69	4	0	9	25	19	0	448	5241
8:20 AM	4	214	10	0	16	186	5	1	5	44	2	0	13	16	13	0	529	5479
8:25 AM	5	143	8	0	10	91	2	0	5	32	3	0	12	32	7	0	350	5489
8:30 AM	7	159	17	0	14	119	4	0	6	62	4	0	14	48	17	0	471	5542
8:35 AM	5	148	17	0	13	151	5	0	6	32	5	0	11	40	16	0	449	5631
8:40 AM	3	209	23	1	9	131	2	0	10	34	6	0	14	49	11	0	502	5683
8:45 AM	8	186	20	0	8	107	3	0	8	45	12	0	12	51	24	0	484	5723
8:50 AM	9	159	13	1	21	143	4	0	7	56	8	0	14	40	8	0	483	5689
8:55 AM	4	214	13	4	10	181	9	0	7	27	4	0	15	18	15	0	521	5668

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	2440	148	0	128	1772	92	0	136	588	88	0	116	496	160	0	6232
Heavy Trucks	0	24	0		8	48	4		0	4	0		0	8	8		104
Pedestrians		8				0				4				8			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

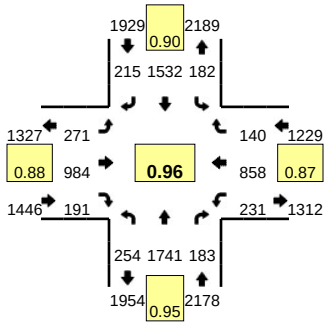
Type of peak hour being reported: Intersection Peak

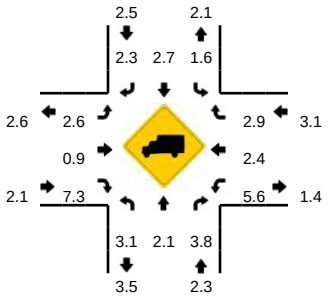
Method for determining peak hour: Total Entering Volume

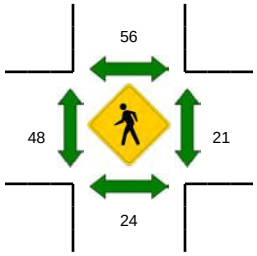
LOCATION: Hawthorne Blvd -- Torrance Blvd
CITY/STATE: Torrance, CA

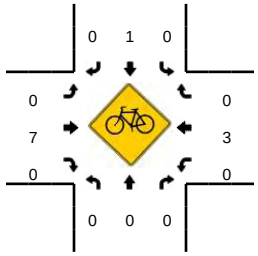
QC JOB #: 12003609
DATE: Thu, Jan 16 2014

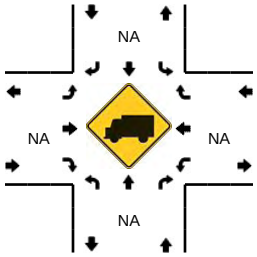
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:30 AM -- 8:45 AM

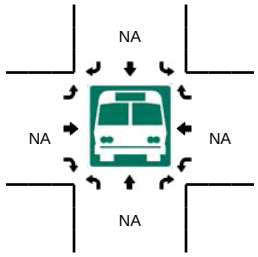












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Torrance Blvd (Eastbound)				Torrance Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	17	89	4	0	8	76	12	0	10	39	8	0	7	53	6	0	329	
7:05 AM	18	123	7	0	9	84	13	3	8	25	7	0	5	23	6	0	331	
7:10 AM	21	107	13	0	9	56	4	1	9	46	13	0	7	36	7	0	329	
7:15 AM	14	98	12	0	8	85	14	2	20	34	6	0	10	15	8	0	326	
7:20 AM	17	147	11	0	3	71	13	1	10	49	14	0	10	52	5	0	403	
7:25 AM	15	66	9	0	12	82	14	1	15	48	3	0	9	58	8	0	340	
7:30 AM	22	185	13	0	16	135	12	1	17	34	8	0	6	38	5	0	492	
7:35 AM	19	115	12	0	14	91	14	0	21	69	18	0	15	67	4	0	459	
7:40 AM	20	144	11	1	13	111	17	3	36	62	22	0	18	41	6	0	505	
7:45 AM	29	175	17	1	13	126	22	0	13	71	12	0	10	85	9	0	583	
7:50 AM	21	137	11	0	8	122	18	2	13	88	15	0	14	86	13	0	548	
7:55 AM	10	136	7	0	10	144	34	3	21	52	11	0	15	62	6	0	511	5156
8:00 AM	25	148	18	0	11	108	17	3	30	112	13	0	19	80	10	0	594	5421
8:05 AM	9	180	15	0	12	138	25	3	31	76	18	0	9	40	11	0	567	5657
8:10 AM	24	150	13	0	10	101	14	2	19	101	13	0	16	59	12	0	534	5862
8:15 AM	16	97	10	0	14	107	20	2	25	85	9	0	12	71	8	0	476	6012
8:20 AM	25	185	22	0	17	168	16	5	24	71	11	0	23	66	8	0	641	6250
8:25 AM	20	147	6	0	6	86	14	5	21	88	13	0	21	86	18	0	531	6441
8:30 AM	26	108	17	0	12	153	24	2	22	81	22	0	20	68	11	0	566	6515
8:35 AM	24	190	24	0	14	135	26	2	19	65	19	0	14	71	12	0	615	6671
8:40 AM	21	126	16	0	9	142	18	3	24	84	16	0	24	91	6	0	580	6746
8:45 AM	18	147	15	0	14	119	15	5	22	74	18	0	30	51	14	0	542	6705
8:50 AM	32	165	16	0	10	105	15	3	18	80	18	0	22	100	16	0	600	6757
8:55 AM	14	98	11	0	16	170	11	2	16	67	21	0	21	75	14	0	536	6782

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	284	1696	228	0	140	1720	272	28	260	920	228	0	232	920	116	0	7044
Heavy Trucks	12	24	0		8	48	4		12	12	20		12	8	0		160
Pedestrians		36				92				28				36			192
Bicycles	0	0	0		0	0	0		0	3	0		0	1	0		4
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

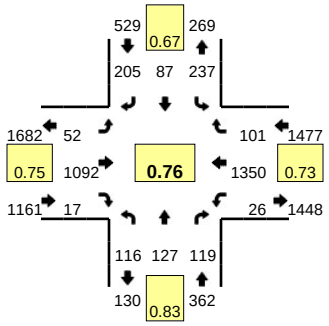
Type of peak hour being reported: Intersection Peak

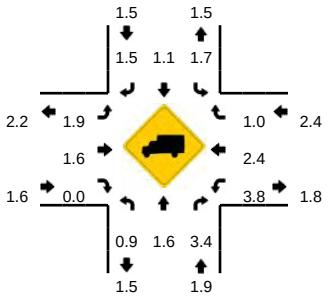
Method for determining peak hour: Total Entering Volume

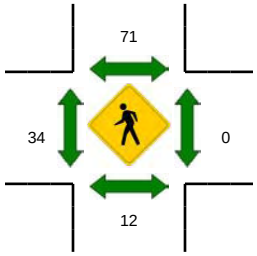
LOCATION: Anza Ave/Vista Montana -- Pacific Coast Hwy
CITY/STATE: Torrance, CA

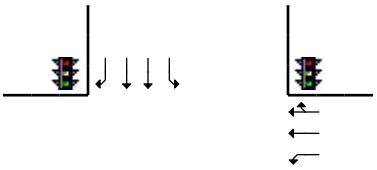
QC JOB #: 12003607
DATE: Thu, Jan 09 2014

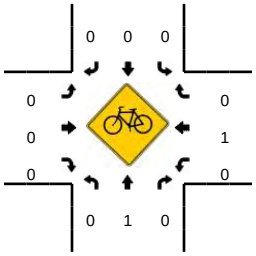
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

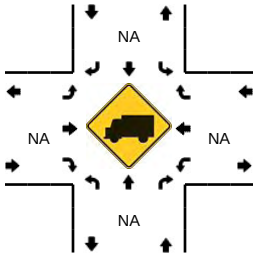


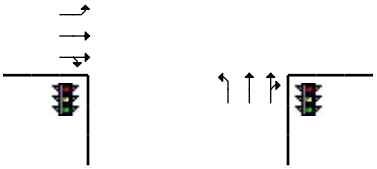


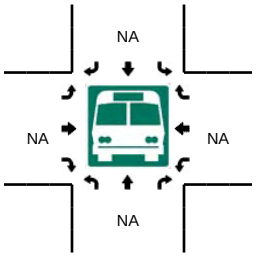












5-Min Count Period Beginning At	Anza Ave/Vista Montana (Northbound)				Anza Ave/Vista Montana (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	6	5	6	0	10	0	13	0	1	45	2	0	1	77	7	0	173	
7:05 AM	4	3	5	0	12	1	1	0	0	49	1	0	3	70	8	0	157	
7:10 AM	5	2	12	0	8	2	2	0	1	40	2	0	1	65	7	0	147	
7:15 AM	5	8	7	0	11	1	2	0	2	54	2	0	0	78	7	0	177	
7:20 AM	10	3	4	0	12	3	3	0	1	50	0	0	1	81	12	0	180	
7:25 AM	5	5	8	0	4	4	9	0	3	93	0	0	3	100	12	0	246	
7:30 AM	2	9	7	0	16	1	7	0	2	58	1	0	0	110	4	0	217	
7:35 AM	13	9	9	0	22	9	15	0	1	78	3	1	2	112	12	0	286	
7:40 AM	20	16	10	0	16	5	28	0	4	76	2	0	1	132	5	0	315	
7:45 AM	14	13	8	0	17	6	28	0	5	96	1	2	2	156	12	0	360	
7:50 AM	14	12	9	0	27	8	37	0	3	103	1	3	4	168	10	0	399	
7:55 AM	15	12	11	0	29	9	30	0	9	116	4	2	2	144	11	0	394	3051
8:00 AM	9	11	15	0	23	14	28	0	6	118	1	1	3	133	7	0	369	3247
8:05 AM	8	14	17	0	21	5	11	0	5	124	1	2	2	67	7	0	284	3374
8:10 AM	5	9	10	0	30	9	4	0	1	72	1	0	4	79	8	0	232	3459
8:15 AM	6	9	8	0	17	7	4	0	1	90	2	0	2	73	6	0	225	3507
8:20 AM	5	8	7	0	15	10	4	0	1	68	0	0	1	76	7	0	202	3529
8:25 AM	4	5	10	0	15	11	4	0	1	86	4	0	8	81	4	0	233	3516
8:30 AM	15	12	11	0	14	8	6	0	0	68	0	0	7	75	9	0	225	3524
8:35 AM	5	5	10	0	15	9	5	0	4	71	0	1	9	83	13	0	230	3468
8:40 AM	7	9	11	0	12	14	6	0	3	81	3	0	9	81	10	0	246	3399
8:45 AM	17	20	9	0	15	13	6	0	3	79	4	0	8	88	7	0	269	3308
8:50 AM	12	14	10	0	20	12	5	0	3	99	3	0	10	91	13	0	292	3201
8:55 AM	16	5	10	0	26	14	9	0	0	81	1	0	3	84	2	0	251	3058

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	140	140	0	316	124	380	0	72	1348	24	24	36	1780	112	0	4648
Heavy Trucks	0	0	0		4	0	0		0	20	0		4	20	0		48
Pedestrians		24				140				28				0			192
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

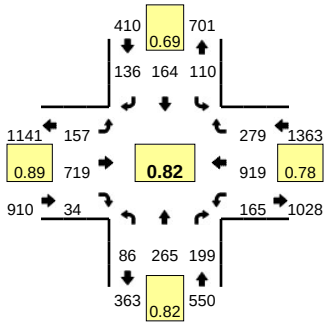
Type of peak hour being reported: Intersection Peak

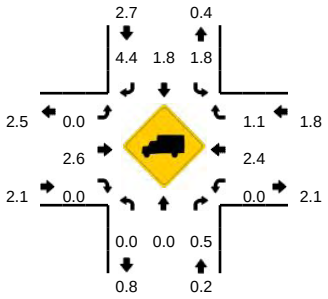
Method for determining peak hour: Total Entering Volume

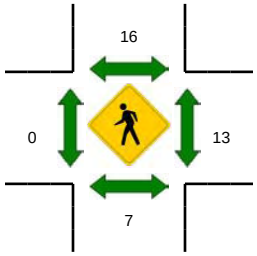
LOCATION: Pacific Coast Hwy -- Calle Mayor
CITY/STATE: Torrance, CA

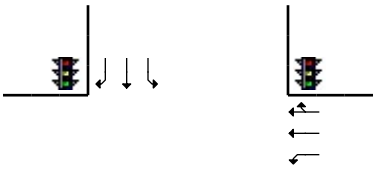
QC JOB #: 12003605
DATE: Thu, Jan 09 2014

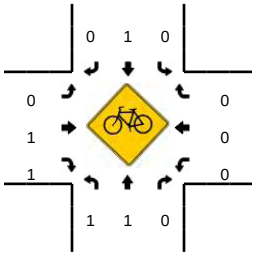
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

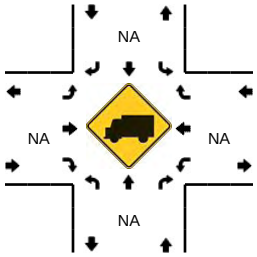


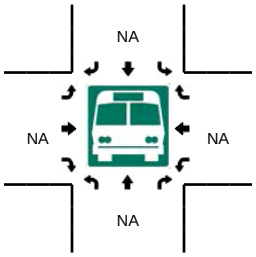












5-Min Count Period Beginning At	Pacific Coast Hwy (Northbound)				Pacific Coast Hwy (Southbound)				Calle Mayor (Eastbound)				Calle Mayor (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	12	4	0	7	14	4	0	6	28	0	0	8	61	6	0	154	
7:05 AM	2	11	10	0	4	4	5	0	5	39	2	0	7	74	8	0	171	
7:10 AM	9	12	9	0	2	6	1	0	7	32	0	0	7	42	4	0	131	
7:15 AM	2	5	10	0	7	4	4	0	6	42	0	0	2	81	4	0	167	
7:20 AM	10	10	9	0	9	10	4	0	5	49	2	0	3	59	6	0	176	
7:25 AM	2	14	12	0	1	7	4	0	13	55	1	0	3	91	7	0	210	
7:30 AM	5	17	9	0	9	13	11	0	2	56	2	0	6	70	9	0	209	
7:35 AM	5	21	18	0	6	6	6	0	11	62	1	0	11	96	18	0	261	
7:40 AM	6	28	17	0	6	11	14	0	6	52	2	0	13	70	24	0	249	
7:45 AM	2	22	15	0	15	11	10	0	30	75	4	0	19	75	40	0	318	
7:50 AM	12	32	23	0	14	21	16	0	12	51	2	0	11	66	50	0	310	
7:55 AM	10	21	27	0	10	16	16	0	24	56	6	0	26	90	59	0	361	2717
8:00 AM	11	17	16	0	18	22	16	0	8	54	4	0	16	86	32	0	300	2863
8:05 AM	9	16	18	0	12	5	13	0	6	73	1	0	18	90	13	0	274	2966
8:10 AM	10	36	12	0	9	15	12	0	12	55	2	0	9	58	6	0	236	3071
8:15 AM	8	12	13	0	3	12	6	0	17	76	3	0	16	72	7	0	245	3149
8:20 AM	5	24	14	0	4	17	10	0	16	47	3	0	6	67	12	0	225	3198
8:25 AM	2	12	18	0	5	8	6	0	11	62	3	0	15	78	8	0	228	3216
8:30 AM	6	24	8	0	8	20	11	0	4	56	3	0	5	71	10	0	226	3233
8:35 AM	10	14	21	0	3	7	5	0	12	64	4	0	13	63	19	0	235	3207
8:40 AM	6	33	14	0	6	17	12	0	8	61	0	0	2	62	14	0	235	3193
8:45 AM	7	10	19	0	11	11	15	0	13	76	2	0	15	74	18	0	271	3146
8:50 AM	4	21	23	0	8	12	22	0	8	59	3	0	12	66	14	0	252	3088
8:55 AM	5	14	18	0	10	9	11	0	8	65	3	0	16	93	17	0	269	2996

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	96	300	260	0	156	192	168	0	264	728	48	0	224	924	596	0	3956
Heavy Trucks	0	0	0		4	0	12		0	12	0		0	12	0		40
Pedestrians		24				32				0				20			76
Bicycles	1	1	0		0	0	0		0	0	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

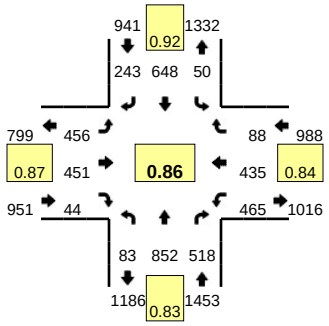
LOCATION: Crenshaw Blvd -- Palos Verdes Drive N

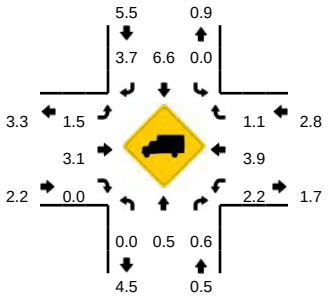
CITY/STATE: Palos Verdes Estates, CA

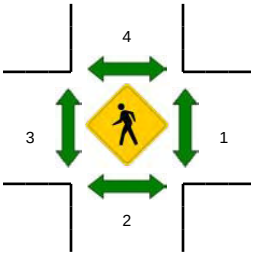
QC JOB #: 12003603

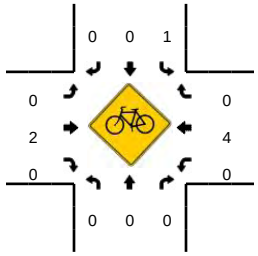
DATE: Sat, Jan 04 2014

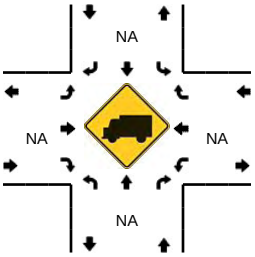
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

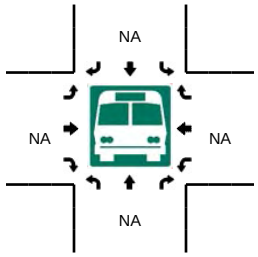












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Palos Verdes Drive N (Eastbound)				Palos Verdes Drive N (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	41	32	0	2	25	7	0	14	38	2	1	22	22	4	0	213	
7:05 AM	2	38	37	0	2	30	10	0	19	37	1	2	29	32	3	0	242	
7:10 AM	2	38	34	1	3	33	6	1	12	38	2	2	20	21	7	0	220	
7:15 AM	1	32	30	0	1	23	13	0	14	47	0	2	27	33	4	0	227	
7:20 AM	6	59	53	0	0	34	13	1	14	17	3	0	37	29	8	0	274	
7:25 AM	1	35	41	2	2	46	17	2	22	52	4	2	34	38	8	0	306	
7:30 AM	2	52	36	4	2	47	15	0	24	33	1	4	53	35	12	0	320	
7:35 AM	4	68	47	3	4	58	28	1	36	25	6	1	50	51	8	0	390	
7:40 AM	5	63	35	12	0	62	20	1	27	43	4	6	27	31	6	0	342	
7:45 AM	4	79	57	2	4	56	20	0	30	43	3	10	48	41	8	0	405	
7:50 AM	7	74	51	3	5	68	20	0	36	47	3	10	42	46	9	0	421	
7:55 AM	6	106	52	2	4	50	12	0	36	42	9	9	61	38	7	0	434	3794
8:00 AM	3	89	40	1	5	59	22	0	40	28	5	6	43	37	2	0	380	3961
8:05 AM	4	63	46	1	6	50	20	0	37	42	2	8	21	29	8	0	337	4056
8:10 AM	5	57	43	0	4	35	15	0	44	39	1	5	26	21	4	0	299	4135
8:15 AM	0	57	35	2	3	50	22	1	24	42	4	1	28	35	8	0	312	4220
8:20 AM	8	69	34	0	4	51	22	1	28	37	4	1	35	47	7	1	349	4295
8:25 AM	5	75	42	0	5	62	27	0	26	30	2	7	30	24	9	0	344	4333
8:30 AM	1	69	40	1	2	47	10	0	27	41	4	2	23	22	9	0	298	4311
8:35 AM	3	65	40	0	6	40	12	0	19	32	1	1	49	35	7	0	310	4231
8:40 AM	1	84	52	1	1	68	9	0	34	37	4	0	40	34	12	0	377	4266
8:45 AM	2	73	42	2	3	69	11	1	29	23	5	1	31	29	5	0	326	4187
8:50 AM	3	60	40	1	7	34	15	2	39	43	5	3	34	36	10	0	332	4098
8:55 AM	3	58	30	1	2	36	11	0	28	31	3	0	53	44	10	0	310	3974

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	1036	640	28	52	696	208	0	408	528	60	116	604	500	96	0	5040
Heavy Trucks	0	4	0		0	48	8		8	8	0		0	16	0		92
Pedestrians		4				16				12				4			36
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

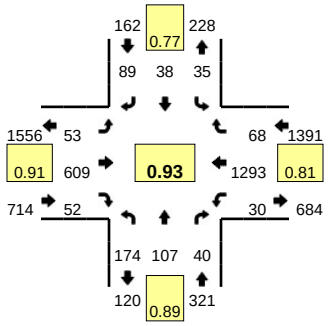
Type of peak hour being reported: Intersection Peak

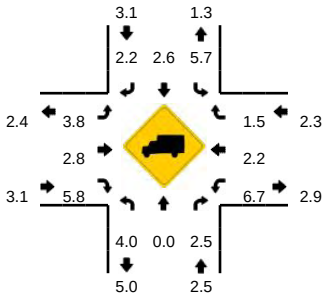
Method for determining peak hour: Total Entering Volume

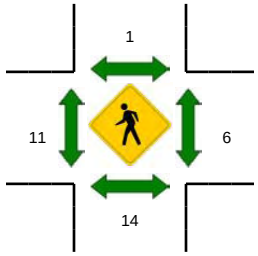
LOCATION: Pennsylvania Ave -- Lomita Blvd
CITY/STATE: Lomita, CA

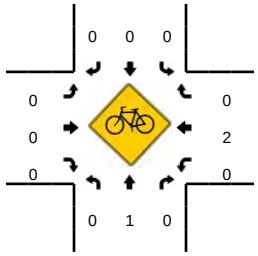
QC JOB #: 12003601
DATE: Thu, Jan 09 2014

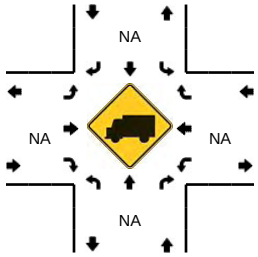
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

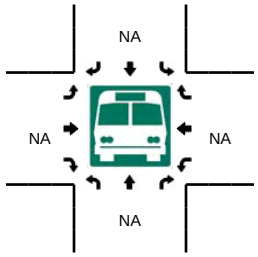












5-Min Count Period Beginning At	Pennsylvania Ave (Northbound)				Pennsylvania Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	13	3	1	0	1	1	5	0	1	31	5	0	0	84	2	0	147	
7:05 AM	10	6	4	0	1	1	1	0	0	23	1	0	1	98	1	0	147	
7:10 AM	12	1	5	0	3	2	1	0	2	26	2	0	3	87	3	0	147	
7:15 AM	8	6	4	0	1	0	1	0	1	30	2	0	2	78	2	0	135	
7:20 AM	20	3	1	0	1	0	6	0	0	42	3	0	2	123	3	0	204	
7:25 AM	27	6	4	0	4	4	3	0	0	28	2	0	1	85	0	0	164	
7:30 AM	15	3	1	0	1	3	3	0	0	39	2	1	2	124	5	0	199	
7:35 AM	20	8	3	0	2	1	7	0	1	32	1	0	5	93	6	0	179	
7:40 AM	12	6	4	0	1	3	7	0	2	54	3	0	3	147	6	0	248	
7:45 AM	14	21	3	0	1	1	8	0	7	44	3	0	2	113	11	0	228	
7:50 AM	14	9	6	0	2	0	2	0	1	42	0	0	3	131	13	0	223	
7:55 AM	11	9	7	0	3	3	8	0	6	46	5	0	3	113	11	0	225	2246
8:00 AM	18	11	3	0	2	5	7	0	7	50	4	0	0	91	4	0	202	2301
8:05 AM	18	6	3	0	7	4	15	0	9	57	7	0	2	76	1	0	205	2359
8:10 AM	9	5	3	0	5	2	4	0	3	57	10	0	2	106	5	0	211	2423
8:15 AM	19	9	1	0	1	5	8	0	4	43	3	0	3	90	4	0	190	2478
8:20 AM	14	9	4	0	5	3	9	0	5	58	4	0	2	115	1	0	229	2503
8:25 AM	21	7	0	0	3	3	3	0	4	47	4	0	2	93	4	0	191	2530
8:30 AM	13	6	2	0	2	1	8	0	4	64	5	0	5	121	5	0	236	2567
8:35 AM	11	9	4	0	3	8	10	0	1	47	4	0	3	97	3	0	200	2588
8:40 AM	10	6	2	0	0	3	5	0	5	58	3	0	3	129	4	0	228	2568
8:45 AM	12	7	4	0	2	5	4	0	5	44	2	0	2	75	3	0	165	2505
8:50 AM	13	5	4	0	1	3	7	0	0	64	5	0	2	99	3	0	206	2488
8:55 AM	10	4	1	0	5	4	5	0	5	39	6	0	4	104	3	0	190	2453

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	160	144	52	0	16	16	68	0	40	560	24	0	32	1564	120	0	2796
Heavy Trucks	4	0	0		4	0	0		0	16	4		8	28	4		68
Pedestrians		8				4				0				4			16
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

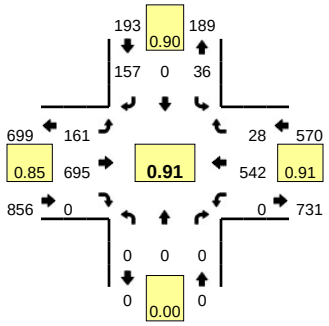
Type of peak hour being reported: Intersection Peak

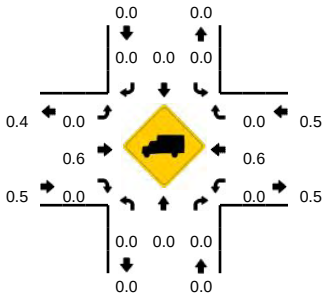
Method for determining peak hour: Total Entering Volume

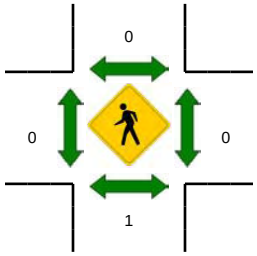
LOCATION: Costco West Dwy (unsignalized) -- Skypark Dr
CITY/STATE: Torrance, CA

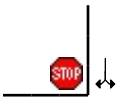
QC JOB #: 12003686
DATE: Thu, Jan 09 2014

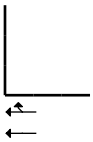
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:55 PM -- 5:10 PM

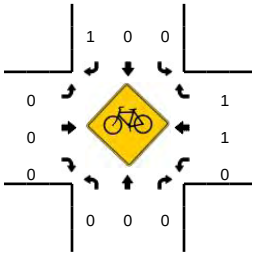


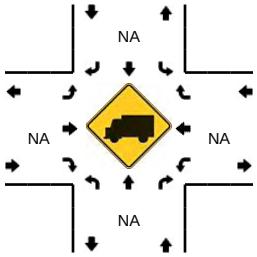


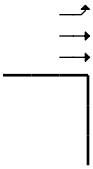


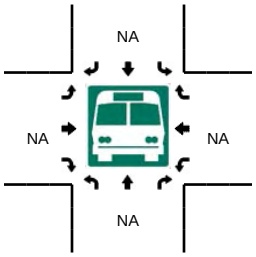












5-Min Count Period Beginning At	Costco West Dwy (unsignalized) (Northbound)				Costco West Dwy (unsignalized) (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	2	0	14	0	15	76	0	0	0	41	1	0	149	
4:05 PM	0	0	0	0	3	0	14	0	10	66	0	0	0	47	0	0	140	
4:10 PM	0	0	0	0	4	0	12	0	16	72	0	0	0	44	3	0	151	
4:15 PM	0	0	0	0	4	0	19	0	12	60	0	0	0	40	0	0	135	
4:20 PM	0	0	0	0	2	0	12	0	10	56	0	0	0	36	1	0	117	
4:25 PM	0	0	0	0	0	0	13	0	14	49	0	0	0	37	3	0	116	
4:30 PM	0	0	0	0	4	0	7	0	17	58	0	0	0	33	2	0	121	
4:35 PM	0	0	0	0	2	0	13	0	19	54	0	0	0	50	3	0	141	
4:40 PM	0	0	0	0	3	0	17	0	17	50	0	0	0	41	4	0	132	
4:45 PM	0	0	0	0	5	0	13	0	8	50	0	0	0	47	2	0	125	
4:50 PM	0	0	0	0	2	0	15	0	15	52	0	0	0	39	4	0	127	
4:55 PM	0	0	0	0	4	0	13	0	10	65	0	0	0	61	2	0	155	1609
5:00 PM	0	0	0	0	2	0	10	0	12	47	0	0	0	51	1	0	123	1583
5:05 PM	0	0	0	0	5	0	17	0	16	80	0	0	0	46	1	0	165	1608
5:10 PM	0	0	0	0	1	0	5	0	12	69	0	0	0	47	4	0	138	1595
5:15 PM	0	0	0	0	2	0	15	0	8	60	0	0	0	50	1	0	136	1596
5:20 PM	0	0	0	0	1	0	15	0	13	61	0	0	0	36	1	0	127	1606
5:25 PM	0	0	0	0	5	0	17	0	14	49	0	0	0	41	3	0	129	1619
5:30 PM	0	0	0	0	2	0	14	0	10	52	0	0	0	39	4	0	121	1619
5:35 PM	0	0	0	0	4	0	12	0	8	53	0	0	0	51	5	0	133	1611
5:40 PM	0	0	0	0	2	0	12	0	7	47	0	0	0	54	2	0	124	1603
5:45 PM	0	0	0	0	2	0	10	0	2	44	0	0	0	42	3	0	103	1581
5:50 PM	0	0	0	0	5	0	12	0	11	35	0	0	0	42	2	0	107	1561
5:55 PM	0	0	0	0	1	0	11	0	7	46	0	0	0	32	2	0	99	1505

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	44	0	160	0	152	768	0	0	0	632	16	0	1772
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	1		0	0	0		0	1	1		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

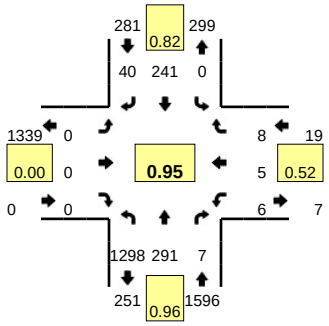
Type of peak hour being reported: Intersection Peak

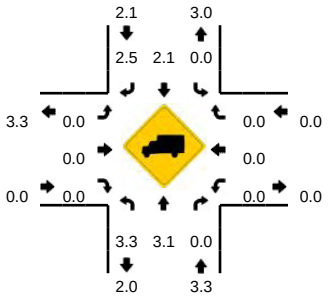
Method for determining peak hour: Total Entering Volume

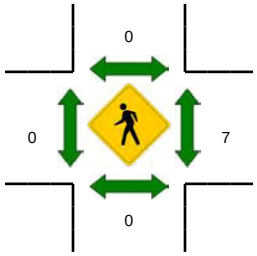
LOCATION: Figueroa St -- I-110 NB On-Ramp
CITY/STATE: Los Angeles, CA

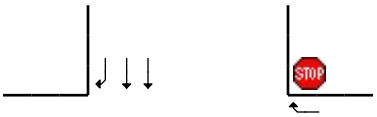
QC JOB #: 12003684
DATE: Thu, Jan 16 2014

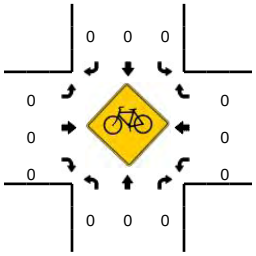
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

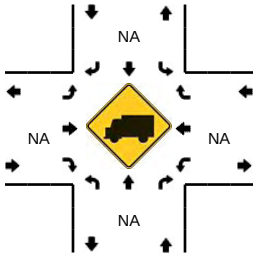


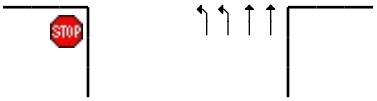


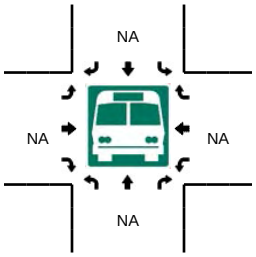












5-Min Count Period Beginning At	Figueroa St (Northbound)				Figueroa St (Southbound)				I-110 NB On-Ramp (Eastbound)				I-110 NB On-Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	91	23	0	0	0	27	10	0	0	0	0	0	0	1	0	0	152	
4:05 PM	93	21	0	0	0	13	5	0	0	0	0	0	0	0	0	0	132	
4:10 PM	103	17	0	0	0	23	1	0	0	0	0	0	0	0	0	0	144	
4:15 PM	128	17	1	0	0	10	8	0	0	0	0	0	1	0	1	0	166	
4:20 PM	112	27	1	0	0	11	7	0	0	0	0	0	0	1	0	0	159	
4:25 PM	100	27	1	0	0	14	4	0	0	0	0	0	1	0	2	0	149	
4:30 PM	100	26	0	0	0	20	1	0	0	0	0	0	0	1	0	0	148	
4:35 PM	109	16	1	0	0	23	6	0	0	0	0	0	0	0	2	0	157	
4:40 PM	131	17	0	0	0	15	5	0	0	0	0	0	0	0	0	0	168	
4:45 PM	99	32	0	2	0	23	2	0	0	0	0	0	0	3	2	0	163	
4:50 PM	102	32	1	2	0	20	2	0	0	0	0	0	4	0	2	0	165	
4:55 PM	89	22	0	0	0	14	2	0	0	0	0	0	0	0	0	0	127	1830
5:00 PM	117	24	0	0	0	18	4	0	0	0	0	0	0	0	0	0	163	1841
5:05 PM	101	23	2	0	0	23	4	0	0	0	0	0	0	0	0	0	153	1862
5:10 PM	103	37	2	0	0	8	2	0	0	0	0	0	1	0	0	0	153	1871
5:15 PM	114	20	0	0	0	21	1	0	0	0	0	0	1	1	2	0	160	1865
5:20 PM	118	22	0	0	0	36	7	0	0	0	0	0	0	0	0	0	183	1889
5:25 PM	111	20	1	0	0	20	4	0	0	0	0	0	0	0	0	0	156	1896
5:30 PM	99	25	0	0	0	18	5	0	0	0	0	0	0	0	0	0	147	1895
5:35 PM	106	26	0	0	0	14	7	0	0	0	0	0	0	2	0	0	155	1893
5:40 PM	90	23	0	0	0	28	4	0	0	0	0	0	1	1	1	0	148	1873
5:45 PM	123	22	0	0	0	21	2	0	0	0	0	0	0	1	2	0	171	1881
5:50 PM	95	14	1	0	0	22	6	0	0	0	0	0	1	0	0	0	139	1855
5:55 PM	96	28	0	0	0	15	6	0	0	0	0	0	0	0	0	0	145	1873

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	1372	248	4	0	0	308	48	0	0	0	0	0	4	4	8	0	1996
Heavy Trucks	56	4	0		0	4	0		0	0	0		0	0	0		64
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

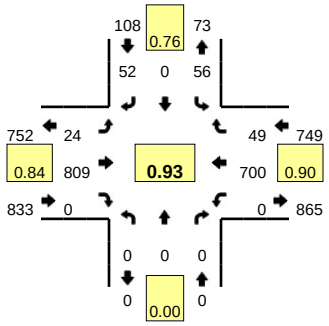
Type of peak hour being reported: Intersection Peak

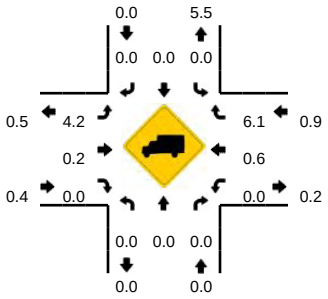
Method for determining peak hour: Total Entering Volume

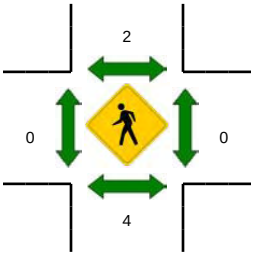
LOCATION: Garnier St -- Skypark Dr
CITY/STATE: Torrance, CA

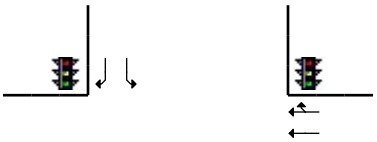
QC JOB #: 12003682
DATE: Thu, Jan 09 2014

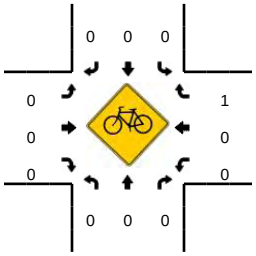
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

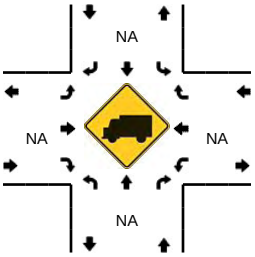


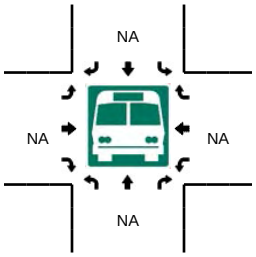












5-Min Count Period Beginning At	Garnier St (Northbound)				Garnier St (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	5	0	4	0	3	71	0	0	0	60	4	0	147	
4:05 PM	0	0	0	0	4	0	2	0	4	88	0	0	0	54	2	0	154	
4:10 PM	0	0	0	0	5	0	6	0	4	89	0	0	0	49	7	0	160	
4:15 PM	0	0	0	0	3	0	3	0	3	67	0	0	0	42	6	0	124	
4:20 PM	0	0	0	0	5	0	5	0	2	70	0	0	0	66	4	0	152	
4:25 PM	0	0	0	0	3	0	4	0	0	55	0	0	0	43	3	0	108	
4:30 PM	0	0	0	0	5	0	3	0	3	61	0	0	0	47	3	0	122	
4:35 PM	0	0	0	0	3	0	5	0	4	83	0	0	0	48	3	0	146	
4:40 PM	0	0	0	0	4	0	6	0	3	60	0	0	0	72	5	0	150	
4:45 PM	0	0	0	0	7	0	3	0	1	57	0	0	0	51	2	0	121	
4:50 PM	0	0	0	0	5	0	3	0	1	74	0	0	0	70	4	0	157	
4:55 PM	0	0	0	0	3	0	2	0	0	64	0	0	0	72	0	0	141	1682
5:00 PM	0	0	0	0	5	0	7	0	1	57	0	0	0	62	7	0	139	1674
5:05 PM	0	0	0	0	4	0	9	0	3	84	0	0	0	51	5	0	156	1676
5:10 PM	0	0	0	0	7	0	4	0	3	78	0	0	0	61	7	0	160	1676
5:15 PM	0	0	0	0	4	0	3	0	3	64	0	0	0	48	5	0	127	1679
5:20 PM	0	0	0	0	3	0	4	0	2	70	0	0	0	66	1	0	146	1673
5:25 PM	0	0	0	0	6	0	2	0	1	61	0	0	0	47	7	0	124	1689
5:30 PM	0	0	0	0	5	0	4	0	2	57	0	0	0	52	3	0	123	1690
5:35 PM	0	0	0	0	3	0	2	1	1	60	0	0	0	62	3	0	132	1676
5:40 PM	0	0	0	0	7	0	2	0	1	51	0	0	0	61	3	0	125	1651
5:45 PM	0	0	0	0	3	0	5	0	1	45	0	0	0	67	7	0	128	1658
5:50 PM	0	0	0	0	2	0	2	0	3	48	0	0	0	52	2	0	109	1610
5:55 PM	0	0	0	0	5	0	5	0	1	41	0	0	0	43	4	0	99	1568

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	64	0	80	0	28	876	0	0	0	696	76	0	1820
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	8		8
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	1		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

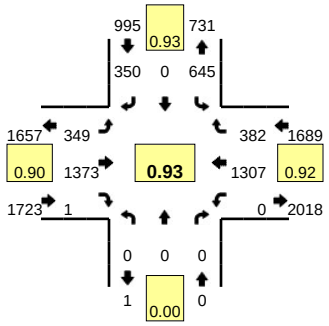
Type of peak hour being reported: Intersection Peak

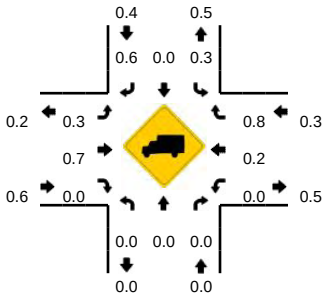
Method for determining peak hour: Total Entering Volume

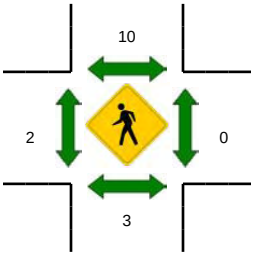
LOCATION: Madrona Ave -- Sepulveda Blvd
CITY/STATE: Torrance, CA

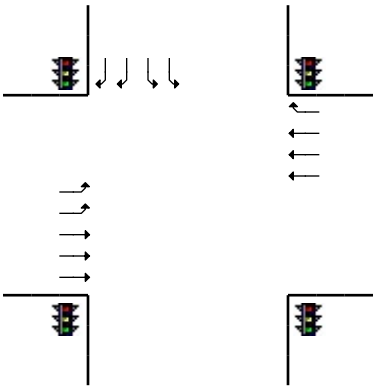
QC JOB #: 12003680
DATE: Thu, Jan 09 2014

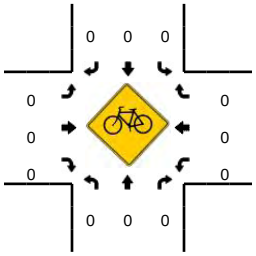
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 4:40 PM -- 4:55 PM

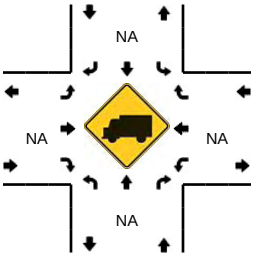


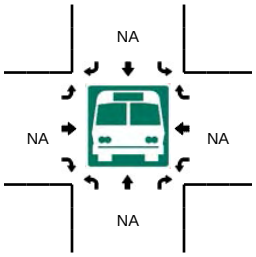












5-Min Count Period Beginning At	Madrona Ave (Northbound)				Madrona Ave (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	48	0	25	0	16	116	0	0	0	96	26	0	327	
4:05 PM	0	0	0	0	42	0	33	0	31	131	0	0	0	119	27	0	383	
4:10 PM	0	0	0	0	47	0	42	0	33	96	0	0	0	121	39	0	378	
4:15 PM	0	0	0	0	47	0	41	0	33	98	0	0	0	123	37	0	379	
4:20 PM	0	0	0	0	40	0	24	0	59	135	0	0	0	113	20	0	391	
4:25 PM	0	0	0	0	35	0	26	0	24	108	0	0	0	103	22	0	318	
4:30 PM	0	0	0	0	57	0	22	0	31	106	0	0	0	96	34	0	346	
4:35 PM	0	0	0	0	51	0	30	0	38	103	0	0	0	81	32	0	335	
4:40 PM	0	0	0	0	51	0	32	0	32	139	0	0	0	116	35	0	405	
4:45 PM	0	0	0	0	51	0	28	0	40	120	0	0	0	122	37	0	398	
4:50 PM	0	0	0	0	70	0	36	0	37	121	0	0	0	91	27	0	382	
4:55 PM	0	0	0	0	44	0	19	0	12	94	0	0	0	113	34	0	316	4358
5:00 PM	0	0	0	0	51	0	28	0	21	90	0	0	0	120	44	0	354	4385
5:05 PM	0	0	0	0	73	0	35	0	28	91	0	0	0	88	34	0	349	4351
5:10 PM	0	0	0	0	50	0	16	0	49	139	0	0	0	105	28	0	387	4360
5:15 PM	0	0	0	0	50	0	35	0	28	111	0	0	0	125	28	0	377	4358
5:20 PM	0	0	0	0	61	0	27	0	17	128	0	0	0	84	29	0	346	4313
5:25 PM	0	0	0	0	43	0	26	0	34	105	1	0	0	134	38	0	381	4376
5:30 PM	0	0	0	0	44	0	37	0	23	105	0	0	0	122	20	0	351	4381
5:35 PM	0	0	0	0	57	0	31	0	28	130	0	0	0	87	28	0	361	4407
5:40 PM	0	0	0	0	44	0	23	0	24	118	0	0	0	104	29	0	342	4344
5:45 PM	0	0	0	0	46	0	22	0	20	88	0	0	0	134	36	0	346	4292
5:50 PM	0	0	0	0	47	0	36	0	23	115	0	0	0	111	27	0	359	4269
5:55 PM	0	0	0	0	71	0	33	0	32	103	0	0	0	91	21	0	351	4304

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	688	0	384	0	436	1520	0	0	0	1316	396	0	4740
Heavy Trucks	0	0	0		0	0	4		0	0	0		0	0	4		8
Pedestrians		8				4				0				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

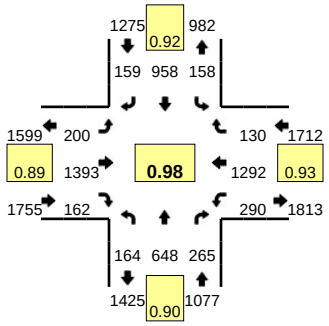
Type of peak hour being reported: Intersection Peak

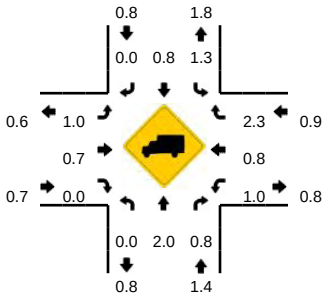
Method for determining peak hour: Total Entering Volume

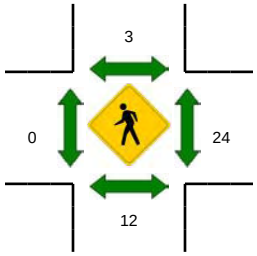
LOCATION: Madrona Ave -- Carson St
CITY/STATE: Torrance, CA

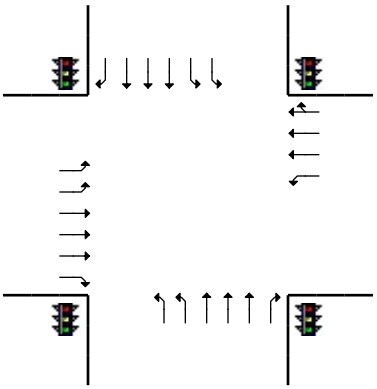
QC JOB #: 12003678
DATE: Thu, Jan 09 2014

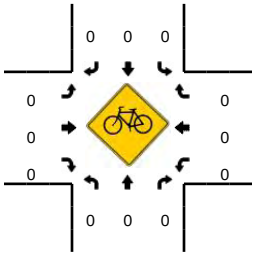
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:30 PM -- 5:45 PM

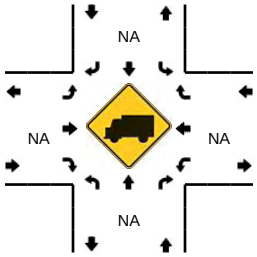


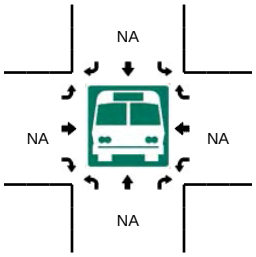












5-Min Count Period Beginning At	Madrona Ave (Northbound)				Madrona Ave (Southbound)				Carson St (Eastbound)				Carson St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	38	13	1	6	56	7	0	22	115	18	0	21	97	15	1	417	
4:05 PM	14	67	19	2	13	85	12	1	16	93	12	0	23	81	15	0	453	
4:10 PM	4	39	21	0	8	63	15	1	15	121	12	0	20	93	7	0	419	
4:15 PM	16	69	25	0	13	78	17	2	14	103	13	0	15	79	9	0	453	
4:20 PM	5	36	22	0	12	54	15	1	24	133	10	0	22	109	13	1	457	
4:25 PM	14	71	20	3	17	98	21	0	12	116	6	0	17	87	13	0	495	
4:30 PM	10	38	20	0	5	50	7	0	20	127	13	0	29	120	13	0	452	
4:35 PM	11	82	36	1	13	86	14	1	14	109	8	0	15	98	9	1	498	
4:40 PM	8	35	18	1	10	61	13	0	20	139	21	0	24	122	14	0	486	
4:45 PM	17	70	19	0	19	90	13	0	20	99	4	0	18	105	8	0	482	
4:50 PM	10	37	17	3	14	77	16	0	19	154	20	0	18	131	13	0	529	
4:55 PM	13	51	27	2	16	84	18	0	13	82	10	0	15	79	12	0	422	5563
5:00 PM	10	41	9	0	11	56	13	0	22	115	15	0	38	127	13	0	470	5616
5:05 PM	14	57	28	1	14	92	11	1	14	100	5	0	17	89	12	0	455	5618
5:10 PM	12	43	24	0	10	57	8	1	19	137	17	0	17	133	13	1	492	5691
5:15 PM	17	71	20	2	17	96	15	1	10	106	16	0	16	93	7	0	487	5725
5:20 PM	10	46	22	0	9	70	14	0	18	125	11	0	35	122	19	0	501	5769
5:25 PM	15	70	25	2	14	97	10	1	14	101	7	0	23	94	8	0	481	5755
5:30 PM	11	35	21	1	10	70	12	0	14	128	19	0	25	127	12	0	485	5788
5:35 PM	17	68	28	0	16	104	15	0	20	114	10	0	16	88	8	0	504	5794
5:40 PM	8	46	17	3	7	65	20	0	22	141	14	0	26	115	15	0	499	5807
5:45 PM	15	65	21	2	16	93	12	0	11	102	13	0	21	89	5	0	465	5790
5:50 PM	7	50	22	1	12	63	15	0	22	131	18	0	34	122	9	0	506	5767
5:55 PM	12	56	28	4	18	95	14	0	14	93	17	0	21	93	9	0	474	5819

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	144	596	264	16	132	956	188	0	224	1532	172	0	268	1320	140	0	5952
Heavy Trucks	0	4	0		0	8	0		0	16	0		0	12	4		44
Pedestrians		20				4				0				28			52
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

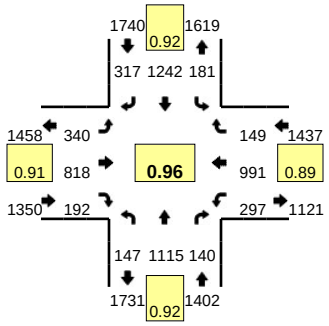
Type of peak hour being reported: Intersection Peak

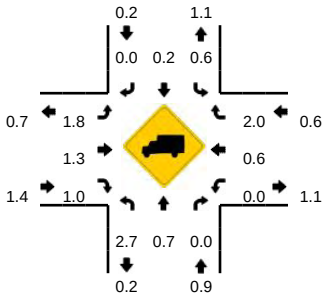
Method for determining peak hour: Total Entering Volume

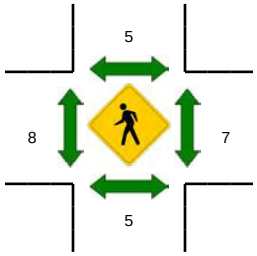
LOCATION: Madrona Ave -- Torrance Blvd
CITY/STATE: Torrance, CA

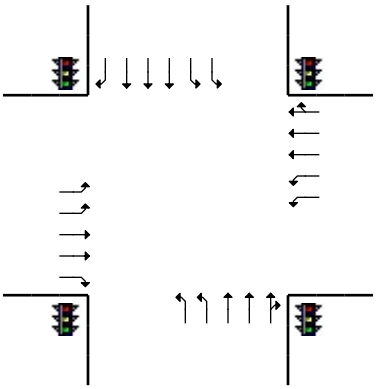
QC JOB #: 12003676
DATE: Thu, Jan 09 2014

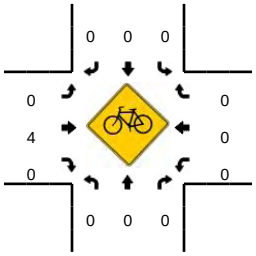
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

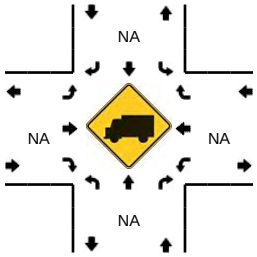


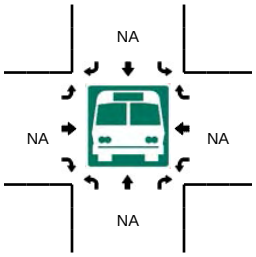












5-Min Count Period Beginning At	Madrona Ave (Northbound)				Madrona Ave (Southbound)				Torrance Blvd (Eastbound)				Torrance Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	14	82	7	0	9	105	16	3	18	65	13	2	28	74	16	0	452	
4:05 PM	14	62	12	0	16	103	24	1	31	71	21	0	18	66	10	0	449	
4:10 PM	12	80	4	0	7	70	14	0	29	67	18	0	29	86	11	0	427	
4:15 PM	10	92	6	0	13	114	24	2	18	47	17	0	19	60	9	0	431	
4:20 PM	6	80	14	0	8	71	24	1	14	99	15	0	21	77	14	0	444	
4:25 PM	6	96	15	0	16	116	24	3	18	40	10	0	16	59	17	0	436	
4:30 PM	5	79	10	0	8	80	21	0	21	75	18	0	21	75	9	0	422	
4:35 PM	16	92	10	0	13	135	16	1	37	46	20	0	23	51	7	0	467	
4:40 PM	14	79	12	0	16	90	17	2	23	64	19	0	26	91	11	0	464	
4:45 PM	12	96	8	0	11	105	24	5	25	65	24	0	16	68	9	0	468	
4:50 PM	9	99	9	0	10	100	17	2	33	58	22	0	26	96	13	0	494	
4:55 PM	20	88	8	0	8	116	32	2	32	53	16	0	17	64	16	0	472	5426
5:00 PM	10	71	6	0	12	103	20	1	23	79	15	1	26	86	19	0	472	5446
5:05 PM	16	91	11	0	20	102	31	0	35	73	13	0	14	69	16	0	491	5488
5:10 PM	12	102	13	0	9	77	32	2	29	85	21	0	33	110	11	0	536	5597
5:15 PM	12	106	16	0	18	114	35	3	33	57	11	0	21	77	9	0	512	5678
5:20 PM	10	75	11	0	13	90	30	0	22	87	14	0	34	94	16	0	496	5730
5:25 PM	17	98	19	0	16	124	29	3	27	72	18	0	19	63	12	0	517	5811
5:30 PM	3	101	16	0	8	102	22	0	22	67	13	0	33	84	6	0	477	5866
5:35 PM	8	84	8	0	20	103	24	2	32	67	16	1	24	75	15	0	479	5878
5:40 PM	11	86	11	0	12	101	21	2	17	74	12	0	34	109	8	0	498	5912
5:45 PM	19	114	12	0	17	110	24	1	32	46	21	1	16	64	8	0	485	5929
5:50 PM	8	90	6	0	5	105	30	0	20	57	15	1	28	101	7	0	473	5908
5:55 PM	8	77	13	0	11	104	22	2	24	57	19	0	16	59	8	0	420	5856

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	136	1132	160	0	160	1124	388	20	336	916	184	0	352	1124	144	0	6176
Heavy Trucks	0	0	0		4	4	0		8	16	4		0	0	4		40
Pedestrians		0				16				12				4			32
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

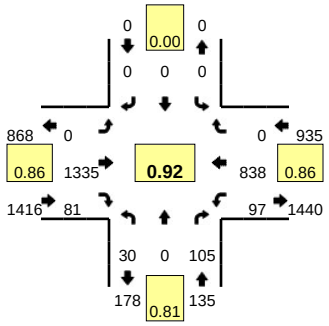
Type of peak hour being reported: Intersection Peak

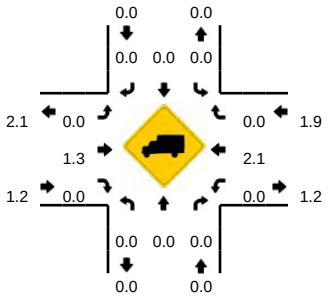
Method for determining peak hour: Total Entering Volume

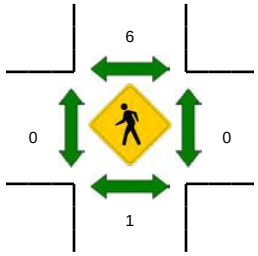
LOCATION: Project Dwy -- Lomita Blvd
CITY/STATE: Torrance, CA

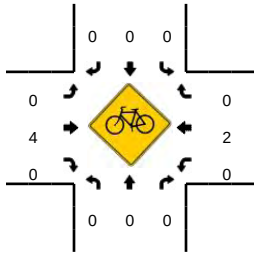
QC JOB #: 12003674
DATE: Thu, Jan 09 2014

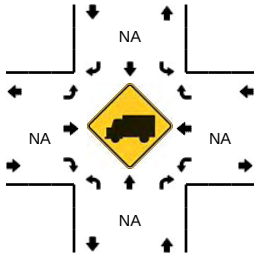
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

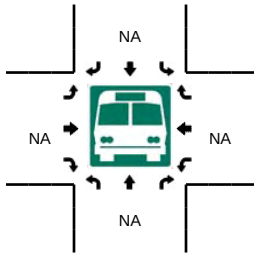












5-Min Count Period Beginning At	Project Dwy (Northbound)				Project Dwy (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	0	11	0	0	0	0	0	0	124	8	0	8	63	0	0	216	
4:05 PM	8	0	8	0	0	0	0	0	0	124	9	0	10	76	0	0	235	
4:10 PM	0	0	6	0	0	0	0	0	0	139	14	0	6	60	0	0	225	
4:15 PM	1	0	7	0	0	0	0	0	0	110	9	0	11	80	0	0	218	
4:20 PM	5	0	7	0	0	0	0	0	0	98	2	0	7	81	0	0	200	
4:25 PM	3	0	4	0	0	0	0	0	0	87	4	0	6	88	0	0	192	
4:30 PM	2	0	7	0	0	0	0	0	0	98	4	0	6	66	0	0	183	
4:35 PM	2	0	8	0	0	0	0	0	0	113	6	0	12	73	0	0	214	
4:40 PM	3	0	6	0	0	0	0	0	0	148	8	0	2	57	0	0	224	
4:45 PM	1	0	14	0	0	0	0	0	0	87	10	0	11	68	0	0	191	
4:50 PM	2	0	9	0	0	0	0	0	0	110	1	0	11	55	0	0	188	
4:55 PM	1	0	18	0	0	0	0	0	0	97	6	0	7	71	0	0	200	2486
5:00 PM	5	0	8	0	0	0	0	0	0	103	11	0	10	49	0	0	186	2456
5:05 PM	2	0	6	0	0	0	0	0	0	137	5	0	6	97	0	0	253	2474
5:10 PM	4	0	12	0	0	0	0	0	0	145	11	0	10	50	0	0	232	2481
5:15 PM	4	0	7	0	0	0	0	0	0	119	4	1	6	66	0	0	207	2470
5:20 PM	3	0	6	0	0	0	0	0	0	124	8	0	3	52	0	0	196	2466
5:25 PM	1	0	9	0	0	0	0	0	0	94	5	0	12	91	0	0	212	2486
5:30 PM	5	0	8	0	0	0	0	0	0	86	3	0	8	50	0	0	160	2463
5:35 PM	3	0	9	0	0	0	0	0	0	111	8	0	8	83	0	0	222	2471
5:40 PM	1	0	7	0	0	0	0	0	0	106	5	0	4	55	0	0	178	2425
5:45 PM	2	0	10	0	0	0	0	0	0	91	3	0	10	88	0	0	204	2438
5:50 PM	2	0	10	0	0	0	0	0	0	107	8	0	11	71	0	0	209	2459
5:55 PM	3	0	12	0	0	0	0	0	0	85	7	0	13	81	0	0	201	2460

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	0	84	0	0	0	0	0	0	1492	128	0	108	864	0	0	2712
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	24	0		44
Pedestrians		0				8				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

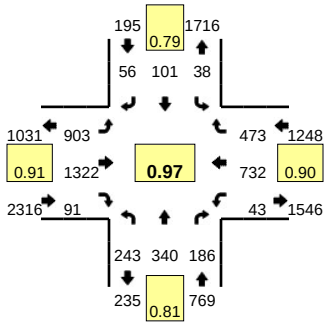
Type of peak hour being reported: Intersection Peak

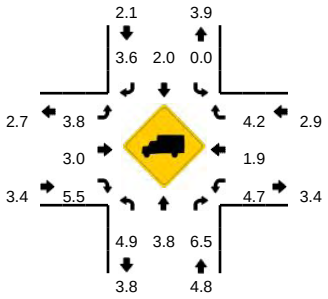
Method for determining peak hour: Total Entering Volume

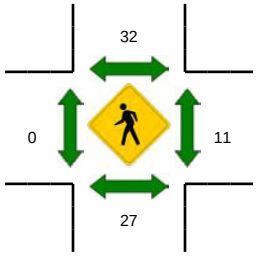
LOCATION: Figueroa St -- Pacific Coast Hwy
CITY/STATE: Los Angeles, CA

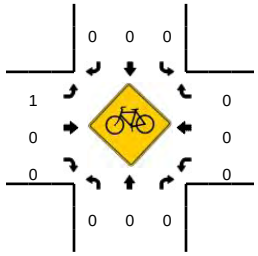
QC JOB #: 12003672
DATE: Thu, Jan 09 2014

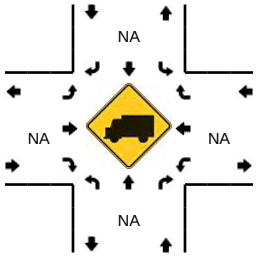
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

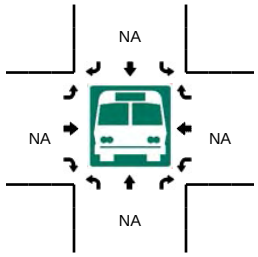












5-Min Count Period Beginning At	Figueroa St (Northbound)				Figueroa St (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	15	7	0	1	11	9	0	87	91	5	0	3	69	29	0	338	
4:05 PM	18	22	21	0	5	7	4	0	65	85	7	0	3	43	28	0	308	
4:10 PM	19	21	15	0	2	7	2	0	66	100	4	0	2	41	35	0	314	
4:15 PM	12	27	12	0	2	5	2	0	72	113	7	0	4	79	40	0	375	
4:20 PM	17	11	13	0	6	7	6	0	54	121	6	0	2	58	33	0	334	
4:25 PM	20	25	9	0	0	8	6	0	97	116	4	0	2	30	21	0	338	
4:30 PM	27	29	18	0	1	2	2	0	79	122	7	0	2	60	32	0	381	
4:35 PM	22	20	17	0	5	9	6	0	73	103	9	0	4	53	39	0	360	
4:40 PM	4	25	12	0	2	13	5	0	74	119	10	0	3	63	50	0	380	
4:45 PM	16	26	9	0	4	5	4	0	77	125	8	0	1	59	27	0	361	
4:50 PM	25	31	14	0	1	5	5	0	100	129	9	0	2	60	39	0	420	
4:55 PM	22	34	16	0	7	12	3	0	66	92	10	0	4	53	30	0	349	4258
5:00 PM	27	23	18	0	1	7	4	0	60	108	7	0	4	83	42	0	384	4304
5:05 PM	15	25	8	0	2	10	7	0	68	106	8	0	6	62	53	0	370	4366
5:10 PM	18	36	25	0	1	9	4	0	86	115	6	0	3	61	44	0	408	4460
5:15 PM	21	32	16	0	9	8	4	0	79	100	6	0	6	43	40	0	364	4449
5:20 PM	29	45	18	0	3	13	8	0	65	85	3	0	3	63	45	0	380	4495
5:25 PM	17	14	15	0	2	8	4	0	76	118	8	0	5	72	32	0	371	4528
5:30 PM	19	18	13	0	2	4	4	0	63	134	4	0	4	45	36	0	346	4493
5:35 PM	15	20	12	0	3	5	10	0	79	97	13	0	4	73	38	0	369	4502
5:40 PM	27	33	16	0	4	4	6	0	54	99	8	0	2	56	33	0	342	4464
5:45 PM	15	26	16	0	8	10	16	0	45	105	7	0	5	83	40	0	376	4479
5:50 PM	13	20	15	0	2	13	8	0	61	108	7	0	3	74	44	0	368	4427
5:55 PM	4	17	9	0	2	4	9	0	59	112	4	0	0	30	28	0	278	4356

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	240	336	204	0	16	104	60	0	856	1316	84	0	52	824	556	0	4648
Heavy Trucks	12	12	12		0	4	0		36	32	0		4	20	16		148
Pedestrians		32				28				0				12			72
Bicycles	0	0	0		0	0	0		1	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

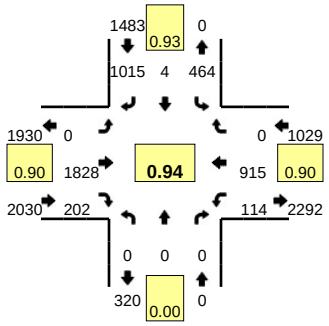
Type of peak hour being reported: Intersection Peak

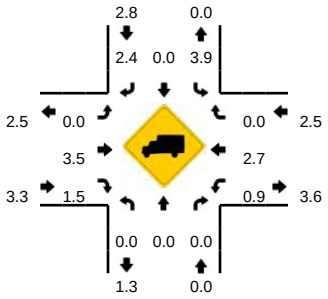
Method for determining peak hour: Total Entering Volume

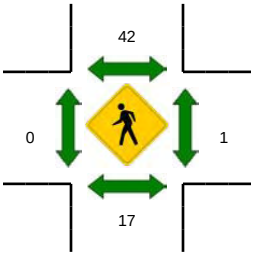
LOCATION: W Pacific Coast Hwy -- I-110 SB
CITY/STATE: Los Angeles, CA

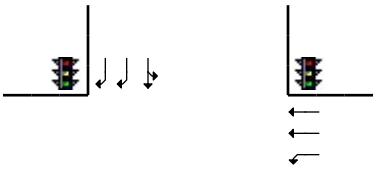
QC JOB #: 12003670
DATE: Thu, Jan 09 2014

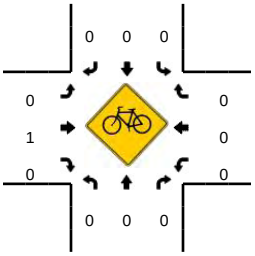
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

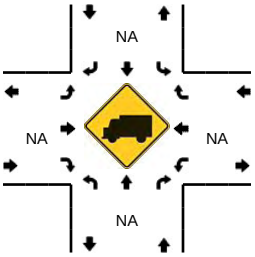


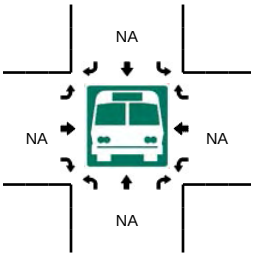












5-Min Count Period Beginning At	W Pacific Coast Hwy (Northbound)				W Pacific Coast Hwy (Southbound)				I-110 SB (Eastbound)				I-110 SB (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	31	0	79	0	0	130	12	0	22	82	0	0	356	
4:05 PM	0	0	0	0	41	0	61	0	0	136	13	0	7	70	0	0	328	
4:10 PM	0	0	0	0	33	0	76	0	0	148	14	0	12	50	0	0	333	
4:15 PM	0	0	0	0	45	0	89	0	0	144	18	0	12	64	0	0	372	
4:20 PM	0	0	0	0	51	0	89	0	0	134	19	0	12	64	0	0	369	
4:25 PM	0	0	0	0	50	0	66	0	0	124	18	0	6	53	0	0	317	
4:30 PM	0	0	0	0	33	0	78	0	0	191	29	0	8	96	0	0	435	
4:35 PM	0	0	0	0	37	0	80	0	0	161	17	0	7	62	0	0	364	
4:40 PM	0	0	0	0	40	1	78	0	0	155	14	0	9	51	0	0	348	
4:45 PM	0	0	0	0	45	0	84	0	0	149	11	0	7	66	0	0	362	
4:50 PM	0	0	0	0	46	1	81	0	0	154	12	0	14	103	0	0	411	
4:55 PM	0	0	0	0	38	1	95	0	0	152	22	0	7	86	0	0	401	4396
5:00 PM	0	0	0	0	43	1	99	0	0	149	16	0	10	77	0	0	395	4435
5:05 PM	0	0	0	0	49	0	66	0	0	119	28	0	9	64	0	0	335	4442
5:10 PM	0	0	0	0	30	0	80	0	0	143	16	0	9	79	0	0	357	4466
5:15 PM	0	0	0	0	31	0	87	0	0	165	14	0	14	71	0	0	382	4476
5:20 PM	0	0	0	0	32	0	88	0	0	134	15	0	13	91	0	0	373	4480
5:25 PM	0	0	0	0	40	0	99	0	0	156	8	0	7	69	0	0	379	4542
5:30 PM	0	0	0	0	48	0	81	0	0	116	12	0	2	61	0	0	320	4427
5:35 PM	0	0	0	0	40	0	71	0	0	140	16	0	18	92	0	0	377	4440
5:40 PM	0	0	0	0	30	0	81	0	0	144	22	0	16	82	0	0	375	4467
5:45 PM	0	0	0	0	33	0	98	0	0	139	18	0	14	82	0	0	384	4489
5:50 PM	0	0	0	0	29	0	99	0	0	98	10	0	13	77	0	0	326	4404
5:55 PM	0	0	0	0	56	0	66	0	0	122	12	0	15	41	0	0	312	4315

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	508	12	1100	0	0	1820	200	0	124	1064	0	0	4828
Heavy Trucks	0	0	0		16	0	8		0	52	4		0	28	0		108
Pedestrians		20				40				0				0			60
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

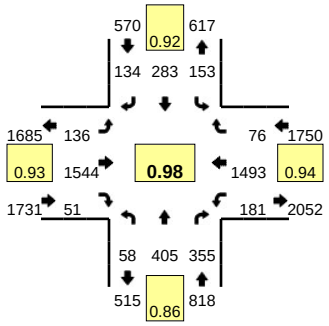
LOCATION: S Vermont Ave -- Pacific Coast Hwy

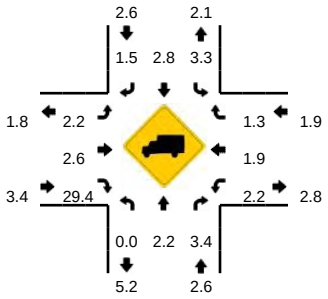
CITY/STATE: Los Angeles, CA

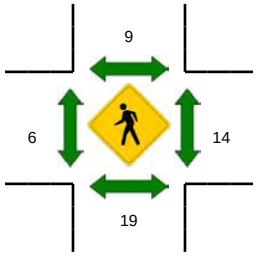
QC JOB #: 12003668

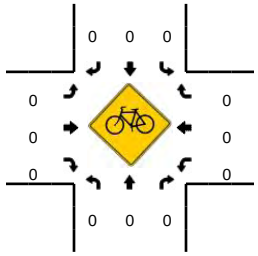
DATE: Thu, Jan 09 2014

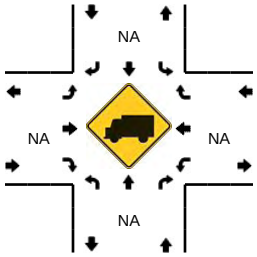
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

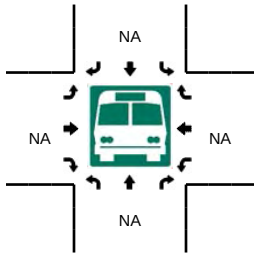












5-Min Count Period Beginning At	S Vermont Ave (Northbound)				S Vermont Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	36	35	0	14	22	13	0	9	117	11	0	22	119	6	0	406	
4:05 PM	4	25	37	0	8	23	8	0	11	123	10	0	26	112	5	0	392	
4:10 PM	8	24	22	0	8	21	13	0	10	124	2	0	17	91	7	0	347	
4:15 PM	4	28	33	0	7	16	7	0	9	145	3	0	14	97	4	0	367	
4:20 PM	6	30	23	0	12	25	12	0	14	128	7	0	16	125	6	0	404	
4:25 PM	3	33	24	0	8	33	11	0	14	149	3	0	20	104	6	0	408	
4:30 PM	7	30	23	0	15	29	7	0	12	147	4	0	13	112	9	0	408	
4:35 PM	2	40	40	0	11	17	14	0	10	117	3	0	24	121	4	0	403	
4:40 PM	5	49	34	0	10	36	13	0	13	123	10	0	17	102	3	0	415	
4:45 PM	4	29	23	0	15	27	11	0	10	121	5	0	16	116	8	0	385	
4:50 PM	5	22	37	0	11	18	13	0	14	133	8	0	13	134	6	0	414	
4:55 PM	1	32	26	0	14	20	8	0	6	124	4	0	16	133	5	0	389	4738
5:00 PM	5	26	22	0	8	21	16	0	10	140	4	0	17	140	10	0	419	4751
5:05 PM	8	40	31	0	14	25	6	0	12	121	3	0	14	113	3	0	390	4749
5:10 PM	6	43	38	0	14	12	10	0	13	130	2	0	8	122	7	0	405	4807
5:15 PM	6	36	30	0	13	30	12	0	9	141	3	0	13	112	9	0	414	4854
5:20 PM	4	29	30	0	12	24	15	0	11	113	1	0	16	151	7	0	413	4863
5:25 PM	5	29	21	0	16	24	9	0	16	134	4	0	14	137	5	0	414	4869
5:30 PM	5	23	32	0	11	30	15	0	12	124	4	0	14	129	3	0	402	4863
5:35 PM	4	30	20	0	10	17	8	0	15	122	2	0	9	122	3	0	362	4822
5:40 PM	3	29	17	0	13	13	8	0	11	117	2	0	17	128	3	0	361	4768
5:45 PM	4	25	22	0	7	24	19	0	9	133	7	0	16	128	7	0	401	4784
5:50 PM	6	37	12	0	12	23	24	0	9	102	3	0	0	114	4	0	346	4716
5:55 PM	3	12	19	0	14	30	15	0	13	111	1	0	30	119	6	0	373	4700

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	376	324	0	164	312	144	0	144	1552	32	0	172	1600	84	0	4964
Heavy Trucks	0	8	8		8	4	0		0	32	12		8	32	4		116
Pedestrians		24				12				0				20			56
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

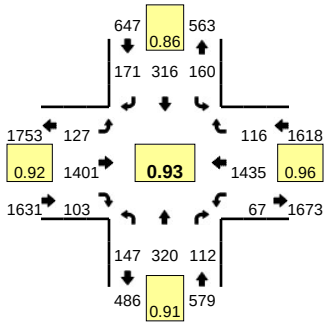
Type of peak hour being reported: Intersection Peak

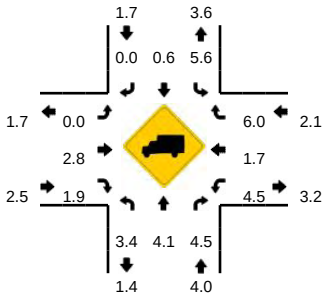
Method for determining peak hour: Total Entering Volume

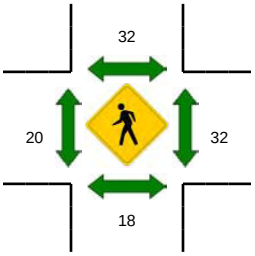
LOCATION: Normandie Ave -- Pacific Coast Hwy
CITY/STATE: Los Angeles, CA

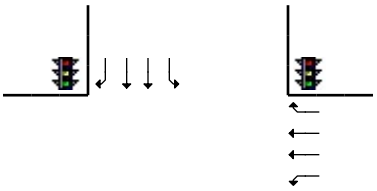
QC JOB #: 12003666
DATE: Thu, Jan 23 2014

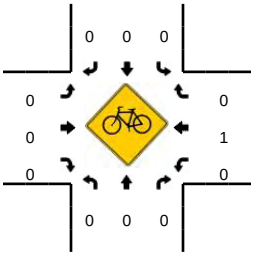
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

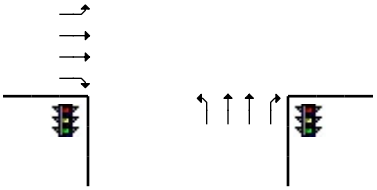


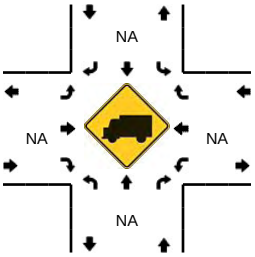


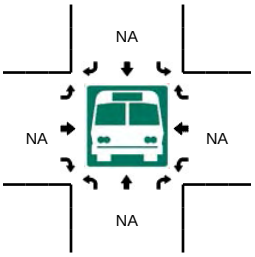












5-Min Count Period Beginning At	Normandie Ave (Northbound)				Normandie Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	26	15	0	9	13	11	0	14	124	8	0	6	83	7	0	323	
4:05 PM	7	27	6	0	12	29	17	0	8	145	7	0	8	89	12	0	367	
4:10 PM	13	33	14	0	10	17	16	0	8	131	5	0	7	108	5	0	367	
4:15 PM	10	29	14	0	19	28	12	0	12	144	4	0	5	86	10	0	373	
4:20 PM	10	23	13	0	20	32	9	0	6	116	5	0	6	135	6	0	381	
4:25 PM	9	23	19	0	4	13	9	0	15	132	10	0	10	117	3	0	364	
4:30 PM	3	11	4	0	11	22	16	0	11	133	4	0	6	115	1	0	337	
4:35 PM	14	28	16	0	8	24	14	0	10	118	18	0	8	110	8	0	376	
4:40 PM	15	29	18	0	24	26	14	0	8	120	6	0	5	77	9	0	351	
4:45 PM	10	34	5	0	19	28	14	0	6	91	10	0	7	107	9	0	340	
4:50 PM	15	30	8	0	11	27	13	0	13	110	12	0	5	124	6	0	374	
4:55 PM	9	21	10	0	11	14	14	0	9	117	12	0	7	123	9	0	356	4309
5:00 PM	10	25	8	0	16	25	9	0	11	104	11	0	4	93	11	0	327	4313
5:05 PM	10	24	11	0	14	21	13	0	11	123	10	0	5	131	9	0	382	4328
5:10 PM	16	31	10	0	17	34	20	0	7	106	4	0	5	117	15	0	382	4343
5:15 PM	17	23	9	0	15	26	21	0	16	132	12	0	10	124	7	0	412	4382
5:20 PM	12	26	9	0	11	37	11	0	12	137	11	0	4	119	11	0	400	4401
5:25 PM	13	30	12	0	14	22	17	0	11	120	5	0	4	129	12	0	389	4426
5:30 PM	12	30	13	0	9	26	15	0	9	115	5	0	8	116	12	0	370	4459
5:35 PM	14	22	9	0	11	31	11	0	14	112	7	0	5	115	11	0	362	4445
5:40 PM	9	24	8	0	12	25	13	0	8	134	4	0	3	137	4	0	381	4475
5:45 PM	10	21	9	0	8	22	13	0	11	114	8	0	4	111	6	0	337	4472
5:50 PM	11	18	4	0	16	20	17	0	9	109	7	0	6	102	9	0	328	4426
5:55 PM	11	14	11	0	9	22	11	0	13	118	9	0	9	141	8	0	376	4446

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	168	316	120	0	160	340	196	0	156	1556	112	0	72	1488	120	0	4804
Heavy Trucks	8	12	0		12	0	0		0	40	0		4	24	8		108
Pedestrians		28				32				80				4			144
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

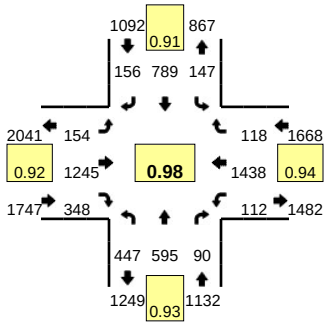
Type of peak hour being reported: Intersection Peak

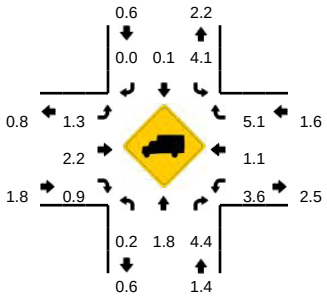
Method for determining peak hour: Total Entering Volume

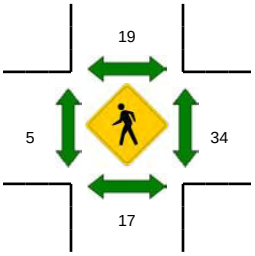
LOCATION: S Western Ave -- Pacific Coast Hwy
CITY/STATE: Los Angeles, CA

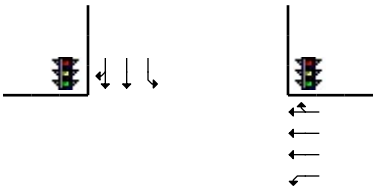
QC JOB #: 12003664
DATE: Thu, Jan 09 2014

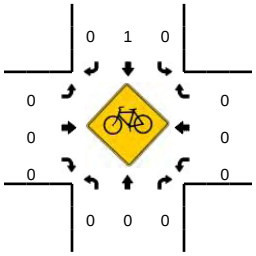
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

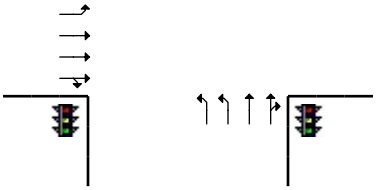


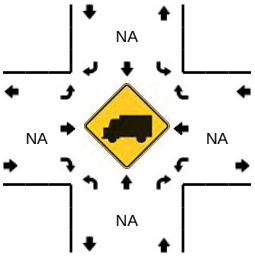


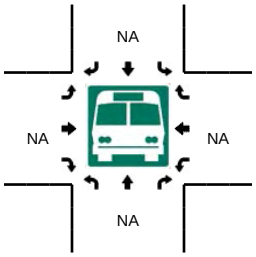












5-Min Count Period Beginning At	S Western Ave (Northbound)				S Western Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	26	51	15	0	12	47	9	0	7	97	22	0	9	91	15	0	401	
4:05 PM	29	34	6	0	9	72	14	0	13	101	28	0	9	114	9	0	438	
4:10 PM	29	50	8	0	13	40	9	0	17	124	27	0	13	104	8	0	442	
4:15 PM	26	41	13	0	8	59	18	0	9	134	28	0	8	86	4	0	434	
4:20 PM	39	53	10	0	21	48	13	0	14	119	25	0	11	101	5	0	459	
4:25 PM	30	43	10	0	17	49	6	0	5	117	23	0	7	116	16	0	439	
4:30 PM	28	52	5	0	9	50	14	0	9	122	37	0	5	90	20	0	441	
4:35 PM	38	53	7	0	15	61	12	0	8	107	29	0	8	107	9	0	454	
4:40 PM	26	60	8	0	16	44	18	0	13	98	44	0	11	106	9	0	453	
4:45 PM	35	35	10	0	5	65	17	0	8	114	23	0	3	118	7	0	440	
4:50 PM	30	31	6	0	17	68	14	0	6	110	25	0	8	117	11	0	443	
4:55 PM	39	44	10	0	16	55	10	0	9	99	36	0	14	115	8	0	455	5299
5:00 PM	32	49	8	0	14	60	14	0	15	96	27	0	10	118	11	0	454	5352
5:05 PM	41	50	10	0	14	64	17	0	15	99	31	0	7	127	10	0	485	5399
5:10 PM	40	44	13	0	16	64	18	0	9	97	27	0	12	105	6	0	451	5408
5:15 PM	33	58	9	0	12	79	20	0	21	107	33	0	9	100	13	0	494	5468
5:20 PM	39	61	9	0	9	61	9	0	8	109	27	0	14	133	6	0	485	5494
5:25 PM	40	44	4	0	11	53	9	0	19	103	40	0	8	117	7	0	455	5510
5:30 PM	37	57	6	0	6	65	11	0	9	111	22	0	12	127	11	0	474	5543
5:35 PM	29	56	7	0	12	74	8	0	11	96	24	0	7	121	12	0	457	5546
5:40 PM	45	39	6	0	18	63	13	0	9	109	29	0	9	133	11	0	484	5577
5:45 PM	36	49	8	0	13	78	16	0	10	102	31	0	7	114	9	0	473	5610
5:50 PM	31	51	4	0	7	61	10	0	13	113	34	0	8	124	12	0	468	5635
5:55 PM	44	37	6	0	15	67	11	0	15	103	23	0	9	119	10	0	459	5639

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	448	652	88	0	128	772	152	0	192	1276	400	0	124	1400	104	0	5736
Heavy Trucks	0	4	4		12	0	0		4	36	0		4	20	4		88
Pedestrians		24				24				12				48			108
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

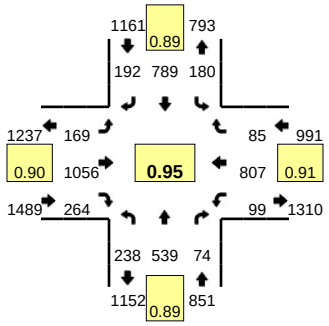
Type of peak hour being reported: Intersection Peak

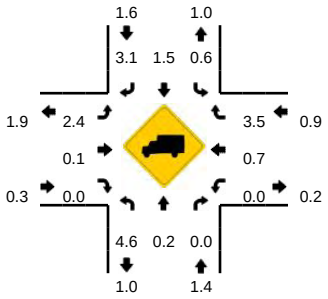
Method for determining peak hour: Total Entering Volume

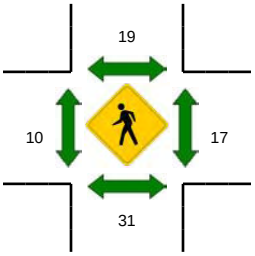
LOCATION: S Western Ave -- Lomita Blvd
CITY/STATE: Los Angeles, CA

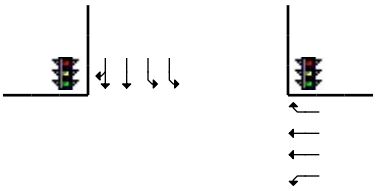
QC JOB #: 12003662
DATE: Thu, Jan 09 2014

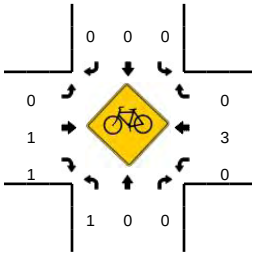
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

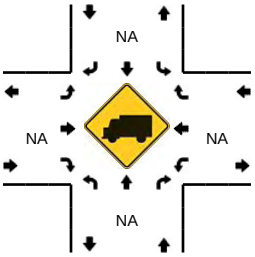


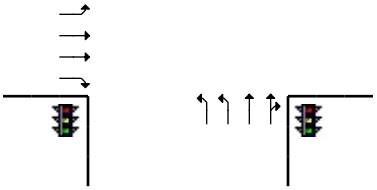


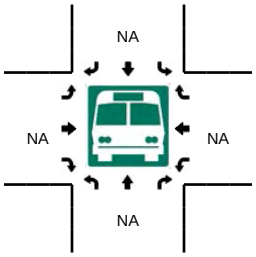












5-Min Count Period Beginning At	S Western Ave (Northbound)				S Western Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	16	45	1	0	18	58	15	0	18	76	25	0	6	44	5	0	327	
4:05 PM	16	34	7	0	8	58	18	0	13	92	26	0	4	62	3	0	341	
4:10 PM	23	51	5	0	9	66	17	0	13	129	17	0	7	51	6	0	394	
4:15 PM	3	16	5	0	14	57	12	0	13	92	11	0	1	78	9	0	311	
4:20 PM	26	53	12	0	16	70	13	0	10	64	20	0	5	52	4	0	345	
4:25 PM	15	29	4	0	14	52	26	0	15	111	16	0	14	61	10	0	367	
4:30 PM	25	61	6	0	7	71	19	0	17	65	26	0	6	42	11	0	356	
4:35 PM	12	28	4	0	7	48	16	0	25	108	25	0	6	80	7	0	366	
4:40 PM	24	52	9	0	18	72	10	0	8	47	15	0	8	57	7	0	327	
4:45 PM	13	60	4	0	13	65	18	0	11	116	26	0	6	77	7	0	416	
4:50 PM	16	28	4	0	17	65	14	0	11	94	23	0	3	69	11	0	355	
4:55 PM	20	45	2	0	13	67	14	0	13	73	19	0	12	65	3	0	346	4251
5:00 PM	15	35	14	0	15	63	15	0	14	65	26	0	8	66	5	0	341	4265
5:05 PM	23	41	8	0	11	55	15	0	15	101	22	0	10	67	6	0	374	4298
5:10 PM	16	41	5	0	17	77	12	0	20	95	19	0	6	65	7	0	380	4284
5:15 PM	17	56	6	0	11	46	17	0	16	111	19	0	6	62	8	0	375	4348
5:20 PM	28	43	4	0	23	57	16	0	10	92	21	0	7	78	10	0	389	4392
5:25 PM	22	59	9	0	13	64	20	0	17	86	22	0	8	85	10	0	415	4440
5:30 PM	16	38	8	0	16	91	21	0	13	68	23	0	12	51	5	0	362	4446
5:35 PM	32	47	5	0	12	64	18	0	18	83	26	0	10	57	6	0	378	4458
5:40 PM	20	46	5	0	19	75	12	0	11	72	18	0	11	65	7	0	361	4492
5:45 PM	19	43	6	0	7	64	19	0	10	93	25	0	6	62	6	0	360	4436
5:50 PM	16	44	8	0	22	67	14	0	15	73	22	0	5	66	7	0	359	4440
5:55 PM	18	42	2	0	9	67	21	0	9	79	19	0	11	88	8	0	373	4467

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	268	632	76	0	188	668	212	0	172	1156	248	0	84	900	112	0	4716
Heavy Trucks	12	4	0		0	12	8		8	0	0		0	4	0		48
Pedestrians		28				28				12				16			84
Bicycles	0	0	0		0	0	0		0	1	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

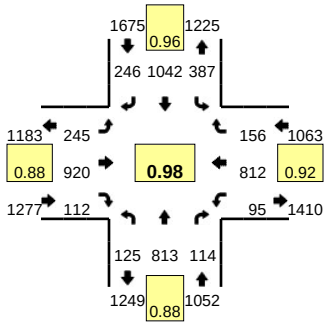
Type of peak hour being reported: Intersection Peak

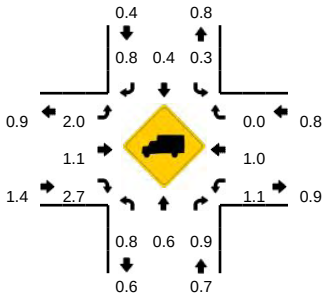
Method for determining peak hour: Total Entering Volume

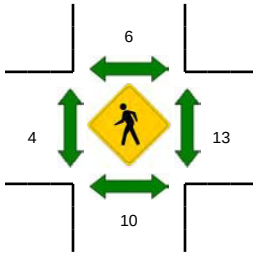
LOCATION: S Western Ave -- Sepulveda Blvd
CITY/STATE: Los Angeles, CA

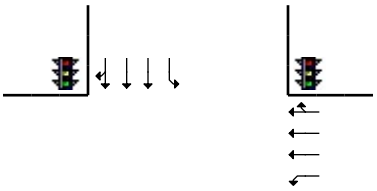
QC JOB #: 12003660
DATE: Thu, Jan 09 2014

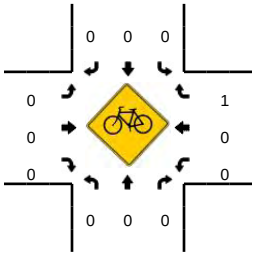
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

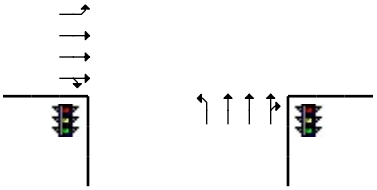


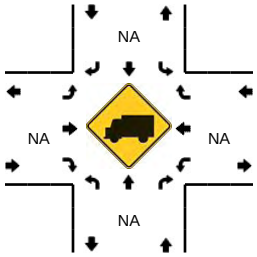


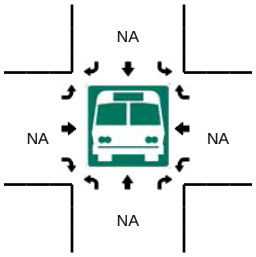












5-Min Count Period Beginning At	S Western Ave (Northbound)				S Western Ave (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	67	7	0	23	87	25	3	18	57	3	0	5	44	9	0	355	
4:05 PM	6	41	8	0	29	81	21	2	17	64	7	0	8	75	18	0	377	
4:10 PM	10	69	2	0	15	66	19	0	14	80	5	0	3	48	7	0	338	
4:15 PM	9	52	7	0	43	88	23	2	12	69	7	0	6	44	11	0	373	
4:20 PM	2	80	13	0	25	87	21	0	18	65	5	0	8	54	18	0	396	
4:25 PM	8	58	8	0	21	65	23	4	15	83	4	0	1	73	15	0	378	
4:30 PM	5	75	10	0	11	97	13	0	16	42	6	0	3	36	9	0	323	
4:35 PM	13	56	8	0	45	80	14	0	8	70	8	0	3	79	22	0	406	
4:40 PM	7	75	9	0	21	105	24	1	23	71	4	0	11	52	13	0	416	
4:45 PM	12	61	10	0	38	70	19	1	12	76	15	0	6	93	12	0	425	
4:50 PM	14	106	11	0	22	111	20	1	20	61	9	0	9	59	5	0	448	
4:55 PM	15	55	10	0	43	85	17	2	15	63	8	0	5	69	16	0	403	4638
5:00 PM	9	58	11	0	31	90	16	0	25	72	7	0	9	50	13	0	391	4674
5:05 PM	9	59	8	0	44	66	14	2	14	79	14	0	5	94	12	0	420	4717
5:10 PM	17	83	8	0	22	105	23	1	31	72	5	0	8	49	12	0	436	4815
5:15 PM	14	65	8	0	31	73	18	0	18	98	11	0	7	66	15	0	424	4866
5:20 PM	1	76	11	0	28	93	26	0	25	86	12	0	10	55	4	0	427	4897
5:25 PM	10	50	9	0	37	69	19	2	11	92	9	0	8	93	19	0	428	4947
5:30 PM	11	79	6	0	21	112	22	1	24	55	7	0	7	60	10	0	415	5039
5:35 PM	8	46	11	0	36	75	20	1	15	76	11	0	7	71	13	0	390	5023
5:40 PM	10	83	14	0	28	84	27	0	26	80	11	0	9	59	13	0	444	5051
5:45 PM	7	53	7	0	33	79	24	1	21	86	8	0	11	87	24	0	441	5067
5:50 PM	2	81	7	0	21	107	31	0	21	36	12	0	9	64	14	0	405	5024
5:55 PM	7	52	10	0	26	71	18	3	17	78	9	0	1	74	14	0	380	5001

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	128	896	108	0	324	1084	268	4	296	1024	112	0	100	680	124	0	5148
Heavy Trucks	4	0	0		4	0	0		0	8	4		0	8	0		28
Pedestrians		28				8				8				28			72
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

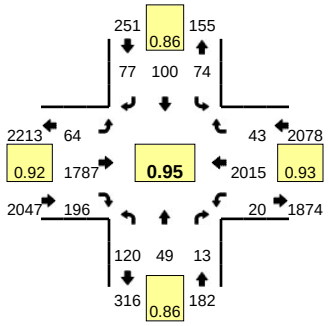
Type of peak hour being reported: Intersection Peak

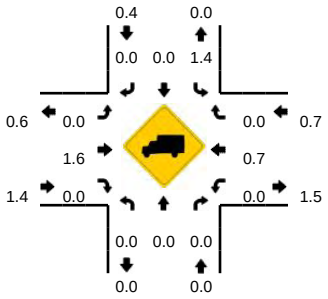
Method for determining peak hour: Total Entering Volume

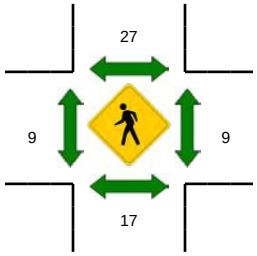
LOCATION: Eshelman Ave -- Pacific Coast Hwy
CITY/STATE: Lomita, CA

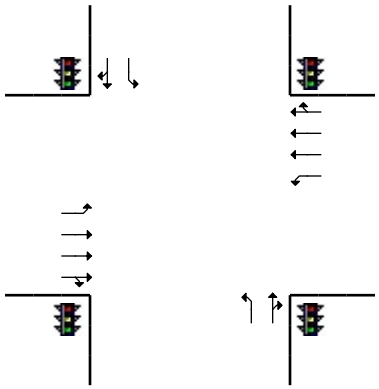
QC JOB #: 12003658
DATE: Thu, Jan 09 2014

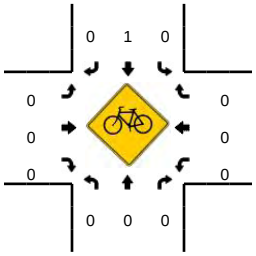
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:35 PM -- 5:50 PM

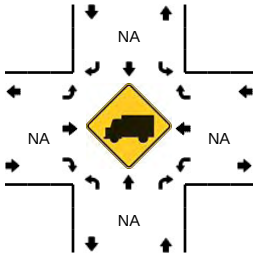


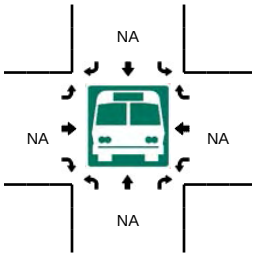












5-Min Count Period Beginning At	Eshelman Ave (Northbound)				Eshelman Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	16	5	1	0	4	9	6	0	2	122	11	0	0	100	4	0	280	
4:05 PM	11	4	3	0	6	7	6	0	3	162	9	0	1	143	2	0	357	
4:10 PM	10	6	3	0	5	3	5	0	7	178	19	0	1	148	3	0	388	
4:15 PM	5	6	1	0	3	5	8	0	5	169	15	0	3	132	3	0	355	
4:20 PM	13	3	2	0	5	8	2	0	2	162	16	0	3	139	3	0	358	
4:25 PM	10	7	0	0	8	8	6	0	3	128	16	0	2	112	4	0	304	
4:30 PM	9	6	2	0	6	4	3	0	6	182	16	0	1	170	5	0	410	
4:35 PM	8	10	3	0	5	9	7	0	3	152	15	0	0	131	3	0	346	
4:40 PM	12	3	3	0	9	7	6	0	3	155	17	0	1	131	5	0	352	
4:45 PM	7	1	1	0	9	8	4	0	9	149	19	0	1	204	4	0	416	
4:50 PM	13	8	2	0	10	9	6	0	1	129	14	0	1	128	8	0	329	
4:55 PM	5	2	1	0	3	3	8	0	9	179	19	0	2	169	3	0	403	4298
5:00 PM	6	9	1	0	6	6	7	0	5	113	8	0	3	169	3	0	336	4354
5:05 PM	9	6	0	0	9	9	4	0	5	142	12	0	0	148	4	0	348	4345
5:10 PM	6	4	2	0	4	4	5	0	3	154	14	0	2	208	5	0	411	4368
5:15 PM	12	2	0	0	10	19	4	0	5	159	21	0	0	120	5	0	357	4370
5:20 PM	9	3	1	0	5	7	0	0	9	162	19	0	1	171	2	0	389	4401
5:25 PM	8	7	5	0	9	9	8	0	6	140	17	0	3	188	2	0	402	4499
5:30 PM	16	3	2	0	3	10	11	0	5	146	15	0	1	145	4	0	361	4450
5:35 PM	9	1	1	0	7	13	8	0	2	134	14	1	0	198	4	0	392	4496
5:40 PM	21	8	0	0	8	9	10	0	7	130	16	0	5	126	3	0	343	4487
5:45 PM	8	2	0	0	4	6	6	0	6	195	23	0	0	216	4	0	470	4541
5:50 PM	11	2	0	0	6	5	6	0	1	133	18	0	3	157	4	0	346	4558
5:55 PM	16	7	2	0	12	13	10	0	7	137	16	0	2	110	4	0	336	4491

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	44	4	0	76	112	96	0	60	1836	212	4	20	2160	44	0	4820
Heavy Trucks	0	0	0		0	0	0		0	24	0		0	8	0		32
Pedestrians		16				12				8				4			40
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

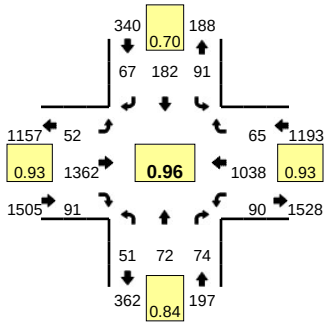
Type of peak hour being reported: Intersection Peak

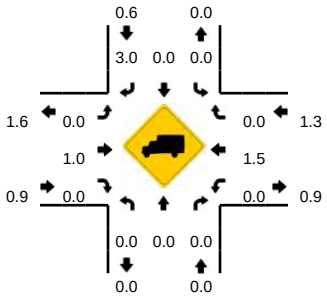
Method for determining peak hour: Total Entering Volume

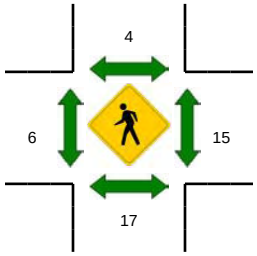
LOCATION: Eshelman Ave -- Lomita Blvd
CITY/STATE: Lomita, CA

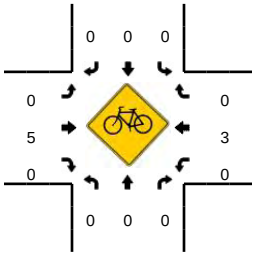
QC JOB #: 12003656
DATE: Thu, Jan 09 2014

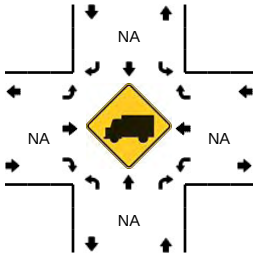
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

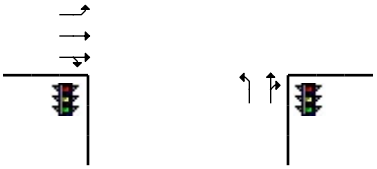


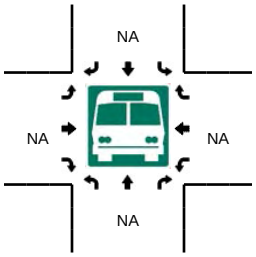












5-Min Count Period Beginning At	Eshelman Ave (Northbound)				Eshelman Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	4	10	0	4	11	0	0	4	119	6	0	2	91	2	1	255	
4:05 PM	2	9	10	0	9	6	6	0	5	97	4	0	6	74	0	0	228	
4:10 PM	5	7	4	0	6	5	3	0	1	146	9	0	2	82	4	0	274	
4:15 PM	5	9	8	0	2	12	4	0	2	109	3	0	3	72	7	0	236	
4:20 PM	4	4	2	0	4	3	3	0	3	143	9	0	2	97	6	0	280	
4:25 PM	7	11	8	0	7	13	4	0	7	105	3	0	7	63	6	0	241	
4:30 PM	2	4	7	0	8	7	7	0	0	137	6	0	3	79	8	0	268	
4:35 PM	4	11	7	0	8	19	2	0	2	85	8	0	5	80	7	1	239	
4:40 PM	0	1	4	0	5	9	0	0	3	143	5	0	4	96	3	0	273	
4:45 PM	1	9	9	0	12	12	4	0	2	101	5	0	8	85	2	0	250	
4:50 PM	7	8	2	0	12	10	2	0	7	111	7	0	9	77	8	0	260	
4:55 PM	4	10	4	0	5	14	6	0	5	90	6	0	11	69	9	0	233	3037
5:00 PM	5	6	6	0	4	13	5	0	7	122	9	0	8	86	9	1	281	3063
5:05 PM	4	6	7	0	5	16	3	0	4	127	4	0	11	84	5	0	276	3111
5:10 PM	1	2	7	0	11	13	2	0	2	128	8	0	7	83	5	0	269	3106
5:15 PM	3	6	6	0	10	8	7	0	3	128	9	0	6	86	10	0	282	3152
5:20 PM	4	6	3	0	6	8	3	0	1	121	10	0	7	95	5	0	269	3141
5:25 PM	4	11	3	0	11	32	8	0	6	93	7	0	4	79	6	0	264	3164
5:30 PM	3	3	7	0	5	14	4	0	7	134	14	0	6	107	4	0	308	3204
5:35 PM	4	6	10	0	16	21	11	0	9	84	6	0	6	70	4	0	247	3212
5:40 PM	5	5	4	0	3	13	6	0	3	109	7	0	6	115	4	0	280	3219
5:45 PM	8	7	8	0	7	19	8	0	1	88	3	0	8	62	4	0	223	3192
5:50 PM	7	6	2	0	4	8	6	0	2	129	10	0	7	90	4	0	275	3207
5:55 PM	3	8	11	0	9	17	4	0	6	99	4	1	13	81	5	0	261	3235

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	44	80	52	0	88	216	60	0	56	1392	124	0	68	1124	60	0	3364
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	20	0		32
Pedestrians		16				0				4				24			44
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

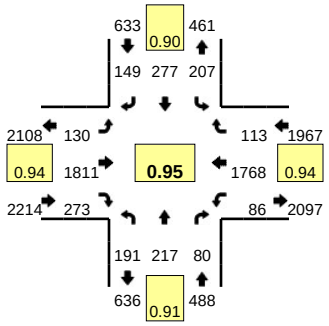
Method for determining peak hour: Total Entering Volume

LOCATION: Narbonne Ave -- Pacific Coast Hwy

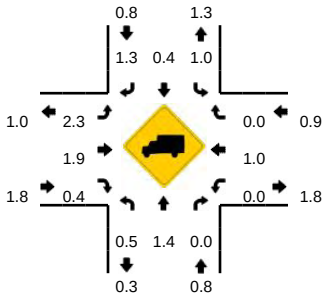
CITY/STATE: Lomita, CA

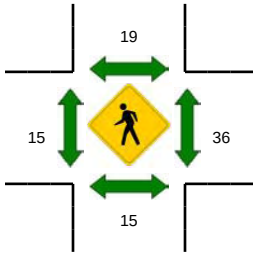
QC JOB #: 12003654

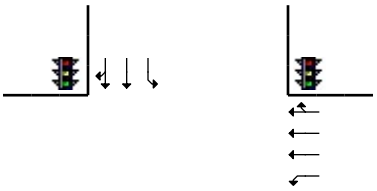
DATE: Thu, Jan 09 2014

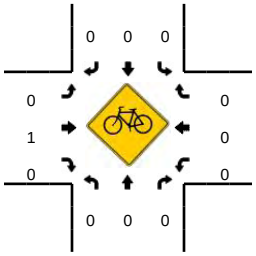


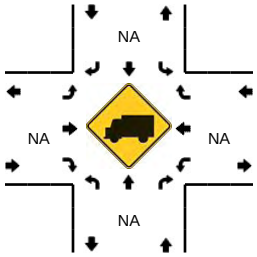
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:40 PM -- 5:55 PM

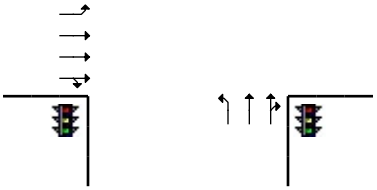


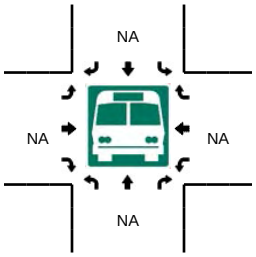












5-Min Count Period Beginning At	Narbonne Ave (Northbound)				Narbonne Ave (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	16	18	6	0	8	16	8	0	5	177	28	0	0	134	7	0	423	
4:05 PM	14	15	12	0	9	22	15	0	6	138	19	0	9	108	6	0	373	
4:10 PM	14	13	15	0	14	21	14	0	8	173	15	0	10	126	8	0	431	
4:15 PM	17	21	7	0	17	14	8	0	6	167	21	1	4	127	11	0	421	
4:20 PM	13	24	13	0	11	27	13	0	10	141	17	0	10	91	6	0	376	
4:25 PM	10	13	3	0	15	21	9	0	13	179	21	0	12	155	7	0	458	
4:30 PM	20	23	8	0	23	29	9	0	14	143	23	0	6	115	4	0	417	
4:35 PM	13	20	5	0	11	21	12	0	13	166	25	0	5	142	11	0	444	
4:40 PM	22	22	11	0	14	21	13	0	8	160	21	0	7	136	11	0	446	
4:45 PM	22	26	11	0	17	20	12	0	14	118	15	0	7	120	7	0	389	
4:50 PM	12	16	7	0	8	12	5	0	8	193	31	0	10	189	12	0	503	
4:55 PM	20	29	6	0	11	29	11	0	12	122	16	0	5	110	2	0	373	5054
5:00 PM	14	17	4	0	10	20	12	0	17	125	17	0	10	124	8	0	378	5009
5:05 PM	19	18	5	0	21	19	8	0	9	164	27	0	6	160	12	0	468	5104
5:10 PM	18	30	12	0	13	22	26	0	10	125	22	0	8	128	7	0	421	5094
5:15 PM	17	18	8	0	15	18	10	0	6	182	19	0	3	179	9	0	484	5157
5:20 PM	13	19	3	0	20	36	11	0	10	143	20	0	4	106	7	0	392	5173
5:25 PM	12	16	5	0	18	18	7	0	9	153	21	0	11	155	12	0	437	5152
5:30 PM	17	17	3	0	17	21	11	0	15	161	25	0	8	163	6	0	464	5199
5:35 PM	15	23	11	0	17	25	15	0	10	118	15	0	9	126	7	0	391	5146
5:40 PM	17	11	5	0	17	23	13	0	9	189	24	0	6	182	15	0	511	5211
5:45 PM	17	18	12	0	27	26	13	1	9	141	24	0	4	140	8	0	440	5262
5:50 PM	13	16	9	0	16	25	12	0	16	158	26	0	8	143	7	0	449	5208
5:55 PM	19	14	3	0	15	24	11	0	10	152	33	0	9	162	15	0	467	5302

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	188	180	104	0	240	296	152	4	136	1952	296	0	72	1860	120	0	5600
Heavy Trucks	0	0	0		0	0	0		8	24	0		0	16	0		48
Pedestrians		12				16				24				40			92
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

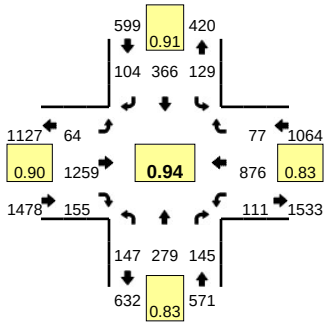
Type of peak hour being reported: Intersection Peak

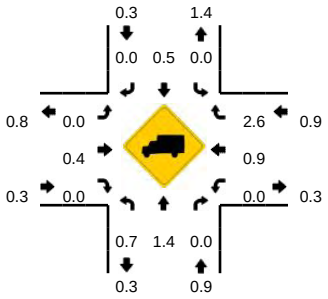
Method for determining peak hour: Total Entering Volume

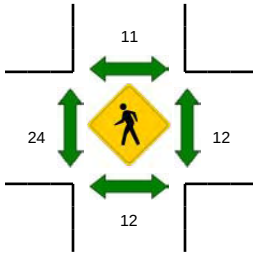
LOCATION: Narbonne Ave -- Lomita Blvd
CITY/STATE: Lomita, CA

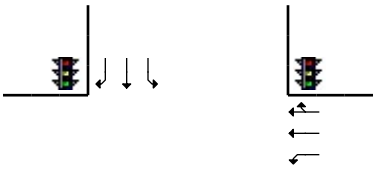
QC JOB #: 12003652
DATE: Thu, Jan 09 2014

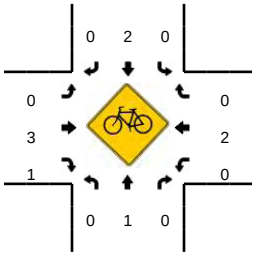
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

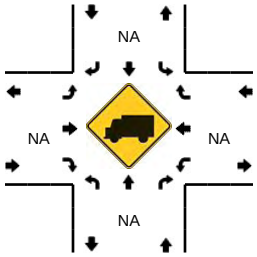


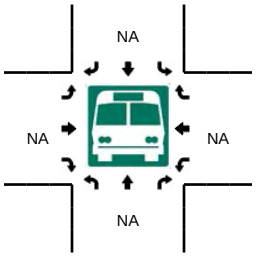












5-Min Count Period Beginning At	Narbonne Ave (Northbound)				Narbonne Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	10	16	8	0	9	31	7	0	9	96	11	0	8	71	11	0	287	
4:05 PM	8	25	8	0	15	34	7	0	4	80	8	0	7	52	2	0	250	
4:10 PM	2	14	7	0	6	27	10	0	2	138	11	0	6	88	3	0	314	
4:15 PM	7	11	7	0	8	21	13	0	3	135	14	0	7	80	8	0	314	
4:20 PM	15	23	13	0	17	24	8	0	3	104	16	0	6	75	4	0	308	
4:25 PM	7	18	10	0	10	32	9	0	5	102	10	0	9	58	6	0	276	
4:30 PM	8	17	7	0	7	23	9	0	4	117	10	0	5	72	6	0	285	
4:35 PM	11	17	14	0	6	33	1	0	6	108	16	0	8	73	8	0	301	
4:40 PM	17	17	9	0	14	26	13	0	5	89	10	0	10	66	4	0	280	
4:45 PM	11	19	7	0	8	27	9	0	2	127	11	0	7	83	4	0	315	
4:50 PM	19	23	17	0	12	31	12	0	3	79	10	0	8	63	2	0	279	
4:55 PM	16	23	6	0	11	31	13	0	7	101	17	0	7	58	10	0	300	3509
5:00 PM	14	26	14	0	10	29	5	0	5	101	10	0	12	68	5	0	299	3521
5:05 PM	11	31	20	0	10	33	6	0	5	111	7	0	7	63	5	0	309	3580
5:10 PM	13	29	14	0	13	31	9	0	5	117	18	0	9	64	6	0	328	3594
5:15 PM	14	27	7	0	10	30	8	0	7	126	12	0	10	62	16	0	329	3609
5:20 PM	14	18	11	0	14	32	8	0	4	115	16	0	9	87	6	0	334	3635
5:25 PM	6	21	11	0	11	32	9	0	12	102	14	0	7	60	3	0	288	3647
5:30 PM	9	21	14	0	10	31	4	0	5	108	14	0	11	102	6	0	335	3697
5:35 PM	11	23	9	0	12	28	10	0	2	84	14	0	9	68	6	0	276	3672
5:40 PM	9	18	15	0	8	31	11	0	7	88	12	0	15	98	8	0	320	3712
5:45 PM	19	10	6	0	13	24	13	0	4	86	8	0	5	74	7	0	269	3666
5:50 PM	13	13	9	0	12	32	9	0	7	117	11	0	6	79	4	0	312	3699
5:55 PM	12	24	10	0	9	39	18	0	8	93	17	0	3	60	6	0	299	3698

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	164	296	128	0	148	372	100	0	64	1432	184	0	112	852	112	0	3964
Heavy Trucks	0	8	0		0	0	0		0	0	0		0	4	4		16
Pedestrians		8				4				8				4			24
Bicycles	0	0	0		0	0	0		0	0	1		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

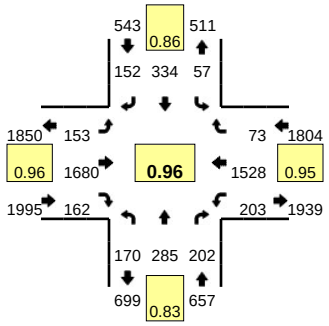
Type of peak hour being reported: Intersection Peak

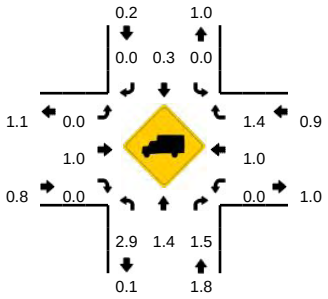
Method for determining peak hour: Total Entering Volume

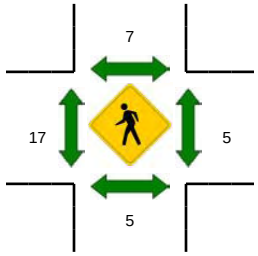
LOCATION: Arlington Ave -- Sepulveda Blvd
CITY/STATE: Torrance, CA

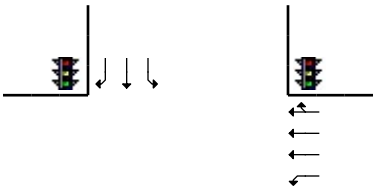
QC JOB #: 12003650
DATE: Thu, Jan 09 2014

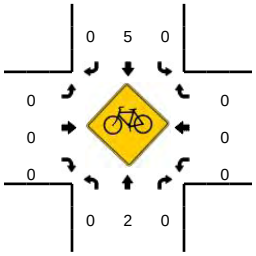
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

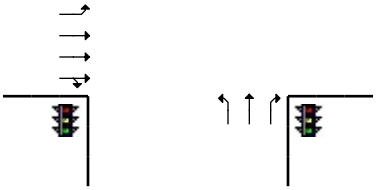


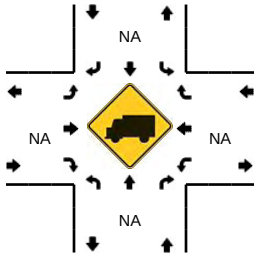


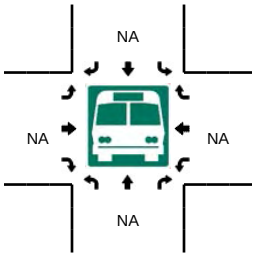












5-Min Count Period Beginning At	Arlington Ave (Northbound)				Arlington Ave (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	20	33	8	0	1	29	12	0	12	125	14	0	14	106	4	0	378	
4:05 PM	10	20	12	0	3	19	14	0	20	159	12	0	9	100	1	0	379	
4:10 PM	20	31	16	0	4	28	20	0	4	113	13	0	16	114	5	0	384	
4:15 PM	7	16	16	0	6	22	10	0	13	168	13	0	14	118	5	0	408	
4:20 PM	10	30	20	0	3	30	14	0	9	133	7	0	12	99	5	0	372	
4:25 PM	12	14	7	0	4	20	14	0	12	131	11	0	18	122	1	0	366	
4:30 PM	21	32	14	0	2	22	10	0	9	141	10	0	10	112	4	0	387	
4:35 PM	12	19	12	0	4	23	15	0	16	152	11	0	15	139	4	0	422	
4:40 PM	20	28	16	0	1	35	17	0	13	129	18	0	15	122	2	0	416	
4:45 PM	6	19	9	0	7	15	17	0	17	160	9	0	22	140	6	0	427	
4:50 PM	15	28	17	0	4	34	14	0	8	133	13	0	13	130	4	0	413	
4:55 PM	11	18	13	0	0	29	10	0	20	147	14	0	23	132	4	0	421	4773
5:00 PM	10	27	25	0	6	30	15	0	7	116	16	0	11	116	1	0	380	4775
5:05 PM	15	17	17	0	4	24	13	0	24	142	9	0	23	128	8	0	424	4820
5:10 PM	24	33	19	0	4	23	12	0	10	134	16	0	15	113	8	0	411	4847
5:15 PM	9	17	26	0	5	18	12	0	12	151	12	0	22	152	10	0	446	4885
5:20 PM	21	34	18	0	6	34	14	0	5	142	11	0	11	106	5	0	407	4920
5:25 PM	13	23	11	0	2	26	12	0	12	157	18	0	21	141	8	0	444	4998
5:30 PM	12	27	20	0	8	38	7	0	11	112	18	0	11	108	9	0	381	4992
5:35 PM	14	14	11	0	10	28	9	0	14	157	8	0	16	140	8	0	429	4999
5:40 PM	11	28	17	0	8	42	11	0	8	114	13	0	16	129	3	0	400	4983
5:45 PM	7	18	15	0	3	24	13	0	19	165	11	0	22	140	6	0	443	4999
5:50 PM	17	16	10	0	4	37	13	0	11	120	13	0	11	93	4	0	349	4935
5:55 PM	9	11	7	0	4	20	18	0	13	128	16	0	20	131	6	0	383	4897

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	172	296	220	0	52	312	152	0	116	1800	164	0	216	1596	92	0	5188
Heavy Trucks	0	8	4		0	4	0		0	16	0		0	16	0		48
Pedestrians		4				0				20				0			24
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

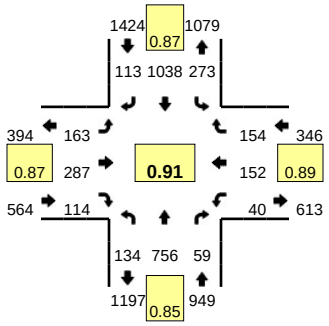
Type of peak hour being reported: Intersection Peak

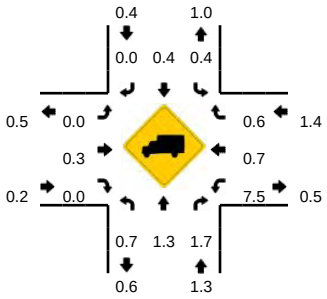
Method for determining peak hour: Total Entering Volume

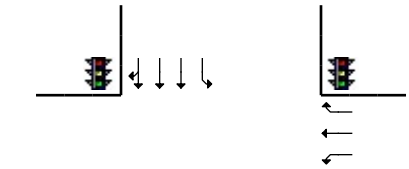
LOCATION: Crenshaw Blvd -- Rolling Hills Rd
CITY/STATE: Torrance, CA

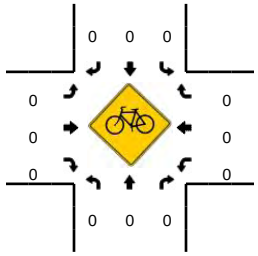
QC JOB #: 12003648
DATE: Thu, Jan 09 2014

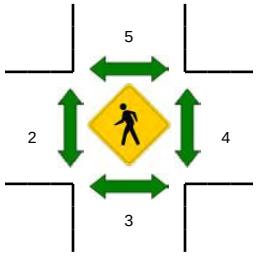
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:30 PM -- 5:45 PM

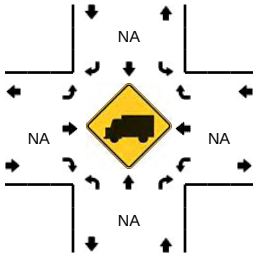


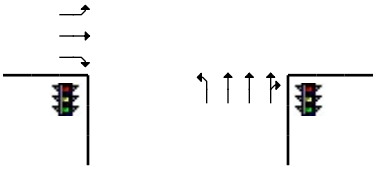


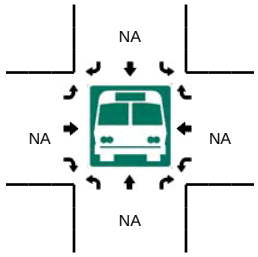












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Rolling Hills Rd (Eastbound)				Rolling Hills Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	63	2	0	21	84	4	2	5	18	7	0	3	15	18	0	247	
4:05 PM	5	68	3	0	14	44	4	1	11	11	5	0	2	19	20	0	207	
4:10 PM	8	67	0	0	24	74	7	1	15	15	6	0	4	12	19	0	252	
4:15 PM	7	79	3	0	15	61	5	1	17	31	5	0	2	10	17	0	253	
4:20 PM	11	85	5	0	24	73	8	0	17	17	7	0	2	6	17	0	272	
4:25 PM	6	66	4	0	14	52	6	0	21	25	8	0	1	14	20	0	237	
4:30 PM	10	66	6	0	26	65	14	2	12	21	4	0	0	7	14	0	247	
4:35 PM	14	56	4	0	7	69	8	1	14	27	5	0	4	20	17	0	246	
4:40 PM	13	74	4	0	33	82	13	0	6	16	8	0	1	12	17	0	279	
4:45 PM	3	62	4	0	13	76	7	1	8	20	10	0	4	21	12	0	241	
4:50 PM	3	62	4	0	32	76	11	1	8	17	6	0	1	21	13	0	255	
4:55 PM	12	56	0	0	22	91	9	2	12	35	8	0	5	16	11	0	279	3015
5:00 PM	12	53	3	1	22	72	7	1	11	20	9	0	1	8	14	0	234	3002
5:05 PM	7	52	4	0	12	88	8	0	11	22	10	0	5	21	14	0	254	3049
5:10 PM	10	72	5	0	14	89	13	1	12	15	8	0	1	14	11	0	265	3062
5:15 PM	11	46	5	0	16	73	6	0	16	32	12	0	5	12	11	0	245	3054
5:20 PM	18	71	4	1	26	115	13	0	8	21	6	0	3	9	6	0	301	3083
5:25 PM	8	42	6	0	23	66	9	0	20	29	11	0	3	16	16	0	249	3095
5:30 PM	12	65	6	1	34	103	12	1	11	16	8	0	2	16	14	0	301	3149
5:35 PM	13	66	7	1	14	90	6	1	25	31	11	0	4	12	13	0	294	3197
5:40 PM	11	81	9	0	35	105	9	0	11	18	6	0	3	10	13	0	311	3229
5:45 PM	7	62	5	0	19	67	8	0	16	28	16	0	3	9	15	0	255	3243
5:50 PM	8	90	5	1	30	79	13	0	10	20	9	0	5	9	16	0	295	3283
5:55 PM	8	60	4	0	21	94	7	1	16	20	8	0	3	18	10	0	270	3274

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	144	848	88	8	332	1192	108	8	188	260	100	0	36	152	160	0	3624
Heavy Trucks	0	8	0		0	0	0		0	0	0		0	0	0		8
Pedestrians		0				4				0				8			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

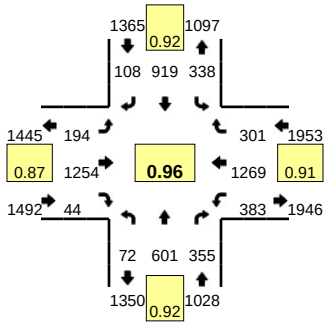
Type of peak hour being reported: Intersection Peak

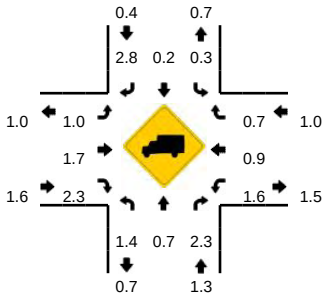
Method for determining peak hour: Total Entering Volume

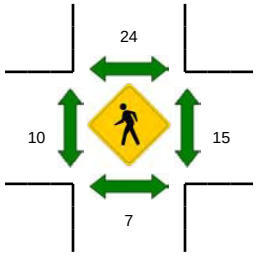
LOCATION: Crenshaw Blvd -- Pacific Coast Hwy
CITY/STATE: Torrance, CA

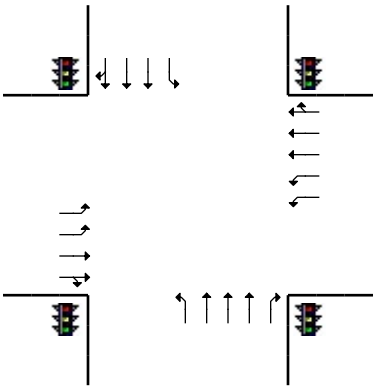
QC JOB #: 12003646
DATE: Thu, Jan 09 2014

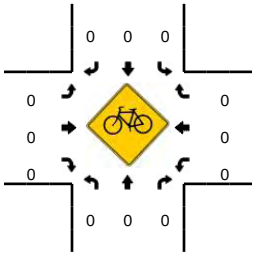
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:35 PM -- 5:50 PM

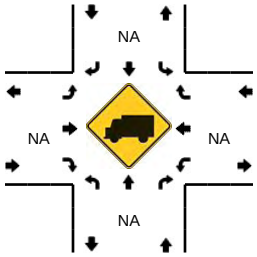


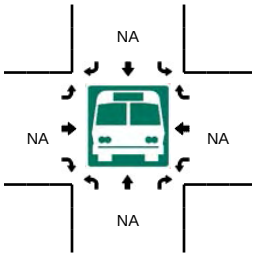












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	64	42	0	25	50	12	0	14	102	3	0	43	97	21	0	475	
4:05 PM	7	50	40	0	26	58	7	0	17	121	1	0	27	93	16	0	463	
4:10 PM	2	58	23	1	27	61	13	0	12	128	3	0	29	109	23	0	489	
4:15 PM	4	60	27	0	27	56	10	0	13	95	1	0	26	99	22	0	440	
4:20 PM	1	61	37	0	24	54	7	1	15	129	4	0	31	74	22	0	460	
4:25 PM	5	64	36	0	25	65	15	0	25	125	1	0	20	95	31	0	507	
4:30 PM	7	62	34	0	28	50	8	0	28	104	3	0	26	94	19	0	463	
4:35 PM	7	65	32	0	31	59	12	1	14	94	4	0	29	98	24	0	470	
4:40 PM	10	68	26	0	26	69	10	0	17	84	3	0	36	97	27	0	473	
4:45 PM	3	45	37	1	35	82	10	0	15	90	3	0	34	104	17	0	476	
4:50 PM	3	43	31	0	28	80	12	0	17	104	4	0	35	107	26	0	490	
4:55 PM	3	53	27	1	31	94	5	1	21	94	5	0	37	89	22	0	483	5689
5:00 PM	6	61	34	0	28	74	8	0	21	82	3	0	27	90	17	0	451	5665
5:05 PM	4	50	27	1	30	77	13	0	20	94	4	0	43	82	22	0	467	5669
5:10 PM	8	52	35	0	33	64	12	0	13	107	2	0	38	108	24	0	496	5676
5:15 PM	3	37	28	0	29	72	5	0	18	101	2	0	46	110	34	0	485	5721
5:20 PM	0	55	27	0	27	92	12	0	11	124	3	0	29	118	31	0	529	5790
5:25 PM	7	42	25	2	14	77	11	0	15	124	3	0	12	92	23	0	447	5730
5:30 PM	5	44	25	0	29	59	10	0	15	82	5	0	28	115	34	0	451	5718
5:35 PM	11	46	32	0	30	86	7	0	10	114	1	0	30	116	21	0	504	5752
5:40 PM	4	53	32	0	27	80	10	0	17	120	4	0	34	126	20	0	527	5806
5:45 PM	6	50	33	0	26	57	5	0	18	109	8	0	32	124	27	0	495	5825
5:50 PM	11	58	30	0	33	87	10	0	15	103	4	0	27	99	26	0	503	5838
5:55 PM	3	58	42	0	32	76	5	0	15	93	2	0	30	105	22	0	483	5838

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	84	596	388	0	332	892	88	0	180	1372	52	0	384	1464	272	0	6104
Heavy Trucks	0	0	8		4	0	4		0	12	0		4	12	0		44
Pedestrians		0				32				4				28			64
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

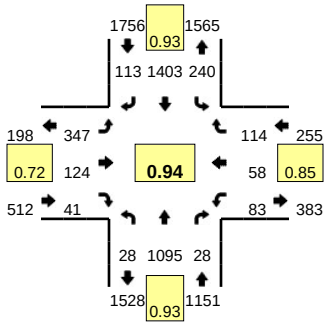
Type of peak hour being reported: Intersection Peak

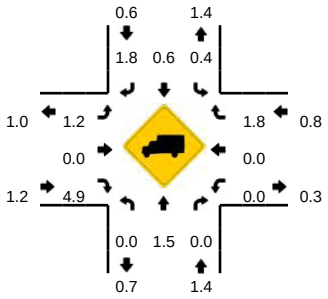
Method for determining peak hour: Total Entering Volume

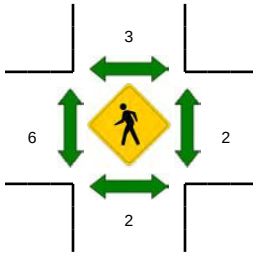
LOCATION: Crenshaw Blvd -- Airport Dr
CITY/STATE: Torrance, CA

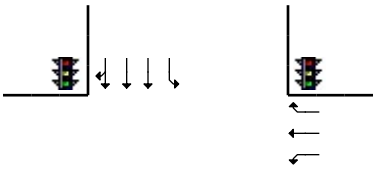
QC JOB #: 12003644
DATE: Thu, Jan 09 2014

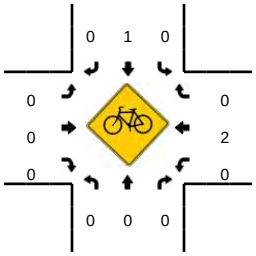
Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

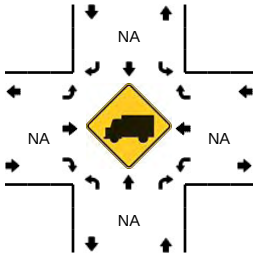


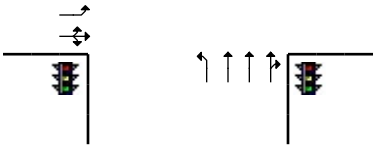


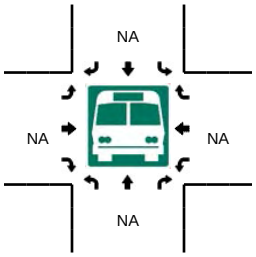












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Airport Dr (Eastbound)				Airport Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	97	3	1	21	97	8	1	47	4	4	0	2	7	7	0	301	
4:05 PM	6	80	3	0	20	115	10	3	33	11	0	0	2	6	9	0	298	
4:10 PM	4	92	0	0	17	120	3	3	50	15	2	0	1	1	16	0	324	
4:15 PM	4	91	1	0	17	95	8	1	46	13	5	0	2	9	11	0	303	
4:20 PM	2	90	2	0	23	120	12	0	49	12	5	0	11	4	12	0	342	
4:25 PM	5	86	3	0	23	102	10	0	32	13	5	0	5	6	9	0	299	
4:30 PM	2	91	2	0	18	76	10	0	21	5	4	0	9	5	14	0	257	
4:35 PM	1	114	0	0	22	117	11	0	16	7	4	0	6	0	7	0	305	
4:40 PM	2	97	1	0	20	114	11	0	36	9	5	0	2	4	9	0	310	
4:45 PM	0	97	1	0	13	115	8	0	30	13	1	0	4	9	13	0	304	
4:50 PM	1	83	4	1	13	122	10	0	18	8	3	0	11	5	8	0	287	
4:55 PM	4	87	5	0	17	103	7	1	25	14	3	0	6	6	12	0	290	3620
5:00 PM	3	92	1	0	18	137	15	1	17	4	1	0	4	6	7	0	306	3625
5:05 PM	4	85	2	0	15	131	7	5	39	13	1	0	9	6	5	0	322	3649
5:10 PM	3	86	7	0	20	112	8	1	42	11	4	0	8	4	4	0	310	3635
5:15 PM	0	87	0	0	29	154	4	1	22	15	5	0	8	3	14	0	342	3674
5:20 PM	2	79	0	0	15	102	9	1	29	7	2	0	2	2	9	0	259	3591
5:25 PM	1	76	1	0	32	141	10	0	27	8	1	0	3	1	7	0	308	3600
5:30 PM	1	84	1	0	22	120	8	0	20	5	3	0	2	2	8	0	276	3619
5:35 PM	3	76	1	0	23	143	11	2	13	3	2	0	2	2	13	0	294	3608
5:40 PM	2	88	3	0	14	108	4	1	16	8	4	0	6	0	11	0	265	3563
5:45 PM	3	67	0	1	22	121	10	1	16	8	2	0	6	0	9	0	266	3525
5:50 PM	2	98	0	0	14	138	11	1	15	9	2	0	4	3	8	0	305	3543
5:55 PM	3	91	3	1	15	133	9	1	28	10	2	0	4	2	8	0	310	3563

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	1032	36	0	256	1588	76	28	412	156	40	0	100	52	92	0	3896
Heavy Trucks	0	0	0		0	8	0		0	0	4		0	0	0		12
Pedestrians		4				0				4				0			8
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

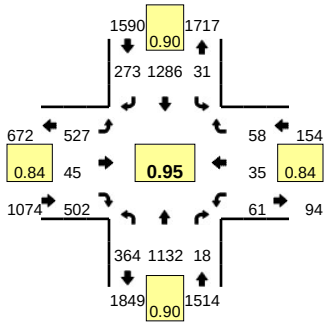
Type of peak hour being reported: Intersection Peak

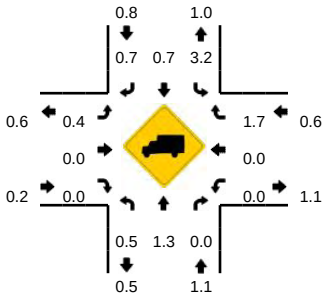
Method for determining peak hour: Total Entering Volume

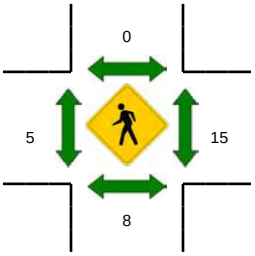
LOCATION: Crenshaw Blvd -- Skypark Dr
CITY/STATE: Torrance, CA

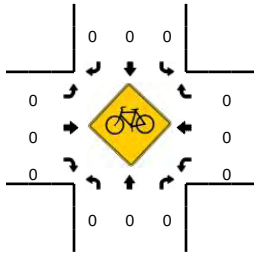
QC JOB #: 12003642
DATE: Thu, Jan 09 2014

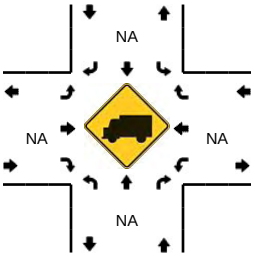
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

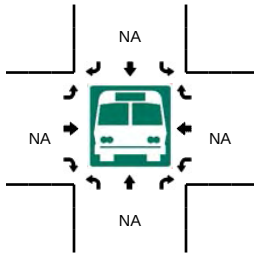












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	22	112	3	0	2	83	24	1	33	2	36	0	4	0	6	0	328	
4:05 PM	30	105	4	0	2	88	27	0	56	5	42	0	2	4	12	0	377	
4:10 PM	17	117	0	0	4	83	22	1	46	3	49	0	6	1	8	0	357	
4:15 PM	30	127	3	0	2	75	23	1	29	3	40	0	3	4	4	0	344	
4:20 PM	34	123	0	0	4	106	19	0	42	1	45	0	2	4	6	0	386	
4:25 PM	19	125	3	0	4	95	24	1	30	3	32	0	5	1	5	0	347	
4:30 PM	26	97	6	0	4	73	15	0	28	3	30	0	4	2	12	0	300	
4:35 PM	29	90	2	0	1	92	19	1	46	1	37	0	1	2	11	0	332	
4:40 PM	28	106	1	0	3	97	21	0	69	2	48	0	5	2	2	0	384	
4:45 PM	34	108	1	0	1	93	16	0	39	3	33	0	6	3	5	0	342	
4:50 PM	47	108	1	0	6	93	28	0	34	9	36	0	5	4	0	0	371	
4:55 PM	23	79	2	0	2	115	25	0	33	5	35	0	4	6	4	0	333	4201
5:00 PM	34	98	5	0	3	101	16	0	42	6	39	0	7	5	7	0	363	4236
5:05 PM	25	88	0	0	3	111	31	0	39	4	44	0	6	0	7	0	358	4217
5:10 PM	23	112	0	0	1	101	29	0	55	2	45	0	8	1	9	0	386	4246
5:15 PM	23	98	0	0	1	114	17	0	67	6	57	0	3	5	5	0	396	4298
5:20 PM	35	94	4	0	3	90	17	0	40	3	43	0	5	2	9	0	345	4257
5:25 PM	29	63	1	0	3	116	13	0	35	3	52	0	4	3	4	0	326	4236
5:30 PM	31	97	0	0	3	117	22	0	31	0	31	0	3	1	1	0	337	4273
5:35 PM	32	81	3	0	2	138	38	0	43	2	39	0	5	3	5	0	391	4332
5:40 PM	23	88	2	0	2	74	22	1	45	5	40	0	3	2	5	0	312	4260
5:45 PM	26	87	1	0	3	134	21	0	42	1	33	0	7	1	1	0	357	4275
5:50 PM	18	100	3	0	5	112	19	0	40	5	47	0	7	1	4	0	361	4265
5:55 PM	25	84	1	0	3	102	17	0	25	3	46	0	4	3	3	0	316	4248

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	284	1192	0	0	20	1304	308	0	644	48	584	0	68	24	84	0	4560
Heavy Trucks	0	4	0		0	12	0		0	0	0		0	0	0		16
Pedestrians		8				0				8				8			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

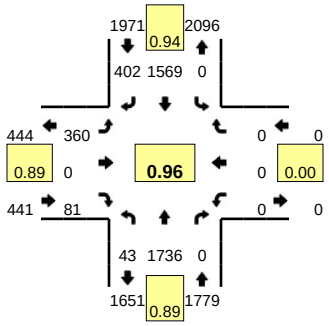
Type of peak hour being reported: Intersection Peak

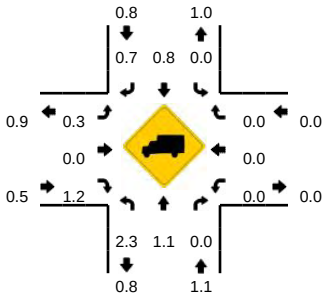
Method for determining peak hour: Total Entering Volume

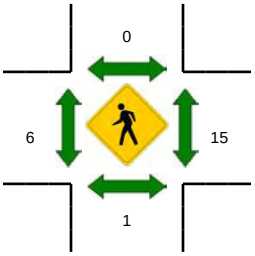
LOCATION: Crenshaw Blvd -- Torrance Crossroads Shopping Center
CITY/STATE: Torrance, CA

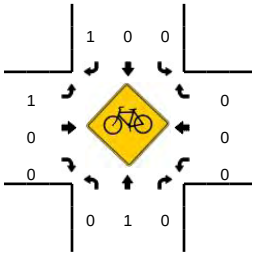
QC JOB #: 12003640
DATE: Thu, Jan 09 2014

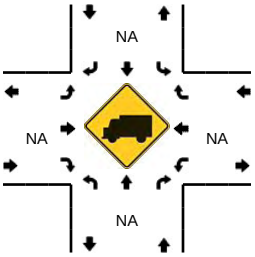
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

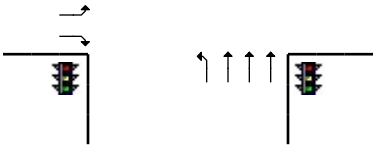


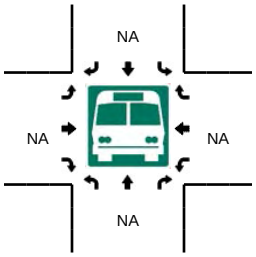












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Torrance Crossroads Shopping Center (Eastbound)				Torrance Crossroads Shopping Center (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	140	0	0	0	94	26	0	34	0	7	0	0	0	0	0	305	
4:05 PM	7	157	0	0	0	141	25	0	34	0	6	0	0	0	0	0	370	
4:10 PM	4	182	0	0	0	96	26	0	35	0	6	0	0	0	0	0	349	
4:15 PM	1	189	0	0	0	113	29	0	30	0	6	0	0	0	0	0	368	
4:20 PM	3	155	0	0	0	148	29	0	29	0	8	0	0	0	0	0	372	
4:25 PM	1	175	0	0	0	97	43	0	41	0	4	0	0	0	0	0	361	
4:30 PM	2	145	0	0	0	82	24	0	22	0	3	0	0	0	0	0	278	
4:35 PM	2	152	0	0	0	126	37	0	32	0	7	0	0	0	0	0	356	
4:40 PM	2	168	0	0	0	114	27	0	28	0	5	0	0	0	0	0	344	
4:45 PM	2	167	0	0	0	131	36	0	21	0	9	0	0	0	0	0	366	
4:50 PM	8	129	0	0	0	147	37	0	30	0	8	0	0	0	0	0	359	
4:55 PM	2	124	0	0	0	113	32	0	33	0	6	0	0	0	0	0	310	4138
5:00 PM	1	141	0	0	0	139	31	0	30	0	6	0	0	0	0	0	348	4181
5:05 PM	5	151	0	0	0	141	33	0	25	0	5	0	0	0	0	0	360	4171
5:10 PM	8	164	0	0	0	93	23	0	40	0	4	0	0	0	0	0	332	4154
5:15 PM	4	156	0	0	0	147	41	0	41	0	9	0	0	0	0	0	398	4184
5:20 PM	4	156	0	0	0	137	28	0	30	0	5	0	0	0	0	0	360	4172
5:25 PM	3	109	0	0	0	118	43	0	27	0	9	0	0	0	0	0	309	4120
5:30 PM	1	119	0	1	0	163	34	0	23	0	8	0	0	0	0	0	349	4191
5:35 PM	7	135	0	0	0	145	26	0	32	0	8	0	0	0	0	0	353	4188
5:40 PM	2	142	0	0	0	113	16	0	23	0	8	0	0	0	0	0	304	4148
5:45 PM	2	122	0	0	0	139	38	0	36	0	9	0	0	0	0	0	346	4128
5:50 PM	8	136	0	0	0	118	22	0	37	0	7	0	0	0	0	0	328	4097
5:55 PM	3	129	0	0	0	165	30	0	21	0	7	0	0	0	0	0	355	4142

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	1884	0	0	0	1524	388	0	424	0	72	0	0	0	0	0	4360
Heavy Trucks	4	4	0		0	8	0		0	0	0		0	0	0		16
Pedestrians		4				0				4				16			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

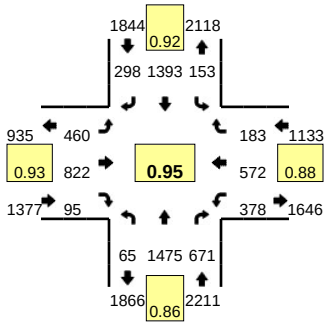
Type of peak hour being reported: Intersection Peak

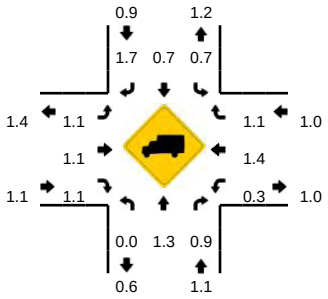
Method for determining peak hour: Total Entering Volume

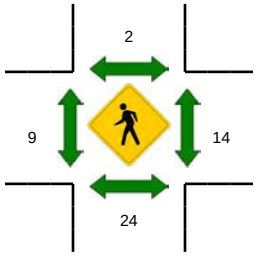
LOCATION: Crenshaw Blvd -- Lomita Blvd
CITY/STATE: Lomita, CA

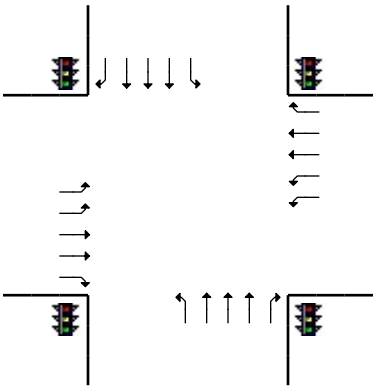
QC JOB #: 12003638
DATE: Thu, Jan 09 2014

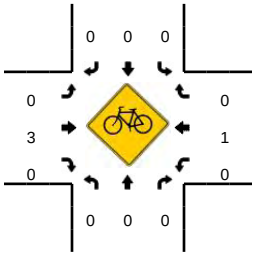
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

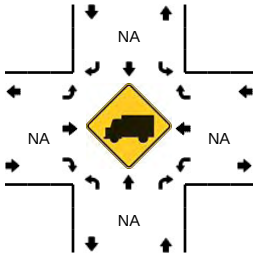


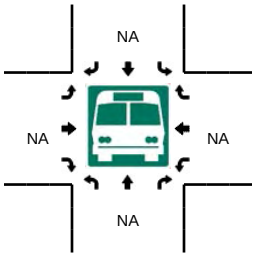












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	9	135	45	0	7	122	27	0	33	50	6	0	28	38	8	0	508	
4:05 PM	9	103	56	0	14	101	23	0	46	90	7	0	38	42	14	0	543	
4:10 PM	10	159	84	0	11	84	31	0	32	53	4	0	27	36	14	0	545	
4:15 PM	8	98	58	0	14	93	28	0	43	81	6	0	40	54	19	0	542	
4:20 PM	6	155	77	0	12	160	39	0	29	57	7	0	25	44	13	0	624	
4:25 PM	11	129	58	0	8	72	17	0	52	77	12	0	39	66	13	0	554	
4:30 PM	9	122	47	0	13	108	29	0	26	61	10	0	15	37	13	0	490	
4:35 PM	6	103	47	0	17	107	18	0	39	83	5	0	29	49	11	0	514	
4:40 PM	1	173	56	0	10	111	17	0	29	65	9	0	31	40	12	0	554	
4:45 PM	5	94	48	0	14	107	22	0	47	73	8	0	47	59	18	0	542	
4:50 PM	2	141	53	0	13	155	22	0	33	48	10	0	30	36	10	0	553	
4:55 PM	4	89	42	0	11	61	20	0	51	84	11	0	43	63	24	0	503	6472
5:00 PM	5	138	54	0	12	191	29	0	38	53	2	0	23	40	10	0	595	6559
5:05 PM	6	83	55	0	17	93	37	0	46	76	11	0	33	56	19	0	532	6548
5:10 PM	2	150	76	0	12	135	20	0	27	64	4	0	23	28	21	0	562	6565
5:15 PM	4	114	51	0	15	113	12	0	50	77	8	0	35	50	13	0	542	6565
5:20 PM	5	147	66	0	14	137	24	0	37	53	6	0	25	32	7	0	553	6494
5:25 PM	3	52	47	0	14	83	28	0	44	84	11	0	43	61	19	0	489	6429
5:30 PM	1	125	47	0	11	196	41	0	33	61	9	0	24	45	16	0	609	6548
5:35 PM	3	98	44	0	11	87	14	0	48	85	2	0	44	60	18	0	514	6548
5:40 PM	7	125	54	0	12	143	23	0	36	56	4	0	22	39	14	0	535	6529
5:45 PM	3	93	37	0	13	99	20	0	48	84	10	0	38	78	14	0	537	6524
5:50 PM	5	142	54	1	14	119	30	0	23	54	8	0	30	43	15	0	538	6509
5:55 PM	3	73	35	0	18	139	30	0	44	74	10	0	37	63	29	0	555	6561

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	100	1528	772	0	136	1300	336	0	496	860	100	0	416	656	180	0	6880
Heavy Trucks	0	12	16		0	8	4		0	8	4		0	16	8		76
Pedestrians		20				0				8				12			40
Bicycles	0	0	0		0	0	0		0	1	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

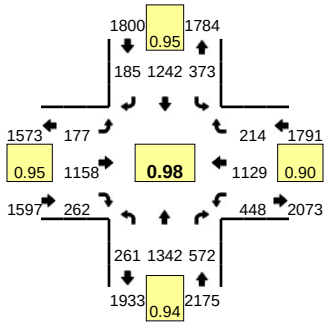
Type of peak hour being reported: Intersection Peak

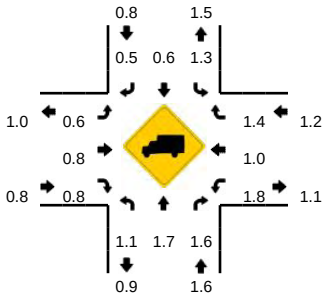
Method for determining peak hour: Total Entering Volume

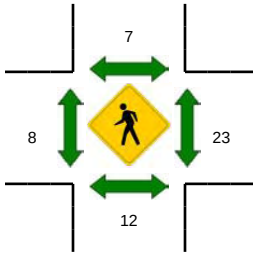
LOCATION: Crenshaw Blvd -- Sepulveda Blvd
CITY/STATE: Torrance, CA

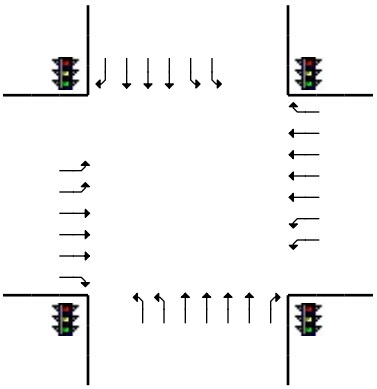
QC JOB #: 12003636
DATE: Thu, Jan 09 2014

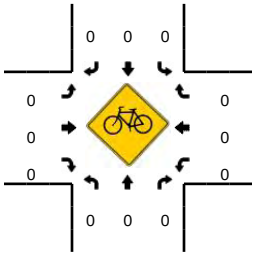
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

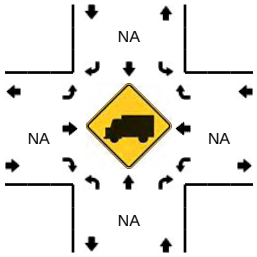


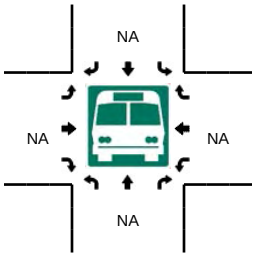












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	14	86	64	1	18	65	17	2	18	95	22	0	48	103	16	1	570	
4:05 PM	26	107	58	1	24	98	16	4	14	78	15	0	28	70	12	5	556	
4:10 PM	22	83	41	0	17	81	7	3	26	95	26	0	34	113	16	4	568	
4:15 PM	31	138	61	1	26	135	19	2	11	85	21	0	29	70	15	0	644	
4:20 PM	17	93	47	0	15	62	15	3	16	86	19	0	38	99	11	6	527	
4:25 PM	24	121	48	0	27	76	8	8	13	97	24	0	27	83	16	1	573	
4:30 PM	14	91	53	0	14	85	14	5	19	107	24	0	40	99	17	2	584	
4:35 PM	23	112	52	0	34	104	20	9	14	98	14	0	29	81	17	3	610	
4:40 PM	23	109	51	0	20	89	15	8	11	97	24	1	45	113	19	1	626	
4:45 PM	27	124	59	0	23	101	16	8	7	97	18	0	35	91	18	0	624	
4:50 PM	17	92	46	1	15	86	13	1	15	107	20	0	45	114	15	2	589	
4:55 PM	31	107	38	0	33	132	17	2	13	92	26	0	26	84	17	3	621	7092
5:00 PM	11	104	46	0	21	120	9	3	15	88	18	0	43	99	21	2	600	7122
5:05 PM	19	121	48	1	37	120	15	7	16	93	21	0	27	71	26	0	622	7188
5:10 PM	17	113	45	0	29	96	15	3	26	98	31	0	31	111	17	3	635	7255
5:15 PM	21	121	52	0	35	111	21	3	12	92	21	0	27	83	16	3	618	7229
5:20 PM	15	113	45	0	29	78	9	2	21	94	23	0	47	104	17	2	599	7301
5:25 PM	40	135	37	1	31	120	21	1	7	95	22	0	31	79	14	1	635	7363
5:30 PM	15	66	42	0	15	109	11	3	19	109	17	0	38	101	21	3	569	7348
5:35 PM	17	121	40	0	25	111	19	4	12	100	17	1	29	79	18	1	594	7332
5:40 PM	18	86	47	0	17	103	19	4	20	105	22	0	45	120	11	2	619	7325
5:45 PM	23	112	41	0	25	115	15	2	11	100	25	0	28	72	22	4	595	7296
5:50 PM	24	72	38	1	18	101	12	1	17	101	30	0	38	92	16	5	566	7273
5:55 PM	31	108	36	0	26	137	27	8	12	90	19	0	32	88	13	0	627	7279

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	228	1420	580	4	404	1308	204	52	216	1132	292	0	340	1060	236	24	7500
Heavy Trucks	0	12	4		8	0	0		4	8	4		12	12	4		68
Pedestrians		8				4				4				28			44
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

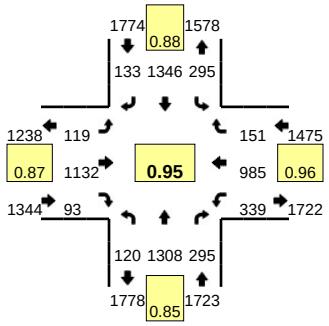
LOCATION: Crenshaw Blvd -- Carson St

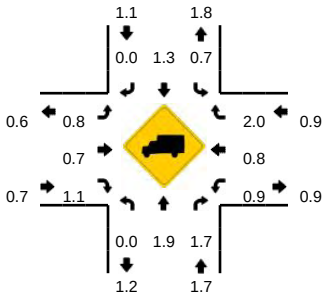
CITY/STATE: Torrance, CA

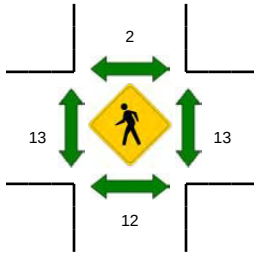
QC JOB #: 12003634

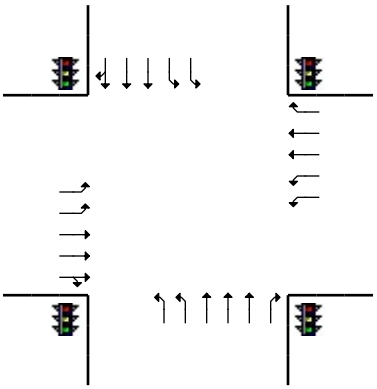
DATE: Thu, Jan 09 2014

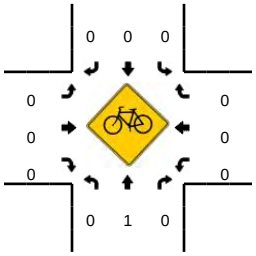
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:40 PM -- 5:55 PM

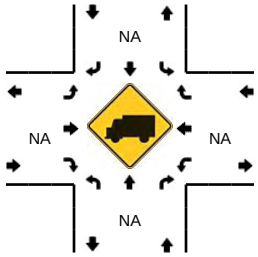


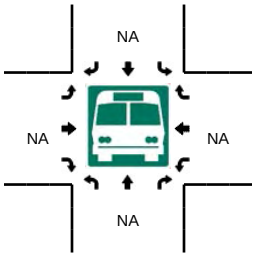












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Carson St (Eastbound)				Carson St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	9	116	23	0	9	124	14	0	14	56	6	0	25	53	10	0	459	
4:05 PM	13	71	22	0	30	79	16	0	7	97	10	0	15	70	12	0	442	
4:10 PM	11	105	24	0	15	144	8	0	15	70	4	0	32	50	13	0	491	
4:15 PM	12	91	16	0	26	81	10	0	12	115	7	0	18	68	17	0	473	
4:20 PM	8	110	25	0	20	101	12	0	15	70	3	0	23	61	9	0	457	
4:25 PM	8	69	28	0	17	65	10	0	6	113	8	0	15	62	8	0	409	
4:30 PM	9	113	25	0	18	116	21	0	16	64	4	0	29	46	10	0	471	
4:35 PM	11	92	22	0	28	76	7	0	7	80	7	0	28	95	15	0	468	
4:40 PM	9	142	22	0	17	123	18	0	18	76	3	0	32	69	7	0	536	
4:45 PM	17	73	18	0	26	89	9	0	14	92	11	0	22	84	16	0	471	
4:50 PM	7	139	25	0	24	140	9	0	15	70	4	0	34	56	11	0	534	
4:55 PM	9	92	19	0	26	86	4	0	9	115	12	0	30	104	10	0	516	5727
5:00 PM	9	109	22	0	17	141	9	0	6	48	7	0	24	80	13	0	485	5753
5:05 PM	10	86	26	0	34	97	8	0	5	119	15	0	12	87	14	0	513	5824
5:10 PM	8	149	26	0	22	111	13	0	9	88	4	0	41	64	15	0	550	5883
5:15 PM	14	104	21	0	23	100	13	0	10	114	9	0	26	80	9	0	523	5933
5:20 PM	5	142	39	0	20	130	17	0	19	72	8	0	42	63	9	0	566	6042
5:25 PM	14	82	26	0	32	101	8	0	13	138	3	0	14	110	11	0	552	6185
5:30 PM	7	89	25	0	8	89	6	0	11	92	4	0	24	87	15	0	457	6171
5:35 PM	6	100	21	0	33	111	9	0	8	67	9	0	32	71	21	0	488	6191
5:40 PM	11	138	27	0	20	134	20	0	14	77	7	0	32	72	9	0	561	6216
5:45 PM	15	89	18	0	38	102	15	0	5	126	7	0	31	95	17	0	558	6303
5:50 PM	12	128	25	0	22	144	11	0	10	76	8	0	31	72	8	0	547	6316
5:55 PM	7	72	18	0	28	95	4	0	6	81	7	0	16	89	12	0	435	6235

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	1420	280	0	320	1520	184	0	116	1116	88	0	376	956	136	0	6664
Heavy Trucks	0	24	8		0	12	0		0	0	0		8	16	0		68
Pedestrians		4				0				12				36			52
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

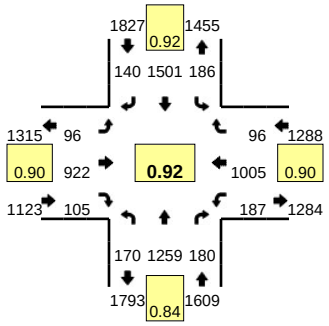
LOCATION: Crenshaw Blvd -- Torrance Blvd

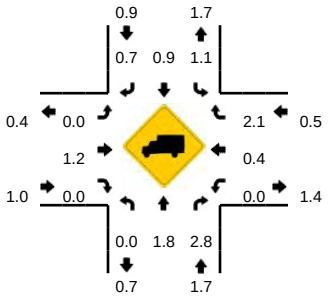
CITY/STATE: Torrance, CA

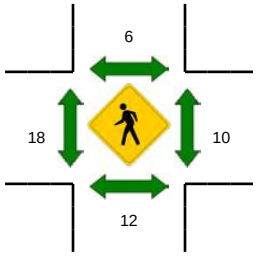
QC JOB #: 12003632

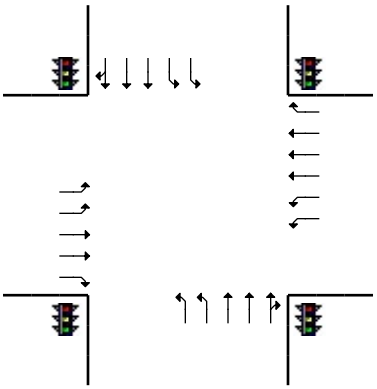
DATE: Thu, Jan 09 2014

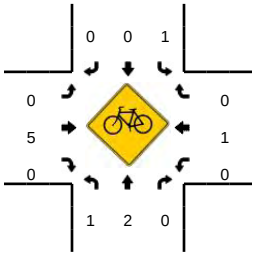
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

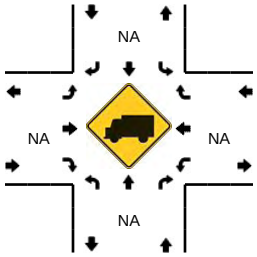


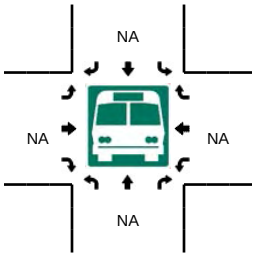












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Torrance Blvd (Eastbound)				Torrance Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	10	56	17	0	18	98	10	1	11	80	10	0	23	91	15	0	440	
4:05 PM	13	114	15	0	27	133	14	0	11	63	8	0	11	41	6	0	456	
4:10 PM	8	88	15	0	9	93	9	0	14	84	10	0	17	79	8	0	434	
4:15 PM	18	124	21	0	5	119	12	0	7	46	8	0	14	59	5	0	438	
4:20 PM	13	64	11	0	8	69	5	1	9	80	5	0	15	77	6	0	363	
4:25 PM	9	105	10	0	8	118	6	1	9	65	11	0	9	62	5	0	418	
4:30 PM	11	68	11	0	12	95	5	0	8	73	6	0	18	80	7	0	394	
4:35 PM	10	139	19	0	22	118	6	2	6	53	16	0	18	59	6	0	474	
4:40 PM	17	86	17	0	13	93	8	0	11	69	11	0	21	87	6	0	439	
4:45 PM	19	114	20	0	9	135	13	1	11	63	14	0	16	55	5	0	475	
4:50 PM	13	81	20	0	17	102	3	0	8	72	9	0	15	93	6	0	439	
4:55 PM	8	123	13	0	12	136	12	1	10	46	13	0	15	77	4	0	470	5240
5:00 PM	12	80	15	0	14	89	5	0	10	81	14	0	22	68	4	0	414	5214
5:05 PM	15	125	15	0	31	141	13	1	6	64	1	0	18	62	10	0	502	5260
5:10 PM	17	72	7	0	20	94	10	1	9	96	12	0	24	115	5	0	482	5308
5:15 PM	20	159	23	0	15	152	14	0	8	74	1	0	6	67	9	0	548	5418
5:20 PM	11	110	15	0	9	108	6	0	12	98	13	0	15	112	13	0	522	5577
5:25 PM	13	121	17	0	16	153	15	0	13	72	9	0	8	76	12	0	525	5684
5:30 PM	10	63	6	0	15	102	11	0	1	73	5	0	15	102	10	0	413	5703
5:35 PM	9	98	15	0	12	110	14	0	10	101	6	0	20	87	3	0	485	5714
5:40 PM	18	120	25	0	19	170	14	0	4	57	10	0	19	74	10	0	540	5815
5:45 PM	17	75	14	0	6	110	15	1	7	100	8	0	18	91	6	0	468	5808
5:50 PM	20	113	15	0	13	136	11	0	6	60	13	0	7	74	10	0	478	5847
5:55 PM	6	63	12	1	11	109	10	1	9	85	9	0	14	96	6	0	432	5809

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	176	1560	220	0	160	1652	140	0	132	976	92	0	116	1020	136	0	6380
Heavy Trucks	0	24	8		0	20	0		0	12	0		0	0	0		64
Pedestrians		12				4				4				8			28
Bicycles	1	1	0		0	0	0		0	1	0		0	0	0		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

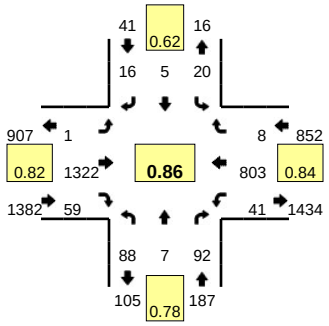
Type of peak hour being reported: Intersection Peak

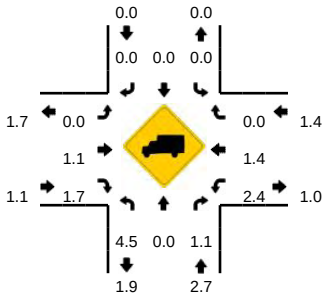
Method for determining peak hour: Total Entering Volume

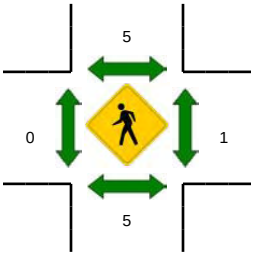
LOCATION: Garnier St -- Lomita Blvd
CITY/STATE: Torrance, CA

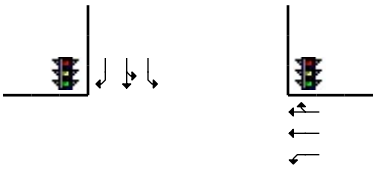
QC JOB #: 12003628
DATE: Thu, Jan 09 2014

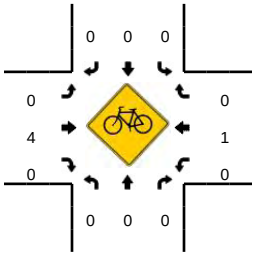
Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

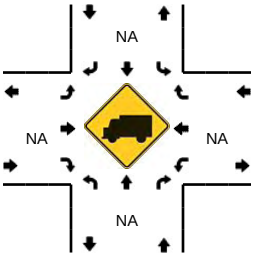


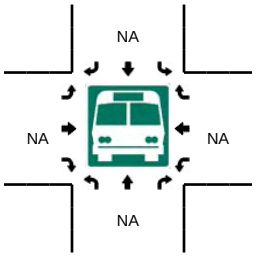












5-Min Count Period Beginning At	Garnier St (Northbound)				Garnier St (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	0	7	0	3	0	1	0	2	121	6	0	4	60	0	0	207	
4:05 PM	7	1	8	0	3	0	0	0	0	128	4	0	3	80	1	0	235	
4:10 PM	10	1	11	0	4	0	1	0	0	123	8	0	1	67	1	0	227	
4:15 PM	4	2	4	0	2	0	0	0	0	111	0	0	8	73	1	0	205	
4:20 PM	6	2	5	0	1	1	1	0	0	88	6	0	3	80	2	0	195	
4:25 PM	3	0	5	0	2	0	1	0	0	101	4	0	8	86	0	0	210	
4:30 PM	6	0	7	0	0	0	1	0	0	84	3	0	1	65	1	0	168	
4:35 PM	8	0	10	0	3	1	0	0	1	121	3	0	5	66	2	0	220	
4:40 PM	9	1	16	0	2	1	5	0	0	132	8	0	2	59	0	0	235	
4:45 PM	7	0	3	0	3	0	2	0	0	93	4	0	3	66	0	0	181	
4:50 PM	1	1	6	0	1	1	0	0	0	98	5	0	3	53	0	0	169	
4:55 PM	2	0	5	0	1	0	0	0	0	101	3	0	2	65	0	0	179	2431
5:00 PM	11	1	10	0	2	0	2	0	0	97	5	0	4	54	0	0	186	2410
5:05 PM	8	0	8	0	2	0	2	0	0	143	8	0	2	99	0	0	272	2447
5:10 PM	13	2	9	0	2	1	1	0	0	151	5	0	2	49	1	0	236	2456
5:15 PM	14	0	8	0	1	0	1	0	0	113	5	0	6	61	2	0	211	2462
5:20 PM	3	0	13	0	2	0	2	0	0	97	7	0	2	51	0	0	177	2444
5:25 PM	4	0	7	0	0	0	1	0	1	99	4	0	10	87	0	0	213	2447
5:30 PM	4	0	9	0	0	0	0	0	0	89	6	0	2	49	1	0	160	2439
5:35 PM	8	0	5	0	3	0	1	0	0	108	4	0	4	83	0	0	216	2435
5:40 PM	6	0	6	0	1	0	0	0	0	107	6	0	1	57	0	0	184	2384
5:45 PM	3	0	3	0	2	0	0	0	0	95	2	0	3	85	0	0	193	2396
5:50 PM	3	0	6	0	1	0	0	0	0	85	7	0	5	72	0	0	179	2406
5:55 PM	3	1	1	0	2	0	0	0	0	102	8	0	3	79	0	0	199	2426

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	140	8	100	0	20	4	16	0	0	1628	72	0	40	836	12	0	2876
Heavy Trucks	12	0	4		0	0	0		0	16	0		0	8	0		40
Pedestrians		12				8				0				4			24
Bicycles	0	0	0		0	0	0		0	2	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

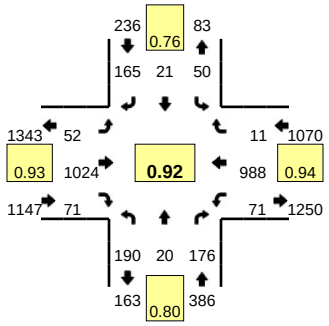
LOCATION: Early Ave/Medical Center Dr -- Lomita Blvd

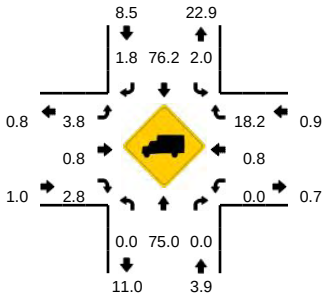
QC JOB #: 12003626

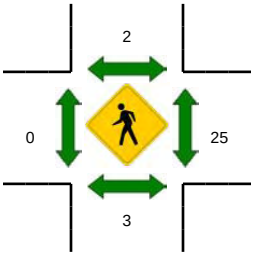
CITY/STATE: Torrance, CA

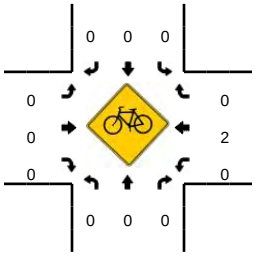
DATE: Thu, Jan 09 2014

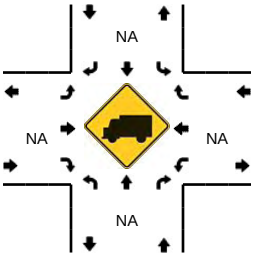
Peak-Hour: 4:10 PM -- 5:10 PM
Peak 15-Min: 4:55 PM -- 5:10 PM

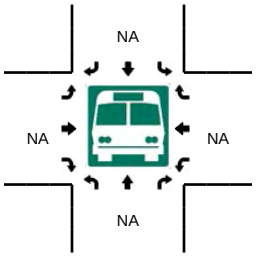












5-Min Count Period Beginning At	Early Ave/Medical Center Dr (Northbound)				Early Ave/Medical Center Dr (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	16	2	20	0	8	1	5	0	5	76	11	0	16	65	0	0	225	
4:05 PM	16	1	16	0	4	2	9	0	6	90	7	0	7	93	3	0	254	
4:10 PM	16	1	12	0	1	1	9	0	7	102	3	0	9	105	0	0	266	
4:15 PM	12	0	19	0	3	2	10	0	6	87	7	0	5	68	0	0	219	
4:20 PM	14	1	17	0	0	0	7	0	2	84	11	0	12	85	1	0	234	
4:25 PM	16	3	8	0	2	2	7	0	10	75	8	0	4	68	1	0	204	
4:30 PM	16	2	10	0	3	1	19	0	6	77	9	0	6	89	1	0	239	
4:35 PM	14	3	14	0	4	2	17	0	5	85	7	0	7	77	2	0	237	
4:40 PM	12	1	11	0	4	2	23	0	5	90	2	0	5	94	2	0	251	
4:45 PM	10	2	20	0	8	4	12	0	3	78	5	0	3	60	0	0	205	
4:50 PM	17	1	13	0	4	3	13	0	3	67	4	0	6	83	0	0	214	
4:55 PM	19	1	10	0	1	0	10	0	2	93	7	0	0	74	1	0	218	2766
5:00 PM	21	3	21	0	7	2	15	0	1	91	1	0	5	80	1	0	248	2789
5:05 PM	23	2	21	0	13	2	23	0	2	95	7	0	9	105	2	0	304	2839
5:10 PM	13	3	12	0	0	1	24	0	3	100	6	0	3	68	2	0	235	2808
5:15 PM	14	1	16	0	1	3	13	0	3	83	5	0	3	104	0	0	246	2835
5:20 PM	4	3	10	0	9	2	6	0	2	82	4	0	3	67	2	0	194	2795
5:25 PM	10	2	12	0	1	3	10	0	2	85	2	0	4	87	1	0	219	2810
5:30 PM	16	3	10	0	2	1	15	0	2	76	7	0	3	90	1	0	226	2797
5:35 PM	14	3	13	0	2	2	9	0	2	79	1	0	6	76	1	0	208	2768
5:40 PM	12	1	11	0	8	1	8	0	3	71	4	0	8	84	0	0	211	2728
5:45 PM	10	1	10	0	3	0	10	0	0	91	5	0	5	83	1	0	219	2742
5:50 PM	9	1	14	0	3	2	7	0	5	75	3	0	4	73	0	0	196	2724
5:55 PM	6	2	7	0	7	1	3	0	1	78	5	0	6	67	2	0	185	2691

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	252	24	208	0	84	16	192	0	20	1116	60	0	56	1036	16	0	3080
Heavy Trucks	0	16	0		0	16	0		0	8	4		0	4	0		48
Pedestrians		0				8				0				24			32
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

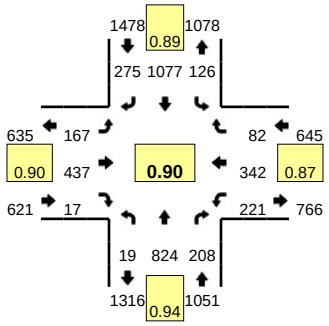
LOCATION: Hawthorne Blvd -- Palos Verdes Dr N

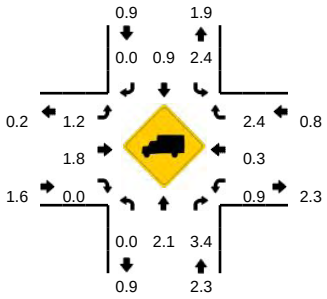
CITY/STATE: Rolling Hills Estates, CA

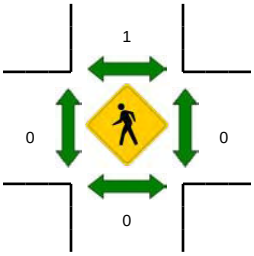
QC JOB #: 12003624

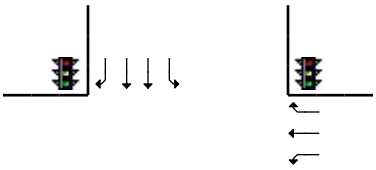
DATE: Thu, Jan 09 2014

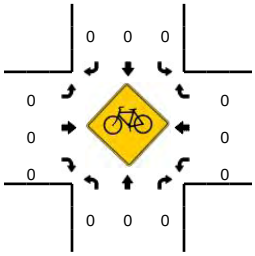
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

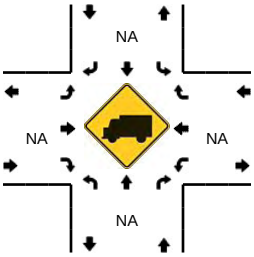


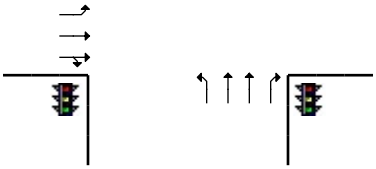


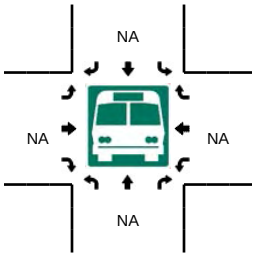












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Palos Verdes Dr N (Eastbound)				Palos Verdes Dr N (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	35	9	0	8	65	17	0	12	37	4	0	17	37	14	0	255	
4:05 PM	2	74	8	0	3	67	12	0	29	20	1	0	15	22	13	0	266	
4:10 PM	0	60	11	0	8	57	14	0	16	61	2	0	11	43	7	0	290	
4:15 PM	2	75	15	0	12	82	19	0	12	23	2	0	8	21	6	0	277	
4:20 PM	0	44	23	0	7	74	18	0	25	42	0	0	8	41	12	0	294	
4:25 PM	2	73	5	0	13	77	21	0	7	24	3	0	8	24	6	0	263	
4:30 PM	2	54	19	0	10	78	33	0	17	50	1	0	21	22	7	0	314	
4:35 PM	3	44	15	0	6	45	15	0	9	44	2	0	15	25	6	0	229	
4:40 PM	1	50	19	0	3	98	14	0	14	40	1	0	18	16	11	0	285	
4:45 PM	2	46	11	0	10	68	22	0	22	37	3	0	14	33	11	0	279	
4:50 PM	3	85	16	0	6	95	13	0	10	34	1	0	17	18	7	0	305	
4:55 PM	0	46	17	0	8	86	13	0	10	34	1	0	20	29	10	0	274	3331
5:00 PM	1	72	19	0	6	86	19	0	15	30	0	0	24	19	10	0	301	3377
5:05 PM	2	63	9	0	13	82	28	0	9	37	2	0	14	26	7	0	292	3403
5:10 PM	2	63	21	0	15	83	30	2	13	45	3	0	20	33	8	0	338	3451
5:15 PM	1	90	23	0	10	110	22	0	21	34	2	0	29	28	6	0	376	3550
5:20 PM	1	51	10	0	16	108	17	0	15	49	3	0	15	42	8	0	335	3591
5:25 PM	2	72	13	0	9	62	25	1	19	38	0	0	19	32	7	0	299	3627
5:30 PM	2	85	14	0	3	94	33	0	8	26	2	0	13	21	6	0	307	3620
5:35 PM	0	67	19	1	17	84	31	0	22	50	2	0	20	35	4	0	352	3743
5:40 PM	2	67	24	0	11	89	21	1	10	33	0	0	12	37	5	0	312	3770
5:45 PM	2	63	23	0	7	98	23	1	15	27	1	0	18	22	4	0	304	3795
5:50 PM	1	44	14	0	5	65	32	0	12	37	2	0	17	29	6	0	264	3754
5:55 PM	2	48	13	0	10	82	18	0	11	21	4	0	18	24	7	0	258	3738

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	816	216	0	164	1204	276	8	196	512	32	0	256	412	88	0	4196
Heavy Trucks	0	28	4		8	4	0		4	12	0		4	0	4		68
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

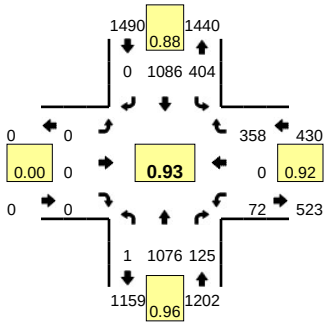
Type of peak hour being reported: Intersection Peak

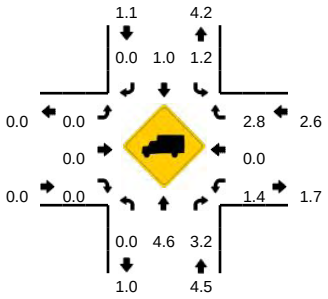
Method for determining peak hour: Total Entering Volume

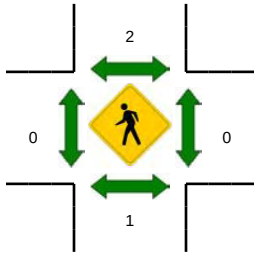
LOCATION: Hawthorne Blvd -- Rolling Hills Rd
CITY/STATE: Torrance, CA

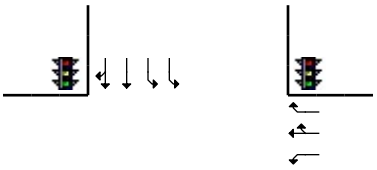
QC JOB #: 12003622
DATE: Thu, Jan 09 2014

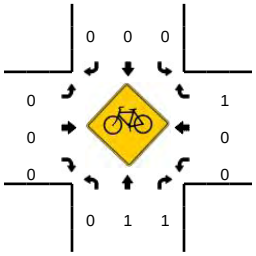
Peak-Hour: 4:10 PM -- 5:10 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

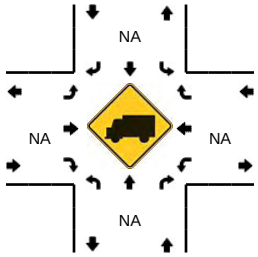


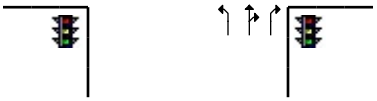


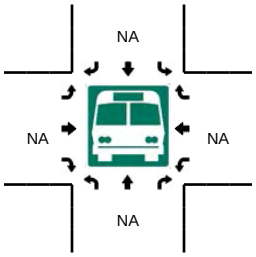












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Rolling Hills Rd (Eastbound)				Rolling Hills Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	83	9	0	22	81	0	0	0	0	0	0	8	0	33	0	236	
4:05 PM	0	77	7	0	27	77	0	0	0	0	0	0	8	0	18	0	214	
4:10 PM	0	70	6	0	22	102	0	0	0	0	0	0	7	0	43	0	250	
4:15 PM	0	105	9	0	43	79	0	0	0	0	0	0	4	0	18	0	258	
4:20 PM	0	103	11	0	39	76	0	0	0	0	0	0	5	0	33	0	267	
4:25 PM	0	79	14	0	32	67	0	0	0	0	0	0	9	0	33	0	234	
4:30 PM	0	88	15	0	53	106	0	0	0	0	0	0	5	0	30	0	297	
4:35 PM	0	115	10	0	44	103	0	1	0	0	0	0	4	0	22	0	299	
4:40 PM	0	83	9	0	29	93	0	0	0	0	0	0	6	0	24	0	244	
4:45 PM	0	94	8	0	34	84	0	0	0	0	0	0	4	0	34	0	258	
4:50 PM	0	109	6	0	23	84	0	2	0	0	0	0	12	0	33	0	269	
4:55 PM	0	92	11	0	31	120	0	1	0	0	0	0	6	0	28	0	289	3115
5:00 PM	0	70	12	0	21	76	0	2	0	0	0	0	6	0	31	0	218	3097
5:05 PM	0	68	14	1	27	96	0	0	0	0	0	0	4	0	29	0	239	3122
5:10 PM	0	101	8	0	16	82	0	0	0	0	0	0	10	0	26	0	243	3115
5:15 PM	0	83	7	0	28	82	0	0	0	0	0	0	4	0	17	0	221	3078
5:20 PM	0	70	12	0	44	93	0	0	0	0	0	0	5	0	24	0	248	3059
5:25 PM	0	85	9	0	29	101	0	0	0	0	0	0	10	0	19	0	253	3078
5:30 PM	0	75	13	0	25	91	0	0	0	0	0	0	5	0	17	0	226	3007
5:35 PM	0	66	8	0	36	109	0	0	0	0	0	0	8	0	22	0	249	2957
5:40 PM	0	64	1	0	35	100	0	0	0	0	0	0	6	0	29	0	235	2948
5:45 PM	0	71	6	0	23	90	0	0	0	0	0	0	7	0	29	0	226	2916
5:50 PM	0	66	16	0	24	79	0	0	0	0	0	0	9	0	30	0	224	2871
5:55 PM	0	69	12	0	38	136	0	1	0	0	0	0	7	0	28	0	291	2873

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1144	136	0	504	1208	0	4	0	0	0	0	60	0	304	0	3360
Heavy Trucks	0	56	4		0	0	0		0	0	0		0	0	12		72
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

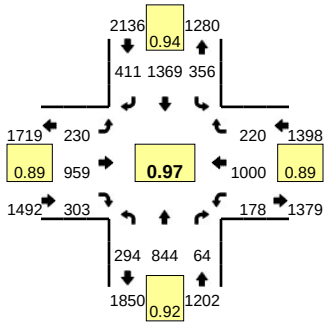
Type of peak hour being reported: Intersection Peak

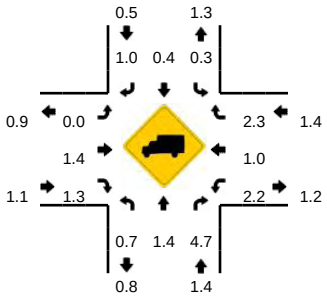
Method for determining peak hour: Total Entering Volume

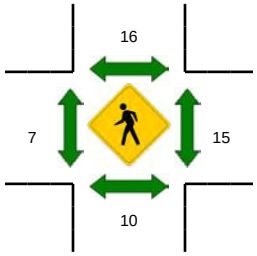
LOCATION: Hawthorne Blvd -- Pacific Coast Hwy
CITY/STATE: Torrance, CA

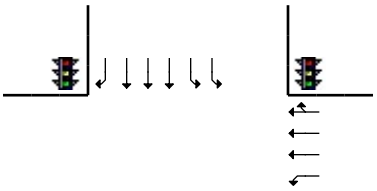
QC JOB #: 12003620
DATE: Thu, Jan 09 2014

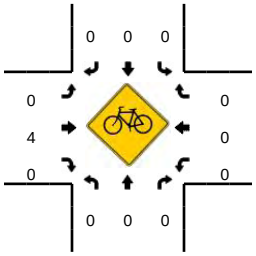
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

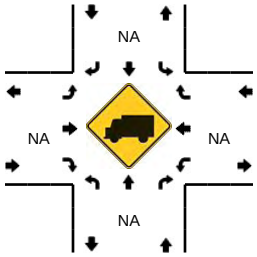


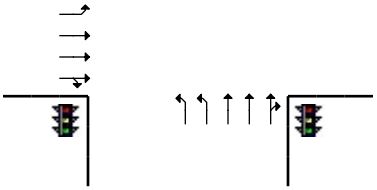


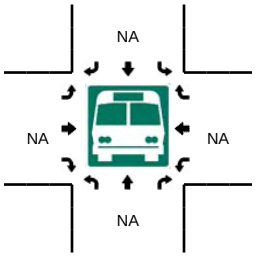












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	29	80	9	0	30	84	25	0	23	50	19	0	11	74	15	0	449	
4:05 PM	23	79	10	0	33	84	29	0	24	92	30	0	7	68	26	0	505	
4:10 PM	25	88	5	0	25	85	25	0	23	76	20	1	22	80	23	0	498	
4:15 PM	22	80	9	0	26	84	33	0	20	81	19	2	18	78	25	0	497	
4:20 PM	22	85	5	0	27	90	27	0	19	91	21	0	10	66	18	0	481	
4:25 PM	14	78	12	0	29	115	30	0	18	71	36	0	17	62	24	0	506	
4:30 PM	24	56	5	0	27	69	37	0	22	89	25	0	12	91	19	0	476	
4:35 PM	15	70	4	0	24	92	26	0	18	65	27	5	17	84	23	0	470	
4:40 PM	22	61	7	0	25	105	36	0	21	67	30	1	13	81	21	0	490	
4:45 PM	25	84	11	0	23	89	37	0	17	66	27	1	13	90	19	0	502	
4:50 PM	30	80	6	0	23	115	40	0	19	83	17	1	10	77	18	0	519	
4:55 PM	32	67	5	0	24	113	37	0	27	69	24	0	11	83	12	0	504	5897
5:00 PM	25	69	3	0	27	123	27	0	18	61	20	1	10	80	13	0	477	5925
5:05 PM	22	68	7	0	31	118	41	0	17	82	27	4	17	69	15	0	518	5938
5:10 PM	27	58	6	0	36	129	34	0	19	80	31	3	14	64	16	0	517	5957
5:15 PM	24	68	7	0	24	112	25	0	25	108	26	0	13	82	28	0	542	6002
5:20 PM	20	89	3	0	37	108	40	0	18	80	32	1	19	89	12	0	548	6069
5:25 PM	22	65	5	0	26	114	26	0	17	58	21	0	15	76	19	0	464	6027
5:30 PM	22	69	7	0	36	112	35	0	12	103	23	0	19	102	19	0	559	6110
5:35 PM	23	83	7	0	26	96	36	0	20	86	23	1	18	92	24	0	535	6175
5:40 PM	25	72	5	0	41	104	26	0	13	79	25	1	16	78	21	0	506	6191
5:45 PM	22	56	3	0	25	125	44	0	11	70	34	2	16	108	23	0	539	6228
5:50 PM	32	82	7	0	30	101	30	0	19	76	24	2	16	76	22	1	518	6227
5:55 PM	37	58	4	0	28	69	26	0	8	71	18	1	15	69	21	0	425	6148

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	284	860	64	0	388	1396	396	0	248	1072	356	16	184	940	224	0	6428
Heavy Trucks	4	12	8		0	4	12		0	8	0		0	0	8		56
Pedestrians		16				20				12				12			60
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

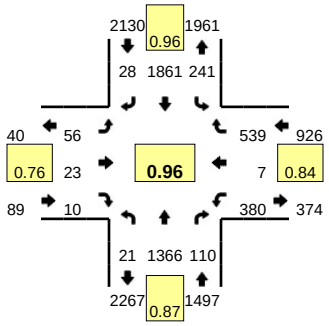
Type of peak hour being reported: Intersection Peak

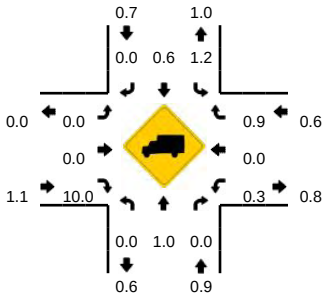
Method for determining peak hour: Total Entering Volume

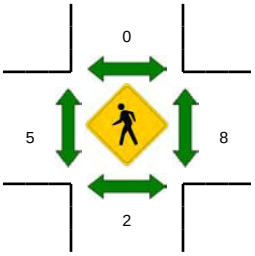
LOCATION: Hawthorne Blvd -- Skypark Dr
CITY/STATE: Torrance, CA

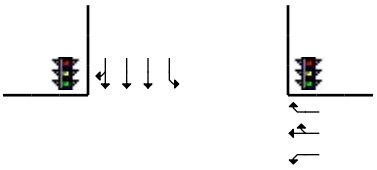
QC JOB #: 12003618
DATE: Thu, Jan 09 2014

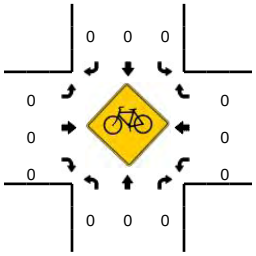
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

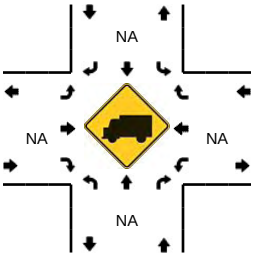


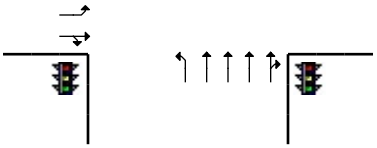


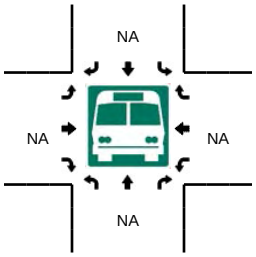












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Skypark Dr (Eastbound)				Skypark Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	110	8	1	36	98	0	0	0	3	1	0	34	1	56	0	348	
4:05 PM	0	132	10	1	13	129	0	0	3	1	1	0	23	1	50	0	364	
4:10 PM	1	168	10	4	20	135	1	0	5	0	1	0	23	1	50	0	419	
4:15 PM	0	108	11	6	18	123	0	0	7	0	0	0	25	0	48	0	346	
4:20 PM	0	122	9	1	22	117	1	0	4	1	0	0	54	0	49	0	380	
4:25 PM	0	136	16	1	28	181	2	0	3	1	0	0	9	1	27	0	405	
4:30 PM	0	96	11	1	19	118	2	0	5	0	1	0	33	2	38	0	326	
4:35 PM	0	100	9	3	34	145	1	0	3	1	1	0	35	0	44	0	376	
4:40 PM	0	140	12	0	20	160	0	0	1	0	0	0	28	0	40	0	401	
4:45 PM	1	108	10	1	26	130	0	0	3	0	0	0	32	2	53	0	366	
4:50 PM	1	75	13	0	20	133	1	0	1	1	0	0	37	1	45	0	328	
4:55 PM	0	119	11	1	32	179	4	0	4	1	0	0	18	1	44	0	414	4473
5:00 PM	0	101	13	1	17	132	1	0	7	3	1	0	27	0	41	0	344	4469
5:05 PM	1	122	8	3	19	143	0	0	5	4	0	0	45	0	78	0	428	4533
5:10 PM	1	96	2	1	31	156	1	0	2	4	1	0	37	0	66	0	398	4512
5:15 PM	0	136	12	0	15	173	3	0	2	2	0	0	21	0	23	0	387	4553
5:20 PM	0	118	9	1	12	143	1	0	2	1	3	0	52	0	50	0	392	4565
5:25 PM	0	89	11	2	18	145	6	0	7	1	0	0	38	2	52	0	371	4531
5:30 PM	2	124	14	1	32	201	2	0	2	3	0	0	18	1	31	0	431	4636
5:35 PM	0	123	6	2	10	119	1	0	9	0	1	0	34	0	34	0	339	4599
5:40 PM	1	103	6	1	16	157	2	0	8	2	2	0	36	1	53	0	388	4586
5:45 PM	0	111	11	0	23	188	5	0	4	2	2	0	24	0	39	0	409	4629
5:50 PM	0	124	7	3	16	125	2	0	4	0	0	0	30	2	28	0	341	4642
5:55 PM	1	90	4	1	21	113	3	0	5	2	0	0	24	2	38	0	304	4532

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	1416	88	16	260	1888	16	0	36	40	4	0	412	0	668	0	4852
Heavy Trucks	0	8	0		4	4	0		0	0	0		0	0	0		16
Pedestrians		0				0				0				16			16
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

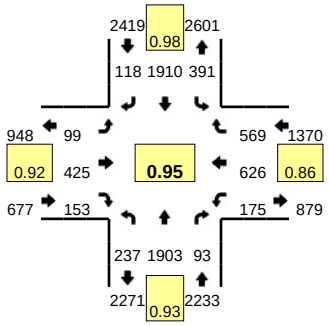
Type of peak hour being reported: Intersection Peak

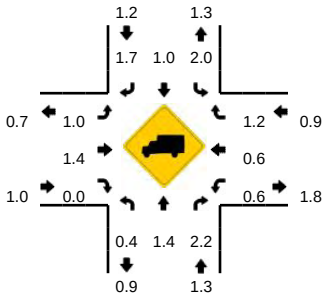
Method for determining peak hour: Total Entering Volume

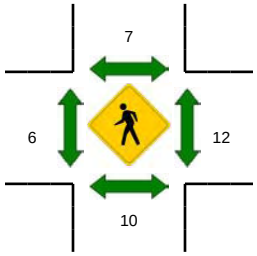
LOCATION: Hawthorne Blvd -- Lomita Blvd
CITY/STATE: Torrance, CA

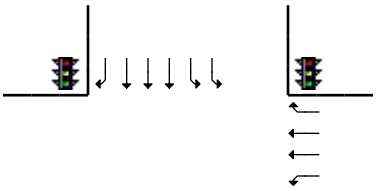
QC JOB #: 12003616
DATE: Thu, Jan 09 2014

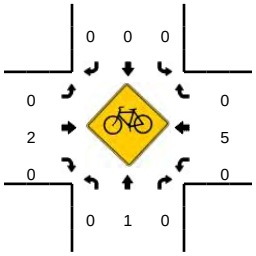
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

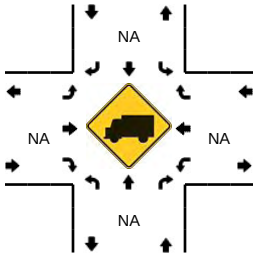


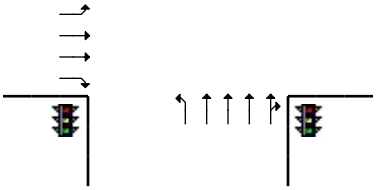


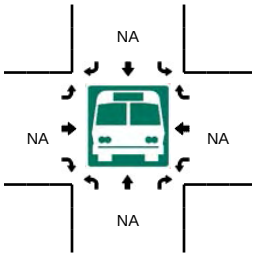












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	19	160	11	4	25	99	9	3	12	37	10	0	19	54	45	0	507	
4:05 PM	17	157	6	0	35	125	11	6	8	35	7	0	8	51	57	0	523	
4:10 PM	29	190	7	3	36	163	13	0	7	39	6	0	8	46	51	0	598	
4:15 PM	13	189	10	0	20	167	9	4	10	42	6	0	15	50	46	0	581	
4:20 PM	18	138	8	2	33	133	10	2	10	52	8	0	7	53	56	0	530	
4:25 PM	20	157	9	3	40	154	21	2	5	41	15	0	15	44	46	0	572	
4:30 PM	17	161	15	1	35	183	6	4	5	14	11	0	14	38	39	0	543	
4:35 PM	14	122	10	3	31	127	7	3	10	44	15	0	17	78	57	0	538	
4:40 PM	19	165	5	6	38	143	11	2	5	27	11	0	13	32	54	0	531	
4:45 PM	18	162	4	2	26	180	8	3	11	38	15	0	14	60	49	0	590	
4:50 PM	11	120	5	2	28	148	6	2	12	37	16	0	17	41	43	0	488	
4:55 PM	24	133	13	5	41	132	11	1	4	41	12	0	11	48	46	0	522	6523
5:00 PM	9	196	6	0	25	201	12	0	6	33	15	0	9	46	33	0	591	6607
5:05 PM	20	180	5	1	16	143	8	4	11	46	17	0	21	67	48	0	587	6671
5:10 PM	28	167	4	7	38	133	7	3	7	35	3	0	14	74	62	0	582	6655
5:15 PM	15	158	9	0	30	186	13	3	8	33	14	0	12	50	51	0	582	6656
5:20 PM	9	182	8	3	13	180	8	3	15	36	9	0	18	48	41	0	573	6699
5:25 PM	14	133	3	6	35	135	8	1	3	41	15	0	14	49	50	0	507	6634
5:30 PM	15	177	8	2	32	169	7	3	8	26	11	0	16	32	42	0	548	6639
5:35 PM	17	154	11	0	24	166	16	2	9	24	13	0	17	48	51	0	552	6653
5:40 PM	9	149	7	1	18	145	4	1	11	38	16	0	13	55	48	0	515	6637
5:45 PM	21	137	4	0	35	160	8	3	7	35	9	0	14	43	53	0	529	6576
5:50 PM	11	169	13	3	25	150	17	4	10	30	10	0	14	40	37	0	533	6621
5:55 PM	14	113	6	2	30	134	9	2	13	51	6	0	12	45	35	0	472	6571

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	228	2172	60	32	316	1908	108	28	96	456	140	0	176	748	572	0	7040
Heavy Trucks	0	16	0		0	16	4		0	8	0		0	4	0		48
Pedestrians		12				8				8				8			36
Bicycles	0	0	0		0	0	0		0	1	0		0	3	0		4
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

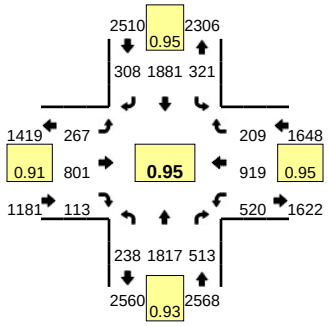
Type of peak hour being reported: Intersection Peak

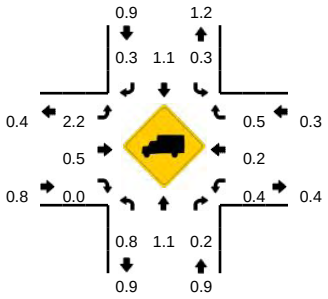
Method for determining peak hour: Total Entering Volume

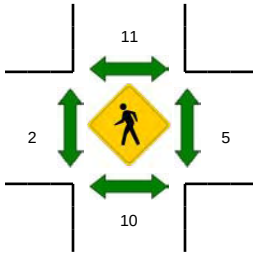
LOCATION: Hawthorne Blvd -- Sepulveda Blvd
CITY/STATE: Torrance, CA

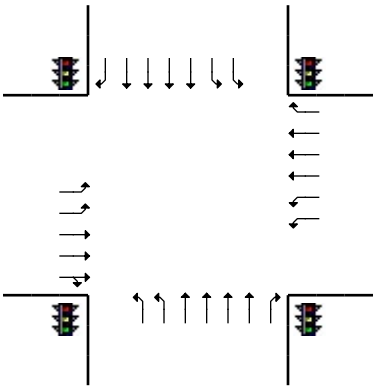
QC JOB #: 12003614
DATE: Thu, Jan 09 2014

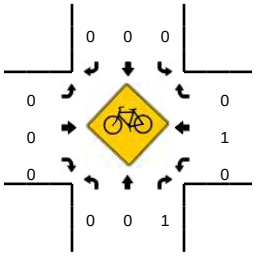
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

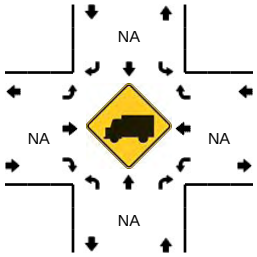


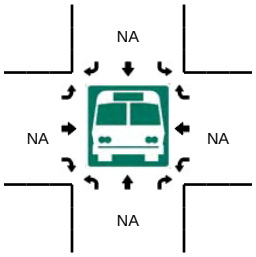












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Sepulveda Blvd (Eastbound)				Sepulveda Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	136	37	1	42	145	10	2	21	64	7	0	40	52	25	0	590	
4:05 PM	18	200	46	2	24	128	16	1	19	53	12	0	44	56	16	0	635	
4:10 PM	18	135	47	2	24	130	12	1	37	92	6	0	58	90	21	0	673	
4:15 PM	12	138	60	2	30	153	18	0	25	69	13	0	35	79	25	0	659	
4:20 PM	23	198	50	5	24	183	19	1	21	63	7	0	43	72	20	0	729	
4:25 PM	18	142	49	6	24	132	23	1	43	71	5	0	62	80	19	0	675	
4:30 PM	10	109	55	5	32	162	23	3	15	74	15	0	44	69	16	0	632	
4:35 PM	18	161	41	3	19	153	12	2	18	58	9	0	45	61	17	0	617	
4:40 PM	10	138	49	2	20	120	16	2	28	66	4	0	50	66	21	0	592	
4:45 PM	12	128	58	5	17	137	24	3	23	92	16	0	38	86	22	0	661	
4:50 PM	9	178	42	6	37	199	25	2	23	55	11	0	41	62	17	0	707	
4:55 PM	21	150	24	3	24	136	12	1	26	47	3	0	55	66	18	0	586	7756
5:00 PM	15	113	39	4	16	145	19	1	21	66	6	0	46	85	14	0	590	7756
5:05 PM	13	156	51	5	32	189	35	2	14	64	10	0	28	75	20	0	694	7815
5:10 PM	32	192	53	5	26	158	33	0	17	62	7	0	38	68	12	0	703	7845
5:15 PM	24	142	29	1	26	126	33	0	34	83	12	0	59	86	20	0	675	7861
5:20 PM	11	129	41	4	29	172	23	0	11	81	7	0	46	83	18	0	655	7787
5:25 PM	17	205	39	4	17	162	29	0	24	57	12	0	42	67	12	0	687	7799
5:30 PM	14	125	46	4	21	124	22	2	33	70	10	0	44	90	22	0	627	7794
5:35 PM	9	120	46	2	33	145	31	1	20	77	10	0	43	105	20	0	662	7839
5:40 PM	15	179	45	3	30	188	22	1	21	47	9	0	40	46	14	0	660	7907
5:45 PM	24	138	33	4	15	137	16	0	24	47	7	0	63	62	21	0	591	7837
5:50 PM	22	109	42	4	18	130	22	0	23	77	13	0	37	90	17	0	604	7734
5:55 PM	9	155	43	6	38	185	21	1	24	65	11	0	41	65	14	0	678	7826

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	276	1960	532	44	336	1892	404	8	260	836	116	0	500	916	208	0	8288
Heavy Trucks	0	8	0		0	8	4		4	0	0		8	0	0		32
Pedestrians		16				8				0				12			36
Bicycles	0	0	1		0	0	0		0	0	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

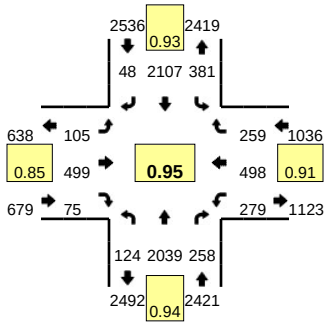
LOCATION: Hawthorne Blvd -- W Carson St

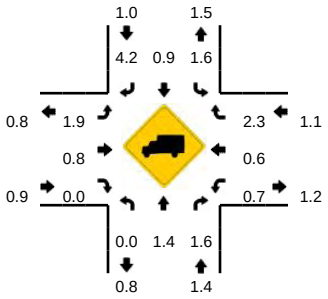
CITY/STATE: Torrance, CA

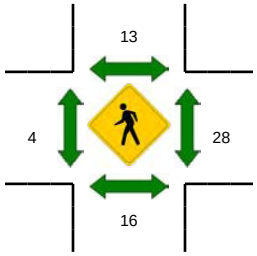
QC JOB #: 12003612

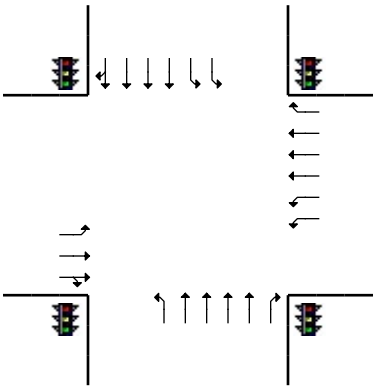
DATE: Thu, Jan 09 2014

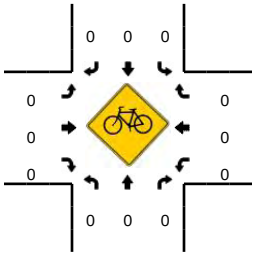
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

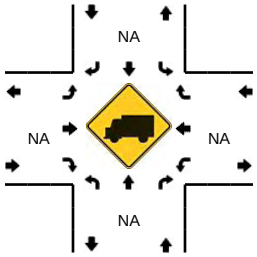


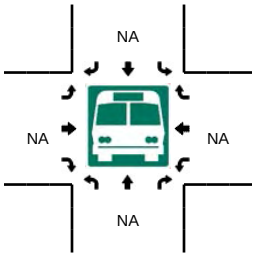












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				W Carson St (Eastbound)				W Carson St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	146	15	1	20	124	0	3	5	52	6	0	20	40	21	0	458	
4:05 PM	11	192	31	1	30	186	4	5	6	27	6	0	14	38	15	0	566	
4:10 PM	6	196	33	4	27	149	4	0	12	29	9	0	26	27	26	0	548	
4:15 PM	8	147	18	3	21	149	5	1	7	46	4	0	21	39	17	0	486	
4:20 PM	13	182	21	5	35	159	4	0	8	30	2	0	15	23	18	0	515	
4:25 PM	6	205	26	2	18	192	3	0	11	24	7	0	27	31	15	0	567	
4:30 PM	7	125	20	3	20	133	2	1	8	35	4	0	36	36	23	0	453	
4:35 PM	5	149	24	2	36	150	2	0	9	24	4	0	14	29	16	0	464	
4:40 PM	10	183	24	3	32	168	5	3	7	28	10	0	23	34	16	0	546	
4:45 PM	4	156	21	4	21	162	8	2	11	36	6	0	31	36	19	0	517	
4:50 PM	9	156	19	5	36	142	3	3	11	38	7	0	17	50	25	0	521	
4:55 PM	7	178	19	1	20	190	4	0	8	36	4	0	23	25	19	0	534	6175
5:00 PM	11	164	16	2	29	173	4	4	10	20	5	0	32	30	17	0	517	6234
5:05 PM	9	144	25	0	47	166	5	0	8	54	5	0	22	45	28	0	558	6226
5:10 PM	5	173	22	4	24	221	7	1	4	46	8	0	17	43	15	0	590	6268
5:15 PM	8	203	31	4	25	184	4	1	12	47	9	0	32	38	11	0	609	6391
5:20 PM	8	132	15	3	39	139	2	2	12	59	7	0	21	47	34	0	520	6396
5:25 PM	5	178	23	3	30	206	2	1	10	42	6	0	22	53	27	0	608	6437
5:30 PM	11	204	20	3	30	179	6	1	7	24	2	0	16	39	18	0	560	6544
5:35 PM	7	140	24	1	26	160	2	1	11	49	12	0	32	54	22	0	541	6621
5:40 PM	7	150	23	3	37	170	5	2	9	49	6	0	26	38	15	0	540	6615
5:45 PM	5	217	21	3	22	177	4	0	3	35	4	0	18	36	28	1	574	6672
5:50 PM	6	142	22	3	23	162	4	2	13	32	10	0	25	42	15	0	501	6652
5:55 PM	6	144	18	4	45	147	7	3	4	43	7	0	27	41	15	0	511	6629

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	88	2080	312	32	384	2284	64	8	96	588	88	0	284	504	216	0	7028
Heavy Trucks	0	12	8		4	20	0		4	4	0		4	4	8		68
Pedestrians		4				12				0				24			40
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

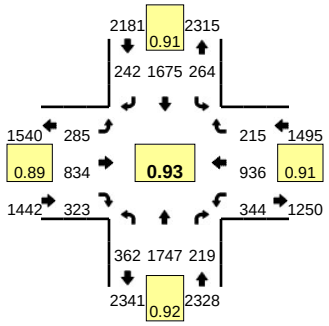
Type of peak hour being reported: Intersection Peak

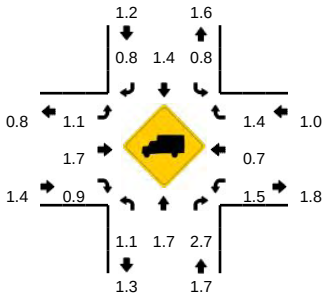
Method for determining peak hour: Total Entering Volume

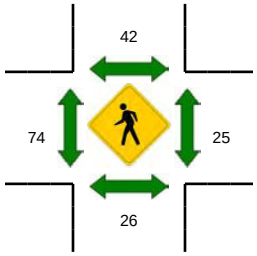
LOCATION: Hawthorne Blvd -- Torrance Blvd
CITY/STATE: Torrance, CA

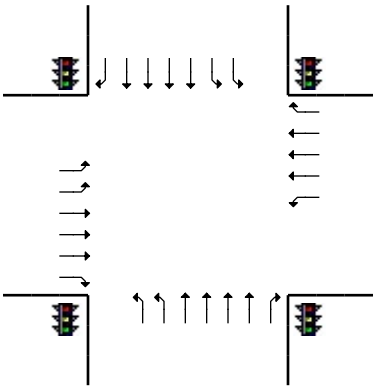
QC JOB #: 12003610
DATE: Thu, Jan 16 2014

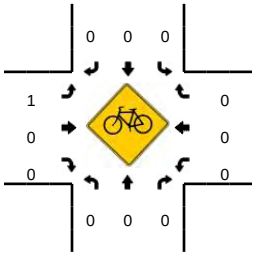
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

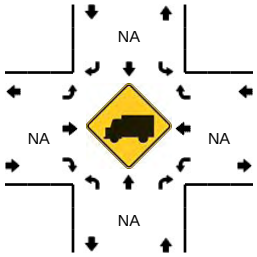


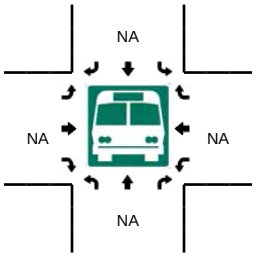












5-Min Count Period Beginning At	Hawthorne Blvd (Northbound)				Hawthorne Blvd (Southbound)				Torrance Blvd (Eastbound)				Torrance Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	18	162	17	0	24	157	30	8	22	49	24	0	19	59	9	0	598	
4:05 PM	40	116	12	0	4	110	16	6	19	80	28	0	20	73	8	0	532	
4:10 PM	21	125	21	0	20	153	25	5	29	42	21	0	35	42	19	0	558	
4:15 PM	38	142	18	0	4	122	18	3	19	89	33	0	42	57	11	0	596	
4:20 PM	28	145	14	0	16	152	20	4	27	62	18	0	25	48	16	0	575	
4:25 PM	24	139	13	0	8	145	27	3	22	73	21	0	19	89	20	0	603	
4:30 PM	27	174	15	0	9	176	27	8	27	48	23	0	22	65	15	0	636	
4:35 PM	32	137	13	0	15	103	16	2	14	60	36	0	17	70	22	0	537	
4:40 PM	24	111	17	0	24	158	15	9	23	48	18	0	29	57	8	0	541	
4:45 PM	30	139	19	0	7	121	13	2	14	92	28	0	17	75	22	0	579	
4:50 PM	24	132	10	0	25	198	22	5	31	56	19	0	31	55	14	0	622	
4:55 PM	33	150	25	0	15	102	17	7	15	90	28	0	25	89	16	0	612	6989
5:00 PM	16	143	15	0	21	164	25	5	20	50	18	0	32	56	12	0	577	6968
5:05 PM	28	117	16	0	12	112	17	3	18	70	31	0	19	90	18	0	551	6987
5:10 PM	30	146	16	0	19	179	24	10	40	72	17	0	28	49	22	0	652	7081
5:15 PM	35	152	26	0	12	127	22	6	26	97	35	0	25	113	20	0	696	7181
5:20 PM	17	171	23	0	17	184	18	7	21	55	27	0	38	64	22	0	664	7270
5:25 PM	39	152	18	0	15	110	21	3	21	77	31	0	12	101	14	0	614	7281
5:30 PM	28	144	18	0	19	147	23	9	35	56	24	0	34	65	20	1	623	7268
5:35 PM	46	131	14	0	14	99	21	4	25	67	31	0	20	94	21	0	587	7318
5:40 PM	29	138	13	0	24	180	23	9	18	49	32	0	28	50	17	0	610	7387
5:45 PM	32	153	19	0	7	109	10	1	19	89	26	0	35	98	17	0	615	7423
5:50 PM	29	150	16	0	21	162	21	4	27	62	23	0	47	67	16	0	645	7446
5:55 PM	48	120	14	0	8	101	25	3	20	81	28	0	21	99	13	0	581	7415

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	328	1876	260	0	192	1960	256	92	348	896	316	0	364	904	256	0	8048
Heavy Trucks	0	20	0		4	28	0		0	4	4		4	8	4		76
Pedestrians		24				40				72				20			156
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

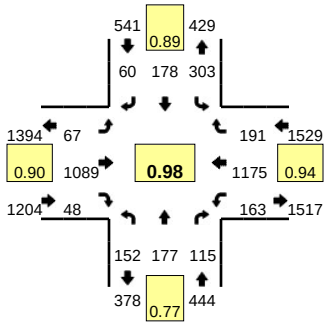
Type of peak hour being reported: Intersection Peak

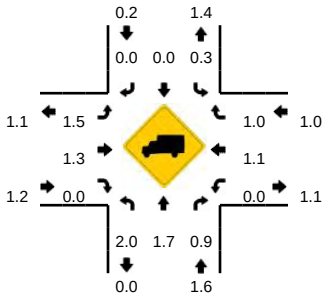
Method for determining peak hour: Total Entering Volume

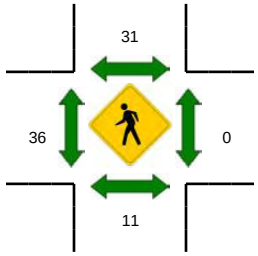
LOCATION: Anza Ave/Vista Montana -- Pacific Coast Hwy
CITY/STATE: Torrance, CA

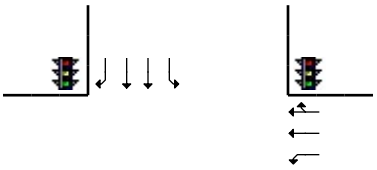
QC JOB #: 12003608
DATE: Thu, Jan 09 2014

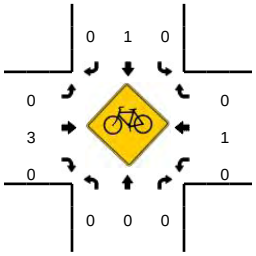
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:40 PM -- 5:55 PM

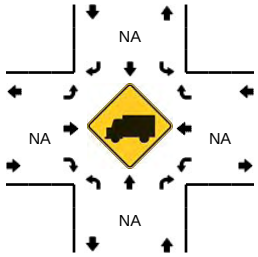


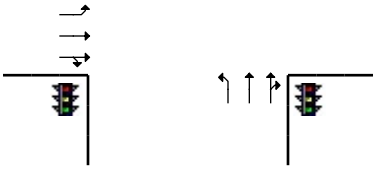


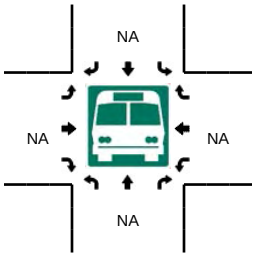












5-Min Count Period Beginning At	Anza Ave/Vista Montana (Northbound)				Anza Ave/Vista Montana (Southbound)				Pacific Coast Hwy (Eastbound)				Pacific Coast Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	25	20	5	0	24	13	8	0	1	61	1	0	16	94	10	0	278	
4:05 PM	10	6	14	0	22	19	5	0	6	109	3	0	6	94	15	1	310	
4:10 PM	21	18	5	0	15	20	6	0	5	82	2	0	8	81	24	1	288	
4:15 PM	14	30	6	0	27	13	10	0	4	99	0	0	18	125	13	2	361	
4:20 PM	20	23	13	0	16	8	6	0	6	78	3	1	14	88	15	1	292	
4:25 PM	15	20	13	0	25	11	16	0	6	75	1	1	12	74	14	0	283	
4:30 PM	9	10	10	0	17	17	4	0	3	97	3	1	17	99	8	2	297	
4:35 PM	13	8	8	0	22	24	4	0	7	74	1	0	15	111	12	1	300	
4:40 PM	14	12	12	0	23	11	4	0	4	97	1	2	12	90	13	1	296	
4:45 PM	14	16	10	0	21	8	7	1	5	94	3	0	16	105	19	0	319	
4:50 PM	6	8	17	0	28	18	9	0	6	75	1	1	11	91	18	1	290	
4:55 PM	11	11	8	0	28	12	2	0	5	106	7	1	13	116	16	1	337	3651
5:00 PM	13	10	10	0	16	15	4	0	3	68	1	0	14	101	16	1	272	3645
5:05 PM	9	15	8	0	25	15	5	0	5	108	4	0	9	97	12	1	313	3648
5:10 PM	13	18	8	0	34	11	1	0	10	85	3	0	12	89	12	4	300	3660
5:15 PM	15	12	10	0	25	11	5	0	6	112	2	0	10	89	21	1	319	3618
5:20 PM	16	18	8	0	34	18	9	0	5	78	3	0	15	94	17	1	316	3642
5:25 PM	18	29	13	0	26	16	7	0	2	80	6	1	13	84	15	1	311	3670
5:30 PM	13	12	9	0	21	13	8	0	5	84	2	0	8	96	14	1	286	3659
5:35 PM	16	17	17	0	21	11	4	1	6	78	6	1	10	105	20	0	313	3672
5:40 PM	7	8	10	0	25	22	3	0	5	99	2	3	21	102	15	0	322	3698
5:45 PM	15	15	6	0	17	10	4	0	4	97	7	1	10	98	12	0	296	3675
5:50 PM	6	12	8	0	30	24	8	0	4	94	5	0	17	104	21	0	333	3718
5:55 PM	14	18	7	0	23	10	4	0	3	106	10	0	14	90	13	0	312	3693

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	112	140	96	0	288	224	60	0	52	1160	56	16	192	1216	192	0	3804
Heavy Trucks	0	0	4		0	0	0		4	8	0		0	20	0		36
Pedestrians		16				20				24				0			60
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

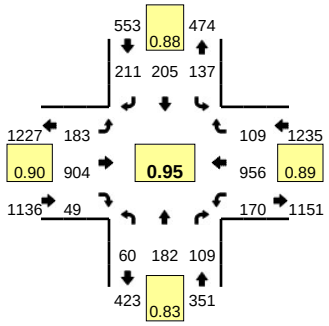
Type of peak hour being reported: Intersection Peak

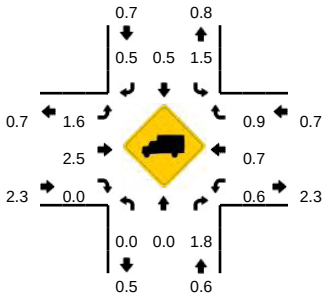
Method for determining peak hour: Total Entering Volume

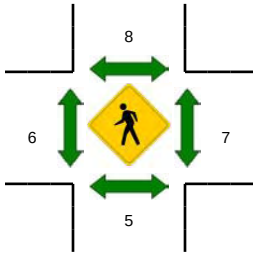
LOCATION: Pacific Coast Hwy -- Calle Mayor
CITY/STATE: Torrance, CA

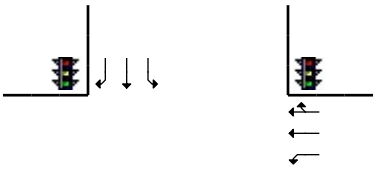
QC JOB #: 12003606
DATE: Sat, Jan 04 2014

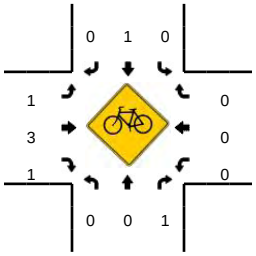
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

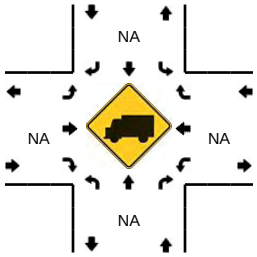


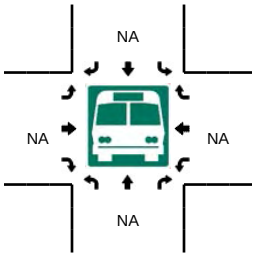












5-Min Count Period Beginning At	Pacific Coast Hwy (Northbound)				Pacific Coast Hwy (Southbound)				Calle Mayor (Eastbound)				Calle Mayor (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	28	10	0	10	13	19	0	23	54	3	0	19	51	9	0	243	
4:05 PM	6	17	8	0	9	13	20	0	12	102	2	0	17	101	12	0	319	
4:10 PM	6	15	12	0	19	20	22	0	18	62	1	0	16	54	11	0	256	
4:15 PM	3	10	9	0	9	13	12	0	16	98	6	0	11	89	12	0	288	
4:20 PM	2	12	7	0	11	22	29	0	18	58	5	0	7	69	13	1	254	
4:25 PM	2	10	4	0	6	12	14	0	13	95	4	0	10	78	7	0	255	
4:30 PM	8	18	9	0	13	15	21	0	14	64	4	0	19	63	2	0	250	
4:35 PM	3	13	9	0	15	11	16	0	20	85	3	0	11	108	10	0	304	
4:40 PM	7	24	10	0	14	27	20	0	9	45	4	0	12	69	9	0	250	
4:45 PM	4	11	11	0	5	10	11	0	24	92	3	0	15	105	4	0	295	
4:50 PM	6	23	11	0	10	27	20	0	6	78	4	0	12	65	8	0	270	
4:55 PM	7	12	6	0	9	13	14	0	16	65	9	0	19	101	12	0	283	3267
5:00 PM	6	17	13	0	17	22	12	0	17	60	4	0	20	54	9	0	251	3275
5:05 PM	5	12	10	0	6	11	8	0	13	102	7	0	11	111	10	0	306	3262
5:10 PM	3	20	7	0	15	18	12	0	11	75	3	0	10	51	9	0	234	3240
5:15 PM	7	5	10	0	7	14	10	0	22	113	3	0	16	84	8	0	299	3251
5:20 PM	2	12	6	0	14	23	15	0	14	61	2	0	9	73	6	0	237	3234
5:25 PM	7	11	7	0	7	20	17	0	19	100	2	0	20	81	2	0	293	3272
5:30 PM	2	17	8	0	9	24	20	0	4	60	3	0	4	65	6	0	222	3244
5:35 PM	4	7	5	0	9	11	13	0	18	110	6	0	20	98	8	0	309	3249
5:40 PM	4	11	8	0	10	19	24	0	20	62	8	0	13	65	6	0	250	3249
5:45 PM	5	7	5	0	11	20	16	0	16	101	2	0	11	90	16	0	300	3254
5:50 PM	3	17	11	0	13	20	19	0	17	79	2	0	11	79	6	0	277	3261
5:55 PM	5	6	7	0	4	16	18	0	10	103	9	0	11	91	11	0	291	3269

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	168	116	0	148	184	216	0	184	1048	36	0	176	976	140	0	3452
Heavy Trucks	0	0	4		0	0	0		4	36	0		0	20	4		68
Pedestrians		12				4				8				0			24
Bicycles	0	0	0		0	1	0		1	0	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

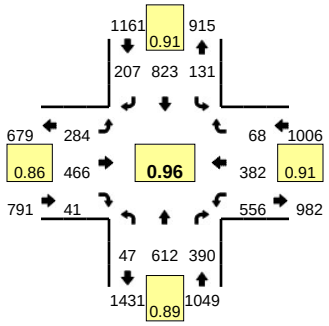
LOCATION: Crenshaw Blvd -- Palos Verdes Dr N

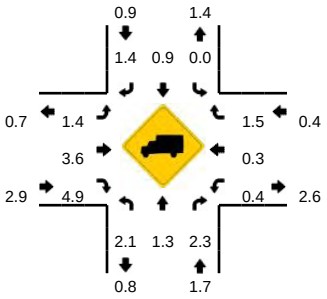
CITY/STATE: Palos Verdes Estates, CA

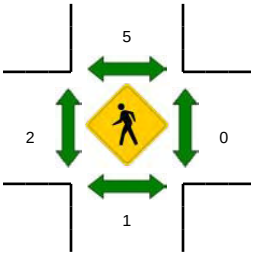
QC JOB #: 12003604

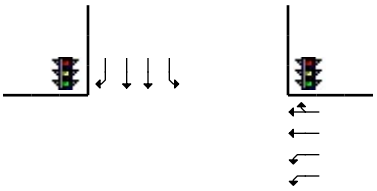
DATE: Thu, Jan 09 2014

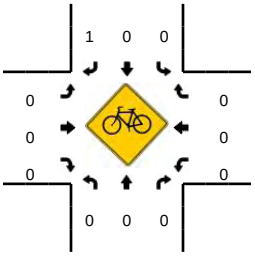
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

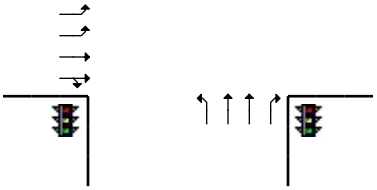


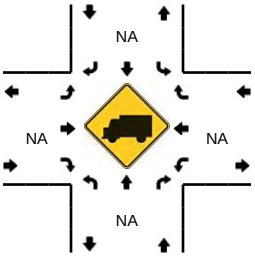


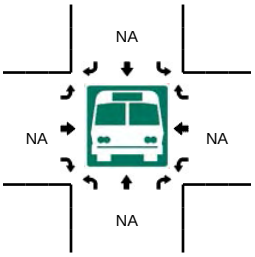












5-Min Count Period Beginning At	Crenshaw Blvd (Northbound)				Crenshaw Blvd (Southbound)				Palos Verdes Dr N (Eastbound)				Palos Verdes Dr N (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	48	41	0	9	65	17	0	29	42	7	1	44	34	5	0	349	
4:05 PM	3	53	30	3	7	42	13	1	13	40	1	6	51	33	9	0	305	
4:10 PM	4	64	49	0	7	64	15	0	22	27	2	4	36	23	6	0	323	
4:15 PM	2	42	32	0	9	44	15	0	34	49	3	6	33	26	8	0	303	
4:20 PM	4	50	35	1	3	59	13	1	31	40	6	9	44	27	8	0	331	
4:25 PM	1	40	28	2	7	39	9	0	22	38	2	3	64	37	7	0	299	
4:30 PM	3	42	42	1	9	53	9	0	19	39	1	0	36	29	4	0	287	
4:35 PM	2	44	36	1	4	50	19	0	24	48	4	6	29	25	13	0	305	
4:40 PM	3	52	42	1	10	64	10	0	19	43	4	6	35	22	4	0	315	
4:45 PM	3	32	19	0	5	63	15	1	19	47	5	4	53	41	6	0	313	
4:50 PM	1	53	36	0	7	59	20	0	27	22	0	2	47	20	3	0	297	
4:55 PM	2	51	35	2	9	70	23	0	12	42	3	1	35	32	4	0	321	3748
5:00 PM	5	34	21	2	16	39	8	0	13	25	2	1	52	49	3	0	270	3669
5:05 PM	5	67	46	0	10	83	19	0	17	38	5	4	42	24	4	0	364	3728
5:10 PM	6	47	42	1	8	80	20	0	10	41	6	1	49	37	6	0	354	3759
5:15 PM	3	45	35	0	9	53	15	1	29	46	5	10	37	29	9	0	326	3782
5:20 PM	2	44	29	2	7	83	26	1	15	37	3	4	45	30	9	0	337	3788
5:25 PM	2	37	30	2	15	58	12	0	20	45	7	3	42	37	4	0	314	3803
5:30 PM	2	50	22	0	12	60	19	1	23	40	2	7	62	35	9	0	344	3860
5:35 PM	3	67	30	0	7	91	14	0	20	45	4	7	49	39	2	0	378	3933
5:40 PM	2	57	28	2	14	65	19	1	20	28	2	2	47	19	6	0	312	3930
5:45 PM	1	67	38	1	11	83	13	1	18	37	1	6	48	26	2	1	354	3971
5:50 PM	2	46	34	0	7	58	19	1	32	42	1	9	47	25	10	0	333	4007
5:55 PM	3	44	36	3	6	74	19	0	27	29	7	2	40	28	3	0	321	4007

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	636	492	4	108	864	216	4	224	500	64	60	512	360	76	0	4176
Heavy Trucks	0	0	16		0	12	0		4	20	4		0	0	0		56
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

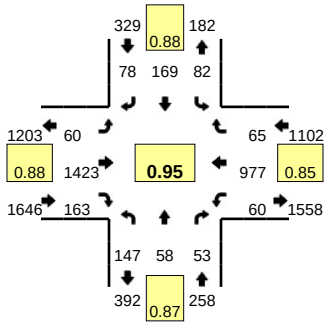
Type of peak hour being reported: Intersection Peak

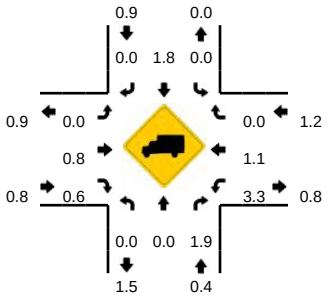
Method for determining peak hour: Total Entering Volume

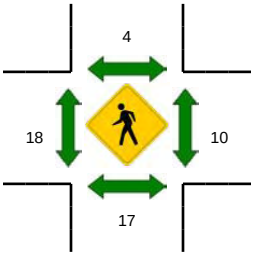
LOCATION: Pennsylvania Ave -- Lomita Blvd
CITY/STATE: Lomita, CA

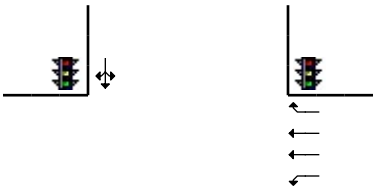
QC JOB #: 12003602
DATE: Thu, Jan 09 2014

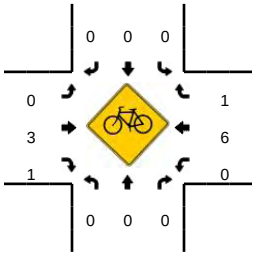
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

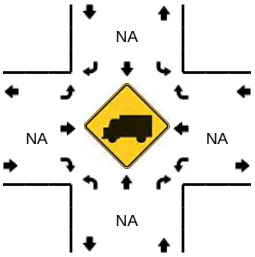


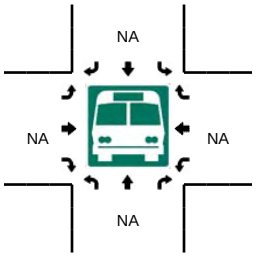












5-Min Count Period Beginning At	Pennsylvania Ave (Northbound)				Pennsylvania Ave (Southbound)				Lomita Blvd (Eastbound)				Lomita Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	4	5	0	6	9	5	0	4	107	11	0	5	92	3	0	258	
4:05 PM	9	4	2	0	11	9	13	0	8	105	7	0	0	67	2	0	237	
4:10 PM	10	4	3	0	10	13	3	0	2	124	18	0	2	74	3	0	266	
4:15 PM	9	3	1	0	1	8	5	0	8	150	12	0	3	74	2	0	276	
4:20 PM	8	4	4	0	5	15	5	0	6	123	3	0	4	95	0	0	272	
4:25 PM	8	3	4	0	5	6	2	0	8	131	17	0	2	90	5	0	281	
4:30 PM	14	1	3	0	5	11	7	0	4	101	10	0	4	62	1	0	223	
4:35 PM	8	4	1	0	3	7	5	0	9	131	10	0	4	69	4	0	255	
4:40 PM	12	3	1	0	4	11	5	0	5	117	12	0	3	84	2	0	259	
4:45 PM	6	9	3	0	6	9	3	0	8	125	13	0	4	90	7	0	283	
4:50 PM	11	2	2	0	9	10	12	0	1	84	10	0	2	85	3	1	232	
4:55 PM	12	2	4	0	2	13	6	0	4	116	13	0	5	75	2	0	254	3096
5:00 PM	14	5	5	0	8	16	8	0	6	105	14	0	4	77	4	0	266	3104
5:05 PM	7	6	7	0	9	14	9	0	3	131	11	0	2	72	6	0	277	3144
5:10 PM	14	2	4	0	8	16	8	0	5	119	12	1	5	67	5	0	266	3144
5:15 PM	8	5	2	0	9	11	6	0	13	153	12	0	4	77	4	0	304	3172
5:20 PM	15	7	8	0	10	18	5	0	3	102	21	0	5	68	3	0	265	3165
5:25 PM	7	7	8	0	4	12	7	0	7	139	20	0	6	90	6	0	313	3197
5:30 PM	10	9	3	0	9	21	3	0	2	104	7	0	7	82	3	0	260	3234
5:35 PM	8	3	2	0	8	15	10	0	6	117	16	0	5	101	8	0	299	3278
5:40 PM	14	5	2	0	8	19	5	0	2	115	8	0	5	72	5	0	260	3279
5:45 PM	12	1	4	0	4	12	2	0	6	111	15	0	6	116	7	0	296	3292
5:50 PM	22	6	4	0	2	10	9	0	5	110	15	0	6	62	7	0	258	3318
5:55 PM	16	2	4	0	3	5	6	0	1	117	12	0	5	93	7	0	271	3335

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	120	76	72	0	92	164	72	0	92	1576	212	0	60	940	52	0	3528
Heavy Trucks	0	0	4		0	0	0		0	12	0		0	12	0		28
Pedestrians		20				0				16				8			44
Bicycles	0	0	0		0	0	0		0	1	1		0	1	1		4
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/31/2014 3:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix B Year 2014 Existing Conditions Level of Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	719	34	165	919	279	86	265	199	110	164	136
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3480		1805	3381		1805	1900	1556	1770	1863	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3480		1805	3381		1805	1900	1556	1770	1863	1553
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)	157	719	34	165	919	279	86	265	199	110	164	136
RTOR Reduction (vph)	0	3	0	0	24	0	0	0	157	0	0	105
Lane Group Flow (vph)	157	750	0	165	1174	0	86	265	42	110	164	31
Confl. Peds. (#/hr)			7			16			13			
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	1%	2%	2%	4%
Turn Type	Prot			Prot			Prot		Perm	Prot		Prot
Protected Phases	1	6		5	2		7	4		3	8	8
Permitted Phases									4			
Actuated Green, G (s)	12.4	41.7		14.1	43.4		6.8	22.4	22.4	9.1	24.7	24.7
Effective Green, g (s)	12.4	41.7		14.1	43.4		6.8	22.4	22.4	9.1	24.7	24.7
Actuated g/C Ratio	0.12	0.39		0.13	0.40		0.06	0.21	0.21	0.08	0.23	0.23
Clearance Time (s)	5.0	5.0		5.0	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)	209	1352		237	1368		114	397	325	150	429	357
v/s Ratio Prot	0.09	0.22		c0.09	c0.35		0.05	c0.14		c0.06	0.09	0.02
v/s Ratio Perm									0.03			
v/c Ratio	0.75	0.55		0.70	0.86		0.75	0.67	0.13	0.73	0.38	0.09
Uniform Delay, d1	46.0	25.6		44.6	29.1		49.4	39.0	34.5	47.9	34.9	32.4
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	14.1	0.5		8.6	5.6		24.3	4.2	0.2	16.8	0.6	0.1
Delay (s)	60.0	26.1		53.1	34.7		73.7	43.2	34.7	64.8	35.4	32.6
Level of Service	E	C		D	C		E	D	C	E	D	C
Approach Delay (s)		31.9			36.9			44.9			42.3	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	107.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.7%	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												
Volume (vph)	52	1092	17	26	1350	101	116	127	119	237	87	205
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	5.0		5.0	5.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.89	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	3531		1736	3539	1419	1787	3246		1610	3309	1564
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	3531		1736	3539	1419	1787	3246		1610	3309	1564
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)	52	1092	17	26	1350	101	116	127	119	237	87	205
RTOR Reduction (vph)	0	1	0	0	0	11	0	92	0	0	0	0
Lane Group Flow (vph)	52	1108	0	26	1350	90	116	154	0	118	206	205
Confl. Peds. (#/hr)			12			71						34
Confl. Bikes (#/hr)						1			1			
Heavy Vehicles (%)	2%	2%	0%	4%	2%	1%	1%	2%	3%	2%	1%	1%
Turn Type	Prot			Prot		Perm	Split			Split		Free
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						Free
Actuated Green, G (s)	6.3	55.2		4.2	53.1	53.1	29.6	29.6		20.8	20.8	129.8
Effective Green, g (s)	6.3	55.2		4.2	53.1	53.1	29.6	29.6		20.8	20.8	129.8
Actuated g/C Ratio	0.05	0.43		0.03	0.41	0.41	0.23	0.23		0.16	0.16	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	86	1502		56	1448	581	408	740		258	530	1564
v/s Ratio Prot	c0.03	0.31		0.01	c0.38		c0.06	0.05		c0.07	0.06	
v/s Ratio Perm						0.06						c0.13
v/c Ratio	0.60	0.74		0.46	0.93	0.16	0.28	0.21		0.46	0.39	0.13
Uniform Delay, d1	60.5	31.2		61.7	36.6	24.2	41.4	40.6		49.4	48.8	0.0
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	11.4	1.9		6.0	11.1	0.1	1.7	0.6		1.3	0.5	0.2
Delay (s)	72.0	33.2		67.7	47.8	24.3	43.1	41.2		50.7	49.3	0.2
Level of Service	E	C		E	D	C	D	D		D	D	A
Approach Delay (s)		34.9			46.5			41.8			30.6	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	39.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	129.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	81.5%	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												
Volume (vph)	271	984	191	231	858	140	254	1741	183	182	1532	215
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.94	1.00	1.00	0.97	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	5136	1452	3303	5085	1470	3400	6408	1500	3433	6346	1483
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	5136	1452	3303	5085	1470	3400	6408	1500	3433	6346	1483
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)	271	984	191	231	858	140	254	1741	183	182	1532	215
RTOR Reduction (vph)	0	0	135	0	0	96	0	0	118	0	0	94
Lane Group Flow (vph)	271	984	56	231	858	44	254	1741	65	182	1532	121
Confl. Peds. (#/hr)			24			56			21			48
Confl. Bikes (#/hr)			7			3						1
Heavy Vehicles (%)	3%	1%	7%	6%	2%	3%	3%	2%	4%	2%	3%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.5	38.2	38.2	15.8	40.5	40.5	13.1	46.2	46.2	9.8	42.9	42.9
Effective Green, g (s)	13.5	38.2	38.2	15.8	40.5	40.5	13.1	46.2	46.2	9.8	42.9	42.9
Actuated g/C Ratio	0.10	0.29	0.29	0.12	0.31	0.31	0.10	0.36	0.36	0.08	0.33	0.33
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	353	1509	427	401	1584	458	343	2277	533	259	2094	489
v/s Ratio Prot	0.08	c0.19		0.07	c0.17		0.07	c0.27		0.05	c0.24	
v/s Ratio Perm			0.04			0.03			0.04			0.08
v/c Ratio	0.77	0.65	0.13	0.58	0.54	0.10	0.74	0.76	0.12	0.70	0.73	0.25
Uniform Delay, d1	56.7	40.1	33.7	53.9	37.1	31.8	56.8	37.1	28.2	58.7	38.5	31.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.64	0.96	1.00	1.00	1.00
Incremental Delay, d2	9.6	1.0	0.1	2.0	0.4	0.1	6.3	1.9	0.3	8.3	2.3	1.2
Delay (s)	66.4	41.1	33.9	55.9	37.4	31.8	48.1	25.6	27.4	67.0	40.8	33.0
Level of Service	E	D	C	E	D	C	D	C	C	E	D	C
Approach Delay (s)		44.9			40.3			28.4			42.4	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.2%	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												
Volume (vph)	101	578	69	149	477	173	70	2153	173	131	1588	61
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		0.97	0.91	1.00	1.00	0.86	1.00	0.97	0.86	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	3509		3433	5136	1492	1805	6471	1552	3335	6301	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	3509		3433	5136	1492	1805	6471	1552	3335	6301	
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)	101	578	69	149	477	173	70	2153	173	131	1588	61
RTOR Reduction (vph)	0	7	0	0	0	138	0	0	91	0	4	0
Lane Group Flow (vph)	101	640	0	149	477	35	70	2153	82	131	1645	0
Confl. Peds. (#/hr)			14			6			14			9
Heavy Vehicles (%)	0%	1%	0%	2%	1%	6%	0%	1%	1%	5%	3%	5%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	11.8	28.7		9.5	26.4	26.4	8.2	61.5	61.5	10.3	63.6	
Effective Green, g (s)	11.8	28.7		9.5	26.4	26.4	8.2	61.5	61.5	10.3	63.6	
Actuated g/C Ratio	0.09	0.22		0.07	0.20	0.20	0.06	0.47	0.47	0.08	0.49	
Clearance Time (s)	5.0	5.0		5.0	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)	164	775		251	1043	303	114	3061	734	264	3083	
v/s Ratio Prot	c0.06	c0.18		0.04	0.09		0.04	c0.33		0.04	c0.26	
v/s Ratio Perm						0.02			0.05			
v/c Ratio	0.62	0.83		0.59	0.46	0.12	0.61	0.70	0.11	0.50	0.53	
Uniform Delay, d1	56.9	48.3		58.4	45.5	42.3	59.4	27.0	19.1	57.4	22.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.13	0.32	0.12	0.61	0.54	
Incremental Delay, d2	6.7	7.2		3.7	0.3	0.2	6.5	0.9	0.2	1.1	0.5	
Delay (s)	63.6	55.4		62.1	45.8	42.4	73.7	9.6	2.5	36.0	12.9	
Level of Service	E	E		E	D	D	E	A	A	D	B	
Approach Delay (s)		56.6			48.1			11.0			14.6	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.4%	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												
Volume (vph)	393	1064	86	466	762	243	104	1790	373	142	1376	183
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	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5065		3433	5085	1599	3400	6471	1563	3367	6408	1533
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5065		3433	5085	1599	3400	6471	1563	3367	6408	1533
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)	393	1064	86	466	762	243	104	1790	373	142	1376	183
RTOR Reduction (vph)	0	7	0	0	0	95	0	0	0	0	0	0
Lane Group Flow (vph)	393	1143	0	466	762	148	104	1790	373	142	1376	183
Confl. Peds. (#/hr)			7			6			3			3
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	1%	2%	2%	2%	1%	3%	1%	2%	4%	2%	4%
Turn Type	Prot			Prot		Prot	Prot		Free	Prot		Free
Protected Phases	7	4		3	8	8	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	19.3	33.3		21.4	35.4	35.4	7.9	46.9	130.0	8.4	47.4	130.0
Effective Green, g (s)	19.3	33.3		21.4	35.4	35.4	7.9	46.9	130.0	8.4	47.4	130.0
Actuated g/C Ratio	0.15	0.26		0.16	0.27	0.27	0.06	0.36	1.00	0.06	0.36	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	515	1297		565	1385	435	207	2335	1563	218	2336	1533
v/s Ratio Prot	0.11	c0.23		c0.14	0.15	0.09	0.03	c0.28		c0.04	0.21	
v/s Ratio Perm									c0.24			0.12
v/c Ratio	0.76	0.88		0.82	0.55	0.34	0.50	0.77	0.24	0.65	0.59	0.12
Uniform Delay, d1	53.2	46.4		52.5	40.5	37.9	59.1	36.7	0.0	59.4	33.4	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.43	0.21	1.00	1.19	0.44	1.00
Incremental Delay, d2	6.6	7.3		9.5	0.5	0.5	1.2	1.6	0.2	5.8	0.9	0.1
Delay (s)	59.8	53.7		62.0	41.0	38.4	85.7	9.2	0.2	76.7	15.7	0.1
Level of Service	E	D		E	D	D	F	A	A	E	B	A
Approach Delay (s)		55.3			47.2			11.2			19.2	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.7%	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												
Volume (vph)	140	654	153	89	372	314	96	1754	113	488	1283	68
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	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.86		0.97	0.91	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3451		1736	3539	1525	1736	6399		3467	4988	1615
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3451		1736	3539	1525	1736	6399		3467	4988	1615
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)	140	654	153	89	372	314	96	1754	113	488	1283	68
RTOR Reduction (vph)	0	16	0	0	0	246	0	7	0	0	0	44
Lane Group Flow (vph)	140	791	0	89	372	68	96	1860	0	488	1283	24
Confl. Peds. (#/hr)			14			4			2			4
Confl. Bikes (#/hr)			4			1						
Heavy Vehicles (%)	2%	1%	1%	4%	2%	4%	4%	1%	3%	1%	4%	0%
Turn Type	Prot			Prot		Perm	Prot			Prot		Prot
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases						8						
Actuated Green, G (s)	21.8	34.1		9.2	21.5	21.5	19.9	45.5		21.2	46.8	46.8
Effective Green, g (s)	21.8	34.1		9.2	21.5	21.5	19.9	45.5		21.2	46.8	46.8
Actuated g/C Ratio	0.17	0.26		0.07	0.17	0.17	0.15	0.35		0.16	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	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)	297	905		123	585	252	266	2240		565	1796	581
v/s Ratio Prot	0.08	c0.23		c0.05	0.11		0.06	c0.29		c0.14	0.26	0.02
v/s Ratio Perm						0.04						
v/c Ratio	0.47	0.87		0.72	0.64	0.27	0.36	0.83		0.86	0.71	0.04
Uniform Delay, d1	48.9	45.9		59.2	50.6	47.4	49.3	38.7		53.0	35.8	27.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.98	0.57		0.91	0.31	0.37
Incremental Delay, d2	1.2	9.4		18.9	2.3	0.6	0.7	3.3		10.2	1.9	0.1
Delay (s)	50.1	55.3		78.0	52.9	48.0	48.9	25.4		58.7	13.1	10.0
Level of Service	D	E		E	D	D	D	C		E	B	B
Approach Delay (s)		54.5			53.8			26.5			25.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	90.6%	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												
Volume (vph)	21	8	2	123	7	228	9	1760	161	233	1063	23
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	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	1.00	0.86		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.86	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1836		1805	1522	1504	1626	6319		1787	5015	
Flt Permitted	0.68	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1286	1836		1805	1522	1504	1626	6319		1787	5015	
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)	21	8	2	123	7	228	9	1760	161	233	1063	23
RTOR Reduction (vph)	0	2	0	0	90	93	0	9	0	0	1	0
Lane Group Flow (vph)	21	8	0	123	29	23	9	1912	0	233	1085	0
Confl. Peds. (#/hr)			5						9			7
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	11%	2%	1%	1%	3%	4%
Turn Type	Perm			Prot		Prot	Prot			Prot		
Protected Phases		4		3	8	8	5	2		1	6	
Permitted Phases	4											
Actuated Green, G (s)	8.1	8.1		12.6	25.7	25.7	5.0	68.1		21.2	84.3	
Effective Green, g (s)	8.1	8.1		12.6	25.7	25.7	5.0	68.1		21.2	84.3	
Actuated g/C Ratio	0.06	0.06		0.10	0.20	0.20	0.04	0.52		0.16	0.65	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	80	114		175	301	297	63	3310		291	3252	
v/s Ratio Prot		0.00		c0.07	0.02	0.02	0.01	c0.30		c0.13	0.22	
v/s Ratio Perm	c0.02											
v/c Ratio	0.26	0.07		0.70	0.10	0.08	0.14	0.58		0.80	0.33	
Uniform Delay, d1	58.1	57.4		56.9	42.7	42.5	60.4	21.1		52.4	10.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.88	0.48	
Incremental Delay, d2	1.8	0.3		12.1	0.1	0.1	1.0	0.7		11.1	0.2	
Delay (s)	59.9	57.7		68.9	42.8	42.6	61.5	21.9		57.1	5.1	
Level of Service	E	E		E	D	D	E	C		E	A	
Approach Delay (s)		59.2			51.7			22.1			14.3	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	278	976	237	141	870	233	259	1366	59	174	701
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		5.0	5.0
Lane Util. Factor		0.95	0.91		1.00	0.91		0.97	0.91		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.97		1.00	0.99		1.00	1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1681	4940		1703	4831		3467	5027		3400	5036
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1681	4940		1703	4831		3467	5027		3400	5036
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)	0	278	976	237	141	870	233	259	1366	59	174	701
RTOR Reduction (vph)	0	0	28	0	0	33	0	0	3	0	0	0
Lane Group Flow (vph)	0	278	1185	0	141	1070	0	259	1422	0	174	701
Confl. Peds. (#/hr)				10			34			8		
Confl. Bikes (#/hr)							1					
Heavy Vehicles (%)	2%	2%	1%	3%	6%	2%	5%	1%	1%	36%	3%	3%
Turn Type	custom	Prot			Prot			Prot			Prot	
Protected Phases		7	4		3	8		5	2		1	6
Permitted Phases	7											
Actuated Green, G (s)		28.7	50.6		17.0	38.9		15.5	52.4		10.0	46.9
Effective Green, g (s)		28.7	50.6		17.0	38.9		15.5	52.4		10.0	46.9
Actuated g/C Ratio		0.19	0.34		0.11	0.26		0.10	0.35		0.07	0.31
Clearance Time (s)		5.0	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
Lane Grp Cap (vph)		322	1666		193	1253		358	1756		227	1575
v/s Ratio Prot		c0.17	0.24		0.08	c0.22		0.07	c0.28		c0.05	0.14
v/s Ratio Perm												
v/c Ratio		0.86	0.71		0.73	0.85		0.72	0.81		0.77	0.45
Uniform Delay, d1		58.8	43.3		64.3	52.9		65.2	44.3		68.9	41.2
Progression Factor		1.00	1.00		0.75	0.34		1.00	1.00		1.00	1.00
Incremental Delay, d2		20.5	2.6		7.5	4.3		7.1	4.2		14.3	0.9
Delay (s)		79.3	45.9		55.6	22.1		72.2	48.5		83.2	42.1
Level of Service		E	D		E	C		E	D		F	D
Approach Delay (s)			52.2			25.9			52.1			47.9
Approach LOS			D			C			D			D

Intersection Summary			
HCM Average Control Delay	45.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	197
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.95
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1511
Flt Permitted	1.00
Satd. Flow (perm)	1511
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	197
RTOR Reduction (vph)	135
Lane Group Flow (vph)	62
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	46.9
Effective Green, g (s)	46.9
Actuated g/C Ratio	0.31
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	472
v/s Ratio Prot	
v/s Ratio Perm	0.04
v/c Ratio	0.13
Uniform Delay, d1	36.9
Progression Factor	1.00
Incremental Delay, d2	0.6
Delay (s)	37.5
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	73	0	342	0	977	65	202	586	0
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	5.0	
Lane Util. Factor		1.00		1.00	0.95	0.95		0.95		0.97	0.95	
Frt		0.86		1.00	0.85	0.85		0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		822		1736	1534	1534		3506		3433	3343	
Flt Permitted		1.00		0.76	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		822		1383	1534	1534		3506		3433	3343	
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)	0	0	1	73	0	342	0	977	65	202	586	0
RTOR Reduction (vph)	0	1	0	0	144	144	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	0	73	27	27	0	1037	0	202	586	0
Heavy Vehicles (%)	0%	0%	100%	4%	0%	0%	0%	2%	2%	2%	8%	0%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		9.6		9.6	9.6	9.6		27.2		9.6	41.8	
Effective Green, g (s)		9.6		9.6	9.6	9.6		27.2		9.6	41.8	
Actuated g/C Ratio		0.16		0.16	0.16	0.16		0.44		0.16	0.68	
Clearance Time (s)		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	
Lane Grp Cap (vph)		129		216	240	240		1553		537	2276	
v/s Ratio Prot		0.00			0.02			c0.30		c0.06	0.18	
v/s Ratio Perm				c0.05		0.02						
v/c Ratio		0.00		0.34	0.11	0.11		0.67		0.38	0.26	
Uniform Delay, d1		21.9		23.1	22.2	22.2		13.5		23.2	3.8	
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.0		0.9	0.2	0.2		1.1		0.4	0.1	
Delay (s)		21.9		24.0	22.4	22.4		14.6		23.7	3.9	
Level of Service		C		C	C	C		B		C	A	
Approach Delay (s)		21.9			22.7			14.6			8.9	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	15.0
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												
Volume (vph)	355	518	17	237	356	135	18	968	292	130	483	166
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1643	3388		1736	1810	1533	1805	3505	1561	1719	3471	1568
Flt Permitted	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1643	3388		1736	1810	1533	1805	3505	1561	1719	3471	1568
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)	355	518	17	237	356	135	18	968	292	130	483	166
RTOR Reduction (vph)	0	2	0	0	0	82	0	0	71	0	0	102
Lane Group Flow (vph)	288	600	0	237	356	53	18	968	221	130	483	64
Confl. Peds. (#/hr)			3			24			2	2		
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	0%	1%	6%	4%	5%	1%	0%	3%	2%	5%	4%	3%
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	29.3	29.3		29.9	29.9	29.9	2.6	42.8	42.8	11.1	51.3	51.3
Effective Green, g (s)	29.3	29.3		29.9	29.9	29.9	2.6	42.8	42.8	11.1	51.3	51.3
Actuated g/C Ratio	0.22	0.22		0.22	0.22	0.22	0.02	0.32	0.32	0.08	0.39	0.39
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	362	746		390	407	344	35	1127	502	143	1338	604
v/s Ratio Prot	0.18	c0.18		0.14	c0.20		0.01	c0.28		c0.08	0.14	
v/s Ratio Perm						0.03			0.14			0.04
v/c Ratio	0.80	0.80		0.61	0.87	0.15	0.51	0.86	0.44	0.91	0.36	0.11
Uniform Delay, d1	49.1	49.2		46.3	49.8	41.4	64.6	42.3	35.7	60.5	29.2	26.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.5	6.3		2.7	18.4	0.2	12.2	6.7	0.6	48.4	0.2	0.1
Delay (s)	60.5	55.5		49.0	68.2	41.6	76.8	49.0	36.3	108.9	29.4	26.3
Level of Service	E	E		D	E	D	E	D	D	F	C	C
Approach Delay (s)		57.1			57.0			46.5			42.0	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	133.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	92.6%	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												
Volume (vph)	131	905	217	190	1014	30	49	21	70	17	32	38
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.93	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3441		1736	3477		1649	1147	1424	1399	1300	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3441		1736	3477		1649	1147	1424	1399	1300	
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)	131	905	217	190	1014	30	49	21	70	17	32	38
RTOR Reduction (vph)	0	14	0	0	1	0	0	0	56	0	30	0
Lane Group Flow (vph)	131	1108	0	190	1043	0	34	36	14	17	40	0
Confl. Peds. (#/hr)			7			3			44			
Confl. Bikes (#/hr)			4			1			1			
Heavy Vehicles (%)	2%	1%	1%	4%	3%	13%	4%	90%	6%	29%	56%	16%
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	19.7	47.4		18.9	46.6		23.1	23.1	23.1	7.7	7.7	
Effective Green, g (s)	19.7	47.4		18.9	46.6		23.1	23.1	23.1	7.7	7.7	
Actuated g/C Ratio	0.17	0.40		0.16	0.40		0.20	0.20	0.20	0.07	0.07	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	298	1393		280	1384		325	226	281	92	85	
v/s Ratio Prot	0.07	c0.32		0.11	c0.30		0.02	c0.03		0.01	c0.03	
v/s Ratio Perm									0.01			
v/c Ratio	0.44	0.80		0.68	0.75		0.10	0.16	0.05	0.18	0.47	
Uniform Delay, d1	43.7	30.6		46.2	30.3		38.5	39.0	38.1	51.7	52.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	3.2		6.4	2.4		0.1	0.3	0.1	1.0	4.1	
Delay (s)	44.8	33.8		52.6	32.7		38.7	39.3	38.2	52.7	56.8	
Level of Service	D	C		D	C		D	D	D	D	E	
Approach Delay (s)		35.0			35.8			38.6			56.0	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	117.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.7%	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												
Volume (vph)	5	650	46	88	1418	28	48	5	33	5	3	2
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1503	3472		1768	3529		1649	1680	1568	1715	1783	1077
Flt Permitted	0.12	1.00		0.38	1.00		0.95	0.96	1.00	0.95	0.99	1.00
Satd. Flow (perm)	195	3472		702	3529		1649	1680	1568	1715	1783	1077
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)	5	650	46	88	1418	28	48	5	33	5	3	2
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	29	0	0	2
Lane Group Flow (vph)	5	693	0	88	1445	0	26	27	4	4	4	0
Confl. Peds. (#/hr)	4		2	2		4						
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	20%	3%	0%	2%	2%	0%	4%	0%	3%	0%	0%	50%
Turn Type	Perm			Perm			Split		Perm	Split		Perm
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	36.7	36.7		36.7	36.7		7.4	7.4	7.4	0.8	0.8	0.8
Effective Green, g (s)	36.7	36.7		36.7	36.7		7.4	7.4	7.4	0.8	0.8	0.8
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.12	0.12	0.12	0.01	0.01	0.01
Clearance Time (s)	5.0	5.0		5.0	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)	119	2127		430	2162		204	208	194	23	24	14
v/s Ratio Prot		0.20			c0.41		0.02	c0.02		c0.00	0.00	
v/s Ratio Perm	0.03			0.13					0.00			0.00
v/c Ratio	0.04	0.33		0.20	0.67		0.13	0.13	0.02	0.17	0.17	0.00
Uniform Delay, d1	4.6	5.6		5.1	7.6		23.4	23.4	23.1	29.2	29.2	29.2
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	0.1	0.1		0.2	0.8		0.3	0.3	0.0	3.6	3.3	0.1
Delay (s)	4.8	5.7		5.4	8.4		23.7	23.7	23.1	32.8	32.5	29.2
Level of Service	A	A		A	A		C	C	C	C	C	C
Approach Delay (s)		5.7			8.2			23.5			32.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	42	324	464	59	13	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	42	324	464	59	13	18
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1310			
pX, platoon unblocked						
vC, conflicting volume	524				740	262
vC1, stage 1 conf vol					494	
vC2, stage 2 conf vol					246	
vCu, unblocked vol	524				740	262
tC, single (s)	4.1				7.0	7.0
tC, 2 stage (s)					6.0	
tF (s)	2.2				3.6	3.4
p0 queue free %	96				97	98
cM capacity (veh/h)	1052				506	723

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	42	162	162	309	214	13	18
Volume Left	42	0	0	0	0	13	0
Volume Right	0	0	0	0	59	0	18
cSH	1052	1700	1700	1700	1700	506	723
Volume to Capacity	0.04	0.10	0.10	0.18	0.13	0.03	0.02
Queue Length 95th (ft)	3	0	0	0	0	2	2
Control Delay (s)	8.6	0.0	0.0	0.0	0.0	12.3	10.1
Lane LOS	A					B	B
Approach Delay (s)	1.0			0.0		11.0	
Approach LOS						B	

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	705	0	0	1532	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0							
Lane Util. Factor		0.95			0.95							
Frpb, ped/bikes		1.00			1.00							
Flpb, ped/bikes		1.00			1.00							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3505			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3505			3539							
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)	0	705	0	0	1532	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	705	0	0	1532	0	0	0	0	0	0	0
Confl. Peds. (#/hr)			3			1						
Confl. Bikes (#/hr)			3			4						
Heavy Vehicles (%)	0%	3%	3%	6%	2%	0%	5%	0%	3%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)		52.0			52.0							
Effective Green, g (s)		52.0			52.0							
Actuated g/C Ratio		1.00			1.00							
Clearance Time (s)		6.0			6.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		3505			3539							
v/s Ratio Prot		0.20			c0.43							
v/s Ratio Perm												
v/c Ratio		0.20			0.43							
Uniform Delay, d1		0.0			0.0							
Progression Factor		1.00			1.00							
Incremental Delay, d2		0.0			0.1							
Delay (s)		0.0			0.1							
Level of Service		A			A							
Approach Delay (s)		0.0			0.1			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	0.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	47.3%	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												
Volume (vph)	155	803	98	206	963	155	140	1403	258	74	1176	77
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3467	3574	1480	3502	5085	1551	3433	4953		3367	4983	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3467	3574	1480	3502	5085	1551	3433	4953		3367	4983	
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)	155	803	98	206	963	155	140	1403	258	74	1176	77
RTOR Reduction (vph)	0	0	36	0	0	77	0	22	0	0	6	0
Lane Group Flow (vph)	155	803	62	206	963	78	140	1639	0	74	1247	0
Confl. Peds. (#/hr)			16			18			16			10
Confl. Bikes (#/hr)			3			3						1
Heavy Vehicles (%)	1%	1%	6%	0%	2%	1%	2%	2%	1%	4%	3%	3%
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	8.7	31.0	31.0	9.7	32.0	32.0	8.6	44.0		5.2	40.6	
Effective Green, g (s)	8.7	31.0	31.0	9.7	32.0	32.0	8.6	44.0		5.2	40.6	
Actuated g/C Ratio	0.08	0.28	0.28	0.09	0.29	0.29	0.08	0.40		0.05	0.37	
Clearance Time (s)	5.0	5.0	5.0	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)	274	1008	417	309	1481	452	269	1983		159	1841	
v/s Ratio Prot	0.04	c0.22		c0.06	0.19		c0.04	c0.33		0.02	0.25	
v/s Ratio Perm			0.04			0.05						
v/c Ratio	0.57	0.80	0.15	0.67	0.65	0.17	0.52	0.83		0.47	0.68	
Uniform Delay, d1	48.8	36.5	29.6	48.5	34.1	29.1	48.7	29.5		51.0	29.1	
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	2.7	4.4	0.2	5.4	1.0	0.2	1.8	3.0		2.1	1.0	
Delay (s)	51.4	41.0	29.7	53.9	35.1	29.3	50.5	32.5		53.1	30.1	
Level of Service	D	D	C	D	D	C	D	C		D	C	
Approach Delay (s)		41.5			37.3			33.9			31.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	109.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.7%	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												
Volume (vph)	207	865	69	305	918	186	93	1370	231	194	1193	87
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3502	5019		3400	3505	1543	3467	5085	1550	3367	5027	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3502	5019		3400	3505	1543	3467	5085	1550	3367	5027	
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)	207	865	69	305	918	186	93	1370	231	194	1193	87
RTOR Reduction (vph)	0	8	0	0	0	59	0	0	83	0	7	0
Lane Group Flow (vph)	207	926	0	305	918	127	93	1370	148	194	1273	0
Confl. Peds. (#/hr)			24			13			9			16
Heavy Vehicles (%)	0%	2%	1%	3%	3%	2%	1%	2%	2%	4%	2%	1%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	9.7	31.3		13.8	35.4	35.4	5.4	39.3	39.3	9.7	43.6	
Effective Green, g (s)	9.7	31.3		13.8	35.4	35.4	5.4	39.3	39.3	9.7	43.6	
Actuated g/C Ratio	0.09	0.27		0.12	0.31	0.31	0.05	0.34	0.34	0.09	0.38	
Clearance Time (s)	5.0	5.0		5.0	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)	298	1377		411	1087	479	164	1751	534	286	1921	
v/s Ratio Prot	0.06	0.18		c0.09	c0.26		0.03	c0.27		c0.06	c0.25	
v/s Ratio Perm						0.08			0.10			
v/c Ratio	0.69	0.67		0.74	0.84	0.26	0.57	0.78	0.28	0.68	0.66	
Uniform Delay, d1	50.8	36.8		48.4	36.8	29.6	53.2	33.6	27.1	50.7	29.2	
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	6.9	1.3		7.1	6.2	0.3	4.4	2.4	0.3	6.3	0.9	
Delay (s)	57.6	38.1		55.5	42.9	29.9	57.6	35.9	27.4	56.9	30.0	
Level of Service	E	D		E	D	C	E	D	C	E	C	
Approach Delay (s)		41.7			43.9			35.9			33.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	25.0
Intersection Capacity Utilization	81.1%	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												
Volume (vph)	241	859	168	629	1164	274	236	1233	242	199	1112	151
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1552	3467	6408	1563	3433	6408	1541	3467	5085	1530
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1552	3467	6408	1563	3433	6408	1541	3467	5085	1530
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)	241	859	168	629	1164	274	236	1233	242	199	1112	151
RTOR Reduction (vph)	0	0	50	0	0	129	0	0	111	0	0	108
Lane Group Flow (vph)	241	859	118	629	1164	145	236	1233	131	199	1112	43
Confl. Peds. (#/hr)			7			11			14			12
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	2%	2%	2%	1%	2%	1%	2%	2%	2%	1%	2%	3%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.2	32.0	32.0	30.8	47.6	47.6	14.5	40.3	40.3	13.3	39.1	39.1
Effective Green, g (s)	15.2	32.0	32.0	30.8	47.6	47.6	14.5	40.3	40.3	13.3	39.1	39.1
Actuated g/C Ratio	0.11	0.23	0.23	0.23	0.35	0.35	0.11	0.30	0.30	0.10	0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	383	1193	364	783	2236	545	365	1893	455	338	1458	439
v/s Ratio Prot	0.07	c0.17		c0.18	0.18		c0.07	0.19		0.06	c0.22	
v/s Ratio Perm			0.08			0.09			0.08			0.03
v/c Ratio	0.63	0.72	0.32	0.80	0.52	0.27	0.65	0.65	0.29	0.59	0.76	0.10
Uniform Delay, d1	57.9	48.1	43.2	49.9	35.3	31.9	58.5	41.9	37.0	58.9	44.4	35.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	2.2	0.5	6.0	0.2	0.3	3.9	0.8	0.4	2.6	2.4	0.1
Delay (s)	61.1	50.2	43.8	55.9	35.5	32.1	62.4	42.7	37.3	61.5	46.8	35.8
Level of Service	E	D	D	E	D	C	E	D	D	E	D	D
Approach Delay (s)		51.5			41.3			44.7			47.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	45.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	136.4	Sum of lost time (s)	20.0
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												
Volume (vph)	215	427	44	340	913	195	90	1088	203	138	1129	521
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1509	3467	3539	1553	1736	5136	1583	1770	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1509	3467	3539	1553	1736	5136	1583	1770	5085	1583
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)	215	427	44	340	913	195	90	1088	203	138	1129	521
RTOR Reduction (vph)	0	0	12	0	0	9	0	0	79	0	0	53
Lane Group Flow (vph)	215	427	32	340	913	186	90	1088	124	138	1129	468
Confl. Peds. (#/hr)			16			1			9			4
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	4%	4%	7%	1%	2%	4%	4%	1%	2%	2%	2%	2%
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	11.6	25.2	41.0	24.1	37.7	56.6	10.8	36.3	60.4	13.9	39.4	51.0
Effective Green, g (s)	11.6	25.2	41.0	24.1	37.7	56.6	10.8	36.3	60.4	13.9	39.4	51.0
Actuated g/C Ratio	0.10	0.21	0.34	0.20	0.32	0.47	0.09	0.30	0.51	0.12	0.33	0.43
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	327	732	518	699	1116	736	157	1560	800	206	1677	676
v/s Ratio Prot	0.06	c0.12	0.02	0.10	c0.26	0.12	0.05	c0.21	0.08	0.08	0.22	c0.30
v/s Ratio Perm												
v/c Ratio	0.66	0.58	0.06	0.49	0.82	0.25	0.57	0.70	0.16	0.67	0.67	0.69
Uniform Delay, d1	52.0	42.4	26.3	42.2	37.7	18.8	52.1	36.7	15.9	50.6	34.5	27.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	1.2	0.0	0.5	4.8	0.2	5.0	1.4	0.1	8.0	1.1	3.1
Delay (s)	56.8	43.6	26.4	42.8	42.5	19.0	57.1	38.1	16.0	58.6	35.6	30.9
Level of Service	E	D	C	D	D	B	E	D	B	E	D	C
Approach Delay (s)		46.6			39.4			36.1			36.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	119.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	101	40	30	1272	1255	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1612	1442	1687	5085	5085	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1612	1442	1687	5085	5085	1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	101	40	30	1272	1255	255
RTOR Reduction (vph)	0	36	0	0	0	70
Lane Group Flow (vph)	101	4	30	1272	1255	185
Confl. Peds. (#/hr)						2
Heavy Vehicles (%)	12%	12%	7%	2%	2%	5%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	12.8	12.8	5.3	97.2	86.9	86.9
Effective Green, g (s)	12.8	12.8	5.3	97.2	86.9	86.9
Actuated g/C Ratio	0.11	0.11	0.04	0.81	0.72	0.72
Clearance Time (s)	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
Lane Grp Cap (vph)	172	154	75	4119	3682	1086
v/s Ratio Prot	c0.06		0.02	c0.25	c0.25	
v/s Ratio Perm		0.00				0.12
v/c Ratio	0.59	0.03	0.40	0.31	0.34	0.17
Uniform Delay, d1	51.1	48.0	55.8	2.9	6.1	5.2
Progression Factor	1.00	1.00	0.82	1.54	1.00	1.00
Incremental Delay, d2	5.0	0.1	3.3	0.2	0.3	0.3
Delay (s)	56.1	48.1	49.1	4.6	6.3	5.5
Level of Service	E	D	D	A	A	A
Approach Delay (s)	53.8			5.7	6.2	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	38.9%	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												
Volume (vph)	102	27	117	28	40	45	262	1181	15	44	893	299
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	5.0	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	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)	1752	1900	1528	1649	1714	1583	3467	5119		1770	5085	1570
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1900	1528	1649	1714	1583	3467	5119		1770	5085	1570
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)	102	27	117	28	40	45	262	1181	15	44	893	299
RTOR Reduction (vph)	0	0	100	0	0	42	0	1	0	0	0	148
Lane Group Flow (vph)	102	27	17	25	43	3	262	1195	0	44	893	151
Confl. Peds. (#/hr)			18						10			4
Heavy Vehicles (%)	3%	0%	2%	4%	5%	2%	1%	1%	7%	2%	2%	1%
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	17.2	17.2	17.2	7.3	7.3	7.3	15.0	68.2		7.3	60.5	60.5
Effective Green, g (s)	17.2	17.2	17.2	7.3	7.3	7.3	15.0	68.2		7.3	60.5	60.5
Actuated g/C Ratio	0.14	0.14	0.14	0.06	0.06	0.06	0.12	0.57		0.06	0.50	0.50
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	251	272	219	100	104	96	433	2909		108	2564	792
v/s Ratio Prot	c0.06	0.01		0.02	c0.03		c0.08	c0.23		0.02	c0.18	
v/s Ratio Perm			0.01			0.00						0.10
v/c Ratio	0.41	0.10	0.08	0.25	0.41	0.03	0.61	0.41		0.41	0.35	0.19
Uniform Delay, d1	46.8	44.7	44.5	53.7	54.3	53.0	49.7	14.6		54.3	17.9	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.41		0.89	0.69	1.00
Incremental Delay, d2	1.1	0.2	0.1	1.3	2.7	0.1	2.2	0.4		2.4	0.4	0.5
Delay (s)	47.8	44.8	44.7	55.1	56.9	53.1	42.1	6.3		50.6	12.6	16.8
Level of Service	D	D	D	E	E	D	D	A		D	B	B
Approach Delay (s)		46.0			55.0			12.8			15.0	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	56.3%	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												
Volume (vph)	83	25	9	16	18	33	28	1343	19	88	820	122
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	5.0		5.0	5.0	
Lane Util. Factor	0.95	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1715	1723		1805	1712	1586	1687	5124		1787	4993	
Flt Permitted	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1715	1723		1805	1712	1586	1687	5124		1787	4993	
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)	83	25	9	16	18	33	28	1343	19	88	820	122
RTOR Reduction (vph)	0	6	0	0	0	30	0	1	0	0	10	0
Lane Group Flow (vph)	58	53	0	16	18	3	28	1361	0	88	932	0
Confl. Peds. (#/hr)			4			5			3			
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	7%	1%	0%	1%	2%	1%
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	11.5	11.5		9.8	9.8	9.8	9.4	68.5		10.2	69.3	
Effective Green, g (s)	11.5	11.5		9.8	9.8	9.8	9.4	68.5		10.2	69.3	
Actuated g/C Ratio	0.10	0.10		0.08	0.08	0.08	0.08	0.57		0.08	0.58	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	164	165		147	140	130	132	2925		152	2883	
v/s Ratio Prot	c0.03	0.03		0.01	c0.01		0.02	c0.27		c0.05	0.19	
v/s Ratio Perm						0.00						
v/c Ratio	0.35	0.32		0.11	0.13	0.02	0.21	0.47		0.58	0.32	
Uniform Delay, d1	50.8	50.6		51.1	51.1	50.7	51.8	15.0		52.8	13.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	0.30	
Incremental Delay, d2	1.3	1.1		0.3	0.4	0.1	0.8	0.5		5.1	0.3	
Delay (s)	52.1	51.7		51.4	51.6	50.8	52.6	15.6		58.1	4.2	
Level of Service	D	D		D	D	D	D	B		E	A	
Approach Delay (s)		51.9			51.1			16.3			8.8	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	55.5%	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												
Volume (vph)	168	813	24	461	1465	315	60	978	475	133	531	79
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	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.95		0.97	0.91		1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	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	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	3384		3183	4876		1752	5136	1526	1736	4950	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	3384		3183	4876		1752	5136	1526	1736	4950	
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)	168	813	24	461	1465	315	60	978	475	133	531	79
RTOR Reduction (vph)	0	1	0	0	23	0	0	0	154	0	13	0
Lane Group Flow (vph)	168	836	0	461	1757	0	60	978	321	133	597	0
Confl. Peds. (#/hr)			5			13			10			4
Heavy Vehicles (%)	2%	6%	12%	10%	3%	3%	3%	1%	3%	4%	2%	6%
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	10.1	45.9		24.8	60.6		8.3	44.6	44.6	14.7	51.0	
Effective Green, g (s)	10.1	45.9		24.8	60.6		8.3	44.6	44.6	14.7	51.0	
Actuated g/C Ratio	0.07	0.31		0.17	0.40		0.06	0.30	0.30	0.10	0.34	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	231	1036		526	1970		97	1527	454	170	1683	
v/s Ratio Prot	0.05	c0.25		0.14	c0.36		0.03	0.19		c0.08	0.12	
v/s Ratio Perm									c0.21			
v/c Ratio	0.73	0.81		0.88	0.89		0.62	0.64	0.71	0.78	0.35	
Uniform Delay, d1	68.6	48.0		61.1	41.6		69.3	45.7	46.9	66.1	37.2	
Progression Factor	0.59	0.41		0.78	0.72		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.7	4.8		10.3	4.4		11.2	2.1	9.0	20.5	0.1	
Delay (s)	48.2	24.2		57.9	34.6		80.5	47.8	55.9	86.6	37.3	
Level of Service	D	C		E	C		F	D	E	F	D	
Approach Delay (s)		28.2			39.4			51.6			46.1	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	89.4%	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												
Volume (vph)	153	139	59	21	159	168	127	1199	60	168	799	134
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	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	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1732	1900	1592	1638	1863	1575	1805	5089		1719	4762	
Flt Permitted	0.63	1.00	1.00	0.67	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1155	1900	1592	1152	1863	1575	1805	5089		1719	4762	
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)	153	139	59	21	159	168	127	1199	60	168	799	134
RTOR Reduction (vph)	0	0	45	0	0	129	0	4	0	0	20	0
Lane Group Flow (vph)	153	139	14	21	159	39	127	1255	0	168	913	0
Confl. Peds. (#/hr)	4		3	3		4			6			5
Heavy Vehicles (%)	4%	0%	0%	10%	2%	1%	0%	1%	2%	5%	6%	7%
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	17.5	17.5	17.5	17.5	17.5	17.5	11.5	29.0		13.8	31.3	
Effective Green, g (s)	17.5	17.5	17.5	17.5	17.5	17.5	11.5	29.0		13.8	31.3	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23	0.23	0.15	0.39		0.18	0.42	
Clearance Time (s)	5.0	5.0	5.0	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)	268	442	370	268	433	366	276	1960		315	1979	
v/s Ratio Prot		0.07			0.09		0.07	c0.25		c0.10	0.19	
v/s Ratio Perm	c0.13		0.01	0.02		0.02						
v/c Ratio	0.57	0.31	0.04	0.08	0.37	0.11	0.46	0.64		0.53	0.46	
Uniform Delay, d1	25.6	23.9	22.4	22.6	24.3	22.7	29.1	18.9		27.8	15.9	
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	2.9	0.4	0.0	0.1	0.5	0.1	1.2	0.7		1.7	0.2	
Delay (s)	28.5	24.3	22.4	22.7	24.8	22.9	30.3	19.6		29.6	16.1	
Level of Service	C	C	C	C	C	C	C	B		C	B	
Approach Delay (s)		25.8			23.7			20.6			18.1	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.5%	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												
Volume (vph)	456	451	44	465	435	88	83	852	518	50	648	243
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	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3462		3433	3389		1805	3610	1579	1805	3374	1516
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3462		3433	3389		1805	3610	1579	1805	3374	1516
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)	456	451	44	465	435	88	83	852	518	50	648	243
RTOR Reduction (vph)	0	7	0	0	16	0	0	0	193	0	0	164
Lane Group Flow (vph)	456	488	0	465	507	0	83	852	325	50	648	79
Confl. Peds. (#/hr)			2			4			1			3
Confl. Bikes (#/hr)			2			4						
Heavy Vehicles (%)	2%	3%	0%	2%	4%	1%	0%	0%	1%	0%	7%	4%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	17.6	21.5		17.8	21.7		7.3	33.8	33.8	5.3	31.8	31.8
Effective Green, g (s)	17.6	21.5		17.8	21.7		7.3	33.8	33.8	5.3	31.8	31.8
Actuated g/C Ratio	0.18	0.22		0.18	0.22		0.07	0.34	0.34	0.05	0.32	0.32
Clearance Time (s)	5.0	5.0		5.0	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)	614	756		621	747		134	1240	542	97	1090	490
v/s Ratio Prot	0.13	0.14		c0.14	c0.15		c0.05	c0.24		0.03	0.19	
v/s Ratio Perm									0.21			0.05
v/c Ratio	0.74	0.65		0.75	0.68		0.62	0.69	0.60	0.52	0.59	0.16
Uniform Delay, d1	38.3	35.0		38.2	35.2		44.2	27.8	26.7	45.3	27.9	23.8
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	4.8	1.9		4.9	2.5		8.3	1.6	1.8	4.6	0.9	0.2
Delay (s)	43.1	36.9		43.1	37.6		52.5	29.4	28.5	49.9	28.8	23.9
Level of Service	D	D		D	D		D	C	C	D	C	C
Approach Delay (s)		39.9			40.2			30.4			28.6	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.5%	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												
Volume (vph)	53	609	52	30	1293	68	174	107	40	35	38	89
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			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00			0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00		1.00			1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.98			0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1736	3438		1665	3539	1560		1763			1665	
Flt Permitted	0.09	1.00		0.33	1.00	1.00		0.73			0.88	
Satd. Flow (perm)	170	3438		583	3539	1560		1331			1485	
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)	53	609	52	30	1293	68	174	107	40	35	38	89
RTOR Reduction (vph)	0	6	0	0	0	26	0	4	0	0	27	0
Lane Group Flow (vph)	53	655	0	30	1293	42	0	317	0	0	135	0
Confl. Peds. (#/hr)	1		14	14		1	11		6	6		11
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	4%	3%	6%	7%	2%	1%	4%	0%	2%	6%	3%	2%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	58.0	58.0		58.0	58.0	58.0		52.0			52.0	
Effective Green, g (s)	58.0	58.0		58.0	58.0	58.0		52.0			52.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48	0.48		0.43			0.43	
Clearance Time (s)	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	
Lane Grp Cap (vph)	82	1662		282	1711	754		577			644	
v/s Ratio Prot		0.19			c0.37							
v/s Ratio Perm	0.31			0.05		0.03		c0.24			0.09	
v/c Ratio	0.65	0.39		0.11	0.76	0.06		0.55			0.21	
Uniform Delay, d1	23.3	19.8		16.9	25.2	16.5		25.3			21.2	
Progression Factor	1.00	1.00		0.16	0.43	0.10		1.00			1.00	
Incremental Delay, d2	33.2	0.7		0.5	2.2	0.1		3.7			0.7	
Delay (s)	56.5	20.5		3.2	13.0	1.8		29.0			21.9	
Level of Service	E	C		A	B	A		C			C	
Approach Delay (s)		23.2			12.2			29.0			21.9	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	90.1%	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												
Volume (vph)	114	1012	68	162	1978	63	174	372	194	43	312	167
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	4967		1770	5008		1770	1881	1599	1719	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	4967		1770	5008		1770	1881	1599	1719	1863	1583
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)	114	1012	68	162	1978	63	174	372	194	43	312	167
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	31	0	0	24
Lane Group Flow (vph)	114	1075	0	162	2039	0	174	372	163	43	312	143
Confl. Peds. (#/hr)			4			7			11			35
Confl. Bikes (#/hr)									6			3
Heavy Vehicles (%)	1%	3%	7%	2%	3%	2%	2%	1%	1%	5%	2%	2%
Turn Type	Prot			Prot			Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4		3	8		5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	11.4	54.6		16.9	60.1		16.4	38.5	60.4	4.6	26.7	43.1
Effective Green, g (s)	11.4	54.6		16.9	60.1		16.4	38.5	60.4	4.6	26.7	43.1
Actuated g/C Ratio	0.08	0.41		0.13	0.45		0.12	0.29	0.45	0.03	0.20	0.32
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	151	2015		222	2236		216	538	718	59	370	507
v/s Ratio Prot	0.06	0.22		c0.09	c0.41		c0.10	0.20	0.10	0.03	c0.17	0.09
v/s Ratio Perm												
v/c Ratio	0.75	0.53		0.73	0.91		0.81	0.69	0.23	0.73	0.84	0.28
Uniform Delay, d1	60.2	30.3		56.7	34.8		57.5	42.8	22.8	64.4	51.9	34.2
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	19.1	0.3		11.4	6.2		19.2	3.8	0.2	36.0	15.9	0.3
Delay (s)	79.3	30.6		68.0	40.9		76.8	46.6	22.9	100.4	67.8	34.5
Level of Service	E	C		E	D		E	D	C	F	E	C
Approach Delay (s)		35.3			42.9			47.5			59.8	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	134.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.4%	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												
Volume (vph)	67	571	89	35	1173	82	147	291	79	72	169	77
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3446		1656	3467		1787	1863	1567	1752	1827	1509
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	3446		1656	3467		1787	1863	1567	1752	1827	1509
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)	67	571	89	35	1173	82	147	291	79	72	169	77
RTOR Reduction (vph)	0	10	0	0	4	0	0	0	61	0	0	62
Lane Group Flow (vph)	67	650	0	35	1251	0	147	291	18	72	169	15
Confl. Peds. (#/hr)			7			6			7			6
Confl. Bikes (#/hr)						1			1			1
Heavy Vehicles (%)	1%	2%	3%	9%	3%	1%	1%	2%	1%	3%	4%	5%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.5	50.6		14.1	57.2		12.0	26.9	26.9	8.4	23.3	23.3
Effective Green, g (s)	7.5	50.6		14.1	57.2		12.0	26.9	26.9	8.4	23.3	23.3
Actuated g/C Ratio	0.06	0.42		0.12	0.48		0.10	0.22	0.22	0.07	0.19	0.19
Clearance Time (s)	5.0	5.0		5.0	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)	112	1453		195	1653		179	418	351	123	355	293
v/s Ratio Prot	c0.04	0.19		0.02	c0.36		0.08	c0.16		0.04	c0.09	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.60	0.45		0.18	0.76		0.82	0.70	0.05	0.59	0.48	0.05
Uniform Delay, d1	54.8	24.7		47.7	25.7		52.9	42.8	36.5	54.1	42.9	39.4
Progression Factor	0.78	0.77		0.64	0.54		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.0	1.0		0.4	2.8		25.1	5.0	0.1	6.9	1.0	0.1
Delay (s)	50.7	19.9		30.8	16.6		78.0	47.8	36.6	61.0	43.9	39.4
Level of Service	D	B		C	B		E	D	D	E	D	D
Approach Delay (s)		22.8			17.0			54.7			46.7	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	77.6%	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												
Volume (vph)	77	1287	104	66	2002	78	296	295	67	95	108	121
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	4876		1388	4913		1719	3381		1719	3172	
Flt Permitted	0.95	1.00		0.95	1.00		0.27	1.00		0.54	1.00	
Satd. Flow (perm)	1736	4876		1388	4913		492	3381		969	3172	
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)	77	1287	104	66	2002	78	296	295	67	95	108	121
RTOR Reduction (vph)	0	5	0	0	2	0	0	15	0	0	111	0
Lane Group Flow (vph)	77	1386	0	66	2078	0	296	347	0	95	118	0
Confl. Peds. (#/hr)			8			10			6			8
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	4%	4%	17%	30%	5%	1%	5%	0%	18%	5%	6%	1%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.1	84.3		10.5	83.7		40.2	26.3		21.7	12.8	
Effective Green, g (s)	11.1	84.3		10.5	83.7		40.2	26.3		21.7	12.8	
Actuated g/C Ratio	0.07	0.56		0.07	0.56		0.27	0.18		0.14	0.09	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	128	2740		97	2741		315	593		185	271	
v/s Ratio Prot	0.04	c0.28		0.05	c0.42		c0.14	0.10		0.03	0.04	
v/s Ratio Perm							c0.11			0.04		
v/c Ratio	0.60	0.51		0.68	0.76		0.94	0.59		0.51	0.44	
Uniform Delay, d1	67.3	20.1		68.1	25.4		49.2	56.8		58.1	65.2	
Progression Factor	0.82	0.64		1.25	0.66		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.0	0.4		14.6	1.6		34.7	1.5		2.4	1.1	
Delay (s)	59.9	13.3		99.4	18.5		83.9	58.3		60.5	66.3	
Level of Service	E	B		F	B		F	E		E	E	
Approach Delay (s)		15.8			21.0			69.8			64.6	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.5%	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												
Volume (vph)	24	686	24	34	1280	46	76	98	116	57	68	35
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		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3486		1805	3486		1768	1719		1715	1734	
Flt Permitted	0.95	1.00		0.95	1.00		0.66	1.00		0.37	1.00	
Satd. Flow (perm)	1736	3486		1805	3486		1220	1719		667	1734	
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)	24	686	24	34	1280	46	76	98	116	57	68	35
RTOR Reduction (vph)	0	1	0	0	2	0	0	41	0	0	17	0
Lane Group Flow (vph)	24	709	0	34	1324	0	76	173	0	57	86	0
Confl. Peds. (#/hr)			9			5	11		3	3		11
Confl. Bikes (#/hr)						1			3			2
Heavy Vehicles (%)	4%	3%	0%	0%	3%	0%	1%	1%	0%	5%	0%	9%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.9	79.3		5.1	79.5		20.6	20.6		20.6	20.6	
Effective Green, g (s)	4.9	79.3		5.1	79.5		20.6	20.6		20.6	20.6	
Actuated g/C Ratio	0.04	0.66		0.04	0.66		0.17	0.17		0.17	0.17	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	71	2304		77	2309		209	295		115	298	
v/s Ratio Prot	0.01	c0.20		0.02	c0.38			c0.10			0.05	
v/s Ratio Perm							0.06			0.09		
v/c Ratio	0.34	0.31		0.44	0.57		0.36	0.59		0.50	0.29	
Uniform Delay, d1	56.0	8.7		56.1	11.0		43.9	45.8		45.0	43.3	
Progression Factor	0.47	0.35		1.18	0.67		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	0.3		3.2	0.8		1.1	3.0		3.3	0.5	
Delay (s)	28.7	3.4		69.4	8.2		45.0	48.8		48.3	43.8	
Level of Service	C	A		E	A		D	D		D	D	
Approach Delay (s)		4.2			9.7			47.8			45.4	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.4%	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												
Volume (vph)	42	1385	38	6	2011	54	190	66	14	62	31	56
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	4960		1805	4872		1794	1843		1757	1845	1585
Flt Permitted	0.95	1.00		0.95	1.00		0.74	1.00		0.68	1.00	1.00
Satd. Flow (perm)	1805	4960		1805	4872		1392	1843		1265	1845	1585
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)	42	1385	38	6	2011	54	190	66	14	62	31	56
RTOR Reduction (vph)	0	1	0	0	1	0	0	6	0	0	0	46
Lane Group Flow (vph)	42	1422	0	6	2064	0	190	74	0	62	31	10
Confl. Peds. (#/hr)			11			9	4		5	5		4
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	4%	3%	0%	6%	2%	0%	0%	0%	2%	3%	0%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.5	107.8		1.4	98.7		25.8	25.8		25.8	25.8	25.8
Effective Green, g (s)	10.5	107.8		1.4	98.7		25.8	25.8		25.8	25.8	25.8
Actuated g/C Ratio	0.07	0.72		0.01	0.66		0.17	0.17		0.17	0.17	0.17
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	126	3565		17	3206		239	317		218	317	273
v/s Ratio Prot	0.02	c0.29		0.00	c0.42			0.04			0.02	
v/s Ratio Perm							c0.14			0.05		0.01
v/c Ratio	0.33	0.40		0.35	0.64		0.79	0.23		0.28	0.10	0.04
Uniform Delay, d1	66.4	8.3		73.8	15.2		59.6	53.6		54.1	52.3	51.7
Progression Factor	0.80	1.09		1.27	0.55		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	0.3		9.3	0.8		16.5	0.4		0.7	0.1	0.1
Delay (s)	54.6	9.3		103.1	9.1		76.1	54.0		54.8	52.4	51.8
Level of Service	D	A		F	A		E	D		D	D	D
Approach Delay (s)		10.6			9.4			69.5			53.2	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.4%	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												
Volume (vph)	114	669	39	43	675	232	87	1093	105	209	836	145
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1736	5069		1770	4906		1787	5051		1770	3539	1548
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1736	5069		1770	4906		1787	5051		1770	3539	1548
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)	114	669	39	43	675	232	87	1093	105	209	836	145
RTOR Reduction (vph)	0	5	0	0	46	0	0	8	0	0	0	87
Lane Group Flow (vph)	114	703	0	43	861	0	87	1190	0	209	836	58
Confl. Peds. (#/hr)			5			4			5			1
Confl. Bikes (#/hr)			1						3			
Heavy Vehicles (%)	4%	1%	8%	2%	1%	2%	1%	1%	3%	2%	2%	3%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	12.7	35.9		6.3	29.5		8.7	36.8		19.0	47.1	47.1
Effective Green, g (s)	12.7	35.9		6.3	29.5		8.7	36.8		19.0	47.1	47.1
Actuated g/C Ratio	0.11	0.30		0.05	0.25		0.07	0.31		0.16	0.40	0.40
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	187	1542		95	1227		132	1575		285	1413	618
v/s Ratio Prot	c0.07	0.14		0.02	c0.18		0.05	c0.24		c0.12	0.24	
v/s Ratio Perm												0.04
v/c Ratio	0.61	0.46		0.45	0.70		0.66	0.76		0.73	0.59	0.09
Uniform Delay, d1	50.3	33.2		54.2	40.3		53.2	36.6		47.1	27.9	22.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.5	0.2		3.4	1.8		11.3	2.1		9.4	0.7	0.1
Delay (s)	55.8	33.4		57.6	42.1		64.5	38.7		56.5	28.6	22.2
Level of Service	E	C		E	D		E	D		E	C	C
Approach Delay (s)		36.5			42.8			40.4			32.7	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	118.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.0%	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												
Volume (vph)	84	645	148	58	843	65	348	619	71	59	368	139
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3539	1558	1656	3539	1494	3467	3504		3433	3269	
Flt Permitted	0.12	1.00	1.00	0.25	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	232	3539	1558	434	3539	1494	3467	3504		3433	3269	
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)	84	645	148	58	843	65	348	619	71	59	368	139
RTOR Reduction (vph)	0	0	73	0	0	46	0	6	0	0	28	0
Lane Group Flow (vph)	84	645	75	58	843	19	348	684	0	59	479	0
Confl. Peds. (#/hr)			11			13			7			22
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	1%	2%	1%	9%	2%	5%	1%	1%	3%	2%	5%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	43.0	36.4	36.4	42.0	35.9	35.9	17.0	51.3		6.2	40.5	
Effective Green, g (s)	43.0	36.4	36.4	42.0	35.9	35.9	17.0	51.3		6.2	40.5	
Actuated g/C Ratio	0.36	0.30	0.30	0.35	0.30	0.30	0.14	0.43		0.05	0.34	
Clearance Time (s)	5.0	5.0	5.0	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)	169	1073	473	214	1059	447	491	1498		177	1103	
v/s Ratio Prot	c0.03	0.18		0.01	c0.24		c0.10	c0.20		0.02	0.15	
v/s Ratio Perm	0.15		0.05	0.08		0.01						
v/c Ratio	0.50	0.60	0.16	0.27	0.80	0.04	0.71	0.46		0.33	0.43	
Uniform Delay, d1	28.5	35.6	30.6	27.2	38.7	29.9	49.1	24.4		54.9	30.9	
Progression Factor	0.66	0.59	0.48	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	0.9	0.2	0.7	4.2	0.0	4.7	1.0		1.1	1.2	
Delay (s)	21.1	22.1	14.7	27.8	42.9	29.9	53.8	25.4		56.0	32.1	
Level of Service	C	C	B	C	D	C	D	C		E	C	
Approach Delay (s)		20.7			41.1			34.9			34.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	78.5%	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												
Volume (vph)	81	1184	171	103	1299	70	546	736	73	102	361	116
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	4847		1703	4804		3400	3491		1687	3340	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1736	4847		1703	4804		3400	3491		1687	3340	
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)	81	1184	171	103	1299	70	546	736	73	102	361	116
RTOR Reduction (vph)	0	11	0	0	3	0	0	5	0	0	22	0
Lane Group Flow (vph)	81	1344	0	103	1366	0	546	804	0	102	455	0
Confl. Peds. (#/hr)			20			13			37			15
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	4%	4%	7%	6%	7%	6%	3%	1%	5%	7%	2%	7%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.4	61.8		13.8	64.2		28.7	40.6		13.8	25.7	
Effective Green, g (s)	11.4	61.8		13.8	64.2		28.7	40.6		13.8	25.7	
Actuated g/C Ratio	0.08	0.41		0.09	0.43		0.19	0.27		0.09	0.17	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	132	1997		157	2056		651	945		155	572	
v/s Ratio Prot	0.05	0.28		c0.06	c0.28		c0.16	c0.23		0.06	0.14	
v/s Ratio Perm												
v/c Ratio	0.61	0.67		0.66	0.66		0.84	0.85		0.66	0.80	
Uniform Delay, d1	67.2	35.9		65.8	34.3		58.4	51.8		65.8	59.6	
Progression Factor	1.01	0.75		1.18	0.78		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.8	1.7		8.5	1.5		9.3	7.4		9.7	7.6	
Delay (s)	75.6	28.6		86.2	28.3		67.7	59.3		75.5	67.2	
Level of Service	E	C		F	C		E	E		E	E	
Approach Delay (s)		31.2			32.4			62.7			68.7	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	44.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.6%	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												
Volume (vph)	128	1449	89	127	1580	112	97	311	64	140	280	109
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1696	4958		1719	4915		1703	3271		1687	3505	1429
Flt Permitted	0.11	1.00		0.13	1.00		0.44	1.00		0.31	1.00	1.00
Satd. Flow (perm)	190	4958		236	4915		787	3271		553	3505	1429
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)	128	1449	89	127	1580	112	97	311	64	140	280	109
RTOR Reduction (vph)	0	4	0	0	5	0	0	12	0	0	0	52
Lane Group Flow (vph)	128	1534	0	127	1687	0	97	363	0	140	280	57
Confl. Peds. (#/hr)	46		83	83		46			29			27
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	6%	3%	3%	4%	4%	4%	6%	5%	14%	7%	3%	7%
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	102.8	102.8		102.8	102.8		32.2	25.2		32.2	25.2	25.2
Effective Green, g (s)	102.8	102.8		102.8	102.8		32.2	25.2		32.2	25.2	25.2
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.21	0.17		0.21	0.17	0.17
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	130	3398		162	3368		212	550		172	589	240
v/s Ratio Prot		0.31			0.34		0.02	0.11		c0.04	0.08	
v/s Ratio Perm	c0.67			0.54			0.08			c0.14		0.04
v/c Ratio	0.98	0.45		0.78	0.50		0.46	0.66		0.81	0.48	0.24
Uniform Delay, d1	22.8	10.8		16.0	11.3		49.3	58.4		54.6	56.4	54.1
Progression Factor	0.72	0.44		1.23	0.74		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	68.7	0.4		27.6	0.5		1.6	3.0		24.6	0.6	0.5
Delay (s)	85.2	5.1		47.3	8.8		50.8	61.4		79.2	57.0	54.6
Level of Service	F	A		D	A		D	E		E	E	D
Approach Delay (s)		11.2			11.5			59.2			62.4	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.5%	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												
Volume (vph)	100	1267	53	348	1549	46	5	295	226	116	286	114
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1687	4958		1752	4865		1805	3505	1551	1687	3272	
Flt Permitted	0.95	1.00		0.95	1.00		0.20	1.00	1.00	0.55	1.00	
Satd. Flow (perm)	1687	4958		1752	4865		386	3505	1551	970	3272	
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)	100	1267	53	348	1549	46	5	295	226	116	286	114
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	194	0	30	0
Lane Group Flow (vph)	100	1318	0	348	1593	0	5	295	32	116	370	0
Confl. Peds. (#/hr)			10			22			7			11
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	7%	3%	25%	3%	6%	7%	0%	3%	2%	7%	4%	7%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	13.5	64.3		34.0	84.8		21.0	21.0	21.0	30.4	30.4	
Effective Green, g (s)	13.5	64.3		34.0	84.8		21.0	21.0	21.0	30.4	30.4	
Actuated g/C Ratio	0.09	0.43		0.23	0.57		0.14	0.14	0.14	0.20	0.20	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	152	2125		397	2750		66	491	217	248	663	
v/s Ratio Prot	0.06	c0.27		c0.20	0.33		0.00	c0.08		0.03	c0.11	
v/s Ratio Perm							0.01		0.02	0.06		
v/c Ratio	0.66	0.62		0.88	0.58		0.08	0.60	0.15	0.47	0.56	
Uniform Delay, d1	66.0	33.3		56.0	21.1		56.4	60.6	56.6	54.6	53.8	
Progression Factor	1.29	0.47		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.8	1.2		19.0	0.9		0.5	2.1	0.3	1.4	1.0	
Delay (s)	93.9	17.0		75.0	22.0		56.9	62.6	56.9	56.0	54.8	
Level of Service	F	B		E	C		E	E	E	E	D	
Approach Delay (s)		22.4			31.5			60.1			55.1	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.1%	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												
Volume (vph)	0	1428	196	95	987	2	0	0	0	244	1	1131
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
Lane Util. Factor		0.86		1.00	0.91						1.00	0.88
Frpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Frt		0.98		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)		6150		1703	4892						1676	2682
Flt Permitted		1.00		0.95	1.00						0.95	1.00
Satd. Flow (perm)		6150		1703	4892						1676	2682
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)	0	1428	196	95	987	2	0	0	0	244	1	1131
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	0	0	0	48
Lane Group Flow (vph)	0	1602	0	95	989	0	0	0	0	0	245	1083
Confl. Peds. (#/hr)	18		9	9		18						
Confl. Bikes (#/hr)						3						
Heavy Vehicles (%)	0%	4%	3%	6%	6%	0%	0%	0%	0%	8%	0%	6%
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Actuated Green, G (s)		36.6		8.9	50.5						49.5	49.5
Effective Green, g (s)		36.6		8.9	50.5						49.5	49.5
Actuated g/C Ratio		0.33		0.08	0.46						0.45	0.45
Clearance Time (s)		5.0		5.0	5.0						5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		2046		138	2246						754	1207
v/s Ratio Prot		c0.26		c0.06	0.20							
v/s Ratio Perm											0.15	c0.40
v/c Ratio		0.78		0.69	0.44						0.32	0.90
Uniform Delay, d1		33.1		49.2	20.2						19.5	27.9
Progression Factor		1.00		1.28	0.26						1.00	1.00
Incremental Delay, d2		3.1		10.8	0.5						0.3	9.0
Delay (s)		36.2		73.5	5.7						19.7	36.9
Level of Service		D		E	A						B	D
Approach Delay (s)		36.2			11.7			0.0			33.8	
Approach LOS		D			B			A			C	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	179	102	1506	273	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	179	102	1506	273	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			350			
pX, platoon unblocked						
vC, conflicting volume	1506	753			1779	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1506	753			1779	
tC, single (s)	7.3	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	0	71			100	
cM capacity (veh/h)	88	357			354	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3
Volume Total	119	162	1004	593	182
Volume Left	119	60	0	0	0
Volume Right	0	102	0	91	182
cSH	88	215	1700	1700	1700
Volume to Capacity	1.36	0.75	0.59	0.35	0.11
Queue Length 95th (ft)	223	128	0	0	0
Control Delay (s)	302.7	59.6	0.0	0.0	0.0
Lane LOS	F	F			
Approach Delay (s)	162.9		0.0		
Approach LOS	F				

Intersection Summary			
Average Delay	22.2		
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	954	718	48	32	827	446	192	209	80	8	47	54
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		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.91		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.95		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3400	3401		1703	4728		1656	3343		1803	1377	1129
Flt Permitted	0.95	1.00		0.95	1.00		0.73	1.00		0.50	1.00	1.00
Satd. Flow (perm)	3400	3401		1703	4728		1266	3343		950	1377	1129
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)	954	718	48	32	827	446	192	209	80	8	47	54
RTOR Reduction (vph)	0	3	0	0	79	0	0	43	0	0	0	43
Lane Group Flow (vph)	954	763	0	32	1194	0	192	246	0	8	47	11
Confl. Peds. (#/hr)			7			4			2	2		
Heavy Vehicles (%)	3%	4%	19%	6%	3%	4%	9%	2%	6%	0%	38%	43%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	32.0	67.1		4.6	39.7		23.3	23.3		23.3	23.3	23.3
Effective Green, g (s)	32.0	67.1		4.6	39.7		23.3	23.3		23.3	23.3	23.3
Actuated g/C Ratio	0.29	0.61		0.04	0.36		0.21	0.21		0.21	0.21	0.21
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	989	2075		71	1706		268	708		201	292	239
v/s Ratio Prot	c0.28	0.22		0.02	c0.25			0.07			0.03	
v/s Ratio Perm							c0.15			0.01		0.01
v/c Ratio	0.96	0.37		0.45	0.70		0.72	0.35		0.04	0.16	0.05
Uniform Delay, d1	38.4	10.8		51.5	30.1		40.3	36.9		34.5	35.4	34.5
Progression Factor	0.66	0.16		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.2	0.4		4.5	2.4		8.8	0.3		0.1	0.3	0.1
Delay (s)	41.7	2.1		56.0	32.5		49.1	37.2		34.5	35.6	34.6
Level of Service	D	A		E	C		D	D		C	D	C
Approach Delay (s)		24.1			33.1			41.9			35.0	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	688	30	34	1505	21	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	688	30	34	1505	21	36
Pedestrians					3	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			721		1526	362
vC1, stage 1 conf vol					706	
vC2, stage 2 conf vol					820	
vCu, unblocked vol			525		1399	135
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.2		3.5	3.3
p0 queue free %			96		93	96
cM capacity (veh/h)			947		312	814

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	459	259	536	1003	57
Volume Left	0	0	34	0	21
Volume Right	0	30	0	0	36
cSH	1700	1700	947	1700	511
Volume to Capacity	0.27	0.15	0.04	0.59	0.11
Queue Length 95th (ft)	0	0	3	0	9
Control Delay (s)	0.0	0.0	1.0	0.0	12.9
Lane LOS			A		B
Approach Delay (s)	0.0		0.3		12.9
Approach LOS					B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	324	770	116	140	684	107	167	1102	147	162	1110	231
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	5.0		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91		0.97	0.91		0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1552	3433	4910		3367	5037		3467	5085	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1552	3433	4910		3367	5037		3467	5085	1537
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)	324	770	116	140	684	107	167	1102	147	162	1110	231
RTOR Reduction (vph)	0	0	80	0	19	0	0	14	0	0	0	117
Lane Group Flow (vph)	324	770	36	140	772	0	167	1235	0	162	1110	114
Confl. Peds. (#/hr)			7			17			2			9
Confl. Bikes (#/hr)			3									
Heavy Vehicles (%)	2%	2%	2%	2%	3%	4%	4%	1%	1%	1%	2%	3%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	14.4	32.0	32.0	9.0	26.6		9.4	32.6		8.8	32.0	32.0
Effective Green, g (s)	14.4	32.0	32.0	9.0	26.6		9.4	32.6		8.8	32.0	32.0
Actuated g/C Ratio	0.14	0.31	0.31	0.09	0.26		0.09	0.32		0.09	0.31	0.31
Clearance Time (s)	5.0	5.0	5.0	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)	483	1106	485	302	1275		309	1604		298	1589	480
v/s Ratio Prot	c0.09	c0.22		0.04	0.16		c0.05	c0.25		0.05	0.22	
v/s Ratio Perm			0.02									0.07
v/c Ratio	0.67	0.70	0.07	0.46	0.61		0.54	0.77		0.54	0.70	0.24
Uniform Delay, d1	41.8	30.9	24.8	44.4	33.3		44.4	31.5		44.9	31.0	26.1
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	3.6	1.9	0.1	1.1	0.8		1.9	2.3		2.0	1.4	0.3
Delay (s)	45.4	32.9	24.8	45.5	34.1		46.4	33.8		46.9	32.3	26.4
Level of Service	D	C	C	D	C		D	C		D	C	C
Approach Delay (s)		35.4			35.8			35.3			33.0	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	102.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	77.7%	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												
Volume (vph)	114	669	39	43	675	232	87	1093	105	209	836	145
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1543	1671	4821		3467	5085	1521	3273	4940	1559
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1543	1671	4821		3467	5085	1521	3273	4940	1559
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)	114	669	39	43	675	232	87	1093	105	209	836	145
RTOR Reduction (vph)	0	0	27	0	53	0	0	0	47	0	0	80
Lane Group Flow (vph)	114	669	12	43	854	0	87	1093	58	209	836	65
Confl. Peds. (#/hr)			5			7			11			4
Heavy Vehicles (%)	2%	3%	3%	8%	3%	3%	1%	2%	4%	7%	5%	2%
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	7.7	30.7	30.7	4.7	27.7		5.4	31.7	31.7	11.4	37.7	37.7
Effective Green, g (s)	7.7	30.7	30.7	4.7	27.7		5.4	31.7	31.7	11.4	37.7	37.7
Actuated g/C Ratio	0.08	0.31	0.31	0.05	0.28		0.05	0.32	0.32	0.12	0.38	0.38
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	268	1570	481	80	1356		190	1636	489	379	1891	597
v/s Ratio Prot	c0.03	c0.13		0.03	c0.18		0.03	c0.21		c0.06	0.17	
v/s Ratio Perm			0.01						0.04			0.04
v/c Ratio	0.43	0.43	0.03	0.54	0.63		0.46	0.67	0.12	0.55	0.44	0.11
Uniform Delay, d1	43.3	26.9	23.5	45.8	30.9		45.1	28.9	23.5	41.1	22.6	19.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.2	0.0	6.8	0.9		1.7	1.0	0.1	1.7	0.2	0.1
Delay (s)	44.4	27.1	23.5	52.6	31.8		46.9	29.9	23.7	42.9	22.8	19.7
Level of Service	D	C	C	D	C		D	C	C	D	C	B
Approach Delay (s)		29.3			32.8			30.5			25.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	98.5	Sum of lost time (s)	25.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	411	1084	1205	491	371	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3467	5085	5036	1567	3400	2715
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3467	5085	5036	1567	3400	2715
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	411	1084	1205	491	371	367
RTOR Reduction (vph)	0	0	0	33	0	12
Lane Group Flow (vph)	411	1084	1205	458	371	355
Confl. Peds. (#/hr)				5		2
Heavy Vehicles (%)	1%	2%	3%	2%	3%	4%
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Actuated Green, G (s)	15.8	48.8	28.0	43.5	15.5	31.3
Effective Green, g (s)	15.8	48.8	28.0	43.5	15.5	31.3
Actuated g/C Ratio	0.21	0.66	0.38	0.59	0.21	0.42
Clearance Time (s)	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
Lane Grp Cap (vph)	737	3340	1898	1023	709	1326
v/s Ratio Prot	c0.12	0.21	c0.24	0.09	c0.11	0.06
v/s Ratio Perm				0.20		0.07
v/c Ratio	0.56	0.32	0.63	0.45	0.52	0.27
Uniform Delay, d1	26.1	5.6	19.0	8.7	26.1	14.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	0.7	0.3	0.7	0.1
Delay (s)	27.0	5.6	19.7	9.0	26.8	14.1
Level of Service	C	A	B	A	C	B
Approach Delay (s)		11.5	16.6		20.5	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	74.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.2%	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												
Volume (veh/h)	20	285	0	0	521	15	0	0	0	3	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	20	285	0	0	521	15	0	0	0	3	0	4
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					852							
pX, platoon unblocked												
vC, conflicting volume	536			286			590	862	144	711	854	268
vC1, stage 1 conf vol							326	326		528	528	
vC2, stage 2 conf vol							264	536		182	326	
vCu, unblocked vol	536			286			590	862	144	711	854	268
tC, single (s)	4.1			4.1			7.5	6.5	6.9	8.2	6.5	6.9
tC, 2 stage (s)							6.5	5.5		7.2	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.8	4.0	3.3
p0 queue free %	98			100			100	100	100	99	100	99
cM capacity (veh/h)	1042			1287			564	454	884	404	467	736

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	162	142	347	189	0	7
Volume Left	20	0	0	0	0	3
Volume Right	0	0	0	15	0	4
cSH	1042	1700	1700	1700	1700	545
Volume to Capacity	0.02	0.08	0.20	0.11	0.00	0.01
Queue Length 95th (ft)	1	0	0	0	0	1
Control Delay (s)	1.2	0.0	0.0	0.0	0.0	11.7
Lane LOS	A				A	B
Approach Delay (s)	0.6		0.0		0.0	11.7
Approach LOS					A	B

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	33.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	724	0	0	1539	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	724	0	0	1539	0	0
Pedestrians	1			1	1	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1064					
pX, platoon unblocked						
vC, conflicting volume			725		1496	364
vC1, stage 1 conf vol					725	
vC2, stage 2 conf vol					770	
vCu, unblocked vol			725		1496	364
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			886		319	638

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	483	241	0	770	770	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.28	0.14	0.00	0.45	0.45	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS						A
Approach Delay (s)	0.0		0.0			0.0
Approach LOS						A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	183	904	49	170	956	109	60	182	109	137	205	211
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3477		1787	3506		1805	1900	1553	1787	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3477		1787	3506		1805	1900	1553	1787	1900	1615
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)	183	904	49	170	956	109	60	182	109	137	205	211
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	90	0	0	163
Lane Group Flow (vph)	183	950	0	170	1058	0	60	182	19	137	205	48
Confl. Peds. (#/hr)			5			8			7			6
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	2%	3%	0%	1%	1%	1%	0%	0%	2%	1%	0%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Prot
Protected Phases	1	6		5	2		7	4		3	8	8
Permitted Phases									4			
Actuated Green, G (s)	14.5	37.6		13.6	36.7		6.5	17.7	17.7	11.8	23.0	23.0
Effective Green, g (s)	14.5	37.6		13.6	36.7		6.5	17.7	17.7	11.8	23.0	23.0
Actuated g/C Ratio	0.14	0.37		0.14	0.36		0.06	0.18	0.18	0.12	0.23	0.23
Clearance Time (s)	5.0	5.0		5.0	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)	255	1298		241	1278		117	334	273	209	434	369
v/s Ratio Prot	c0.10	0.27		0.10	c0.30		0.03	c0.10		c0.08	0.11	0.03
v/s Ratio Perm									0.01			
v/c Ratio	0.72	0.73		0.71	0.83		0.51	0.54	0.07	0.66	0.47	0.13
Uniform Delay, d1	41.1	27.2		41.6	29.1		45.6	37.8	34.6	42.5	33.6	30.9
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	9.3	2.2		9.0	4.6		3.8	1.8	0.1	7.2	0.8	0.2
Delay (s)	50.4	29.4		50.7	33.7		49.3	39.6	34.7	49.7	34.4	31.1
Level of Service	D	C		D	C		D	D	C	D	C	C
Approach Delay (s)		32.8			36.0			39.8			36.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.0%	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												
Volume (vph)	67	1089	48	163	1175	191	152	177	115	303	178	60
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	5.0		5.0	5.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1787	3549		1805	3574	1515	1770	3343		1643	3382	1578
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1787	3549		1805	3574	1515	1770	3343		1643	3382	1578
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)	67	1089	48	163	1175	191	152	177	115	303	178	60
RTOR Reduction (vph)	0	2	0	0	0	22	0	83	0	0	0	0
Lane Group Flow (vph)	67	1135	0	163	1175	169	152	209	0	158	323	60
Confl. Peds. (#/hr)			11			31						36
Confl. Bikes (#/hr)			3			1						1
Heavy Vehicles (%)	1%	1%	0%	0%	1%	1%	2%	2%	1%	0%	0%	0%
Turn Type	Prot			Prot		Perm	Split			Split		Free
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						Free
Actuated Green, G (s)	7.8	44.8		15.3	52.3	52.3	16.3	16.3		21.8	21.8	118.2
Effective Green, g (s)	7.8	44.8		15.3	52.3	52.3	16.3	16.3		21.8	21.8	118.2
Actuated g/C Ratio	0.07	0.38		0.13	0.44	0.44	0.14	0.14		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	118	1345		234	1581	670	244	461		303	624	1578
v/s Ratio Prot	0.04	c0.32		c0.09	c0.33		c0.09	0.06		c0.10	0.10	
v/s Ratio Perm						0.11						0.04
v/c Ratio	0.57	0.84		0.70	0.74	0.25	0.62	0.45		0.52	0.52	0.04
Uniform Delay, d1	53.6	33.5		49.2	27.4	20.7	48.1	46.9		43.5	43.5	0.0
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	6.1	5.0		8.7	1.9	0.2	4.9	0.7		1.6	0.7	0.0
Delay (s)	59.7	38.5		57.9	29.3	20.9	52.9	47.6		45.1	44.2	0.0
Level of Service	E	D		E	C	C	D	D		D	D	A
Approach Delay (s)		39.7			31.3			49.4			39.6	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	118.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.6%	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												
Volume (vph)	285	834	323	344	936	215	362	1747	219	264	1675	242
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
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)	285	834	323	344	936	215	362	1747	219	264	1675	242
RTOR Reduction (vph)	0	0	182	0	0	140	0	0	144	0	0	98
Lane Group Flow (vph)	285	834	141	344	936	75	362	1747	75	264	1675	144
Confl. Peds. (#/hr)			26			42			25			74
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	1%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.8	36.8	36.8	17.2	41.2	41.2	14.7	44.5	44.5	11.5	41.3	41.3
Effective Green, g (s)	12.8	36.8	36.8	17.2	41.2	41.2	14.7	44.5	44.5	11.5	41.3	41.3
Actuated g/C Ratio	0.10	0.28	0.28	0.13	0.32	0.32	0.11	0.34	0.34	0.09	0.32	0.32
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	341	1439	437	459	1628	482	392	2194	516	307	2056	462
v/s Ratio Prot	c0.08	c0.16		c0.10	0.18		0.10	c0.27		0.08	c0.26	
v/s Ratio Perm			0.09			0.05			0.05			0.10
v/c Ratio	0.84	0.58	0.32	0.75	0.57	0.16	0.92	0.80	0.15	0.86	0.81	0.31
Uniform Delay, d1	57.6	40.0	36.8	54.3	37.1	31.9	57.1	38.7	29.6	58.5	40.8	33.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.72	1.53	1.00	1.00	1.00
Incremental Delay, d2	16.1	0.6	0.4	6.6	0.5	0.2	20.5	2.1	0.4	20.6	3.7	1.7
Delay (s)	73.6	40.5	37.2	60.9	37.6	32.1	64.3	30.0	45.6	79.1	44.5	35.3
Level of Service	E	D	D	E	D	C	E	C	D	E	D	D
Approach Delay (s)		46.3			42.2			36.8			47.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	42.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	97.5%	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												
Volume (vph)	105	499	75	279	498	259	124	2039	258	381	2107	48
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		0.97	0.91	1.00	1.00	0.86	1.00	0.97	0.86	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3492		3467	5136	1534	1805	6471	1510	3433	6443	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3492		3467	5136	1534	1805	6471	1510	3433	6443	
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)	105	499	75	279	498	259	124	2039	258	381	2107	48
RTOR Reduction (vph)	0	9	0	0	0	218	0	0	151	0	2	0
Lane Group Flow (vph)	105	565	0	279	498	41	124	2039	107	381	2153	0
Confl. Peds. (#/hr)			16			13			28			4
Heavy Vehicles (%)	2%	1%	0%	1%	1%	2%	0%	1%	2%	2%	1%	4%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	17.6	24.7		13.5	20.6	20.6	13.0	53.7	53.7	18.1	58.8	
Effective Green, g (s)	17.6	24.7		13.5	20.6	20.6	13.0	53.7	53.7	18.1	58.8	
Actuated g/C Ratio	0.14	0.19		0.10	0.16	0.16	0.10	0.41	0.41	0.14	0.45	
Clearance Time (s)	5.0	5.0		5.0	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)	240	663		360	814	243	181	2673	624	478	2914	
v/s Ratio Prot	0.06	c0.16		c0.08	0.10		0.07	c0.32		0.11	c0.33	
v/s Ratio Perm						0.03			0.07			
v/c Ratio	0.44	0.85		0.78	0.61	0.17	0.69	0.76	0.17	0.80	0.74	
Uniform Delay, d1	51.7	50.9		56.8	51.0	47.3	56.5	32.7	24.1	54.2	29.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.94	0.47	0.23	0.53	0.34	
Incremental Delay, d2	1.3	10.3		10.0	1.4	0.3	7.4	1.5	0.4	6.5	1.2	
Delay (s)	52.9	61.2		66.8	52.3	47.6	60.7	16.7	6.0	35.4	11.1	
Level of Service	D	E		E	D	D	E	B	A	D	B	
Approach Delay (s)		59.9			55.0			17.8			14.8	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.6%	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												
Volume (vph)	267	801	113	520	919	209	238	1817	513	321	1881	308
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	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5073		3502	5187	1615	3467	6471	1593	3502	6471	1595
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5073		3502	5187	1615	3467	6471	1593	3502	6471	1595
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)	267	801	113	520	919	209	238	1817	513	321	1881	308
RTOR Reduction (vph)	0	14	0	0	0	145	0	0	0	0	0	0
Lane Group Flow (vph)	267	900	0	520	919	64	238	1817	513	321	1881	308
Confl. Peds. (#/hr)			10			11			5			2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot		Prot	Prot		Free	Prot		Free
Protected Phases	7	4		3	8	8	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	18.5	26.5		23.1	31.1	31.1	12.6	45.1	130.0	15.3	47.8	130.0
Effective Green, g (s)	18.5	26.5		23.1	31.1	31.1	12.6	45.1	130.0	15.3	47.8	130.0
Actuated g/C Ratio	0.14	0.20		0.18	0.24	0.24	0.10	0.35	1.00	0.12	0.37	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	489	1034		622	1241	386	336	2245	1593	412	2379	1595
v/s Ratio Prot	0.08	c0.18		c0.15	0.18	0.04	0.07	0.28		c0.09	c0.29	
v/s Ratio Perm									c0.32			0.19
v/c Ratio	0.55	0.87		0.84	0.74	0.17	0.71	0.81	0.32	0.78	0.79	0.19
Uniform Delay, d1	51.8	50.1		51.6	45.7	39.2	56.9	38.5	0.0	55.7	36.6	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.58	1.00	0.93	0.50	1.00
Incremental Delay, d2	1.2	8.1		9.5	2.4	0.2	3.7	1.8	0.3	6.2	1.9	0.2
Delay (s)	53.1	58.2		61.1	48.1	39.4	60.9	24.2	0.3	58.0	20.3	0.2
Level of Service	D	E		E	D	D	E	C	A	E	C	A
Approach Delay (s)		57.0			51.1			22.8			22.6	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.2%	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												
Volume (vph)	99	425	153	175	626	569	237	1903	93	391	1910	118
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	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.86		0.97	0.91	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3417		1787	3574	1559	1805	6416		3433	5136	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1787	3417		1787	3574	1559	1805	6416		3433	5136	1583
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)	99	425	153	175	626	569	237	1903	93	391	1910	118
RTOR Reduction (vph)	0	29	0	0	0	224	0	5	0	0	0	51
Lane Group Flow (vph)	99	549	0	175	626	345	237	1991	0	391	1910	67
Confl. Peds. (#/hr)			10			7			12			6
Confl. Bikes (#/hr)			2			5			1			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	1%	0%	1%	2%	2%	1%	2%
Turn Type	Prot			Prot		Perm	Prot			Prot		Prot
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases						8						
Actuated Green, G (s)	9.1	29.1		13.0	33.0	33.0	18.1	49.9		18.0	49.8	49.8
Effective Green, g (s)	9.1	29.1		13.0	33.0	33.0	18.1	49.9		18.0	49.8	49.8
Actuated g/C Ratio	0.07	0.22		0.10	0.25	0.25	0.14	0.38		0.14	0.38	0.38
Clearance Time (s)	5.0	5.0		5.0	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)	125	765		179	907	396	251	2463		475	1967	606
v/s Ratio Prot	0.06	c0.16		0.10	0.18		c0.13	0.31		0.11	c0.37	0.04
v/s Ratio Perm						c0.22						
v/c Ratio	0.79	0.72		0.98	0.69	0.87	0.94	0.81		0.82	0.97	0.11
Uniform Delay, d1	59.5	46.7		58.4	43.9	46.5	55.4	35.8		54.5	39.4	25.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.06	0.49		0.50	0.32	0.14
Incremental Delay, d2	28.1	3.2		60.1	2.3	18.5	38.9	2.7		6.8	10.2	0.2
Delay (s)	87.6	49.9		118.4	46.2	65.0	97.4	20.2		34.1	22.6	3.9
Level of Service	F	D		F	D	E	F	C		C	C	A
Approach Delay (s)		55.4			63.2			28.4			23.6	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
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												
Volume (vph)	56	23	10	380	7	539	21	1366	110	241	1861	28
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	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	1.00	0.86		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.85	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1752		1805	1526	1519	1805	6392		1787	5122	
Flt Permitted	0.58	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1111	1752		1805	1526	1519	1805	6392		1787	5122	
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)	56	23	10	380	7	539	21	1366	110	241	1861	28
RTOR Reduction (vph)	0	9	0	0	172	179	0	8	0	0	1	0
Lane Group Flow (vph)	56	24	0	380	99	96	21	1468	0	241	1888	0
Confl. Peds. (#/hr)			2	2			5		8	8		5
Heavy Vehicles (%)	0%	0%	10%	0%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Prot		Prot	Prot			Prot		
Protected Phases		4		3	8	8	5	2		1	6	
Permitted Phases	4											
Actuated Green, G (s)	11.9	11.9		28.6	45.5	45.5	4.2	47.9		21.6	65.3	
Effective Green, g (s)	11.9	11.9		28.6	45.5	45.5	4.2	47.9		21.6	65.3	
Actuated g/C Ratio	0.09	0.09		0.22	0.35	0.35	0.03	0.37		0.17	0.50	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	102	160		397	534	532	58	2355		297	2573	
v/s Ratio Prot		0.01		c0.21	0.07	0.06	0.01	c0.23		0.13	c0.37	
v/s Ratio Perm	c0.05											
v/c Ratio	0.55	0.15		0.96	0.19	0.18	0.36	0.62		0.81	0.73	
Uniform Delay, d1	56.5	54.4		50.1	29.4	29.3	61.6	33.7		52.2	25.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.05	0.31	
Incremental Delay, d2	5.9	0.4		33.8	0.2	0.2	3.8	1.3		5.4	0.6	
Delay (s)	62.4	54.8		83.9	29.5	29.5	65.4	34.9		60.2	8.6	
Level of Service	E	D		F	C	C	E	C		E	A	
Approach Delay (s)		59.6			51.8			35.3			14.4	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	230	959	303	178	1000	220	294	844	64	356	1369
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		5.0	5.0
Lane Util. Factor		0.95	0.91		1.00	0.91		0.97	0.91		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.97		1.00	0.99		1.00	1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1715	4916		1770	4957		3467	5055		3502	5187
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1715	4916		1770	4957		3467	5055		3502	5187
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)	0	230	959	303	178	1000	220	294	844	64	356	1369
RTOR Reduction (vph)	0	0	38	0	0	23	0	0	6	0	0	0
Lane Group Flow (vph)	0	230	1224	0	178	1197	0	294	902	0	356	1369
Confl. Peds. (#/hr)				10			16			15		
Confl. Bikes (#/hr)				4								
Heavy Vehicles (%)	2%	0%	1%	1%	2%	1%	2%	1%	1%	5%	0%	0%
Turn Type	custom	Prot			Prot			Prot			Prot	
Protected Phases		7	4		3	8		5	2		1	6
Permitted Phases	7											
Actuated Green, G (s)		24.2	49.9		18.4	44.1		15.6	42.1		19.6	46.1
Effective Green, g (s)		24.2	49.9		18.4	44.1		15.6	42.1		19.6	46.1
Actuated g/C Ratio		0.16	0.33		0.12	0.29		0.10	0.28		0.13	0.31
Clearance Time (s)		5.0	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
Lane Grp Cap (vph)		277	1635		217	1457		361	1419		458	1594
v/s Ratio Prot		c0.13	0.25		0.10	c0.24		c0.08	0.18		0.10	c0.26
v/s Ratio Perm												
v/c Ratio		0.83	0.75		0.82	0.82		0.81	0.64		0.78	0.86
Uniform Delay, d1		60.9	44.5		64.2	49.3		65.8	47.2		63.1	48.9
Progression Factor		1.00	1.00		1.51	0.90		1.00	1.00		1.00	1.00
Incremental Delay, d2		18.6	3.2		13.4	3.2		13.2	0.9		8.1	4.9
Delay (s)		79.5	47.7		110.2	47.4		78.9	48.2		71.2	53.7
Level of Service		E	D		F	D		E	D		E	D
Approach Delay (s)			52.6			55.4			55.7			54.3
Approach LOS			D			E			E			D

Intersection Summary			
HCM Average Control Delay	54.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	411
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1563
Flt Permitted	1.00
Satd. Flow (perm)	1563
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	411
RTOR Reduction (vph)	214
Lane Group Flow (vph)	197
Confl. Peds. (#/hr)	7
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	1%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	46.1
Effective Green, g (s)	46.1
Actuated g/C Ratio	0.31
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	480
v/s Ratio Prot	
v/s Ratio Perm	0.13
v/c Ratio	0.41
Uniform Delay, d1	41.2
Progression Factor	1.00
Incremental Delay, d2	0.6
Delay (s)	41.7
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1	1	72	0	358	1	1076	125	404	1086	0
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		5.0	5.0	
Lane Util. Factor		1.00		1.00	0.95	0.95	1.00	0.95		0.97	0.95	
Frpb, ped/bikes		1.00		1.00	0.99	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.85	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1776		1785	1468	1468	1805	3384		3467	3574	
Flt Permitted		0.90		0.76	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1626		1420	1468	1468	1805	3384		3467	3574	
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)	1	1	1	72	0	358	1	1076	125	404	1086	0
RTOR Reduction (vph)	0	1	0	0	156	156	0	7	0	0	0	0
Lane Group Flow (vph)	0	2	0	72	23	23	1	1194	0	404	1086	0
Confl. Peds. (#/hr)	2		1	1		2						
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	3%	0%	5%	3%	1%	1%	0%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		10.8		10.8	10.8	10.8	0.8	42.2		15.7	57.1	
Effective Green, g (s)		10.8		10.8	10.8	10.8	0.8	42.2		15.7	57.1	
Actuated g/C Ratio		0.13		0.13	0.13	0.13	0.01	0.50		0.19	0.68	
Clearance Time (s)		5.0		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	
Lane Grp Cap (vph)		210		183	189	189	17	1706		650	2438	
v/s Ratio Prot					0.02		0.00	c0.35		c0.12	0.30	
v/s Ratio Perm		0.00		c0.05		0.02						
v/c Ratio		0.01		0.39	0.12	0.12	0.06	0.70		0.62	0.45	
Uniform Delay, d1		31.8		33.4	32.3	32.3	41.1	15.9		31.3	6.1	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0		1.4	0.3	0.3	1.5	1.3		1.9	0.1	
Delay (s)		31.8		34.8	32.5	32.5	42.5	17.2		33.1	6.2	
Level of Service		C		C	C	C	D	B		C	A	
Approach Delay (s)		31.8			32.9			17.2			13.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	83.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	80.8%	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												
Volume (vph)	167	437	17	221	342	82	19	824	208	126	1077	275
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1626	3369		1787	1900	1563	1805	3539	1568	1770	3574	1615
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1626	3369		1787	1900	1563	1805	3539	1568	1770	3574	1615
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)	167	437	17	221	342	82	19	824	208	126	1077	275
RTOR Reduction (vph)	0	2	0	0	0	52	0	0	58	0	0	167
Lane Group Flow (vph)	150	469	0	221	342	30	19	824	150	126	1077	108
Confl. Peds. (#/hr)						1						
Heavy Vehicles (%)	1%	2%	0%	1%	0%	2%	0%	2%	3%	2%	1%	0%
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	23.2	23.2		26.7	26.7	26.7	2.4	37.2	37.2	12.2	47.0	47.0
Effective Green, g (s)	23.2	23.2		26.7	26.7	26.7	2.4	37.2	37.2	12.2	47.0	47.0
Actuated g/C Ratio	0.19	0.19		0.22	0.22	0.22	0.02	0.31	0.31	0.10	0.39	0.39
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	316	655		400	425	350	36	1104	489	181	1408	636
v/s Ratio Prot	0.09	c0.14		0.12	c0.18		0.01	0.23		c0.07	c0.30	
v/s Ratio Perm						0.02			0.10			0.07
v/c Ratio	0.47	0.72		0.55	0.80	0.09	0.53	0.75	0.31	0.70	0.76	0.17
Uniform Delay, d1	42.6	45.0		41.0	43.8	36.6	57.9	36.8	31.2	51.8	31.4	23.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	3.7		1.7	10.6	0.1	13.3	2.8	0.4	11.0	2.5	0.1
Delay (s)	43.8	48.7		42.7	54.4	36.7	71.1	39.6	31.6	62.8	33.9	23.6
Level of Service	D	D		D	D	D	E	D	C	E	C	C
Approach Delay (s)		47.5			48.1			38.6			34.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	119.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.3%	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												
Volume (vph)	52	1024	71	71	988	11	190	20	176	50	21	165
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1736	3529		1805	3561		1715	1520	1555	1770	1493	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (perm)	1736	3529		1805	3561		1715	1520	1555	1770	1493	
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)	52	1024	71	71	988	11	190	20	176	50	21	165
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	119	0	149	0
Lane Group Flow (vph)	52	1092	0	71	998	0	104	106	57	50	37	0
Confl. Peds. (#/hr)			3			2			25			
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	1%	3%	0%	1%	18%	0%	75%	0%	2%	76%	2%
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	9.3	41.9		7.5	40.1		19.7	19.7	19.7	9.8	9.8	
Effective Green, g (s)	9.3	41.9		7.5	40.1		19.7	19.7	19.7	9.8	9.8	
Actuated g/C Ratio	0.09	0.42		0.08	0.41		0.20	0.20	0.20	0.10	0.10	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	163	1495		137	1444		342	303	310	175	148	
v/s Ratio Prot	0.03	c0.31		0.04	c0.28		0.06	c0.07		c0.03	0.03	
v/s Ratio Perm									0.04			
v/c Ratio	0.32	0.73		0.52	0.69		0.30	0.35	0.18	0.29	0.25	
Uniform Delay, d1	41.8	23.8		44.0	24.3		33.8	34.1	32.9	41.3	41.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.1	1.9		3.3	1.4		0.5	0.7	0.3	0.9	0.9	
Delay (s)	43.0	25.6		47.2	25.7		34.3	34.8	33.2	42.2	42.1	
Level of Service	D	C		D	C		C	C	C	D	D	
Approach Delay (s)		26.4			27.2			33.9			42.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	98.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	78.7%	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												
Volume (vph)	1	1322	59	41	803	8	88	7	92	20	5	16
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1801	3545		1770	3568		1633	1661	1578	1715	1751	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1801	3545		1770	3568		1633	1661	1578	1715	1751	1615
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)	1	1322	59	41	803	8	88	7	92	20	5	16
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	79	0	0	15
Lane Group Flow (vph)	1	1379	0	41	811	0	48	47	13	12	13	1
Confl. Peds. (#/hr)	5		5	5		5			1			
Confl. Bikes (#/hr)			4			1						
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	5%	0%	1%	0%	0%	0%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	0.5	43.3		2.4	45.2		11.1	11.1	11.1	3.2	3.2	3.2
Effective Green, g (s)	0.5	43.3		2.4	45.2		11.1	11.1	11.1	3.2	3.2	3.2
Actuated g/C Ratio	0.01	0.54		0.03	0.57		0.14	0.14	0.14	0.04	0.04	0.04
Clearance Time (s)	5.0	5.0		5.0	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)	11	1919		53	2016		227	230	219	69	70	65
v/s Ratio Prot	0.00	c0.39		c0.02	0.23		c0.03	0.03		0.01	c0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.09	0.72		0.77	0.40		0.21	0.20	0.06	0.17	0.19	0.01
Uniform Delay, d1	39.5	13.8		38.5	9.8		30.6	30.5	29.9	37.1	37.1	36.9
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	3.6	1.3		49.7	0.1		0.5	0.4	0.1	1.2	1.3	0.1
Delay (s)	43.1	15.1		88.3	9.9		31.0	31.0	30.0	38.3	38.4	36.9
Level of Service	D	B		F	A		C	C	C	D	D	D
Approach Delay (s)		15.1			13.7			30.5			37.8	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	24	809	700	49	56	52
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	809	700	49	56	52
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1310			
pX, platoon unblocked						
vC, conflicting volume	751				1179	376
vC1, stage 1 conf vol					726	
vC2, stage 2 conf vol					452	
vCu, unblocked vol	751				1179	376
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				85	92
cM capacity (veh/h)	840				383	626

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	24	404	404	467	282	56	52
Volume Left	24	0	0	0	0	56	0
Volume Right	0	0	0	0	49	0	52
cSH	840	1700	1700	1700	1700	383	626
Volume to Capacity	0.03	0.24	0.24	0.27	0.17	0.15	0.08
Queue Length 95th (ft)	2	0	0	0	0	13	7
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	16.0	11.3
Lane LOS	A					C	B
Approach Delay (s)	0.3			0.0		13.7	
Approach LOS						B	

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	700	11	41	447	336	16	8	57	336	10	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	0.87		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	3610	1575	1805	3610	1578	1805	1650		1805	1900	1592
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3610	1575	1805	3610	1578	1805	1650		1805	1900	1592
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)	69	700	11	41	447	336	16	8	57	336	10	132
RTOR Reduction (vph)	0	0	7	0	0	232	0	53	0	0	0	99
Lane Group Flow (vph)	69	700	4	41	447	104	16	12	0	336	10	33
Confl. Peds. (#/hr)			3			2						2
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	4.3	25.7	25.7	2.0	23.4	23.4	5.1	5.1		19.0	19.0	19.0
Effective Green, g (s)	4.3	25.7	25.7	2.0	23.4	23.4	5.1	5.1		19.0	19.0	19.0
Actuated g/C Ratio	0.06	0.34	0.34	0.03	0.31	0.31	0.07	0.07		0.25	0.25	0.25
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
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)	102	1224	534	48	1114	487	121	111		452	476	399
v/s Ratio Prot	c0.04	c0.19		0.02	0.12		c0.01	0.01		c0.19	0.01	
v/s Ratio Perm			0.00			0.07						0.02
v/c Ratio	0.68	0.57	0.01	0.85	0.40	0.21	0.13	0.11		0.74	0.02	0.08
Uniform Delay, d1	35.1	20.5	16.6	36.8	20.7	19.4	33.3	33.2		26.2	21.4	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.3	0.7	0.0	76.9	0.2	0.2	0.5	0.4		6.5	0.0	0.1
Delay (s)	51.4	21.2	16.6	113.6	20.9	19.6	33.8	33.6		32.7	21.4	21.8
Level of Service	D	C	B	F	C	B	C	C		C	C	C
Approach Delay (s)		23.8			25.0			33.7			29.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.0%	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												
Volume (vph)	96	922	105	187	1005	96	170	1259	180	186	1501	140
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3502	3574	1572	3502	5187	1555	3502	4969		3467	5057	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3502	3574	1572	3502	5187	1555	3502	4969		3467	5057	
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)	96	922	105	187	1005	96	170	1259	180	186	1501	140
RTOR Reduction (vph)	0	0	33	0	0	44	0	16	0	0	9	0
Lane Group Flow (vph)	96	922	72	187	1005	52	170	1423	0	186	1632	0
Confl. Peds. (#/hr)			12			6			10			18
Confl. Bikes (#/hr)			5			1			2			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	0%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	6.9	34.5	34.5	8.9	36.5	36.5	8.0	43.0		8.9	43.9	
Effective Green, g (s)	6.9	34.5	34.5	8.9	36.5	36.5	8.0	43.0		8.9	43.9	
Actuated g/C Ratio	0.06	0.30	0.30	0.08	0.32	0.32	0.07	0.37		0.08	0.38	
Clearance Time (s)	5.0	5.0	5.0	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)	210	1069	470	270	1642	492	243	1853		268	1925	
v/s Ratio Prot	0.03	c0.26		c0.05	0.19		0.05	0.29		c0.05	c0.32	
v/s Ratio Perm			0.05			0.03						
v/c Ratio	0.46	0.86	0.15	0.69	0.61	0.10	0.70	0.77		0.69	0.85	
Uniform Delay, d1	52.4	38.2	29.7	51.9	33.4	27.9	52.5	31.8		51.9	32.6	
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	1.6	7.3	0.2	7.5	0.7	0.1	8.5	2.0		7.6	3.7	
Delay (s)	54.0	45.5	29.8	59.3	34.1	27.9	61.0	33.7		59.4	36.3	
Level of Service	D	D	C	E	C	C	E	C		E	D	
Approach Delay (s)		44.7			37.3			36.6			38.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	115.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.4%	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												
Volume (vph)	119	1132	93	339	985	151	120	1308	295	295	1346	133
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	5068		3467	3574	1561	3502	5085	1542	3467	5059	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	5068		3467	3574	1561	3502	5085	1542	3467	5059	
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)	119	1132	93	339	985	151	120	1308	295	295	1346	133
RTOR Reduction (vph)	0	8	0	0	0	44	0	0	111	0	10	0
Lane Group Flow (vph)	119	1217	0	339	985	107	120	1308	184	295	1469	0
Confl. Peds. (#/hr)			12			2			13			13
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	0%	2%	2%	1%	1%	0%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	7.0	32.9		14.4	40.3	40.3	7.0	36.5	36.5	12.6	42.1	
Effective Green, g (s)	7.0	32.9		14.4	40.3	40.3	7.0	36.5	36.5	12.6	42.1	
Actuated g/C Ratio	0.06	0.28		0.12	0.35	0.35	0.06	0.31	0.31	0.11	0.36	
Clearance Time (s)	5.0	5.0		5.0	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)	208	1432		429	1237	540	211	1595	484	375	1830	
v/s Ratio Prot	0.03	0.24		c0.10	c0.28		0.03	0.26		c0.09	c0.29	
v/s Ratio Perm						0.07			0.12			
v/c Ratio	0.57	0.85		0.79	0.80	0.20	0.57	0.82	0.38	0.79	0.80	
Uniform Delay, d1	53.2	39.4		49.5	34.3	26.7	53.2	36.9	31.1	50.6	33.4	
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	3.8	4.9		9.6	3.6	0.2	3.5	3.5	0.5	10.4	2.6	
Delay (s)	57.0	44.4		59.1	38.0	26.9	56.7	40.4	31.6	61.0	36.1	
Level of Service	E	D		E	D	C	E	D	C	E	D	
Approach Delay (s)		45.5			41.7			40.1			40.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	116.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.0%	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												
Volume (vph)	177	1158	262	448	1129	214	261	1342	572	373	1242	185
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1559	3433	6471	1568	3467	6408	1525	3467	5136	1566
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1559	3433	6471	1568	3467	6408	1525	3467	5136	1566
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)	177	1158	262	448	1129	214	261	1342	572	373	1242	185
RTOR Reduction (vph)	0	0	55	0	0	97	0	0	188	0	0	121
Lane Group Flow (vph)	177	1158	207	448	1129	117	261	1342	384	373	1242	64
Confl. Peds. (#/hr)			12			7			23			8
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%	1%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.4	39.5	39.5	23.2	50.3	50.3	16.2	49.2	49.2	19.7	52.7	52.7
Effective Green, g (s)	12.4	39.5	39.5	23.2	50.3	50.3	16.2	49.2	49.2	19.7	52.7	52.7
Actuated g/C Ratio	0.08	0.26	0.26	0.15	0.33	0.33	0.11	0.32	0.32	0.13	0.35	0.35
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	284	1338	406	525	2147	520	370	2080	495	451	1785	544
v/s Ratio Prot	0.05	c0.23		c0.13	0.17		0.08	0.21		c0.11	c0.24	
v/s Ratio Perm			0.13			0.07			c0.25			0.04
v/c Ratio	0.62	0.87	0.51	0.85	0.53	0.23	0.71	0.65	0.78	0.83	0.70	0.12
Uniform Delay, d1	67.3	53.5	47.8	62.5	41.0	36.6	65.4	43.7	46.2	64.3	42.6	33.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.2	6.1	1.0	12.7	0.2	0.2	6.0	0.7	7.5	11.8	1.2	0.1
Delay (s)	71.6	59.6	48.8	75.3	41.2	36.8	71.4	44.4	53.7	76.1	43.8	33.7
Level of Service	E	E	D	E	D	D	E	D	D	E	D	C
Approach Delay (s)		59.2			49.2			50.1			49.4	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	151.6	Sum of lost time (s)	25.0
Intersection Capacity Utilization	103.9%	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												
Volume (vph)	460	822	95	378	572	183	65	1475	671	153	1393	298
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
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)	460	822	95	378	572	183	65	1475	671	153	1393	298
RTOR Reduction (vph)	0	0	5	0	0	5	0	0	27	0	0	73
Lane Group Flow (vph)	460	822	90	378	572	178	65	1475	644	153	1393	225
Confl. Peds. (#/hr)			24			2			14			9
Confl. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	1%	1%	1%	0%	1%	1%	0%	1%	1%	1%	1%	2%
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	20.7	36.7	55.2	18.1	34.1	48.3	13.5	43.8	66.9	14.2	44.5	65.2
Effective Green, g (s)	20.7	36.7	55.2	18.1	34.1	48.3	13.5	43.8	66.9	14.2	44.5	65.2
Actuated g/C Ratio	0.16	0.28	0.42	0.14	0.26	0.36	0.10	0.33	0.50	0.11	0.34	0.49
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	540	988	665	477	918	582	183	1694	806	191	1721	777
v/s Ratio Prot	0.13	c0.23	0.06	0.11	0.16	0.11	0.04	c0.29	c0.40	c0.09	0.27	0.14
v/s Ratio Perm												
v/c Ratio	0.85	0.83	0.14	0.79	0.62	0.31	0.36	0.87	0.80	0.80	0.81	0.29
Uniform Delay, d1	54.6	45.2	24.0	55.5	43.7	30.2	55.6	41.8	27.4	57.9	40.3	20.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.3	6.1	0.1	8.8	1.3	0.3	1.2	5.2	5.6	20.9	2.9	0.2
Delay (s)	66.9	51.2	24.1	64.3	45.0	30.5	56.8	47.0	32.9	78.8	43.2	20.3
Level of Service	E	D	C	E	D	C	E	D	C	E	D	C
Approach Delay (s)		54.6			49.1			43.0			42.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	132.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	360	81	43	1736	1569	402
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1578	1770	5136	5136	1544
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1578	1770	5136	5136	1544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	360	81	43	1736	1569	402
RTOR Reduction (vph)	0	61	0	0	0	130
Lane Group Flow (vph)	360	20	43	1736	1569	272
Confl. Peds. (#/hr)		1				6
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	29.5	29.5	7.2	80.5	68.3	68.3
Effective Green, g (s)	29.5	29.5	7.2	80.5	68.3	68.3
Actuated g/C Ratio	0.25	0.25	0.06	0.67	0.57	0.57
Clearance Time (s)	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
Lane Grp Cap (vph)	444	388	106	3445	2923	879
v/s Ratio Prot	c0.20		0.02	c0.34	c0.31	
v/s Ratio Perm		0.01				0.18
v/c Ratio	0.81	0.05	0.41	0.50	0.54	0.31
Uniform Delay, d1	42.6	34.6	54.3	9.8	16.0	13.5
Progression Factor	1.00	1.00	0.83	1.52	1.00	1.00
Incremental Delay, d2	10.7	0.1	2.0	0.4	0.7	0.9
Delay (s)	53.4	34.6	47.4	15.4	16.7	14.4
Level of Service	D	C	D	B	B	B
Approach Delay (s)	49.9			16.2	16.3	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	64.0%	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												
Volume (vph)	527	45	502	61	35	58	364	1132	18	31	1286	273
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	5.0	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	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	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1579	1715	1780	1583	3467	5120		1752	5136	1567
Flt Permitted	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	1900	1579	1715	1780	1583	3467	5120		1752	5136	1567
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)	527	45	502	61	35	58	364	1132	18	31	1286	273
RTOR Reduction (vph)	0	0	290	0	0	54	0	1	0	0	0	129
Lane Group Flow (vph)	527	45	212	47	49	4	364	1149	0	31	1286	144
Confl. Peds. (#/hr)			8	8					15			5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	1%	1%	0%	3%	1%	1%
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	37.2	37.2	37.2	7.6	7.6	7.6	15.6	50.0		5.2	39.6	39.6
Effective Green, g (s)	37.2	37.2	37.2	7.6	7.6	7.6	15.6	50.0		5.2	39.6	39.6
Actuated g/C Ratio	0.31	0.31	0.31	0.06	0.06	0.06	0.13	0.42		0.04	0.33	0.33
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	560	589	489	109	113	100	451	2133		76	1695	517
v/s Ratio Prot	c0.29	0.02		0.03	c0.03		c0.10	0.22		0.02	c0.25	
v/s Ratio Perm			0.13			0.00						0.09
v/c Ratio	0.94	0.08	0.43	0.43	0.43	0.04	0.81	0.54		0.41	0.76	0.28
Uniform Delay, d1	40.3	29.3	33.0	54.1	54.1	52.8	50.7	26.3		55.9	35.9	29.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.42		0.85	0.66	0.82
Incremental Delay, d2	24.2	0.1	0.6	2.7	2.7	0.2	8.2	0.8		3.1	2.8	1.2
Delay (s)	64.6	29.3	33.6	56.8	56.8	52.9	42.9	11.9		50.6	26.6	25.6
Level of Service	E	C	C	E	E	D	D	B		D	C	C
Approach Delay (s)		48.6			55.3			19.3			26.9	
Approach LOS		D			E			B			C	

Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.6%	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												
Volume (vph)	347	124	41	83	58	114	28	1095	28	240	1403	113
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	5.0		5.0	5.0	
Lane Util. Factor	0.95	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1707		1805	1900	1552	1805	5114		1805	5060	
Flt Permitted	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1698	1707		1805	1900	1552	1805	5114		1805	5060	
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)	347	124	41	83	58	114	28	1095	28	240	1403	113
RTOR Reduction (vph)	0	6	0	0	0	101	0	2	0	0	6	0
Lane Group Flow (vph)	257	249	0	83	58	13	28	1121	0	240	1510	0
Confl. Peds. (#/hr)			2			3			2			6
Confl. Bikes (#/hr)						2						1
Heavy Vehicles (%)	1%	0%	5%	0%	0%	2%	0%	1%	0%	0%	1%	2%
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	23.4	23.4		13.7	13.7	13.7	4.2	41.0		21.9	58.7	
Effective Green, g (s)	23.4	23.4		13.7	13.7	13.7	4.2	41.0		21.9	58.7	
Actuated g/C Ratio	0.19	0.19		0.11	0.11	0.11	0.04	0.34		0.18	0.49	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	331	333		206	217	177	63	1747		329	2475	
v/s Ratio Prot	c0.15	0.15		c0.05	0.03		0.02	c0.22		c0.13	0.30	
v/s Ratio Perm						0.01						
v/c Ratio	0.78	0.75		0.40	0.27	0.07	0.44	0.64		0.73	0.61	
Uniform Delay, d1	45.8	45.5		49.4	48.6	47.5	56.8	33.3		46.3	22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.33	0.30	
Incremental Delay, d2	10.9	8.8		1.3	0.7	0.2	4.9	1.8		5.9	0.8	
Delay (s)	56.7	54.3		50.6	49.2	47.7	61.7	35.1		67.4	7.5	
Level of Service	E	D		D	D	D	E	D		E	A	
Approach Delay (s)		55.5			49.0			35.8			15.7	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.0%	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												
Volume (vph)	194	1254	44	383	1269	301	72	601	355	338	919	108
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	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.95		0.97	0.91		1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3519		3433	4944		1787	5136	1529	1805	5075	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	3519		3433	4944		1787	5136	1529	1805	5075	
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)	194	1254	44	383	1269	301	72	601	355	338	919	108
RTOR Reduction (vph)	0	2	0	0	27	0	0	0	193	0	10	0
Lane Group Flow (vph)	194	1296	0	383	1543	0	72	601	162	338	1017	0
Confl. Peds. (#/hr)			7			24			15			10
Heavy Vehicles (%)	1%	2%	2%	2%	1%	1%	1%	1%	2%	0%	0%	3%
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	17.1	55.2		18.2	56.3		10.4	25.5	25.5	31.1	46.2	
Effective Green, g (s)	17.1	55.2		18.2	56.3		10.4	25.5	25.5	31.1	46.2	
Actuated g/C Ratio	0.11	0.37		0.12	0.38		0.07	0.17	0.17	0.21	0.31	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	395	1295		417	1856		124	873	260	374	1563	
v/s Ratio Prot	0.06	c0.37		0.11	c0.31		0.04	c0.12		c0.19	0.20	
v/s Ratio Perm									0.11			
v/c Ratio	0.49	1.00		0.92	0.83		0.58	0.69	0.62	0.90	0.65	
Uniform Delay, d1	62.4	47.4		65.2	42.5		67.7	58.5	57.8	58.0	44.9	
Progression Factor	0.78	0.72		0.96	0.40		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	21.7		17.9	3.0		6.8	2.3	4.6	24.3	1.0	
Delay (s)	49.1	55.9		80.7	20.0		74.4	60.8	62.3	82.3	45.9	
Level of Service	D	E		F	B		E	E	E	F	D	
Approach Delay (s)		55.0			31.9			62.3			54.9	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
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												
Volume (vph)	163	287	114	40	152	154	134	756	59	273	1038	113
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	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	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1900	1592	1671	1881	1574	1787	5067		1805	5099	
Flt Permitted	0.66	1.00	1.00	0.43	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1255	1900	1592	754	1881	1574	1787	5067		1805	5099	
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)	163	287	114	40	152	154	134	756	59	273	1038	113
RTOR Reduction (vph)	0	0	84	0	0	114	0	7	0	0	11	0
Lane Group Flow (vph)	163	287	30	40	152	40	134	808	0	273	1140	0
Confl. Peds. (#/hr)			3			5	2		4	4		2
Heavy Vehicles (%)	0%	0%	0%	8%	1%	1%	1%	1%	2%	0%	0%	0%
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	18.3	18.3	18.3	18.3	18.3	18.3	11.6	19.7		17.3	25.4	
Effective Green, g (s)	18.3	18.3	18.3	18.3	18.3	18.3	11.6	19.7		17.3	25.4	
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.17	0.28		0.25	0.36	
Clearance Time (s)	5.0	5.0	5.0	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)	327	495	414	196	490	410	295	1420		444	1842	
v/s Ratio Prot		c0.15			0.08		0.07	0.16		c0.15	c0.22	
v/s Ratio Perm	0.13		0.02	0.05		0.03						
v/c Ratio	0.50	0.58	0.07	0.20	0.31	0.10	0.45	0.57		0.61	0.62	
Uniform Delay, d1	22.1	22.7	19.6	20.3	20.9	19.7	26.5	21.7		23.5	18.5	
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	1.2	1.7	0.1	0.5	0.4	0.1	1.1	0.5		2.5	0.6	
Delay (s)	23.3	24.3	19.7	20.8	21.3	19.8	27.6	22.2		26.1	19.1	
Level of Service	C	C	B	C	C	B	C	C		C	B	
Approach Delay (s)		23.1			20.6			23.0			20.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	70.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.0%	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												
Volume (vph)	284	466	41	556	382	68	47	612	390	131	823	207
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	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3423		3502	3514		1770	3574	1583	1805	3574	1563
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3423		3502	3514		1770	3574	1583	1805	3574	1563
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)	284	466	41	556	382	68	47	612	390	131	823	207
RTOR Reduction (vph)	0	6	0	0	13	0	0	0	216	0	0	137
Lane Group Flow (vph)	284	501	0	556	437	0	47	612	174	131	823	70
Confl. Peds. (#/hr)			1			5						2
Heavy Vehicles (%)	1%	4%	5%	0%	0%	1%	2%	1%	2%	0%	1%	1%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	12.8	21.3		19.5	28.0		4.4	28.7	28.7	9.2	33.5	33.5
Effective Green, g (s)	12.8	21.3		19.5	28.0		4.4	28.7	28.7	9.2	33.5	33.5
Actuated g/C Ratio	0.13	0.22		0.20	0.28		0.04	0.29	0.29	0.09	0.34	0.34
Clearance Time (s)	5.0	5.0		5.0	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)	450	739		692	997		79	1039	460	168	1213	531
v/s Ratio Prot	0.08	c0.15		c0.16	0.12		0.03	0.17		c0.07	c0.23	
v/s Ratio Perm									0.11			0.04
v/c Ratio	0.63	0.68		0.80	0.44		0.59	0.59	0.38	0.78	0.68	0.13
Uniform Delay, d1	40.7	35.5		37.8	28.9		46.3	30.0	27.9	43.8	28.0	22.5
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	2.9	2.5		6.7	0.3		11.5	0.9	0.5	20.1	1.5	0.1
Delay (s)	43.6	38.0		44.5	29.2		57.7	30.8	28.4	63.9	29.5	22.7
Level of Service	D	D		D	C		E	C	C	E	C	C
Approach Delay (s)		40.0			37.7			31.1			32.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	98.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.8%	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												
Volume (vph)	60	1423	163	60	977	65	147	58	53	82	169	78
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			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96		1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99			1.00	
Frt	1.00	0.98		1.00	1.00	0.85		0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1801	3492		1752	3574	1557		1771			1782	
Flt Permitted	0.25	1.00		0.09	1.00	1.00		0.52			0.84	
Satd. Flow (perm)	467	3492		170	3574	1557		955			1525	
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)	60	1423	163	60	977	65	147	58	53	82	169	78
RTOR Reduction (vph)	0	7	0	0	0	23	0	8	0	0	9	0
Lane Group Flow (vph)	60	1579	0	60	977	42	0	250	0	0	320	0
Confl. Peds. (#/hr)	4		17	17		4	18		10	10		18
Confl. Bikes (#/hr)			3			6						
Heavy Vehicles (%)	0%	1%	1%	3%	1%	0%	0%	0%	2%	0%	2%	0%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	76.8	76.8		76.8	76.8	76.8		33.2			33.2	
Effective Green, g (s)	76.8	76.8		76.8	76.8	76.8		33.2			33.2	
Actuated g/C Ratio	0.64	0.64		0.64	0.64	0.64		0.28			0.28	
Clearance Time (s)	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	
Lane Grp Cap (vph)	299	2235		109	2287	996		264			422	
v/s Ratio Prot		c0.45			0.27							
v/s Ratio Perm	0.13			0.35		0.03		c0.26			0.21	
v/c Ratio	0.20	0.71		0.55	0.43	0.04		0.95			0.76	
Uniform Delay, d1	8.9	14.2		12.0	10.7	8.0		42.5			39.7	
Progression Factor	1.00	1.00		1.01	0.61	1.19		1.00			1.00	
Incremental Delay, d2	1.5	1.9		14.8	0.5	0.1		40.7			7.6	
Delay (s)	10.4	16.1		27.0	7.0	9.6		83.3			47.3	
Level of Service	B	B		C	A	A		F			D	
Approach Delay (s)		15.9			8.2			83.3			47.3	
Approach LOS		B			A			F			D	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.0%	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												
Volume (vph)	153	1680	162	203	1528	73	170	285	202	57	334	152
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	5060		1805	5093		1752	1881	1599	1805	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	5060		1805	5093		1752	1881	1599	1805	1900	1615
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)	153	1680	162	203	1528	73	170	285	202	57	334	152
RTOR Reduction (vph)	0	11	0	0	5	0	0	0	49	0	0	12
Lane Group Flow (vph)	153	1831	0	203	1596	0	170	285	153	57	334	140
Confl. Peds. (#/hr)			5			7			5			17
Confl. Bikes (#/hr)									2			5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	3%	1%	1%	0%	0%	0%
Turn Type	Prot			Prot			Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4		3	8		5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	9.0	32.1		11.0	34.1		9.0	25.9	41.9	6.1	23.0	37.0
Effective Green, g (s)	9.0	32.1		11.0	34.1		9.0	25.9	41.9	6.1	23.0	37.0
Actuated g/C Ratio	0.09	0.34		0.12	0.36		0.09	0.27	0.44	0.06	0.24	0.39
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	171	1708		209	1826		166	512	705	116	460	628
v/s Ratio Prot	0.08	c0.36		c0.11	0.31		c0.10	c0.15	0.10	0.03	c0.18	0.09
v/s Ratio Perm												
v/c Ratio	0.89	1.07		0.97	0.87		1.02	0.56	0.22	0.49	0.73	0.22
Uniform Delay, d1	42.6	31.5		41.9	28.5		43.0	29.7	16.5	43.0	33.2	19.4
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	40.0	43.9		53.8	5.0		76.3	1.3	0.2	3.3	5.6	0.2
Delay (s)	82.6	75.4		95.6	33.5		119.4	31.0	16.6	46.3	38.8	19.6
Level of Service	F	E		F	C		F	C	B	D	D	B
Approach Delay (s)		76.0			40.5			49.4			34.2	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM Average Control Delay	55.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	95.1	Sum of lost time (s)	25.0
Intersection Capacity Utilization	93.5%	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												
Volume (vph)	64	1259	155	111	876	77	147	279	145	129	366	104
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3531		1805	3512		1787	1881	1574	1805	1881	1554
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3531		1805	3512		1787	1881	1574	1805	1881	1554
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)	64	1259	155	111	876	77	147	279	145	129	366	104
RTOR Reduction (vph)	0	7	0	0	5	0	0	0	114	0	0	45
Lane Group Flow (vph)	64	1407	0	111	948	0	147	279	31	129	366	59
Confl. Peds. (#/hr)			12			11			12			24
Confl. Bikes (#/hr)			3			2			1			2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	3%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.0	50.9		9.0	52.9		10.0	25.8	25.8	14.3	30.1	30.1
Effective Green, g (s)	7.0	50.9		9.0	52.9		10.0	25.8	25.8	14.3	30.1	30.1
Actuated g/C Ratio	0.06	0.42		0.08	0.44		0.08	0.22	0.22	0.12	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	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)	105	1498		135	1548		149	404	338	215	472	390
v/s Ratio Prot	0.04	c0.40		c0.06	0.27		c0.08	0.15		0.07	c0.19	
v/s Ratio Perm									0.02			0.04
v/c Ratio	0.61	0.94		0.82	0.61		0.99	0.69	0.09	0.60	0.78	0.15
Uniform Delay, d1	55.2	33.1		54.7	25.7		54.9	43.4	37.7	50.1	41.8	35.0
Progression Factor	0.99	0.79		0.84	0.78		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.7	9.5		28.3	1.6		69.1	5.0	0.1	4.5	7.8	0.2
Delay (s)	61.2	35.6		74.3	21.7		124.0	48.4	37.8	54.6	49.6	35.2
Level of Service	E	D		E	C		F	D	D	D	D	D
Approach Delay (s)		36.7			27.2			65.2			48.2	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	95.6%	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												
Volume (vph)	130	1811	273	86	1768	113	191	217	80	207	277	149
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4970		1805	5077		1787	3371		1787	3364	
Flt Permitted	0.95	1.00		0.95	1.00		0.24	1.00		0.40	1.00	
Satd. Flow (perm)	1770	4970		1805	5077		451	3371		751	3364	
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)	130	1811	273	86	1768	113	191	217	80	207	277	149
RTOR Reduction (vph)	0	12	0	0	5	0	0	26	0	0	49	0
Lane Group Flow (vph)	130	2072	0	86	1876	0	191	271	0	207	377	0
Confl. Peds. (#/hr)			15			19			36			15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	0%	0%	1%	0%	1%	1%	0%	1%	0%	1%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)	16.9	78.5		10.9	72.5		40.3	24.0		40.9	24.3	
Effective Green, g (s)	16.9	78.5		10.9	72.5		40.3	24.0		40.9	24.3	
Actuated g/C Ratio	0.11	0.52		0.07	0.48		0.27	0.16		0.27	0.16	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	199	2601		131	2454		266	539		319	545	
v/s Ratio Prot	c0.07	c0.42		0.05	0.37		c0.08	0.08		0.07	0.11	
v/s Ratio Perm							c0.11			0.10		
v/c Ratio	0.65	0.80		0.66	0.76		0.72	0.50		0.65	0.69	
Uniform Delay, d1	63.7	29.2		67.7	31.8		45.6	57.5		45.1	59.3	
Progression Factor	0.83	0.54		1.06	0.67		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	1.4		9.6	2.0		8.9	0.7		4.5	3.8	
Delay (s)	56.9	17.2		81.7	23.3		54.5	58.3		49.6	63.1	
Level of Service	E	B		F	C		D	E		D	E	
Approach Delay (s)		19.5			25.8			56.8			58.7	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	92.1%	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												
Volume (vph)	52	1362	91	90	1038	65	51	72	74	91	182	67
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		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3529		1805	3505		1798	1730		1781	1800	
Flt Permitted	0.95	1.00		0.95	1.00		0.33	1.00		0.56	1.00	
Satd. Flow (perm)	1805	3529		1805	3505		615	1730		1051	1800	
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)	52	1362	91	90	1038	65	51	72	74	91	182	67
RTOR Reduction (vph)	0	3	0	0	3	0	0	34	0	0	12	0
Lane Group Flow (vph)	52	1450	0	90	1100	0	51	112	0	91	237	0
Confl. Peds. (#/hr)			17			4	6		15	15		6
Confl. Bikes (#/hr)			5			3						
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	3%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	14.2	71.8		10.3	67.9		22.9	22.9		22.9	22.9	
Effective Green, g (s)	14.2	71.8		10.3	67.9		22.9	22.9		22.9	22.9	
Actuated g/C Ratio	0.12	0.60		0.09	0.57		0.19	0.19		0.19	0.19	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	214	2112		155	1983		117	330		201	344	
v/s Ratio Prot	0.03	c0.41		0.05	c0.31			0.06			c0.13	
v/s Ratio Perm							0.08			0.09		
v/c Ratio	0.24	0.69		0.58	0.55		0.44	0.34		0.45	0.69	
Uniform Delay, d1	48.0	16.4		52.8	16.5		42.8	42.0		43.0	45.2	
Progression Factor	0.60	0.33		0.99	0.77		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.0		3.5	0.7		2.6	0.6		1.6	5.6	
Delay (s)	28.9	6.5		55.5	13.4		45.4	42.6		44.6	50.9	
Level of Service	C	A		E	B		D	D		D	D	
Approach Delay (s)		7.2			16.6			43.4			49.2	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
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												
Volume (vph)	64	1787	196	20	2015	43	120	49	13	74	100	77
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	4973		1805	5106		1783	1830		1763	1900	1570
Flt Permitted	0.95	1.00		0.95	1.00		0.61	1.00		0.72	1.00	1.00
Satd. Flow (perm)	1805	4973		1805	5106		1138	1830		1330	1900	1570
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)	64	1787	196	20	2015	43	120	49	13	74	100	77
RTOR Reduction (vph)	0	6	0	0	1	0	0	7	0	0	0	66
Lane Group Flow (vph)	64	1977	0	20	2057	0	120	55	0	74	100	11
Confl. Peds. (#/hr)			17			27	9		9	9		9
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.3	109.2		4.9	103.8		20.9	20.9		20.9	20.9	20.9
Effective Green, g (s)	10.3	109.2		4.9	103.8		20.9	20.9		20.9	20.9	20.9
Actuated g/C Ratio	0.07	0.73		0.03	0.69		0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	124	3620		59	3533		159	255		185	265	219
v/s Ratio Prot	0.04	c0.40		0.01	c0.40			0.03			0.05	
v/s Ratio Perm							c0.11			0.06		0.01
v/c Ratio	0.52	0.55		0.34	0.58		0.75	0.22		0.40	0.38	0.05
Uniform Delay, d1	67.4	9.2		71.0	11.9		62.1	57.3		58.8	58.6	55.9
Progression Factor	1.11	1.76		1.25	0.27		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	0.4		1.5	0.3		18.2	0.4		1.4	0.9	0.1
Delay (s)	77.0	16.6		90.2	3.5		80.3	57.7		60.3	59.5	56.0
Level of Service	E	B		F	A		F	E		E	E	E
Approach Delay (s)		18.5			4.3			72.6			58.7	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.9%	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												
Volume (vph)	245	920	112	95	812	156	125	813	114	387	1042	246
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5029		1787	5005		1787	5025		1805	3610	1573
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5029		1787	5005		1787	5025		1805	3610	1573
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)	245	920	112	95	812	156	125	813	114	387	1042	246
RTOR Reduction (vph)	0	11	0	0	21	0	0	13	0	0	0	127
Lane Group Flow (vph)	245	1021	0	95	947	0	125	914	0	387	1042	119
Confl. Peds. (#/hr)			10			6			13			4
Heavy Vehicles (%)	2%	1%	3%	1%	1%	0%	1%	1%	1%	0%	0%	1%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	18.1	38.0		11.5	31.4		12.2	30.9		28.2	46.9	46.9
Effective Green, g (s)	18.1	38.0		11.5	31.4		12.2	30.9		28.2	46.9	46.9
Actuated g/C Ratio	0.14	0.30		0.09	0.24		0.09	0.24		0.22	0.36	0.36
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	249	1486		160	1222		170	1207		396	1317	574
v/s Ratio Prot	c0.14	0.20		0.05	c0.19		0.07	0.18		c0.21	c0.29	
v/s Ratio Perm												0.08
v/c Ratio	0.98	0.69		0.59	0.77		0.74	0.76		0.98	0.79	0.21
Uniform Delay, d1	55.1	40.0		56.3	45.3		56.6	45.4		49.9	36.5	28.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	52.2	1.3		5.8	3.1		15.2	2.8		38.8	3.3	0.2
Delay (s)	107.3	41.4		62.1	48.4		71.8	48.1		88.7	39.8	28.3
Level of Service	F	D		E	D		E	D		F	D	C
Approach Delay (s)		54.0			49.7			50.9			49.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	50.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	128.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.5%	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												
Volume (vph)	169	1056	264	99	807	85	238	539	74	180	789	192
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3610	1536	1805	3574	1496	3335	3530		3467	3412	
Flt Permitted	0.14	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	252	3610	1536	209	3574	1496	3335	3530		3467	3412	
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)	169	1056	264	99	807	85	238	539	74	180	789	192
RTOR Reduction (vph)	0	0	72	0	0	59	0	9	0	0	18	0
Lane Group Flow (vph)	169	1056	192	99	807	26	238	604	0	180	963	0
Confl. Peds. (#/hr)			31			19			17			10
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	2%	0%	0%	0%	1%	4%	5%	0%	0%	1%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	50.3	39.7	39.7	43.5	36.3	36.3	11.2	42.8		10.3	41.9	
Effective Green, g (s)	50.3	39.7	39.7	43.5	36.3	36.3	11.2	42.8		10.3	41.9	
Actuated g/C Ratio	0.42	0.33	0.33	0.36	0.30	0.30	0.09	0.36		0.09	0.35	
Clearance Time (s)	5.0	5.0	5.0	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)	240	1194	508	172	1081	453	311	1259		298	1191	
v/s Ratio Prot	c0.06	c0.29		0.03	0.23		c0.07	0.17		0.05	c0.28	
v/s Ratio Perm	0.23		0.12	0.17		0.02						
v/c Ratio	0.70	0.88	0.38	0.58	0.75	0.06	0.77	0.48		0.60	0.81	
Uniform Delay, d1	25.7	38.0	30.7	29.4	37.7	29.7	53.1	30.0		52.9	35.4	
Progression Factor	1.00	0.51	0.30	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.9	6.3	0.4	4.6	2.9	0.1	10.7	1.3		3.4	6.0	
Delay (s)	32.8	25.8	9.5	34.0	40.6	29.8	63.8	31.3		56.3	41.4	
Level of Service	C	C	A	C	D	C	E	C		E	D	
Approach Delay (s)		23.7			39.0			40.4			43.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.3%	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												
Volume (vph)	154	1245	348	112	1438	118	447	595	90	147	789	156
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	4885		1736	5025		3502	3431		1736	3508	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	4885		1736	5025		3502	3431		1736	3508	
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)	154	1245	348	112	1438	118	447	595	90	147	789	156
RTOR Reduction (vph)	0	33	0	0	6	0	0	8	0	0	11	0
Lane Group Flow (vph)	154	1560	0	112	1550	0	447	677	0	147	934	0
Confl. Peds. (#/hr)			17			19			34			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	1%	2%	1%	4%	1%	5%	0%	2%	4%	4%	0%	0%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.3	55.5		11.9	52.1		20.8	45.4		17.2	41.8	
Effective Green, g (s)	15.3	55.5		11.9	52.1		20.8	45.4		17.2	41.8	
Actuated g/C Ratio	0.10	0.37		0.08	0.35		0.14	0.30		0.11	0.28	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	182	1807		138	1745		486	1038		199	978	
v/s Ratio Prot	c0.09	c0.32		0.06	0.31		c0.13	0.20		0.08	c0.27	
v/s Ratio Perm												
v/c Ratio	0.85	0.86		0.81	0.89		0.92	0.65		0.74	0.96	
Uniform Delay, d1	66.2	43.7		67.9	46.2		63.8	45.4		64.2	53.2	
Progression Factor	0.94	1.00		0.93	0.71		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.5	5.0		26.6	6.5		22.4	1.5		13.4	18.7	
Delay (s)	87.5	48.9		89.5	39.1		86.2	46.9		77.6	71.9	
Level of Service	F	D		F	D		F	D		E	E	
Approach Delay (s)		52.3			42.5			62.4			72.7	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	55.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	95.4%	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												
Volume (vph)	127	1401	103	67	1435	116	147	320	112	160	316	171
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1799	4975		1732	4993		1752	3285		1703	3574	1548
Flt Permitted	0.12	1.00		0.13	1.00		0.44	1.00		0.26	1.00	1.00
Satd. Flow (perm)	233	4975		239	4993		807	3285		463	3574	1548
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)	127	1401	103	67	1435	116	147	320	112	160	316	171
RTOR Reduction (vph)	0	6	0	0	6	0	0	24	0	0	0	52
Lane Group Flow (vph)	127	1498	0	67	1545	0	147	408	0	160	316	119
Confl. Peds. (#/hr)	32		18	18		32			32			20
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	3%	2%	4%	2%	6%	3%	4%	4%	6%	1%	0%
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	97.3	97.3		97.3	97.3		36.4	27.6		39.0	28.9	28.9
Effective Green, g (s)	97.3	97.3		97.3	97.3		36.4	27.6		39.0	28.9	28.9
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.24	0.18		0.26	0.19	0.19
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	151	3227		155	3239		251	604		204	689	298
v/s Ratio Prot		0.30			0.31		0.03	0.12		c0.05	0.09	
v/s Ratio Perm	c0.54			0.28			0.11			c0.15		0.08
v/c Ratio	0.84	0.46		0.43	0.48		0.59	0.68		0.78	0.46	0.40
Uniform Delay, d1	20.4	13.2		12.9	13.4		48.0	57.0		47.7	53.6	52.9
Progression Factor	0.85	0.42		0.55	0.32		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	28.7	0.3		6.8	0.4		3.5	3.0		17.7	0.5	0.9
Delay (s)	46.0	5.9		13.8	4.7		51.5	60.0		65.4	54.1	53.8
Level of Service	D	A		B	A		D	E		E	D	D
Approach Delay (s)		9.0			5.1			57.9			56.8	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	84.0%	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												
Volume (vph)	136	1544	51	181	1493	76	58	405	355	153	283	134
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	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	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4966		1770	5045		1805	3539	1522	1752	3336	
Flt Permitted	0.95	1.00		0.95	1.00		0.42	1.00	1.00	0.26	1.00	
Satd. Flow (perm)	1770	4966		1770	5045		806	3539	1522	479	3336	
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)	136	1544	51	181	1493	76	58	405	355	153	283	134
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	233	0	40	0
Lane Group Flow (vph)	136	1593	0	181	1566	0	58	405	122	153	377	0
Confl. Peds. (#/hr)			19			9			14			6
Heavy Vehicles (%)	2%	3%	29%	2%	2%	1%	0%	2%	3%	3%	3%	1%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	18.4	69.0		20.0	70.6		34.6	28.1	28.1	46.0	34.5	
Effective Green, g (s)	18.4	69.0		20.0	70.6		34.6	28.1	28.1	46.0	34.5	
Actuated g/C Ratio	0.12	0.46		0.13	0.47		0.23	0.19	0.19	0.31	0.23	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	217	2284		236	2375		229	663	285	256	767	
v/s Ratio Prot	0.08	c0.32		c0.10	0.31		0.01	0.11		c0.05	0.11	
v/s Ratio Perm							0.05		0.08	c0.13		
v/c Ratio	0.63	0.70		0.77	0.66		0.25	0.61	0.43	0.60	0.49	
Uniform Delay, d1	62.5	32.2		62.8	30.5		45.9	55.9	53.8	40.6	50.1	
Progression Factor	0.85	0.40		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.0	1.6		13.8	1.5		0.6	1.7	1.0	3.7	0.5	
Delay (s)	58.3	14.3		76.6	31.9		46.5	57.6	54.9	44.3	50.6	
Level of Service	E	B		E	C		D	E	D	D	D	
Approach Delay (s)		17.8			36.5			55.6			48.9	
Approach LOS		B			D			E			D	

Intersection Summary			
HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	84.4%	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												
Volume (vph)	0	1828	202	114	915	0	0	0	0	464	4	1015
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
Lane Util. Factor		0.86		1.00	0.91						1.00	0.88
Frpb, ped/bikes		0.99		1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Frt		0.99		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)		6175		1787	5036						1741	2787
Flt Permitted		1.00		0.95	1.00						0.95	1.00
Satd. Flow (perm)		6175		1787	5036						1741	2787
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)	0	1828	202	114	915	0	0	0	0	464	4	1015
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	0	0	86
Lane Group Flow (vph)	0	2013	0	114	915	0	0	0	0	0	468	929
Confl. Peds. (#/hr)			17			42			1			
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	4%	1%	1%	3%	0%	0%	0%	0%	4%	0%	2%
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Actuated Green, G (s)		42.7		9.7	57.4						42.6	42.6
Effective Green, g (s)		42.7		9.7	57.4						42.6	42.6
Actuated g/C Ratio		0.39		0.09	0.52						0.39	0.39
Clearance Time (s)		5.0		5.0	5.0						5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		2397		158	2628						674	1079
v/s Ratio Prot		c0.33		c0.06	0.18							
v/s Ratio Perm											0.27	c0.33
v/c Ratio		0.84		0.72	0.35						0.69	0.86
Uniform Delay, d1		30.5		48.8	15.4						28.2	31.0
Progression Factor		1.00		1.26	0.32						1.00	1.00
Incremental Delay, d2		3.7		11.5	0.3						3.1	7.2
Delay (s)		34.3		73.2	5.1						31.4	38.1
Level of Service		C		E	A						C	D
Approach Delay (s)		34.3			12.7			0.0			36.0	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	241	40	1298	298	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	241	40	1298	298	0	0
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			350			
pX, platoon unblocked						
vC, conflicting volume	1305	656			1603	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1305	656			1603	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	90			100	
cM capacity (veh/h)	153	410			411	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3
Volume Total	161	120	865	532	199
Volume Left	161	80	0	0	0
Volume Right	0	40	0	99	199
cSH	153	230	1700	1700	1700
Volume to Capacity	1.05	0.52	0.51	0.31	0.12
Queue Length 95th (ft)	206	69	0	0	0
Control Delay (s)	144.8	39.4	0.0	0.0	0.0
Lane LOS	F	E			
Approach Delay (s)	99.6		0.0		
Approach LOS	F				

Intersection Summary			
Average Delay	14.9		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	903	1322	91	43	732	473	243	340	186	38	101	56
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		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.91		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.94		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3452		1719	4665		1719	3240		1797	1863	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.69	1.00		0.29	1.00	1.00
Satd. Flow (perm)	3367	3452		1719	4665		1252	3240		550	1863	1553
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)	903	1322	91	43	732	473	243	340	186	38	101	56
RTOR Reduction (vph)	0	4	0	0	101	0	0	74	0	0	0	42
Lane Group Flow (vph)	903	1409	0	43	1104	0	243	452	0	38	101	14
Confl. Peds. (#/hr)			27			32			11	11		
Heavy Vehicles (%)	4%	3%	5%	5%	2%	4%	5%	4%	6%	0%	2%	4%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	32.4	62.5		5.0	35.1		27.5	27.5		27.5	27.5	27.5
Effective Green, g (s)	32.4	62.5		5.0	35.1		27.5	27.5		27.5	27.5	27.5
Actuated g/C Ratio	0.29	0.57		0.05	0.32		0.25	0.25		0.25	0.25	0.25
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	992	1961		78	1489		313	810		138	466	388
v/s Ratio Prot	c0.27	c0.41		0.03	0.24			0.14			0.05	
v/s Ratio Perm							c0.19			0.07		0.01
v/c Ratio	0.91	0.72		0.55	0.74		0.78	0.56		0.28	0.22	0.04
Uniform Delay, d1	37.4	17.3		51.4	33.4		38.4	35.9		33.2	32.7	31.2
Progression Factor	0.73	0.36		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.6	1.3		8.2	3.4		11.4	0.8		1.1	0.2	0.0
Delay (s)	34.8	7.6		59.6	36.8		49.8	36.8		34.3	32.9	31.3
Level of Service	C	A		E	D		D	D		C	C	C
Approach Delay (s)		18.2			37.6			40.9			32.7	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	28.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1335	81	97	838	30	105
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1335	81	97	838	30	105
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340					
pX, platoon unblocked			0.70		0.70	0.70
vC, conflicting volume			1417		1990	709
vC1, stage 1 conf vol					1376	
vC2, stage 2 conf vol					613	
vCu, unblocked vol			745		1561	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			84		88	86
cM capacity (veh/h)			612		259	765

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	890	526	97	419	419	135
Volume Left	0	0	97	0	0	30
Volume Right	0	81	0	0	0	105
cSH	1700	1700	612	1700	1700	533
Volume to Capacity	0.52	0.31	0.16	0.25	0.25	0.25
Queue Length 95th (ft)	0	0	14	0	0	25
Control Delay (s)	0.0	0.0	12.0	0.0	0.0	14.0
Lane LOS			B			B
Approach Delay (s)	0.0		1.2			14.0
Approach LOS						B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	818	192	297	991	149	147	1115	140	181	1242	317
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	5.0		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91		0.97	0.91		0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3574	1568	3502	5018		3400	5045		3467	5187	1584
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3574	1568	3502	5018		3400	5045		3467	5187	1584
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)	340	818	192	297	991	149	147	1115	140	181	1242	317
RTOR Reduction (vph)	0	0	121	0	17	0	0	13	0	0	0	146
Lane Group Flow (vph)	340	818	71	297	1123	0	147	1242	0	181	1242	171
Confl. Peds. (#/hr)			5			5			7			8
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	2%	1%	1%	0%	1%	2%	3%	1%	0%	1%	0%	0%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	14.8	33.5	33.5	14.0	32.7		8.7	35.2		8.9	35.4	35.4
Effective Green, g (s)	14.8	33.5	33.5	14.0	32.7		8.7	35.2		8.9	35.4	35.4
Actuated g/C Ratio	0.13	0.30	0.30	0.13	0.29		0.08	0.32		0.08	0.32	0.32
Clearance Time (s)	5.0	5.0	5.0	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)	455	1073	471	439	1470		265	1591		276	1645	502
v/s Ratio Prot	c0.10	c0.23		0.08	0.22		0.04	c0.25		c0.05	0.24	
v/s Ratio Perm			0.05									0.11
v/c Ratio	0.75	0.76	0.15	0.68	0.76		0.55	0.78		0.66	0.76	0.34
Uniform Delay, d1	46.6	35.4	28.6	46.6	35.9		49.6	34.7		49.9	34.2	29.2
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	6.6	3.3	0.1	4.1	2.4		2.5	2.6		5.5	2.0	0.4
Delay (s)	53.2	38.7	28.8	50.7	38.4		52.1	37.3		55.4	36.2	29.6
Level of Service	D	D	C	D	D		D	D		E	D	C
Approach Delay (s)		40.9			40.9			38.8			37.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	111.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	81.0%	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												
Volume (vph)	200	1393	162	290	1292	130	164	648	265	158	958	159
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
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)	200	1393	162	290	1292	130	164	648	265	158	958	159
RTOR Reduction (vph)	0	0	62	0	10	0	0	0	193	0	0	73
Lane Group Flow (vph)	200	1393	100	290	1412	0	164	648	72	158	958	86
Confl. Peds. (#/hr)			12			3			24			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	2%	0%	2%	1%	1%	1%	0%
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.1	34.8	34.8	22.0	44.7		7.1	31.4	31.4	7.1	31.4	31.4
Effective Green, g (s)	12.1	34.8	34.8	22.0	44.7		7.1	31.4	31.4	7.1	31.4	31.4
Actuated g/C Ratio	0.10	0.30	0.30	0.19	0.39		0.06	0.27	0.27	0.06	0.27	0.27
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	364	1550	476	341	1959		216	1385	421	213	1399	440
v/s Ratio Prot	0.06	c0.27		c0.16	0.28		c0.05	0.13		0.05	c0.19	
v/s Ratio Perm			0.06						0.05			0.05
v/c Ratio	0.55	0.90	0.21	0.85	0.72		0.76	0.47	0.17	0.74	0.68	0.19
Uniform Delay, d1	49.0	38.6	30.0	45.1	30.0		53.3	35.0	32.0	53.2	37.5	32.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	7.3	0.2	18.0	1.3		14.2	0.3	0.2	13.0	1.4	0.2
Delay (s)	50.7	45.9	30.2	63.1	31.3		67.4	35.2	32.2	66.2	38.9	32.4
Level of Service	D	D	C	E	C		E	D	C	E	D	C
Approach Delay (s)		45.0			36.7			39.4			41.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	115.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	349	1373	1307	382	645	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3502	5136	5187	1579	3502	2790
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3502	5136	5187	1579	3502	2790
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	349	1373	1307	382	645	350
RTOR Reduction (vph)	0	0	0	30	0	9
Lane Group Flow (vph)	349	1373	1307	352	645	341
Confl. Peds. (#/hr)				10		2
Heavy Vehicles (%)	0%	1%	0%	1%	0%	1%
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Actuated Green, G (s)	15.1	52.6	32.5	56.0	23.5	38.6
Effective Green, g (s)	15.1	52.6	32.5	56.0	23.5	38.6
Actuated g/C Ratio	0.18	0.61	0.38	0.65	0.27	0.45
Clearance Time (s)	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
Lane Grp Cap (vph)	614	3138	1958	1119	956	1413
v/s Ratio Prot	c0.10	0.27	c0.25	0.09	c0.18	0.04
v/s Ratio Perm				0.14		0.08
v/c Ratio	0.57	0.44	0.67	0.31	0.67	0.24
Uniform Delay, d1	32.5	8.9	22.3	6.6	27.9	14.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	0.9	0.2	1.9	0.1
Delay (s)	33.7	9.0	23.2	6.8	29.8	14.8
Level of Service	C	A	C	A	C	B
Approach Delay (s)		14.0	19.5		24.5	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	66.5%	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												
Volume (veh/h)	161	695	0	0	542	28	0	0	0	36	0	157
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	161	695	0	0	542	28	0	0	0	36	0	157
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					852							
pX, platoon unblocked	0.94						0.94	0.94		0.94	0.94	0.94
vC, conflicting volume	570			696			1446	1588	348	1226	1574	285
vC1, stage 1 conf vol							1018	1018		556	556	
vC2, stage 2 conf vol							428	570		670	1018	
vCu, unblocked vol	423			696			1352	1503	348	1118	1488	121
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	85			100			100	100	100	89	100	82
cM capacity (veh/h)	1081			909			196	234	653	315	249	862

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	508	348	361	209	0	193
Volume Left	161	0	0	0	0	36
Volume Right	0	0	0	28	0	157
cSH	1081	1700	1700	1700	1700	651
Volume to Capacity	0.15	0.20	0.21	0.12	0.00	0.30
Queue Length 95th (ft)	13	0	0	0	0	31
Control Delay (s)	4.0	0.0	0.0	0.0	0.0	12.8
Lane LOS	A				A	B
Approach Delay (s)	2.4		0.0		0.0	12.8
Approach LOS					A	B

Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	61.4%	ICU Level of Service	B	
Analysis Period (min)	15			

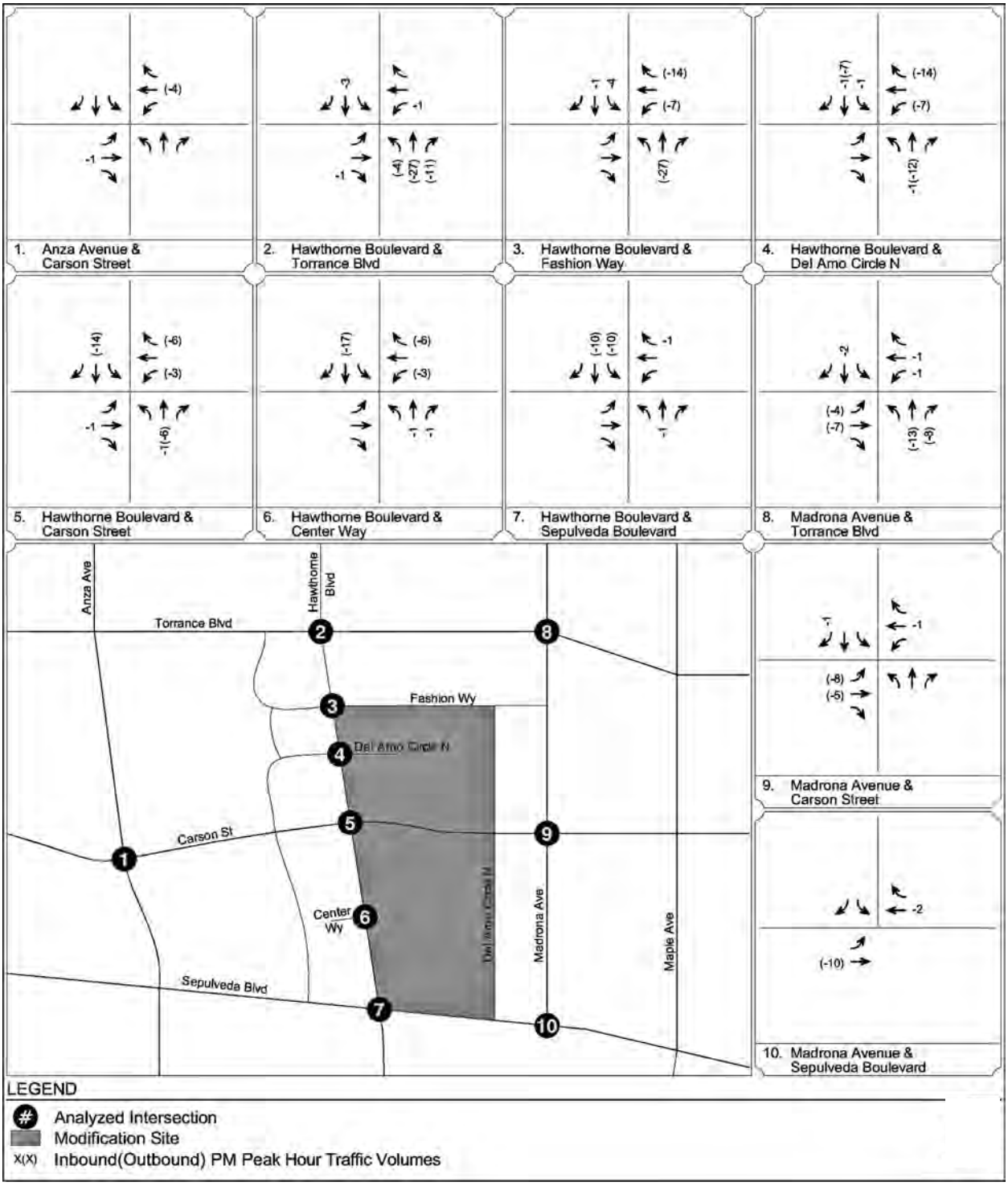
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1440	0	0	935	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1440	0	0	935	0	0
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1064					
pX, platoon unblocked			0.72		0.72	0.72
vC, conflicting volume			1446		1914	726
vC1, stage 1 conf vol					1446	
vC2, stage 2 conf vol					468	
vCu, unblocked vol			838		1488	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			576		254	780

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	960	480	0	468	468	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.56	0.28	0.00	0.28	0.28	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS						A
Approach Delay (s)	0.0		0.0			0.0
Approach LOS						A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix C Approved and Planned Development Trips

2012 Modification-Only Intersection Peak Hour Traffic Volumes



NOT TO SCALE

Source: Gibson Transportation Consulting, Inc. 2012

PROJECT DESCRIPTION: **Date: 6/28/06**

Construction of a new 66,900 sqft.(103 beds) convalescent home at the property located at 25535 Hawthorne Blvd. Boulevard.

Existing Average Daily Traffic (ADT)

A. 38,342 Hawthorne Boulevard
B. 9,879 Rolling Hills Road

Existing Peak Hour Volumes

A. 3,120 Hawthorne Boulevard
B. 839 Rolling Hills Road

TRIP GENERATION

TEPD Rate: 2.66 trips per bed for assisted living facility, 44.32 trips per 1,000 feet of gross leasable area for special retail center.

Source: ITE Trip Generation (7th Edition)

A. Existing from sites 581 trip-ends per day (TEPD).

B. From project 274 TEPD (Average).
15 (0.14) TE during morning (a.m.) peak-hour.
23 (0.22) TE during afternoon (p.m.) peak-hour.

C. Net increase = -307 TEPD.

TRIP DISTRIBUTION

A. **Arriving**
1. ___ TEPD eastbound.
2. ___ TEPD westbound.

Departing
1. ___ TEPD eastbound.
2. ___ TEPD westbound.

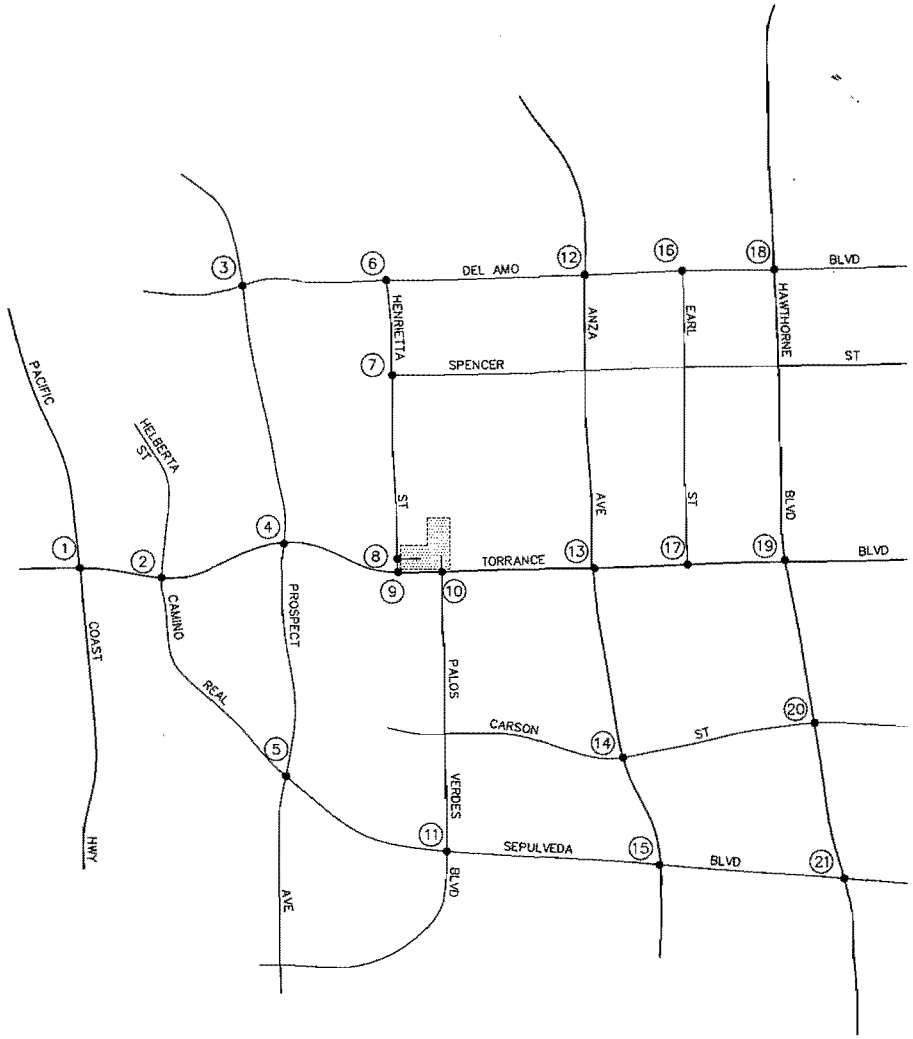
Total

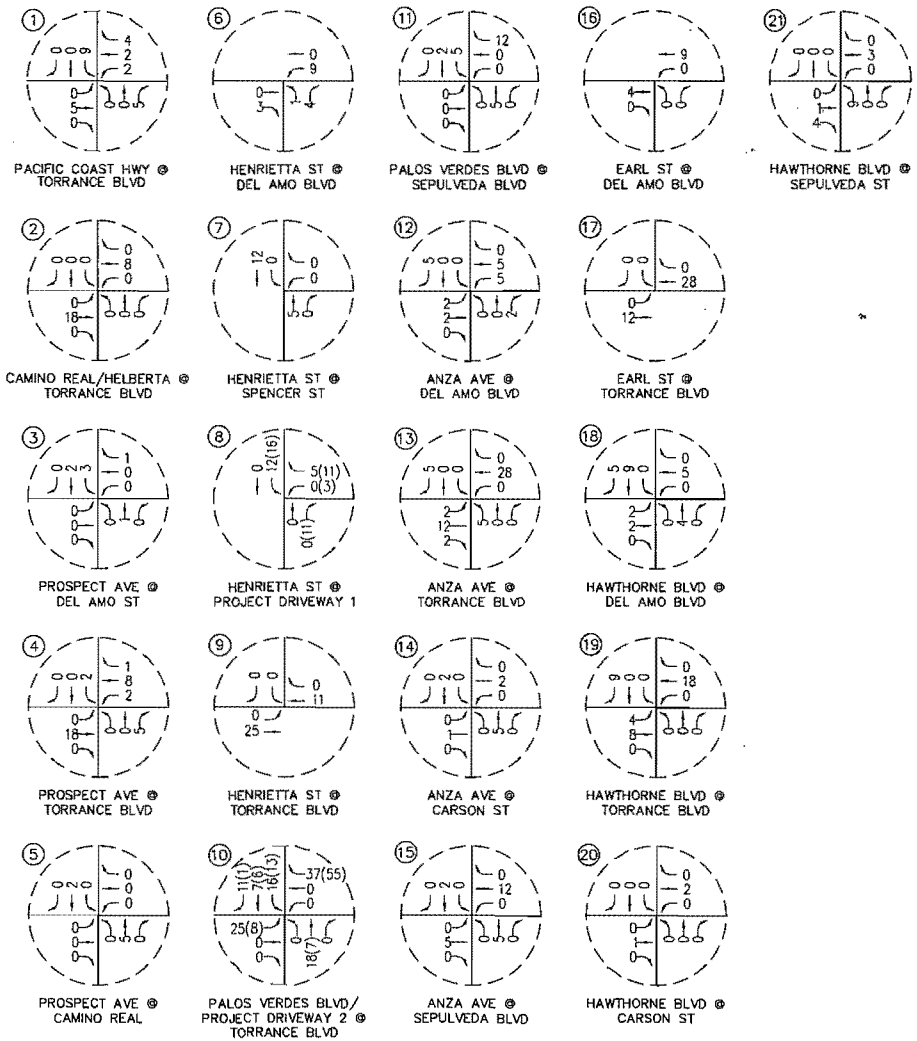
Total

TRAFFIC CHARACTERISTICS

The proposed land use (assisted living) will generate less traffic than the previous land use (retail center) The 24-hour traffic volumes will not be increased by the proposed development. Also, peak hour V/C Ratios at critical intersections (Hathorne Blvd. & Rolling Hills Road, Hawthorne Blvd. & Newton St. and Rolling Hills Road & Crenshaw Blvd) will not be increased. The existing levels of service at these intersections will have minimal impacts.

By: PS





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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE
(XX) = EXISTING TRIP CREDIT

FIGURE 5-3

AM PEAK HOUR PROJECT TRAFFIC VOLUMES – PHASE I

DAILY BREEZE MEDICAL OFFICE BUILDING, TORRANCE

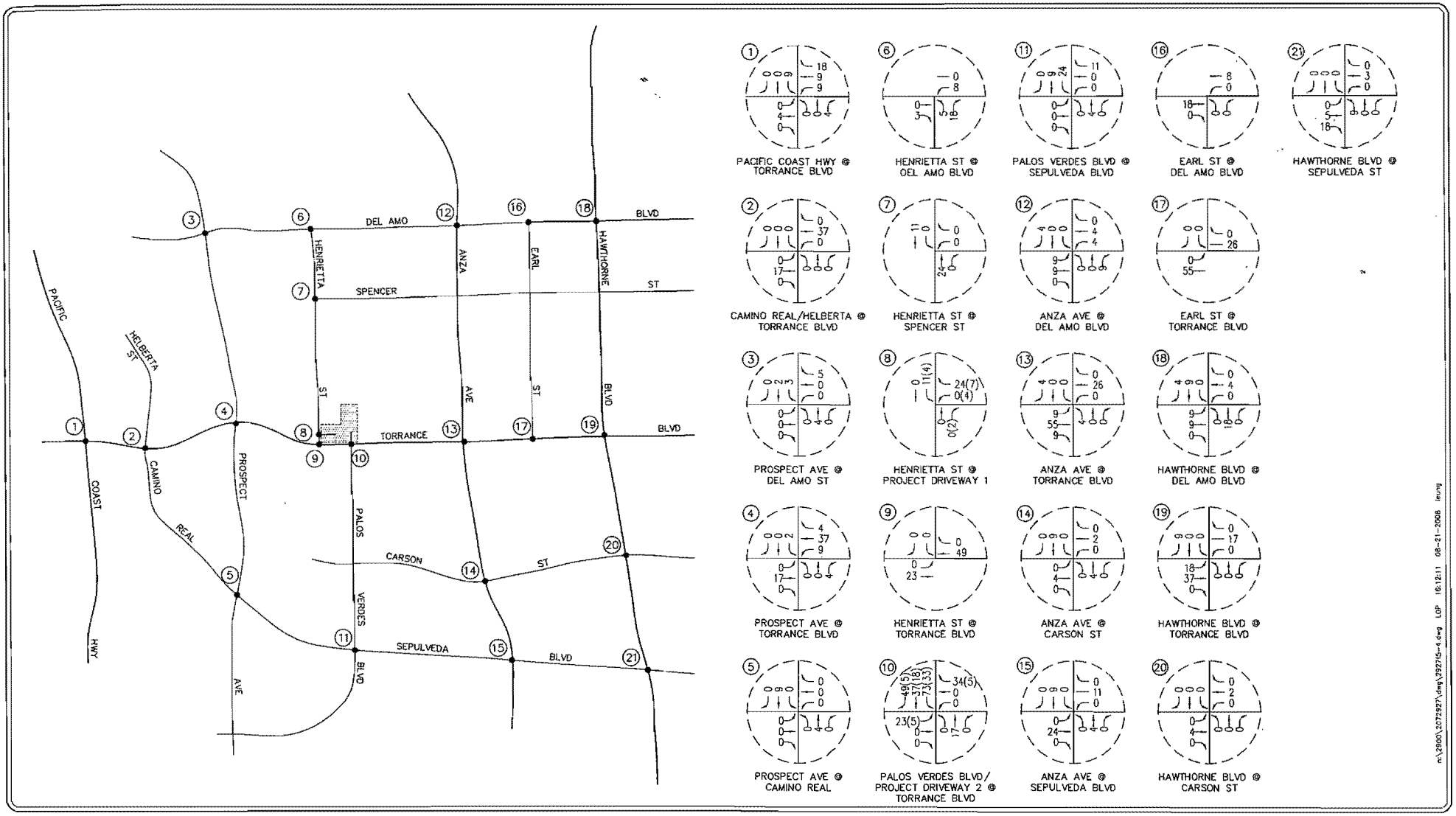
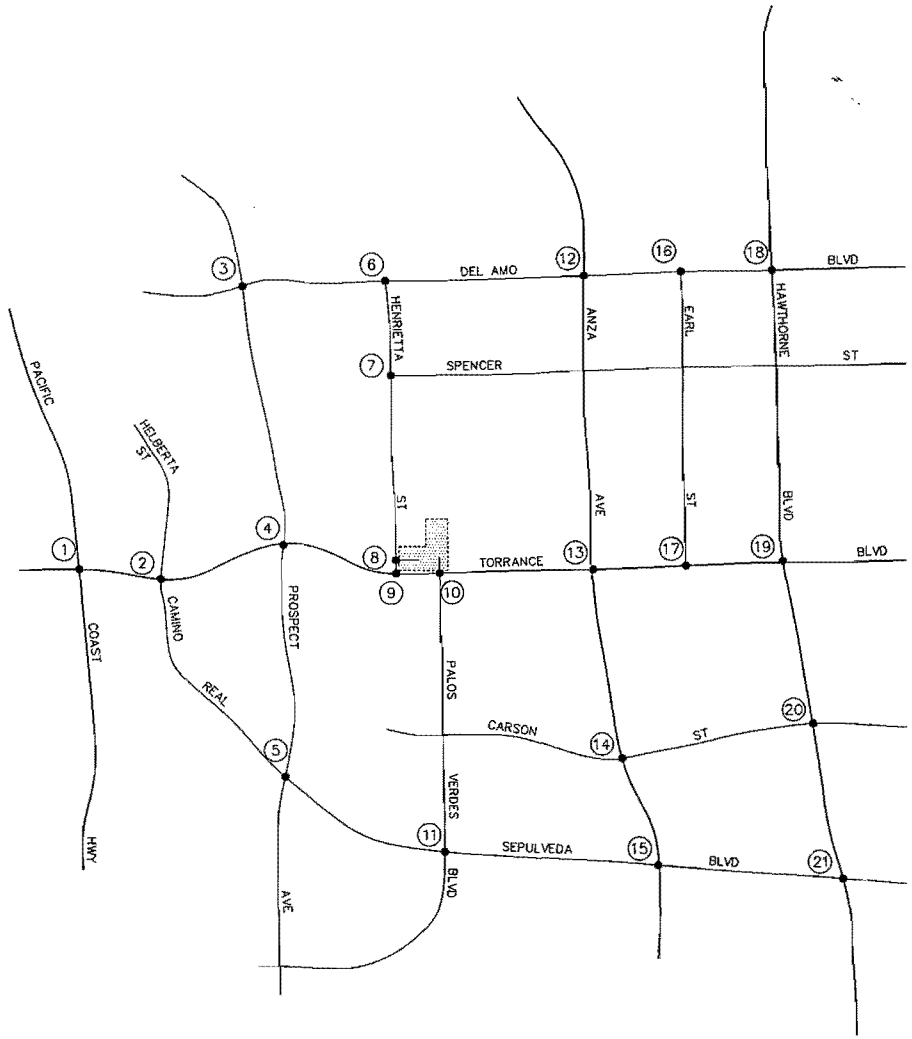
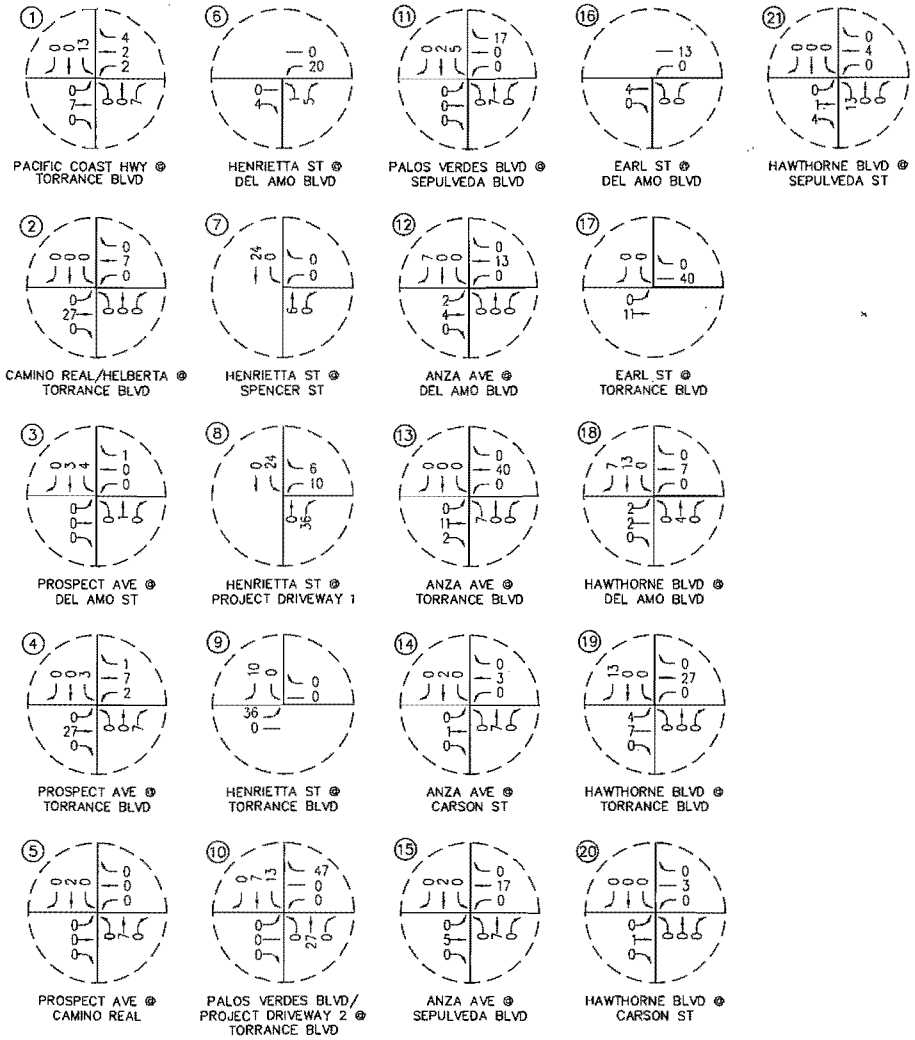


FIGURE 5-4

PM PEAK HOUR PROJECT TRAFFIC VOLUMES – PHASE I

DAILY BREEZE MEDICAL OFFICE BUILDING, TORRANCE





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LINSCOTT LAW & GREENSPAN engineers

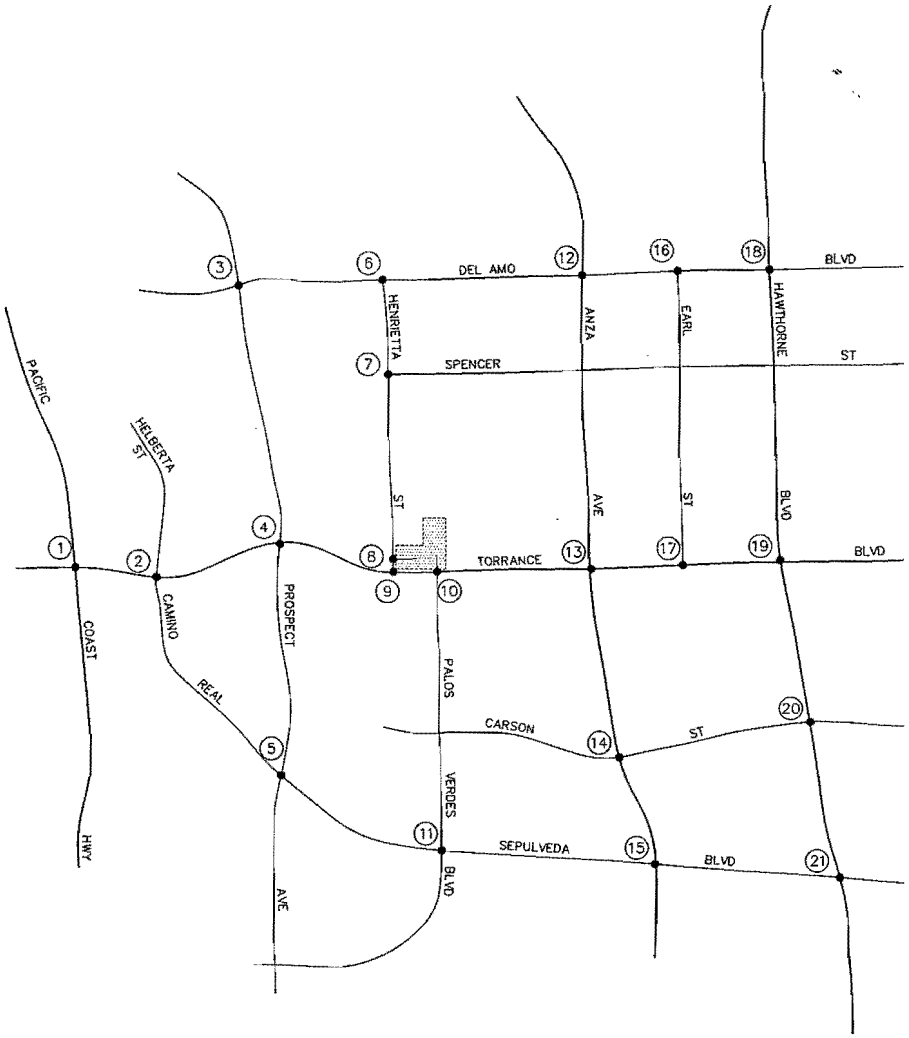
N NO SCALE

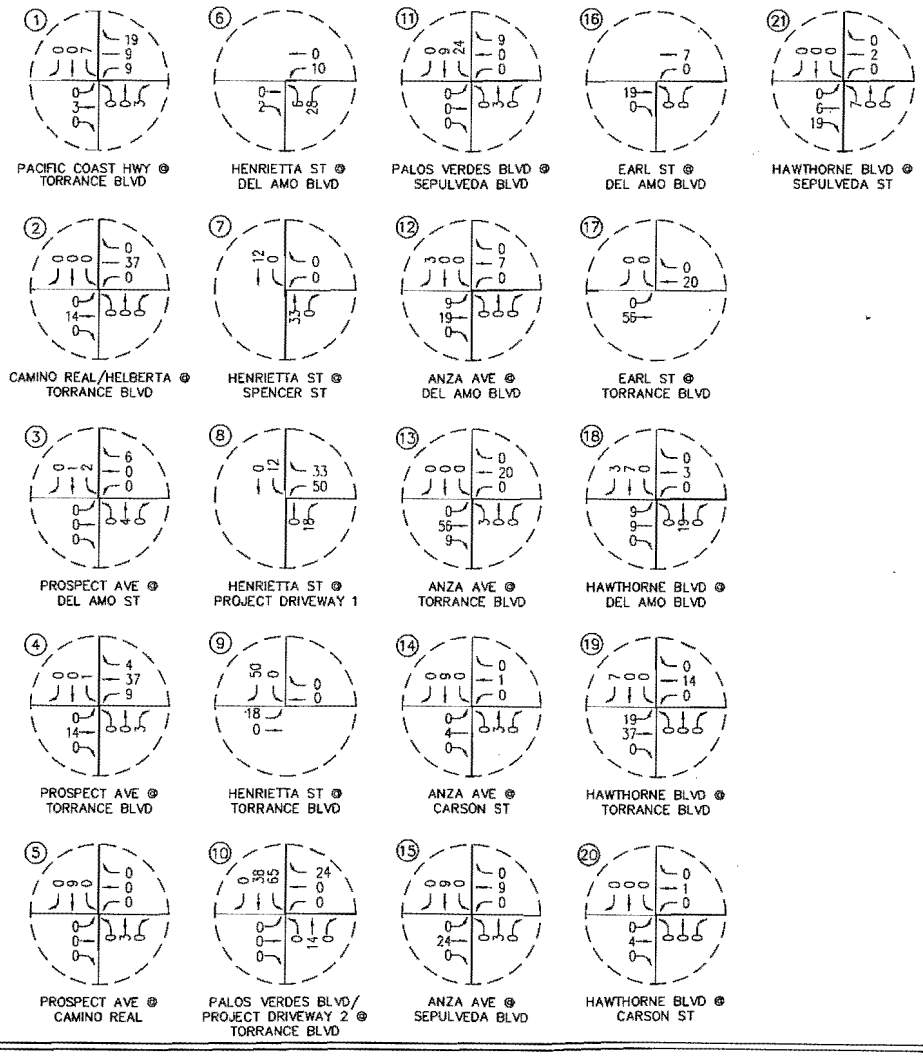
KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-5

AM PEAK HOUR PROJECT TRAFFIC VOLUMES – PHASE II

DAILY BREEZE MEDICAL OFFICE BUILDING, TORRANCE





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LINSCOTT LAW & GREENSPAN engineers

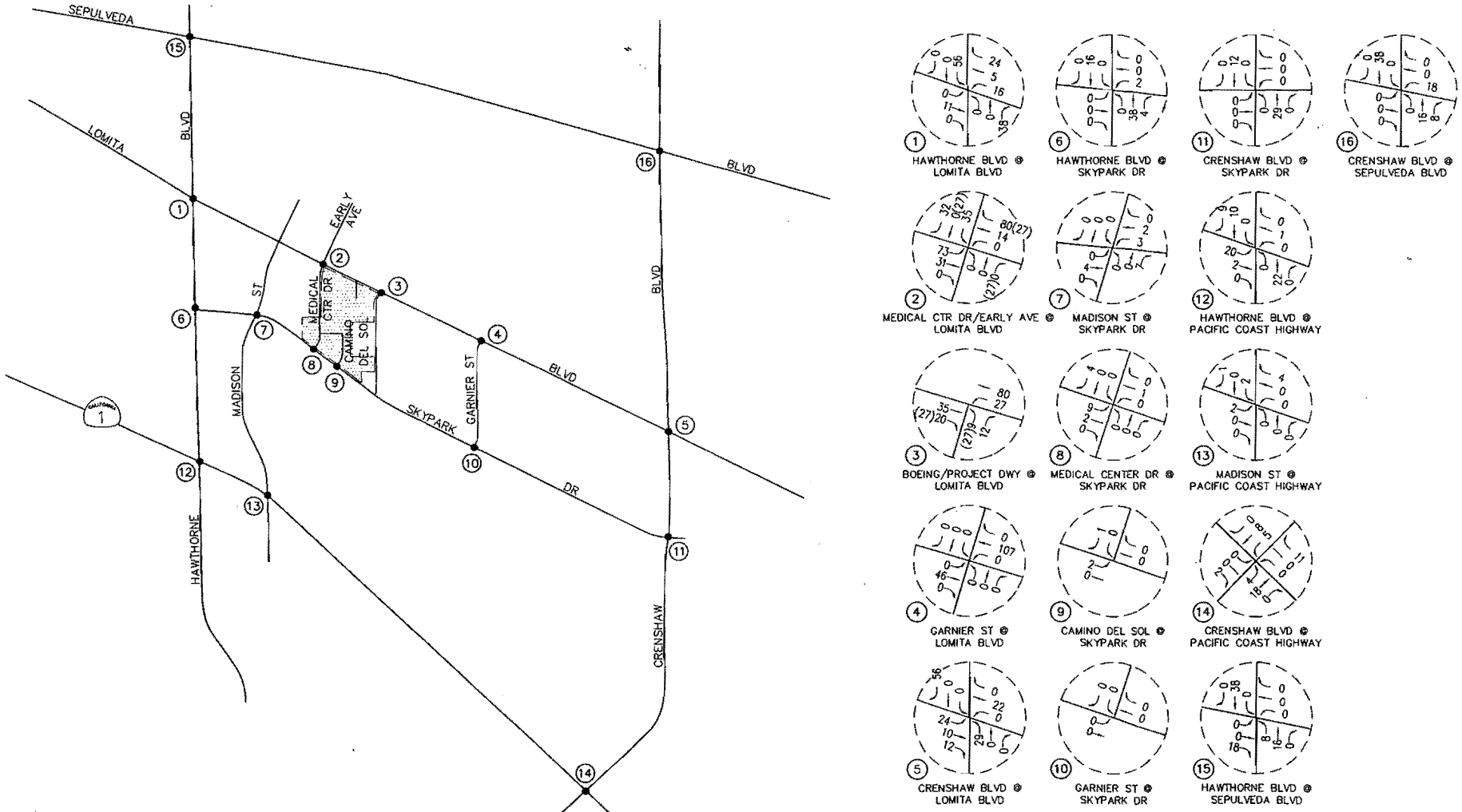
N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-6

PM PEAK HOUR PROJECT TRAFFIC VOLUMES – PHASE II

DAILY BREEZE MEDICAL OFFICE BUILDING, TORRANCE



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LINSCOTT LAW & GREENSPAN engineers

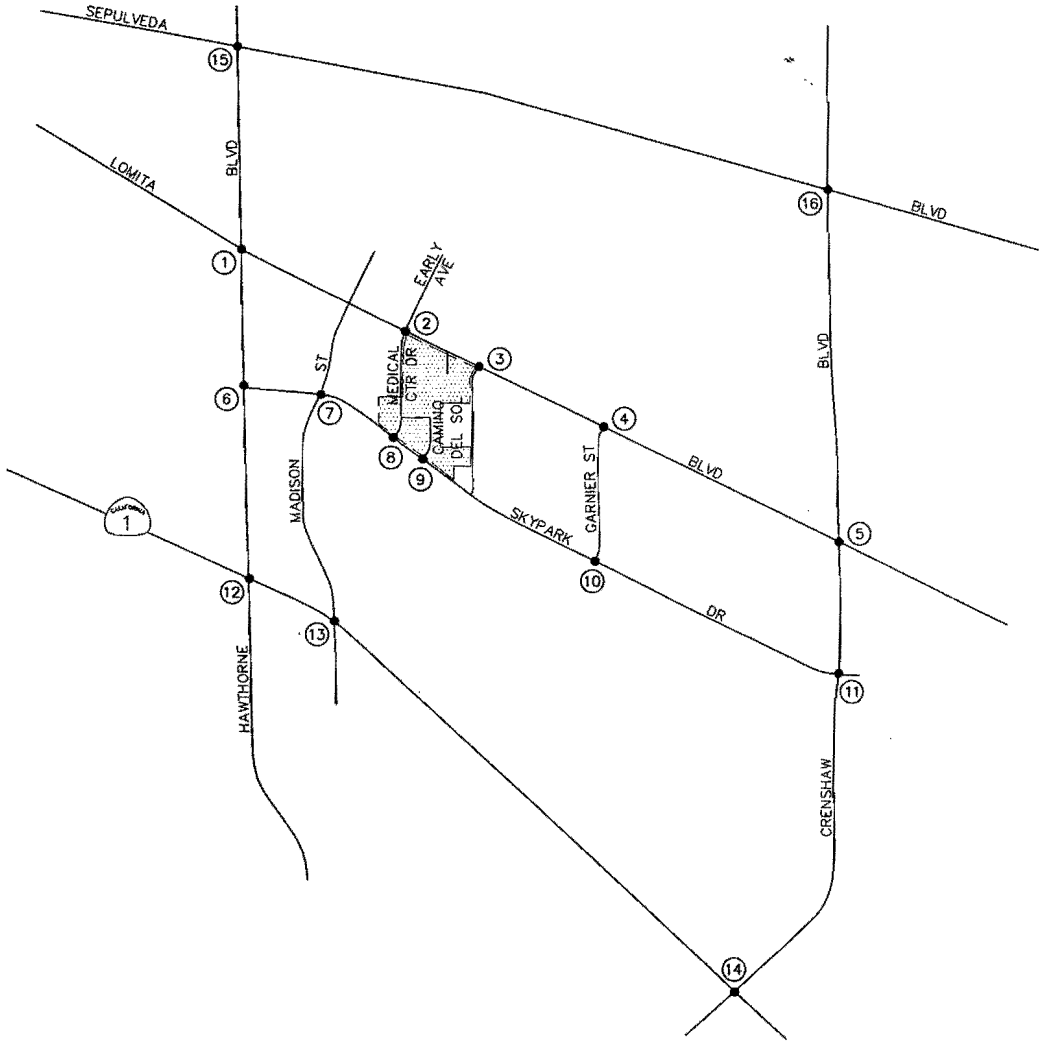
N NO SCALE

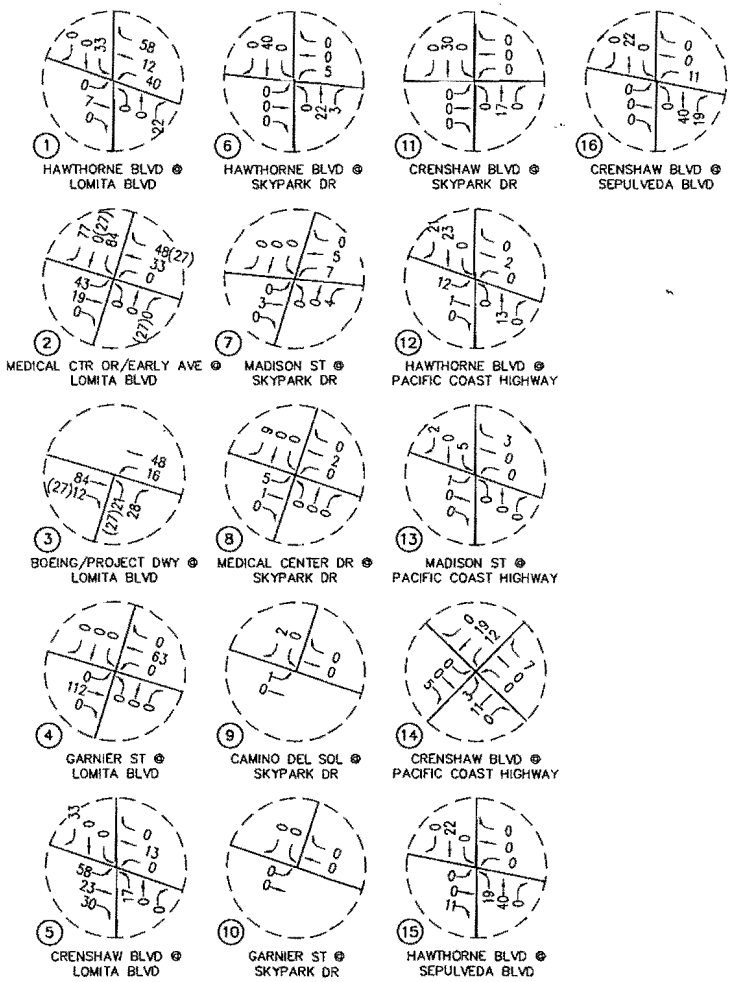
KEY
= PROJECT SITE
(XX) = HOSPITAL SHUTTLE SERVICE TRIPS

FIGURE 5-4

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

NEW MAIN TOWER AT TMMC, TORRANCE





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LINSCOTT LAW & GREENSPAN engineers

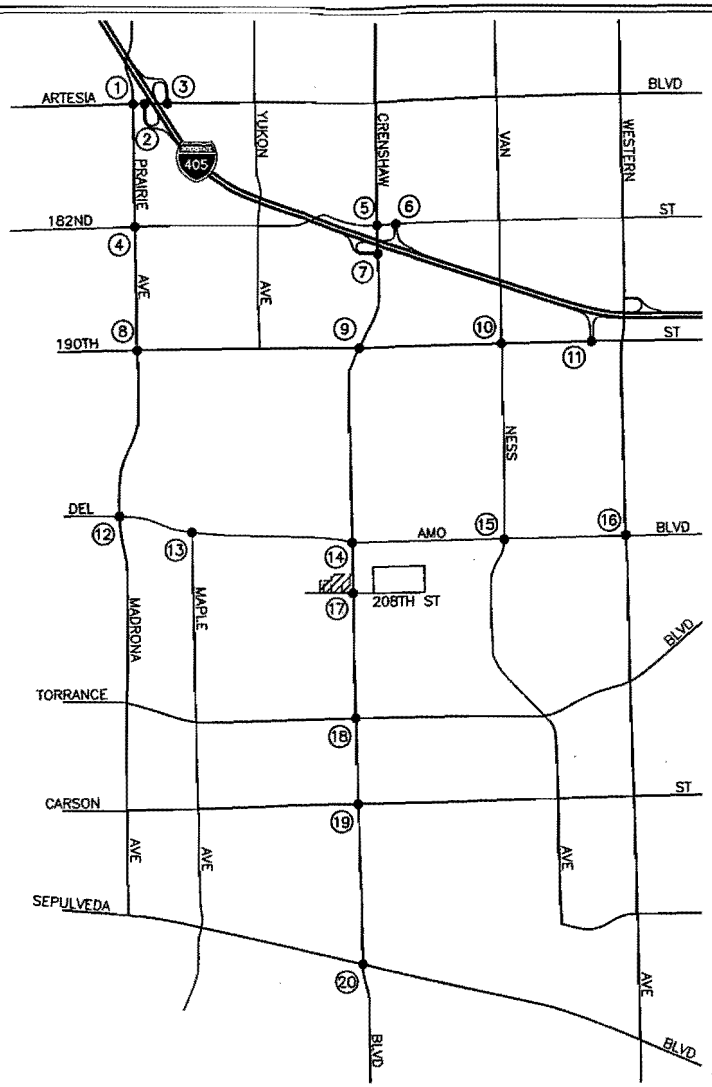
N NO SCALE

KEY
= PROJECT SITE
(XX) = HOSPITAL SHUTTLE SERVICE TRIPS

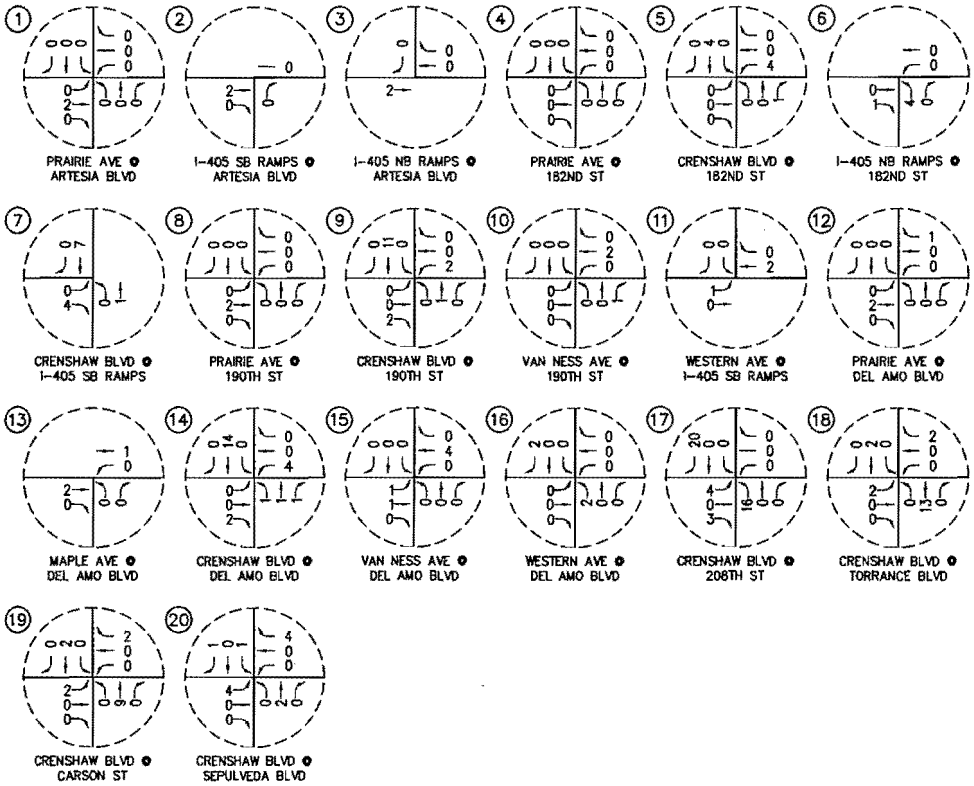
FIGURE 5-5

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

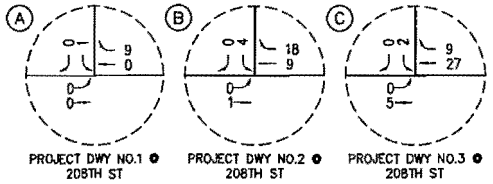
NEW MAIN TOWER AT TMMC, TORRANCE



STUDY INTERSECTIONS



PROJECT DRIVEWAYS



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LINSCOTT LAW & GREENSPAN engineers

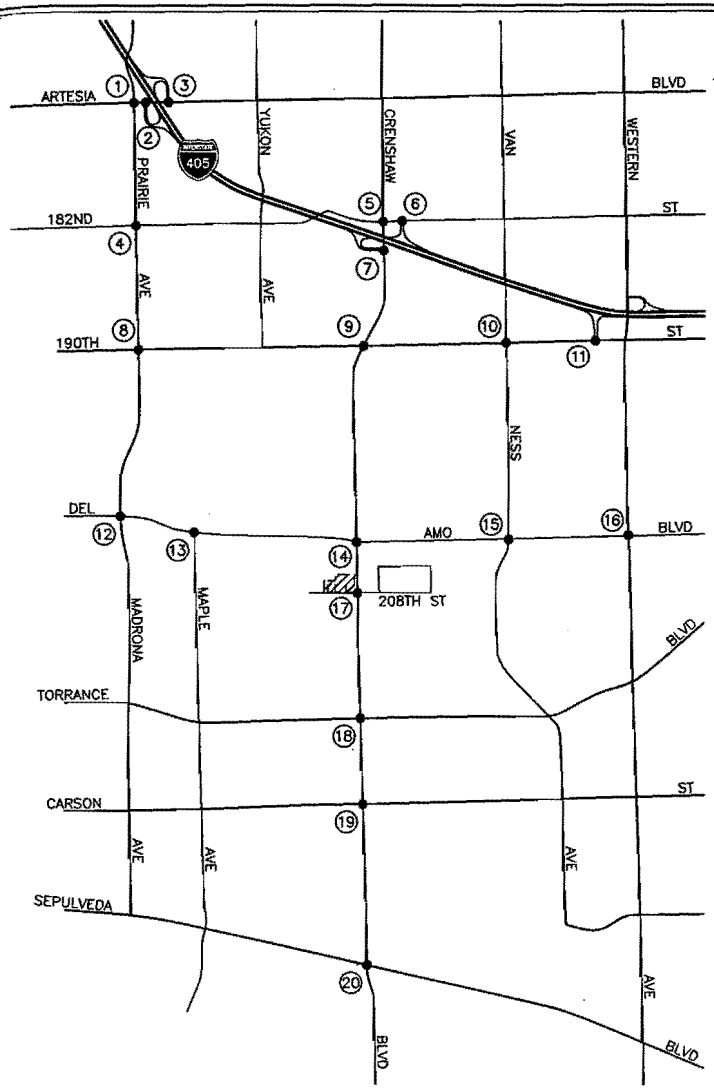
N NO SCALE

KEY
= PROJECT SITE

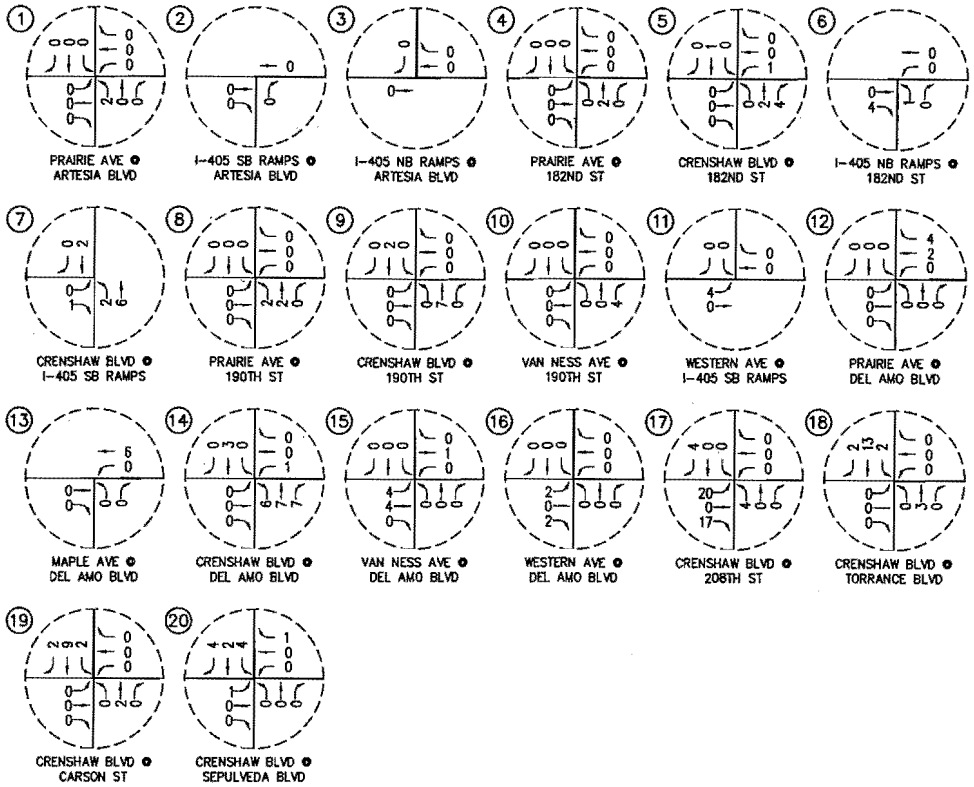
FIGURE 5-2

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

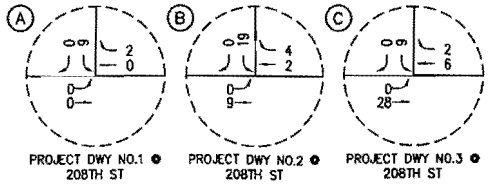
OMP DOW CHEMICAL LOT 4 LIGHT INDUSTRIAL/WAREHOUSE PROJECT, TORRANCE



STUDY INTERSECTIONS



PROJECT DRIVEWAYS



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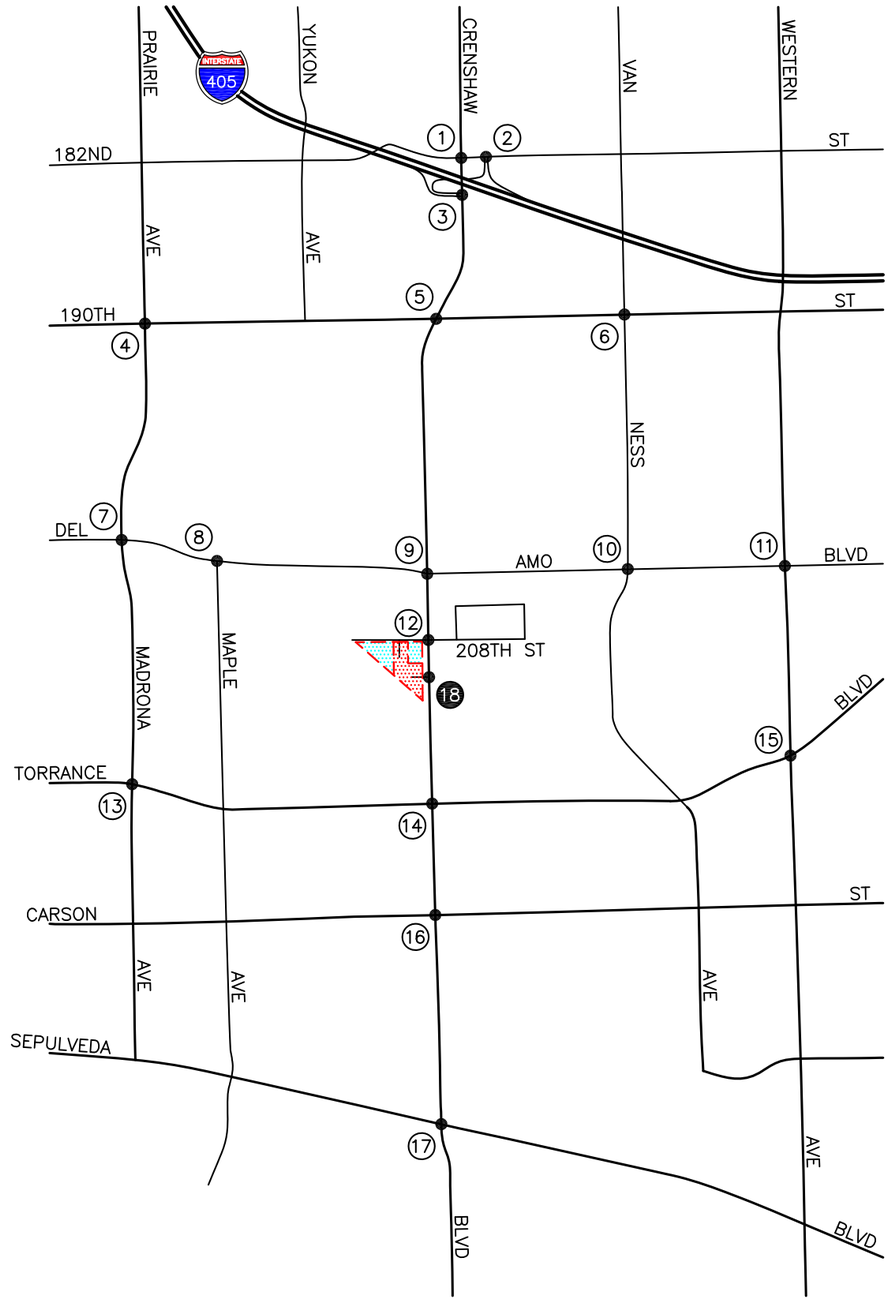
LINSCOTT LAW & GREENSPAN engineers

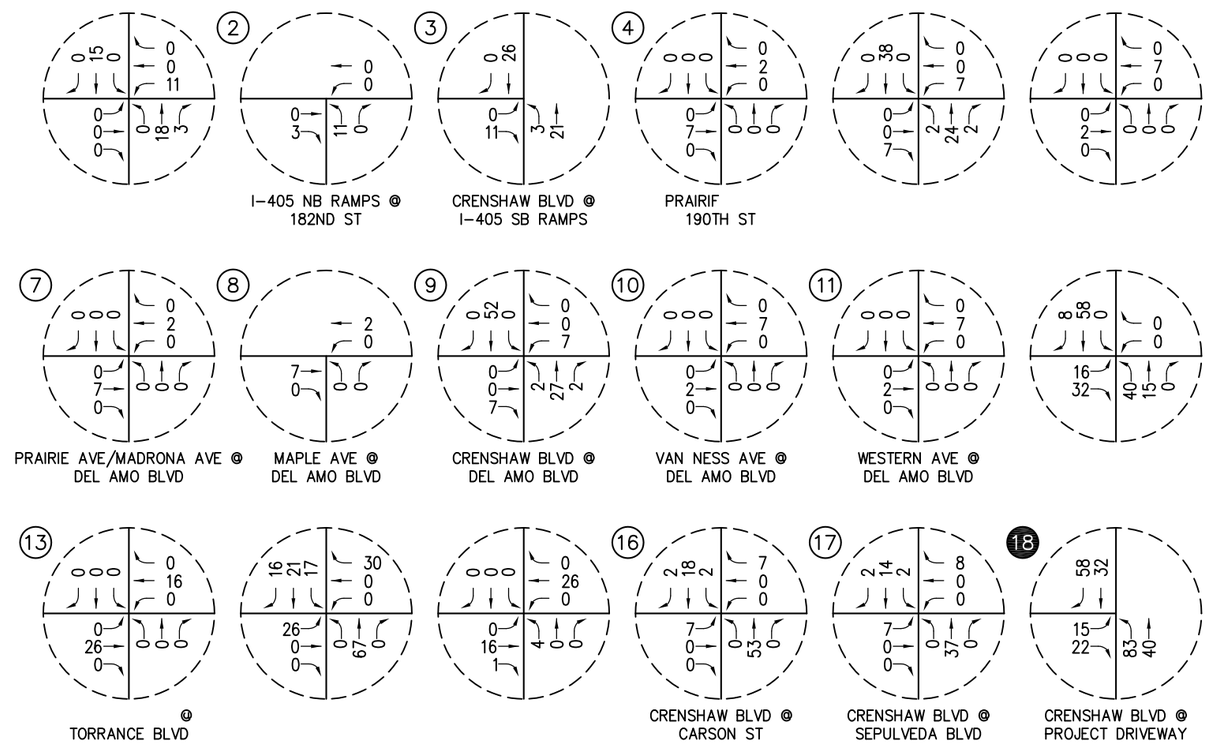
N NO SCALE

KEY
▨ = PROJECT SITE

FIGURE 5-3

PM PEAK HOUR PROJECT TRAFFIC VOLUMES
OMP DOW CHEMICAL LOT 4 LIGHT INDUSTRIAL/WAREHOUSE PROJECT, TORRANCE





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LINSCOTT LAW & GREENSPAN engineers

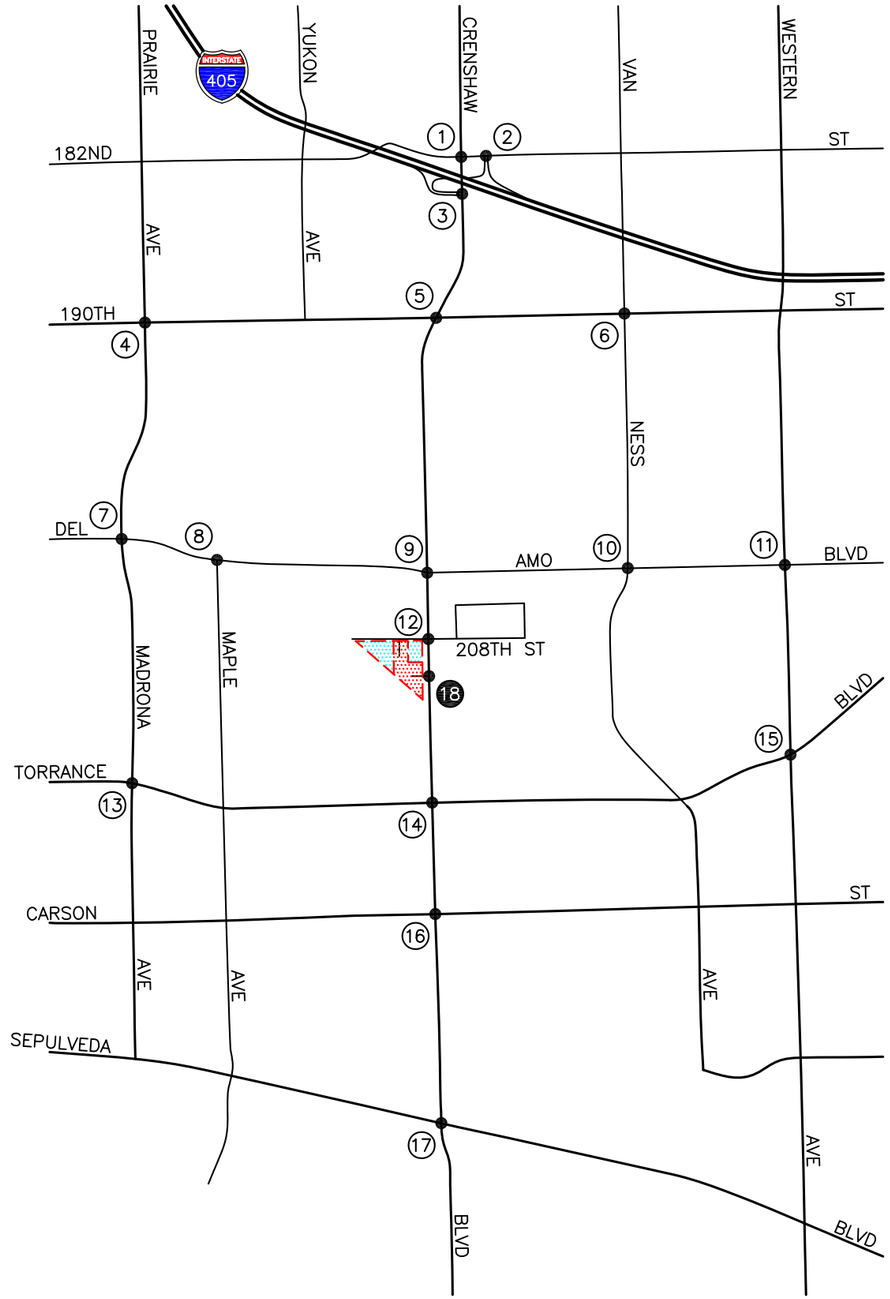
N NO SCALE

KEY
= TORRANCE TRANSIT CENTER
= NOT A PART OF PROJECT

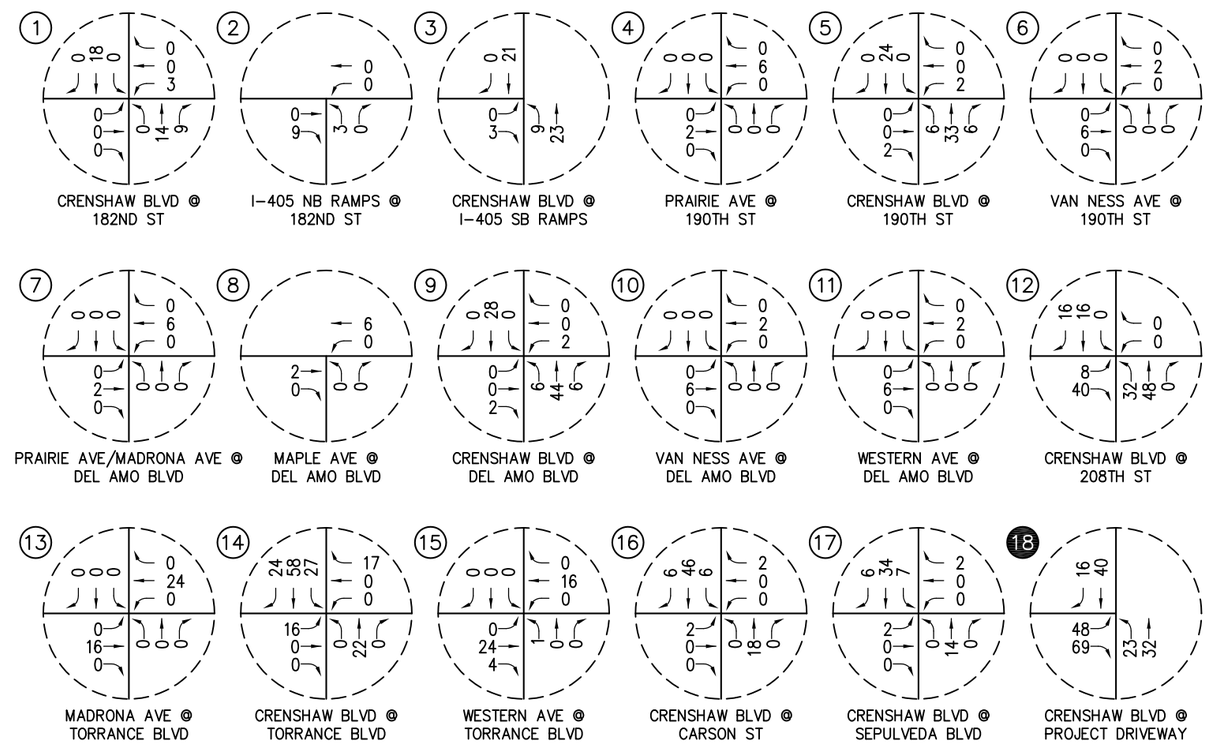
FIGURE 5-7

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

TORRANCE TRANSIT CENTER, TORRANCE



STUDY INTERSECTIONS



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
= TORRANCE TRANSIT CENTER
= NOT A PART OF PROJECT

FIGURE 5-8

PM PEAK HOUR PROJECT TRAFFIC VOLUMES
TORRANCE TRANSIT CENTER, TORRANCE

Appendix D Year 2016 Cumulative Traffic Level-of-Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	787	35	170	948	286	88	270	210	119	167	139
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3481		1805	3381		1805	1900	1555	1770	1863	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3481		1805	3381		1805	1900	1555	1770	1863	1553
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)	160	787	35	170	948	286	88	270	210	119	167	139
RTOR Reduction (vph)	0	2	0	0	24	0	0	0	166	0	0	107
Lane Group Flow (vph)	160	820	0	170	1210	0	88	270	44	119	167	32
Confl. Peds. (#/hr)			7			16			13			
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	1%	2%	2%	4%
Turn Type	Prot			Prot			Prot		Perm	Prot		Prot
Protected Phases	1	6		5	2		7	4		3	8	8
Permitted Phases									4			
Actuated Green, G (s)	12.5	42.6		14.3	44.4		6.9	22.9	22.9	9.2	25.2	25.2
Effective Green, g (s)	12.5	42.6		14.3	44.4		6.9	22.9	22.9	9.2	25.2	25.2
Actuated g/C Ratio	0.11	0.39		0.13	0.41		0.06	0.21	0.21	0.08	0.23	0.23
Clearance Time (s)	5.0	5.0		5.0	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)	207	1360		237	1377		114	399	327	149	431	359
v/s Ratio Prot	0.09	0.24		c0.09	c0.36		0.05	c0.14		c0.07	0.09	0.02
v/s Ratio Perm									0.03			
v/c Ratio	0.77	0.60		0.72	0.88		0.77	0.68	0.13	0.80	0.39	0.09
Uniform Delay, d1	46.9	26.5		45.4	29.8		50.3	39.6	35.0	49.0	35.4	32.9
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	16.3	0.8		9.9	6.7		27.0	4.5	0.2	25.0	0.6	0.1
Delay (s)	63.2	27.2		55.3	36.5		77.3	44.1	35.2	74.0	36.0	33.0
Level of Service	E	C		E	D		E	D	D	E	D	C
Approach Delay (s)		33.1			38.8			46.0			45.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	109.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.5%	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												
Volume (vph)	53	1180	17	28	1389	104	118	130	128	248	89	209
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	5.0		5.0	5.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.90	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	3531		1736	3539	1439	1787	3237		1610	3308	1564
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	3531		1736	3539	1439	1787	3237		1610	3308	1564
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)	53	1180	17	28	1389	104	118	130	128	248	89	209
RTOR Reduction (vph)	0	1	0	0	0	9	0	113	0	0	0	0
Lane Group Flow (vph)	53	1196	0	28	1389	95	118	145	0	124	213	209
Confl. Peds. (#/hr)			12			71						34
Confl. Bikes (#/hr)						1			1			
Heavy Vehicles (%)	2%	2%	0%	4%	2%	1%	1%	2%	3%	2%	1%	1%
Turn Type	Prot			Prot		Perm	Split			Split		Free
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						Free
Actuated Green, G (s)	6.3	55.7		4.6	54.0	54.0	13.2	13.2		20.3	20.3	113.8
Effective Green, g (s)	6.3	55.7		4.6	54.0	54.0	13.2	13.2		20.3	20.3	113.8
Actuated g/C Ratio	0.06	0.49		0.04	0.47	0.47	0.12	0.12		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	98	1728		70	1679	683	207	375		287	590	1564
v/s Ratio Prot	c0.03	0.34		0.02	c0.39		c0.07	0.04		c0.08	0.06	
v/s Ratio Perm						0.07						c0.13
v/c Ratio	0.54	0.69		0.40	0.83	0.14	0.57	0.39		0.43	0.36	0.13
Uniform Delay, d1	52.3	22.4		53.3	25.9	16.8	47.6	46.6		41.6	41.1	0.0
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	6.0	1.2		3.7	3.5	0.1	3.8	0.7		1.0	0.4	0.2
Delay (s)	58.3	23.7		57.0	29.4	16.9	51.4	47.2		42.7	41.4	0.2
Level of Service	E	C		E	C	B	D	D		D	D	A
Approach Delay (s)		25.1			29.0			48.5			25.9	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	113.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.8%	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												
Volume (vph)	280	1013	208	242	893	143	261	1785	188	186	1612	228
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.94	1.00	1.00	0.97	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	5136	1452	3303	5085	1470	3400	6408	1500	3433	6346	1483
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	5136	1452	3303	5085	1470	3400	6408	1500	3433	6346	1483
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)	280	1013	208	242	893	143	261	1785	188	186	1612	228
RTOR Reduction (vph)	0	0	146	0	0	98	0	0	121	0	0	95
Lane Group Flow (vph)	280	1013	62	242	893	45	261	1785	67	186	1612	133
Confl. Peds. (#/hr)			24			56			21			48
Confl. Bikes (#/hr)			7			3						1
Heavy Vehicles (%)	3%	1%	7%	6%	2%	3%	3%	2%	4%	2%	3%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.6	38.7	38.7	15.5	40.6	40.6	13.0	46.0	46.0	9.8	42.8	42.8
Effective Green, g (s)	13.6	38.7	38.7	15.5	40.6	40.6	13.0	46.0	46.0	9.8	42.8	42.8
Actuated g/C Ratio	0.10	0.30	0.30	0.12	0.31	0.31	0.10	0.35	0.35	0.08	0.33	0.33
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	356	1529	432	394	1588	459	340	2267	531	259	2089	488
v/s Ratio Prot	c0.08	c0.20		0.07	c0.18		0.08	c0.28		0.05	c0.25	
v/s Ratio Perm			0.04			0.03			0.04			0.09
v/c Ratio	0.79	0.66	0.14	0.61	0.56	0.10	0.77	0.79	0.13	0.72	0.77	0.27
Uniform Delay, d1	56.8	39.9	33.5	54.4	37.3	31.7	57.0	37.6	28.4	58.7	39.2	32.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.69	1.08	1.00	1.00	1.00
Incremental Delay, d2	10.9	1.1	0.2	2.8	0.5	0.1	7.3	2.1	0.3	9.1	2.8	1.4
Delay (s)	67.7	41.0	33.6	57.2	37.7	31.8	50.8	27.9	31.0	67.9	42.0	33.5
Level of Service	E	D	C	E	D	C	D	C	C	E	D	C
Approach Delay (s)		45.0			40.8			30.9			43.5	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.8%	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												
Volume (vph)	103	591	70	159	489	176	71	2208	178	134	1686	62
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		0.97	0.91	1.00	1.00	0.86	1.00	0.97	0.86	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	3509		3433	5136	1492	1805	6471	1552	3335	6302	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	3509		3433	5136	1492	1805	6471	1552	3335	6302	
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)	103	591	70	159	489	176	71	2208	178	134	1686	62
RTOR Reduction (vph)	0	7	0	0	0	140	0	0	94	0	4	0
Lane Group Flow (vph)	103	654	0	159	489	36	71	2208	84	134	1744	0
Confl. Peds. (#/hr)			14			6			14			9
Heavy Vehicles (%)	0%	1%	0%	2%	1%	6%	0%	1%	1%	5%	3%	5%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	11.9	29.0		9.6	26.7	26.7	8.2	61.1	61.1	10.3	63.2	
Effective Green, g (s)	11.9	29.0		9.6	26.7	26.7	8.2	61.1	61.1	10.3	63.2	
Actuated g/C Ratio	0.09	0.22		0.07	0.21	0.21	0.06	0.47	0.47	0.08	0.49	
Clearance Time (s)	5.0	5.0		5.0	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)	165	783		254	1055	306	114	3041	729	264	3064	
v/s Ratio Prot	c0.06	c0.19		0.05	0.10		0.04	c0.34		0.04	c0.28	
v/s Ratio Perm						0.02			0.05			
v/c Ratio	0.62	0.84		0.63	0.46	0.12	0.62	0.73	0.11	0.51	0.57	
Uniform Delay, d1	56.9	48.2		58.5	45.4	42.1	59.4	27.7	19.3	57.4	23.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.15	0.32	0.12	0.66	0.60	
Incremental Delay, d2	7.2	7.7		4.8	0.3	0.2	6.6	1.0	0.2	1.1	0.5	
Delay (s)	64.1	55.9		63.2	45.7	42.2	74.9	9.9	2.5	38.8	14.8	
Level of Service	E	E		E	D	D	E	A	A	D	B	
Approach Delay (s)		57.0			48.3			11.2			16.5	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.8%	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												
Volume (vph)	401	1086	123	499	780	248	125	1855	385	145	1515	187
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	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5040		3433	5085	1599	3400	6471	1563	3367	6408	1533
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5040		3433	5085	1599	3400	6471	1563	3367	6408	1533
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)	401	1086	123	499	780	248	125	1855	385	145	1515	187
RTOR Reduction (vph)	0	10	0	0	0	94	0	0	0	0	0	0
Lane Group Flow (vph)	401	1199	0	499	780	154	125	1855	385	145	1515	187
Confl. Peds. (#/hr)			7			6			3			3
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	1%	2%	2%	2%	1%	3%	1%	2%	4%	2%	4%
Turn Type	Prot			Prot		Prot	Prot		Free	Prot		Free
Protected Phases	7	4		3	8	8	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	19.5	33.8		22.0	36.3	36.3	8.1	46.0	130.0	8.2	46.1	130.0
Effective Green, g (s)	19.5	33.8		22.0	36.3	36.3	8.1	46.0	130.0	8.2	46.1	130.0
Actuated g/C Ratio	0.15	0.26		0.17	0.28	0.28	0.06	0.35	1.00	0.06	0.35	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	520	1310		581	1420	446	212	2290	1563	212	2272	1533
v/s Ratio Prot	0.12	c0.24		c0.15	0.15	0.10	0.04	c0.29		c0.04	0.24	
v/s Ratio Perm									c0.25			0.12
v/c Ratio	0.77	0.91		0.86	0.55	0.35	0.59	0.81	0.25	0.68	0.67	0.12
Uniform Delay, d1	53.1	46.7		52.5	39.9	37.4	59.3	38.0	0.0	59.6	35.5	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.39	0.24	1.00	1.14	0.49	1.00
Incremental Delay, d2	7.0	10.0		12.0	0.4	0.5	2.2	1.7	0.2	7.3	1.3	0.1
Delay (s)	60.1	56.7		64.5	40.3	37.8	84.6	10.8	0.2	75.5	18.8	0.1
Level of Service	E	E		E	D	D	F	B	A	E	B	A
Approach Delay (s)		57.6			47.8			13.0			21.4	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.0%	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												
Volume (vph)	143	691	156	117	387	365	98	1789	213	663	1309	69
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	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.86		0.97	0.91	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3455		1736	3539	1525	1736	6345		3467	4988	1615
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3455		1736	3539	1525	1736	6345		3467	4988	1615
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)	143	691	156	117	387	365	98	1789	213	663	1309	69
RTOR Reduction (vph)	0	15	0	0	0	244	0	16	0	0	0	45
Lane Group Flow (vph)	143	832	0	117	387	121	98	1986	0	663	1309	24
Confl. Peds. (#/hr)			14			4			2			4
Confl. Bikes (#/hr)			4			1						
Heavy Vehicles (%)	2%	1%	1%	4%	2%	4%	4%	1%	3%	1%	4%	0%
Turn Type	Prot			Prot		Perm	Prot			Prot		Prot
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases						8						
Actuated Green, G (s)	22.6	34.9		10.0	22.3	22.3	19.1	43.1		22.0	46.0	46.0
Effective Green, g (s)	22.6	34.9		10.0	22.3	22.3	19.1	43.1		22.0	46.0	46.0
Actuated g/C Ratio	0.17	0.27		0.08	0.17	0.17	0.15	0.33		0.17	0.35	0.35
Clearance Time (s)	5.0	5.0		5.0	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)	308	928		134	607	262	255	2104		587	1765	571
v/s Ratio Prot	0.08	c0.24		c0.07	0.11		0.06	c0.31		c0.19	0.26	0.02
v/s Ratio Perm						0.08						
v/c Ratio	0.46	0.90		0.87	0.64	0.46	0.38	0.94		1.13	0.74	0.04
Uniform Delay, d1	48.3	45.8		59.4	50.1	48.5	50.1	42.3		54.0	36.8	27.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.96	0.54		0.90	0.32	0.33
Incremental Delay, d2	1.1	11.1		42.1	2.2	1.3	0.8	8.8		72.9	2.0	0.1
Delay (s)	49.4	56.9		101.5	52.3	49.8	48.7	31.6		121.3	13.6	9.2
Level of Service	D	E		F	D	D	D	C		F	B	A
Approach Delay (s)		55.8			57.9			32.4			48.5	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM Average Control Delay	45.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.8%	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												
Volume (vph)	21	8	2	139	7	233	9	1893	221	238	1110	23
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	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	1.00	0.86		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.86	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1836		1805	1521	1504	1626	6297		1787	5015	
Flt Permitted	0.68	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1283	1836		1805	1521	1504	1626	6297		1787	5015	
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)	21	8	2	139	7	233	9	1893	221	238	1110	23
RTOR Reduction (vph)	0	2	0	0	91	95	0	12	0	0	1	0
Lane Group Flow (vph)	21	8	0	139	30	24	9	2102	0	238	1132	0
Confl. Peds. (#/hr)			5						9			7
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	11%	2%	1%	1%	3%	4%
Turn Type	Perm			Prot		Prot	Prot			Prot		
Protected Phases		4		3	8	8	5	2		1	6	
Permitted Phases	4											
Actuated Green, G (s)	8.1	8.1		13.1	26.2	26.2	4.6	67.4		21.4	84.2	
Effective Green, g (s)	8.1	8.1		13.1	26.2	26.2	4.6	67.4		21.4	84.2	
Actuated g/C Ratio	0.06	0.06		0.10	0.20	0.20	0.04	0.52		0.16	0.65	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	80	114		182	307	303	58	3265		294	3248	
v/s Ratio Prot		0.00		c0.08	0.02	0.02	0.01	c0.33		c0.13	0.23	
v/s Ratio Perm	c0.02											
v/c Ratio	0.26	0.07		0.76	0.10	0.08	0.16	0.64		0.81	0.35	
Uniform Delay, d1	58.1	57.4		56.9	42.3	42.1	60.8	22.6		52.3	10.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.87	0.51	
Incremental Delay, d2	1.8	0.3		17.2	0.1	0.1	1.2	1.0		11.1	0.2	
Delay (s)	59.9	57.7		74.1	42.4	42.2	62.1	23.6		56.8	5.5	
Level of Service	E	E		E	D	D	E	C		E	A	
Approach Delay (s)		59.2			54.0			23.8			14.4	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	383	998	242	144	888	244	264	1445	60	179	731
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		5.0	5.0
Lane Util. Factor		0.95	0.91		1.00	0.91		0.97	0.91		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.97		1.00	0.99		1.00	1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1681	4941		1703	4825		3467	5031		3400	5036
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1681	4941		1703	4825		3467	5031		3400	5036
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)	0	383	998	242	144	888	244	264	1445	60	179	731
RTOR Reduction (vph)	0	0	26	0	0	34	0	0	3	0	0	0
Lane Group Flow (vph)	0	383	1214	0	144	1098	0	264	1502	0	179	731
Confl. Peds. (#/hr)				10			34			8		
Confl. Bikes (#/hr)							1					
Heavy Vehicles (%)	2%	2%	1%	3%	6%	2%	5%	1%	1%	36%	3%	3%
Turn Type	custom	Prot			Prot			Prot			Prot	
Protected Phases		7	4		3	8		5	2		1	6
Permitted Phases	7											
Actuated Green, G (s)		33.8	55.8		17.2	39.2		15.6	47.0		10.0	41.4
Effective Green, g (s)		33.8	55.8		17.2	39.2		15.6	47.0		10.0	41.4
Actuated g/C Ratio		0.23	0.37		0.11	0.26		0.10	0.31		0.07	0.28
Clearance Time (s)		5.0	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
Lane Grp Cap (vph)		379	1838		195	1261		361	1576		227	1390
v/s Ratio Prot		c0.23	0.25		0.08	c0.23		0.08	c0.30		c0.05	0.15
v/s Ratio Perm												
v/c Ratio		1.01	0.66		0.74	0.87		0.73	0.95		0.79	0.53
Uniform Delay, d1		58.1	39.2		64.2	53.0		65.2	50.4		69.0	46.0
Progression Factor		1.00	1.00		0.79	0.34		1.00	1.00		1.00	1.00
Incremental Delay, d2		48.9	1.9		6.8	4.2		7.4	14.0		16.4	1.4
Delay (s)		107.0	41.1		57.6	22.0		72.6	64.4		85.4	47.4
Level of Service		F	D		E	C		E	E		F	D
Approach Delay (s)			56.6			26.0			65.6			52.3
Approach LOS			E			C			E			D

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	225
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.95
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1511
Flt Permitted	1.00
Satd. Flow (perm)	1511
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	225
RTOR Reduction (vph)	163
Lane Group Flow (vph)	62
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	41.4
Effective Green, g (s)	41.4
Actuated g/C Ratio	0.28
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	417
v/s Ratio Prot	
v/s Ratio Perm	0.04
v/c Ratio	0.15
Uniform Delay, d1	41.0
Progression Factor	1.00
Incremental Delay, d2	0.8
Delay (s)	41.8
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	1	2	74	2	355	2	1020	66	207	602	6
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		5.0	5.0	
Lane Util. Factor		1.00		1.00	0.95	0.95	1.00	0.95		0.97	0.95	
Frt		0.95		1.00	0.85	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1328		1736	1537	1534	1805	3507		3433	3340	
Flt Permitted		0.84		0.75	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1139		1377	1537	1534	1805	3507		3433	3340	
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)	3	1	2	74	2	355	2	1020	66	207	602	6
RTOR Reduction (vph)	0	2	0	0	152	151	0	5	0	0	1	0
Lane Group Flow (vph)	0	4	0	74	28	26	2	1081	0	207	607	0
Heavy Vehicles (%)	0%	0%	100%	4%	0%	0%	0%	2%	2%	2%	8%	0%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		9.8		9.8	9.8	9.8	0.9	32.9		9.8	41.8	
Effective Green, g (s)		9.8		9.8	9.8	9.8	0.9	32.9		9.8	41.8	
Actuated g/C Ratio		0.15		0.15	0.15	0.15	0.01	0.49		0.15	0.62	
Clearance Time (s)		5.0		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	
Lane Grp Cap (vph)		165		200	223	223	24	1709		498	2068	
v/s Ratio Prot					0.02		0.00	c0.31		c0.06	0.18	
v/s Ratio Perm		0.00		c0.05		0.02						
v/c Ratio		0.03		0.37	0.12	0.12	0.08	0.63		0.42	0.29	
Uniform Delay, d1		24.8		26.1	25.1	25.1	32.9	12.8		26.2	6.0	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		1.2	0.3	0.2	1.5	0.8		0.6	0.1	
Delay (s)		24.8		27.2	25.4	25.3	34.4	13.6		26.8	6.1	
Level of Service		C		C	C	C	C	B		C	A	
Approach Delay (s)		24.8			25.7			13.6			11.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	15.0
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												
Volume (vph)	362	528	17	242	363	138	18	987	298	133	493	169
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1643	3388		1736	1810	1532	1805	3505	1561	1719	3471	1568
Flt Permitted	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1643	3388		1736	1810	1532	1805	3505	1561	1719	3471	1568
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)	362	528	17	242	363	138	18	987	298	133	493	169
RTOR Reduction (vph)	0	2	0	0	0	82	0	0	71	0	0	104
Lane Group Flow (vph)	293	612	0	242	363	56	18	987	227	133	493	65
Confl. Peds. (#/hr)			3			24			2			
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	0%	1%	6%	4%	5%	1%	0%	3%	2%	5%	4%	3%
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	29.7	29.7		30.2	30.2	30.2	2.6	43.2	43.2	11.1	51.7	51.7
Effective Green, g (s)	29.7	29.7		30.2	30.2	30.2	2.6	43.2	43.2	11.1	51.7	51.7
Actuated g/C Ratio	0.22	0.22		0.23	0.23	0.23	0.02	0.32	0.32	0.08	0.39	0.39
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	364	750		391	407	345	35	1128	502	142	1337	604
v/s Ratio Prot	0.18	c0.18		0.14	c0.20		0.01	c0.28		c0.08	0.14	
v/s Ratio Perm						0.04			0.15			0.04
v/c Ratio	0.80	0.82		0.62	0.89	0.16	0.51	0.88	0.45	0.94	0.37	0.11
Uniform Delay, d1	49.5	49.7		46.8	50.4	41.8	65.2	43.0	36.1	61.2	29.6	26.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.2	6.9		2.9	21.0	0.2	12.2	7.8	0.7	56.1	0.2	0.1
Delay (s)	61.7	56.5		49.7	71.4	42.0	77.3	50.7	36.8	117.3	29.7	26.5
Level of Service	E	E		D	E	D	E	D	D	F	C	C
Approach Delay (s)		58.2			58.9			47.9			43.7	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	134.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.7%	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												
Volume (vph)	134	1184	221	194	1142	31	50	21	71	17	33	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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.93	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3464		1736	3479		1649	1147	1415	1399	1299	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3464		1736	3479		1649	1147	1415	1399	1299	
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)	134	1184	221	194	1142	31	50	21	71	17	33	39
RTOR Reduction (vph)	0	10	0	0	1	0	0	0	59	0	30	0
Lane Group Flow (vph)	134	1395	0	194	1172	0	35	36	12	17	42	0
Confl. Peds. (#/hr)			7			3			44			
Confl. Bikes (#/hr)			4			1			1			
Heavy Vehicles (%)	2%	1%	1%	4%	3%	13%	4%	90%	6%	29%	56%	16%
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	23.5	61.1		18.5	56.1		22.9	22.9	22.9	8.2	8.2	
Effective Green, g (s)	23.5	61.1		18.5	56.1		22.9	22.9	22.9	8.2	8.2	
Actuated g/C Ratio	0.18	0.47		0.14	0.43		0.18	0.18	0.18	0.06	0.06	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	318	1619		246	1493		289	201	248	88	81	
v/s Ratio Prot	0.08	c0.40		0.11	c0.34		0.02	c0.03		0.01	c0.03	
v/s Ratio Perm									0.01			
v/c Ratio	0.42	0.86		0.79	0.78		0.12	0.18	0.05	0.19	0.52	
Uniform Delay, d1	47.6	31.0		54.2	32.1		45.4	45.9	44.9	58.1	59.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	5.0		15.3	2.8		0.2	0.4	0.1	1.1	5.5	
Delay (s)	48.5	36.0		69.5	34.9		45.6	46.3	44.9	59.2	64.8	
Level of Service	D	D		E	C		D	D	D	E	E	
Approach Delay (s)		37.1			39.8			45.5			63.8	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	39.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.7%	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												
Volume (vph)	5	895	47	98	1586	29	49	5	70	5	3	2
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1503	3479		1768	3529		1649	1680	1568	1715	1783	1077
Flt Permitted	0.13	1.00		0.29	1.00		0.95	0.96	1.00	0.95	0.99	1.00
Satd. Flow (perm)	199	3479		538	3529		1649	1680	1568	1715	1783	1077
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)	5	895	47	98	1586	29	49	5	70	5	3	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	66	0	0	2
Lane Group Flow (vph)	5	941	0	98	1615	0	27	27	4	4	4	0
Confl. Peds. (#/hr)	4		2	2		4						
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	20%	3%	0%	2%	2%	0%	4%	0%	3%	0%	0%	50%
Turn Type	Perm			Perm			Split		Perm	Split		Perm
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	94.9	94.9		94.9	94.9		7.5	7.5	7.5	2.6	2.6	2.6
Effective Green, g (s)	94.9	94.9		94.9	94.9		7.5	7.5	7.5	2.6	2.6	2.6
Actuated g/C Ratio	0.79	0.79		0.79	0.79		0.06	0.06	0.06	0.02	0.02	0.02
Clearance Time (s)	5.0	5.0		5.0	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)	157	2751		425	2791		103	105	98	37	39	23
v/s Ratio Prot		0.27			c0.46		c0.02	0.02		c0.00	0.00	
v/s Ratio Perm	0.03			0.18					0.00			0.00
v/c Ratio	0.03	0.34		0.23	0.58		0.26	0.26	0.04	0.11	0.10	0.00
Uniform Delay, d1	2.7	3.6		3.2	4.8		53.6	53.6	52.9	57.6	57.6	57.4
Progression Factor	1.00	1.00		0.57	0.83		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.3		1.1	0.8		1.4	1.3	0.2	1.3	1.2	0.0
Delay (s)	3.1	3.9		3.0	4.8		55.0	54.9	53.1	58.9	58.7	57.5
Level of Service	A	A		A	A		D	D	D	E	E	E
Approach Delay (s)		3.9			4.7			53.9			58.5	
Approach LOS		A			A			D			E	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
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						
Volume (veh/h)	79	330	473	60	13	26
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	79	330	473	60	13	26
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1310			
pX, platoon unblocked						
vC, conflicting volume	534				827	268
vC1, stage 1 conf vol					504	
vC2, stage 2 conf vol					323	
vCu, unblocked vol	534				827	268
tC, single (s)	4.1				7.0	7.0
tC, 2 stage (s)					6.0	
tF (s)	2.2				3.6	3.4
p0 queue free %	92				97	96
cM capacity (veh/h)	1043				473	718

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	79	165	165	315	218	13	26
Volume Left	79	0	0	0	0	13	0
Volume Right	0	0	0	0	60	0	26
cSH	1043	1700	1700	1700	1700	473	718
Volume to Capacity	0.08	0.10	0.10	0.19	0.13	0.03	0.04
Queue Length 95th (ft)	6	0	0	0	0	2	3
Control Delay (s)	8.7	0.0	0.0	0.0	0.0	12.8	10.2
Lane LOS	A					B	B
Approach Delay (s)	1.7			0.0		11.1	
Approach LOS						B	

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	202	8	20	564	77	6	0	14	66	7	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.99
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	0.85		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	3610	1581	1805	3610	1615	1805	1581		1805	1900	1594
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3610	1581	1805	3610	1615	1805	1581		1805	1900	1594
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)	44	202	8	20	564	77	6	0	14	66	7	40
RTOR Reduction (vph)	0	0	4	0	0	44	0	14	0	0	0	36
Lane Group Flow (vph)	44	202	4	20	564	33	6	0	0	66	7	4
Confl. Peds. (#/hr)			1						1			1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.1	26.6	26.6	0.6	25.1	25.1	1.9	1.9		6.0	6.0	6.0
Effective Green, g (s)	2.1	26.6	26.6	0.6	25.1	25.1	1.9	1.9		6.0	6.0	6.0
Actuated g/C Ratio	0.04	0.45	0.45	0.01	0.42	0.42	0.03	0.03		0.10	0.10	0.10
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
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)	64	1625	712	18	1533	686	58	51		183	193	162
v/s Ratio Prot	c0.02	0.06		0.01	c0.16		c0.00	0.00		c0.04	0.00	
v/s Ratio Perm			0.00			0.02						0.00
v/c Ratio	0.69	0.12	0.01	1.11	0.37	0.05	0.10	0.01		0.36	0.04	0.03
Uniform Delay, d1	28.2	9.5	9.0	29.2	11.6	10.0	27.8	27.7		24.8	23.9	23.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.5	0.0	0.0	250.0	0.2	0.0	0.8	0.1		1.2	0.1	0.1
Delay (s)	54.6	9.5	9.0	279.2	11.7	10.0	28.6	27.8		26.0	24.0	24.0
Level of Service	D	A	A	F	B	B	C	C		C	C	C
Approach Delay (s)		17.3			19.6			28.0			25.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	44.5%	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												
Volume (vph)	186	819	100	223	982	190	143	1520	265	92	1272	95
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3467	3574	1480	3502	5085	1550	3433	4959		3367	4976	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3467	3574	1480	3502	5085	1550	3433	4959		3367	4976	
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)	186	819	100	223	982	190	143	1520	265	92	1272	95
RTOR Reduction (vph)	0	0	36	0	0	92	0	20	0	0	7	0
Lane Group Flow (vph)	186	819	64	223	982	98	143	1765	0	92	1360	0
Confl. Peds. (#/hr)			16			18			16			10
Confl. Bikes (#/hr)			3			3						1
Heavy Vehicles (%)	1%	1%	6%	0%	2%	1%	2%	2%	1%	4%	3%	3%
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	9.6	32.2	32.2	9.9	32.5	32.5	8.6	45.2		6.8	43.4	
Effective Green, g (s)	9.6	32.2	32.2	9.9	32.5	32.5	8.6	45.2		6.8	43.4	
Actuated g/C Ratio	0.08	0.28	0.28	0.09	0.28	0.28	0.08	0.40		0.06	0.38	
Clearance Time (s)	5.0	5.0	5.0	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)	292	1009	418	304	1448	441	259	1964		201	1893	
v/s Ratio Prot	0.05	c0.23		c0.06	0.19		c0.04	c0.36		0.03	0.27	
v/s Ratio Perm			0.04			0.06						
v/c Ratio	0.64	0.81	0.15	0.73	0.68	0.22	0.55	0.90		0.46	0.72	
Uniform Delay, d1	50.6	38.1	30.7	50.8	36.2	31.2	50.9	32.3		51.9	30.1	
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	4.5	5.1	0.2	8.8	1.3	0.3	2.5	5.9		1.7	1.3	
Delay (s)	55.1	43.2	30.9	59.6	37.4	31.4	53.4	38.2		53.5	31.5	
Level of Service	E	D	C	E	D	C	D	D		D	C	
Approach Delay (s)		44.1			40.2			39.4			32.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	87.9%	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												
Volume (vph)	220	882	70	328	936	199	95	1471	239	200	1291	91
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3502	5019		3400	3505	1543	3467	5085	1550	3367	5029	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3502	5019		3400	3505	1543	3467	5085	1550	3367	5029	
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)	220	882	70	328	936	199	95	1471	239	200	1291	91
RTOR Reduction (vph)	0	8	0	0	0	62	0	0	79	0	6	0
Lane Group Flow (vph)	220	944	0	328	936	137	95	1471	160	200	1376	0
Confl. Peds. (#/hr)			24			13			9			16
Heavy Vehicles (%)	0%	2%	1%	3%	3%	2%	1%	2%	2%	4%	2%	1%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	9.8	31.6		14.3	36.1	36.1	6.9	39.5	39.5	9.7	42.3	
Effective Green, g (s)	9.8	31.6		14.3	36.1	36.1	6.9	39.5	39.5	9.7	42.3	
Actuated g/C Ratio	0.09	0.27		0.12	0.31	0.31	0.06	0.34	0.34	0.08	0.37	
Clearance Time (s)	5.0	5.0		5.0	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)	298	1378		422	1099	484	208	1745	532	284	1848	
v/s Ratio Prot	0.06	0.19		c0.10	c0.27		0.03	c0.29		c0.06	c0.27	
v/s Ratio Perm						0.09			0.10			
v/c Ratio	0.74	0.69		0.78	0.85	0.28	0.46	0.84	0.30	0.70	0.74	
Uniform Delay, d1	51.4	37.3		48.9	37.0	29.8	52.3	34.9	27.7	51.3	31.7	
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	9.2	1.4		8.7	6.5	0.3	1.6	3.9	0.3	7.7	1.7	
Delay (s)	60.6	38.7		57.6	43.5	30.1	53.9	38.8	28.0	59.0	33.4	
Level of Service	E	D		E	D	C	D	D	C	E	C	
Approach Delay (s)		42.8			44.8			38.2			36.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	115.1	Sum of lost time (s)	25.0
Intersection Capacity Utilization	83.7%	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												
Volume (vph)	257	876	171	746	1187	291	241	1328	271	206	1266	157
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1551	3467	6408	1561	3433	6408	1539	3467	5085	1528
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1551	3467	6408	1561	3433	6408	1539	3467	5085	1528
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)	257	876	171	746	1187	291	241	1328	271	206	1266	157
RTOR Reduction (vph)	0	0	50	0	0	131	0	0	114	0	0	111
Lane Group Flow (vph)	257	876	121	746	1187	160	241	1328	157	206	1266	46
Confl. Peds. (#/hr)			7			11			14			12
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	2%	2%	2%	1%	2%	1%	2%	2%	2%	1%	2%	3%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.2	33.9	33.9	36.3	54.0	54.0	15.0	45.2	45.2	13.8	44.0	44.0
Effective Green, g (s)	16.2	33.9	33.9	36.3	54.0	54.0	15.0	45.2	45.2	13.8	44.0	44.0
Actuated g/C Ratio	0.11	0.23	0.23	0.24	0.36	0.36	0.10	0.30	0.30	0.09	0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	373	1155	352	844	2319	565	345	1941	466	321	1500	451
v/s Ratio Prot	0.07	c0.17		c0.22	0.19		c0.07	0.21		0.06	c0.25	
v/s Ratio Perm			0.08			0.10			0.10			0.03
v/c Ratio	0.69	0.76	0.34	0.88	0.51	0.28	0.70	0.68	0.34	0.64	0.84	0.10
Uniform Delay, d1	64.1	53.8	48.3	54.4	37.3	33.8	64.9	45.7	40.4	65.3	49.4	38.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	2.9	0.6	10.9	0.2	0.3	6.1	1.0	0.4	4.3	4.5	0.1
Delay (s)	69.3	56.7	48.9	65.3	37.5	34.1	71.0	46.7	40.8	69.7	53.9	38.3
Level of Service	E	E	D	E	D	C	E	D	D	E	D	D
Approach Delay (s)		58.2			46.4			49.0			54.4	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	149.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.0%	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												
Volume (vph)	274	459	70	347	1036	199	194	1110	207	141	1152	754
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1509	3467	3539	1553	1736	5136	1583	1770	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1509	3467	3539	1553	1736	5136	1583	1770	5085	1583
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)	274	459	70	347	1036	199	194	1110	207	141	1152	754
RTOR Reduction (vph)	0	0	8	0	0	6	0	0	71	0	0	23
Lane Group Flow (vph)	274	459	62	347	1036	193	194	1110	136	141	1152	731
Confl. Peds. (#/hr)			16			1			9			4
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	4%	4%	7%	1%	2%	4%	4%	1%	2%	2%	2%	2%
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	11.0	28.4	49.4	24.6	42.0	62.7	16.0	51.3	75.9	15.7	51.0	62.0
Effective Green, g (s)	11.0	28.4	49.4	24.6	42.0	62.7	16.0	51.3	75.9	15.7	51.0	62.0
Actuated g/C Ratio	0.08	0.20	0.35	0.18	0.30	0.45	0.11	0.37	0.54	0.11	0.36	0.44
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	265	704	532	609	1062	696	198	1882	858	198	1852	701
v/s Ratio Prot	0.08	0.13	0.04	0.10	c0.29	0.12	c0.11	0.22	0.09	0.08	0.23	c0.46
v/s Ratio Perm												
v/c Ratio	1.03	0.65	0.12	0.57	0.98	0.28	0.98	0.59	0.16	0.71	0.62	1.04
Uniform Delay, d1	64.5	51.3	30.6	52.9	48.5	24.4	61.8	35.8	16.1	60.0	36.6	39.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	64.4	2.2	0.1	1.2	21.7	0.2	57.4	0.5	0.1	11.4	0.7	45.7
Delay (s)	128.9	53.4	30.7	54.1	70.2	24.6	119.2	36.3	16.1	71.4	37.2	84.7
Level of Service	F	D	C	D	E	C	F	D	B	E	D	F
Approach Delay (s)		77.2			60.9			44.2			57.1	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	57.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	103	41	31	1400	1306	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1612	1442	1687	5085	5085	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1612	1442	1687	5085	5085	1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	41	31	1400	1306	260
RTOR Reduction (vph)	0	37	0	0	0	72
Lane Group Flow (vph)	103	4	31	1400	1306	188
Confl. Peds. (#/hr)						2
Heavy Vehicles (%)	12%	12%	7%	2%	2%	5%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	13.0	13.0	5.3	97.0	86.7	86.7
Effective Green, g (s)	13.0	13.0	5.3	97.0	86.7	86.7
Actuated g/C Ratio	0.11	0.11	0.04	0.81	0.72	0.72
Clearance Time (s)	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
Lane Grp Cap (vph)	175	156	75	4110	3674	1084
v/s Ratio Prot	c0.06		0.02	c0.28	c0.26	
v/s Ratio Perm		0.00				0.13
v/c Ratio	0.59	0.03	0.41	0.34	0.36	0.17
Uniform Delay, d1	51.0	47.9	55.8	3.0	6.2	5.3
Progression Factor	1.00	1.00	0.88	1.75	1.00	1.00
Incremental Delay, d2	5.0	0.1	3.4	0.2	0.3	0.3
Delay (s)	55.9	47.9	52.4	5.5	6.5	5.6
Level of Service	E	D	D	A	A	A
Approach Delay (s)	53.7			6.6	6.3	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	41.1%	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												
Volume (vph)	104	28	126	29	41	46	267	1307	15	45	936	305
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	5.0	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	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)	1752	1900	1528	1649	1714	1583	3467	5121		1770	5085	1570
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1900	1528	1649	1714	1583	3467	5121		1770	5085	1570
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)	104	28	126	29	41	46	267	1307	15	45	936	305
RTOR Reduction (vph)	0	0	108	0	0	43	0	1	0	0	0	153
Lane Group Flow (vph)	104	28	18	26	44	3	267	1321	0	45	936	152
Confl. Peds. (#/hr)			18						10			4
Heavy Vehicles (%)	3%	0%	2%	4%	5%	2%	1%	1%	7%	2%	2%	1%
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	17.3	17.3	17.3	7.4	7.4	7.4	15.6	67.9		7.4	59.7	59.7
Effective Green, g (s)	17.3	17.3	17.3	7.4	7.4	7.4	15.6	67.9		7.4	59.7	59.7
Actuated g/C Ratio	0.14	0.14	0.14	0.06	0.06	0.06	0.13	0.57		0.06	0.50	0.50
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	253	274	220	102	106	98	451	2898		109	2530	781
v/s Ratio Prot	c0.06	0.01		0.02	c0.03		c0.08	c0.26		0.03	c0.18	
v/s Ratio Perm			0.01			0.00						0.10
v/c Ratio	0.41	0.10	0.08	0.25	0.42	0.03	0.59	0.46		0.41	0.37	0.19
Uniform Delay, d1	46.7	44.6	44.5	53.7	54.2	52.9	49.2	15.2		54.2	18.6	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.46		0.88	0.69	0.97
Incremental Delay, d2	1.1	0.2	0.2	1.3	2.6	0.1	1.9	0.5		2.4	0.4	0.5
Delay (s)	47.8	44.8	44.6	55.0	56.8	53.0	41.6	7.4		50.3	13.2	16.9
Level of Service	D	D	D	D	E	D	D	A		D	B	B
Approach Delay (s)		45.9			54.9			13.2			15.3	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	58.8%	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												
Volume (vph)	85	26	9	16	18	34	29	1443	19	90	861	124
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	5.0		5.0	5.0	
Lane Util. Factor	0.95	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1715	1724		1805	1712	1586	1687	5124		1787	4995	
Flt Permitted	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1715	1724		1805	1712	1586	1687	5124		1787	4995	
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)	85	26	9	16	18	34	29	1443	19	90	861	124
RTOR Reduction (vph)	0	6	0	0	0	31	0	1	0	0	9	0
Lane Group Flow (vph)	60	54	0	16	18	3	29	1461	0	90	976	0
Confl. Peds. (#/hr)			4			5			3			
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	7%	1%	0%	1%	2%	1%
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	11.6	11.6		9.8	9.8	9.8	9.6	68.2		10.4	69.0	
Effective Green, g (s)	11.6	11.6		9.8	9.8	9.8	9.6	68.2		10.4	69.0	
Actuated g/C Ratio	0.10	0.10		0.08	0.08	0.08	0.08	0.57		0.09	0.58	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	166	167		147	140	130	135	2912		155	2872	
v/s Ratio Prot	c0.03	0.03		0.01	c0.01		0.02	c0.29		c0.05	0.20	
v/s Ratio Perm						0.00						
v/c Ratio	0.36	0.32		0.11	0.13	0.02	0.21	0.50		0.58	0.34	
Uniform Delay, d1	50.7	50.5		51.1	51.1	50.7	51.7	15.6		52.7	13.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.98	0.35	
Incremental Delay, d2	1.3	1.1		0.3	0.4	0.1	0.8	0.6		5.2	0.3	
Delay (s)	52.1	51.6		51.4	51.6	50.8	52.5	16.3		56.7	5.0	
Level of Service	D	D		D	D	D	D	B		E	A	
Approach Delay (s)		51.9			51.1			17.0			9.3	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.6%	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												
Volume (vph)	171	829	26	470	1494	382	65	1039	485	161	554	81
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	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.95		0.97	0.91		1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	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	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	3382		3183	4852		1752	5136	1526	1736	4952	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	3382		3183	4852		1752	5136	1526	1736	4952	
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)	171	829	26	470	1494	382	65	1039	485	161	554	81
RTOR Reduction (vph)	0	1	0	0	31	0	0	0	150	0	12	0
Lane Group Flow (vph)	171	854	0	470	1845	0	65	1039	335	161	623	0
Confl. Peds. (#/hr)			5			13			10			4
Heavy Vehicles (%)	2%	6%	12%	10%	3%	3%	3%	1%	3%	4%	2%	6%
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.9	46.4		25.0	61.5		8.4	43.0	43.0	15.6	50.2	
Effective Green, g (s)	9.9	46.4		25.0	61.5		8.4	43.0	43.0	15.6	50.2	
Actuated g/C Ratio	0.07	0.31		0.17	0.41		0.06	0.29	0.29	0.10	0.33	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	227	1046		531	1989		98	1472	437	181	1657	
v/s Ratio Prot	0.05	c0.25		0.15	c0.38		0.04	0.20		c0.09	0.13	
v/s Ratio Perm									c0.22			
v/c Ratio	0.75	0.82		0.89	0.93		0.66	0.71	0.77	0.89	0.38	
Uniform Delay, d1	68.8	47.9		61.1	42.1		69.4	47.8	48.9	66.3	38.0	
Progression Factor	0.60	0.42		0.79	0.67		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.6	5.1		10.3	5.8		15.6	2.9	12.2	37.1	0.1	
Delay (s)	50.6	25.2		58.5	34.1		85.0	50.7	61.1	103.4	38.1	
Level of Service	D	C		E	C		F	D	E	F	D	
Approach Delay (s)		29.5			39.0			55.3			51.3	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	93.1%	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												
Volume (vph)	156	142	60	21	162	171	130	1246	61	171	820	137
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	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	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1731	1900	1592	1638	1863	1575	1805	5090		1719	4763	
Flt Permitted	0.62	1.00	1.00	0.66	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1133	1900	1592	1141	1863	1575	1805	5090		1719	4763	
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)	156	142	60	21	162	171	130	1246	61	171	820	137
RTOR Reduction (vph)	0	0	46	0	0	131	0	4	0	0	20	0
Lane Group Flow (vph)	156	142	14	21	162	40	130	1303	0	171	937	0
Confl. Peds. (#/hr)	4		3	3		4			6			5
Heavy Vehicles (%)	4%	0%	0%	10%	2%	1%	0%	1%	2%	5%	6%	7%
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	18.1	18.1	18.1	18.1	18.1	18.1	11.7	30.7		14.1	33.1	
Effective Green, g (s)	18.1	18.1	18.1	18.1	18.1	18.1	11.7	30.7		14.1	33.1	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23	0.23	0.15	0.39		0.18	0.42	
Clearance Time (s)	5.0	5.0	5.0	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)	263	441	370	265	433	366	271	2006		311	2024	
v/s Ratio Prot		0.07			0.09		0.07	c0.26		c0.10	0.20	
v/s Ratio Perm	c0.14		0.01	0.02		0.03						
v/c Ratio	0.59	0.32	0.04	0.08	0.37	0.11	0.48	0.65		0.55	0.46	
Uniform Delay, d1	26.6	24.8	23.2	23.4	25.1	23.5	30.3	19.2		29.0	16.0	
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	3.6	0.4	0.0	0.1	0.5	0.1	1.3	0.7		2.0	0.2	
Delay (s)	30.2	25.2	23.2	23.5	25.7	23.7	31.7	20.0		31.0	16.2	
Level of Service	C	C	C	C	C	C	C	B		C	B	
Approach Delay (s)		27.1			24.6			21.0			18.5	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	15.0
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												
Volume (vph)	465	460	45	474	444	90	85	869	528	51	661	248
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	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3462		3433	3389		1805	3610	1579	1805	3374	1516
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3462		3433	3389		1805	3610	1579	1805	3374	1516
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)	465	460	45	474	444	90	85	869	528	51	661	248
RTOR Reduction (vph)	0	7	0	0	16	0	0	0	193	0	0	168
Lane Group Flow (vph)	465	498	0	474	518	0	85	869	335	51	661	80
Confl. Peds. (#/hr)			2			4			1			3
Confl. Bikes (#/hr)			2			4						
Heavy Vehicles (%)	2%	3%	0%	2%	4%	1%	0%	0%	1%	0%	7%	4%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	17.9	22.0		18.0	22.1		7.3	34.3	34.3	5.3	32.3	32.3
Effective Green, g (s)	17.9	22.0		18.0	22.1		7.3	34.3	34.3	5.3	32.3	32.3
Actuated g/C Ratio	0.18	0.22		0.18	0.22		0.07	0.34	0.34	0.05	0.32	0.32
Clearance Time (s)	5.0	5.0		5.0	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)	617	765		620	752		132	1243	544	96	1094	492
v/s Ratio Prot	0.14	0.14		c0.14	c0.15		c0.05	c0.24		0.03	0.20	
v/s Ratio Perm									0.21			0.05
v/c Ratio	0.75	0.65		0.76	0.69		0.64	0.70	0.62	0.53	0.60	0.16
Uniform Delay, d1	38.8	35.3		38.8	35.6		44.9	28.2	27.2	45.9	28.3	24.0
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	5.2	2.0		5.6	2.6		10.3	1.7	2.1	5.5	0.9	0.2
Delay (s)	44.0	37.3		44.4	38.2		55.2	29.9	29.3	51.5	29.2	24.2
Level of Service	D	D		D	D		E	C	C	D	C	C
Approach Delay (s)		40.5			41.1			31.1			29.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	99.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.5%	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												
Volume (vph)	54	621	53	31	1385	69	177	109	41	36	39	107
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			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00			0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00		1.00			1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.98			0.92	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1736	3438		1665	3539	1560		1764			1657	
Flt Permitted	0.08	1.00		0.33	1.00	1.00		0.71			0.89	
Satd. Flow (perm)	149	3438		584	3539	1560		1290			1486	
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)	54	621	53	31	1385	69	177	109	41	36	39	107
RTOR Reduction (vph)	0	6	0	0	0	24	0	4	0	0	22	0
Lane Group Flow (vph)	54	668	0	31	1385	45	0	323	0	0	160	0
Confl. Peds. (#/hr)	1		14	14		1	11		6	6		11
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	4%	3%	6%	7%	2%	1%	4%	0%	2%	6%	3%	2%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	60.7	60.7		60.7	60.7	60.7		49.3			49.3	
Effective Green, g (s)	60.7	60.7		60.7	60.7	60.7		49.3			49.3	
Actuated g/C Ratio	0.51	0.51		0.51	0.51	0.51		0.41			0.41	
Clearance Time (s)	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	
Lane Grp Cap (vph)	75	1739		295	1790	789		530			610	
v/s Ratio Prot		0.19			c0.39							
v/s Ratio Perm	0.36			0.05		0.03		c0.25			0.11	
v/c Ratio	0.72	0.38		0.11	0.77	0.06		0.61			0.26	
Uniform Delay, d1	23.0	18.2		15.5	24.1	15.1		27.8			23.3	
Progression Factor	1.00	1.00		0.13	0.40	0.06		1.00			1.00	
Incremental Delay, d2	45.4	0.6		0.5	2.1	0.1		5.1			1.0	
Delay (s)	68.4	18.8		2.5	11.7	1.0		32.9			24.4	
Level of Service	E	B		A	B	A		C			C	
Approach Delay (s)		22.5			11.0			32.9			24.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.7%	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												
Volume (vph)	120	1045	69	165	2084	64	177	379	198	44	318	187
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	4968		1770	5009		1770	1881	1599	1719	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	4968		1770	5009		1770	1881	1599	1719	1863	1583
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)	120	1045	69	165	2084	64	177	379	198	44	318	187
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	30	0	0	16
Lane Group Flow (vph)	120	1109	0	165	2146	0	177	379	168	44	318	171
Confl. Peds. (#/hr)			4			7			11			35
Confl. Bikes (#/hr)									6			3
Heavy Vehicles (%)	1%	3%	7%	2%	3%	2%	2%	1%	1%	5%	2%	2%
Turn Type	Prot			Prot			Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4		3	8		5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	10.9	57.4		17.5	64.0		15.6	38.1	60.6	4.7	27.2	43.1
Effective Green, g (s)	10.9	57.4		17.5	64.0		15.6	38.1	60.6	4.7	27.2	43.1
Actuated g/C Ratio	0.08	0.42		0.13	0.46		0.11	0.28	0.44	0.03	0.20	0.31
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	141	2071		225	2328		201	520	704	59	368	495
v/s Ratio Prot	0.07	0.22		c0.09	c0.43		c0.10	0.20	0.11	0.03	c0.17	0.11
v/s Ratio Perm												
v/c Ratio	0.85	0.54		0.73	0.92		0.88	0.73	0.24	0.75	0.86	0.34
Uniform Delay, d1	62.6	30.1		57.9	34.5		60.1	45.1	24.1	65.9	53.5	36.4
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	36.0	0.3		11.7	6.7		33.0	5.1	0.2	39.6	18.5	0.4
Delay (s)	98.6	30.4		69.5	41.2		93.2	50.2	24.3	105.5	72.0	36.8
Level of Service	F	C		E	D		F	D	C	F	E	D
Approach Delay (s)		37.0			43.2			53.5			62.7	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	45.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	137.7	Sum of lost time (s)	20.0
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												
Volume (vph)	68	582	91	36	1246	84	150	297	81	73	172	95
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3446		1656	3468		1787	1863	1567	1752	1827	1509
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	3446		1656	3468		1787	1863	1567	1752	1827	1509
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)	68	582	91	36	1246	84	150	297	81	73	172	95
RTOR Reduction (vph)	0	10	0	0	4	0	0	0	63	0	0	76
Lane Group Flow (vph)	68	663	0	36	1326	0	150	297	18	73	172	19
Confl. Peds. (#/hr)			7			6			7			6
Confl. Bikes (#/hr)						1			1			1
Heavy Vehicles (%)	1%	2%	3%	9%	3%	1%	1%	2%	1%	3%	4%	5%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.6	50.5		13.8	56.7		11.3	27.3	27.3	8.4	24.4	24.4
Effective Green, g (s)	7.6	50.5		13.8	56.7		11.3	27.3	27.3	8.4	24.4	24.4
Actuated g/C Ratio	0.06	0.42		0.12	0.47		0.09	0.23	0.23	0.07	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	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)	113	1450		190	1639		168	424	356	123	371	307
v/s Ratio Prot	0.04	c0.19		0.02	c0.38		c0.08	c0.16		0.04	c0.09	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.60	0.46		0.19	0.81		0.89	0.70	0.05	0.59	0.46	0.06
Uniform Delay, d1	54.7	24.9		48.0	27.0		53.8	42.6	36.2	54.1	42.0	38.6
Progression Factor	0.78	0.79		0.67	0.60		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.4	1.0		0.4	3.8		40.1	5.2	0.1	7.5	0.9	0.1
Delay (s)	51.1	20.6		32.4	19.9		93.9	47.8	36.3	61.6	43.0	38.7
Level of Service	D	C		C	B		F	D	D	E	D	D
Approach Delay (s)		23.4			20.2			59.1			45.8	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
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												
Volume (vph)	79	1330	110	67	2092	80	319	301	68	97	110	123
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	4873		1388	4914		1719	3382		1719	3173	
Flt Permitted	0.95	1.00		0.95	1.00		0.27	1.00		0.53	1.00	
Satd. Flow (perm)	1736	4873		1388	4914		483	3382		963	3173	
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)	79	1330	110	67	2092	80	319	301	68	97	110	123
RTOR Reduction (vph)	0	5	0	0	2	0	0	15	0	0	112	0
Lane Group Flow (vph)	79	1435	0	67	2170	0	319	354	0	97	121	0
Confl. Peds. (#/hr)			8			10			6			8
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	4%	4%	17%	30%	5%	1%	5%	0%	18%	5%	6%	1%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.1	84.4		10.5	83.8		40.1	26.3		21.7	12.9	
Effective Green, g (s)	11.1	84.4		10.5	83.8		40.1	26.3		21.7	12.9	
Actuated g/C Ratio	0.07	0.56		0.07	0.56		0.27	0.18		0.14	0.09	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	128	2742		97	2745		312	593		184	273	
v/s Ratio Prot	0.05	c0.29		0.05	c0.44		c0.15	0.10		0.03	0.04	
v/s Ratio Perm							c0.12			0.05		
v/c Ratio	0.62	0.52		0.69	0.79		1.02	0.60		0.53	0.44	
Uniform Delay, d1	67.4	20.3		68.2	26.2		50.6	57.0		58.2	65.1	
Progression Factor	0.82	0.64		1.28	0.70		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.0	0.4		15.2	1.9		56.8	1.6		2.7	1.1	
Delay (s)	60.1	13.4		102.2	20.2		107.4	58.6		60.9	66.3	
Level of Service	E	B		F	C		F	E		E	E	
Approach Delay (s)		15.8			22.7			81.2			64.7	
Approach LOS		B			C			F			E	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	91.7%	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												
Volume (vph)	24	700	24	35	1322	47	94	100	118	58	69	52
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		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.92		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3486		1805	3486		1768	1720		1715	1691	
Flt Permitted	0.95	1.00		0.95	1.00		0.61	1.00		0.36	1.00	
Satd. Flow (perm)	1736	3486		1805	3486		1134	1720		655	1691	
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)	24	700	24	35	1322	47	94	100	118	58	69	52
RTOR Reduction (vph)	0	1	0	0	2	0	0	41	0	0	26	0
Lane Group Flow (vph)	24	723	0	35	1367	0	94	177	0	58	95	0
Confl. Peds. (#/hr)			9			5	11		3	3		11
Confl. Bikes (#/hr)						1			3			2
Heavy Vehicles (%)	4%	3%	0%	0%	3%	0%	1%	1%	0%	5%	0%	9%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.8	79.1		5.1	79.4		20.8	20.8		20.8	20.8	
Effective Green, g (s)	4.8	79.1		5.1	79.4		20.8	20.8		20.8	20.8	
Actuated g/C Ratio	0.04	0.66		0.04	0.66		0.17	0.17		0.17	0.17	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	69	2298		77	2307		197	298		114	293	
v/s Ratio Prot	0.01	c0.21		0.02	c0.39			c0.10			0.06	
v/s Ratio Perm							0.08			0.09		
v/c Ratio	0.35	0.31		0.45	0.59		0.48	0.60		0.51	0.33	
Uniform Delay, d1	56.1	8.8		56.1	11.3		44.7	45.7		45.0	43.5	
Progression Factor	0.48	0.46		1.19	0.71		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	0.3		3.3	0.9		1.8	3.2		3.5	0.7	
Delay (s)	29.7	4.4		69.8	8.9		46.5	48.9		48.5	44.1	
Level of Service	C	A		E	A		D	D		D	D	
Approach Delay (s)		5.2			10.4			48.2			45.5	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.7%	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												
Volume (vph)	43	1430	39	6	2101	55	194	67	14	63	32	57
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	4960		1805	4872		1794	1844		1757	1845	1585
Flt Permitted	0.95	1.00		0.95	1.00		0.74	1.00		0.68	1.00	1.00
Satd. Flow (perm)	1805	4960		1805	4872		1390	1844		1261	1845	1585
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	1430	39	6	2101	55	194	67	14	63	32	57
RTOR Reduction (vph)	0	1	0	0	1	0	0	6	0	0	0	47
Lane Group Flow (vph)	43	1468	0	6	2155	0	194	75	0	63	32	10
Confl. Peds. (#/hr)			11			9	4		5	5		4
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	4%	3%	0%	6%	2%	0%	0%	0%	2%	3%	0%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.6	107.4		1.4	98.2		26.2	26.2		26.2	26.2	26.2
Effective Green, g (s)	10.6	107.4		1.4	98.2		26.2	26.2		26.2	26.2	26.2
Actuated g/C Ratio	0.07	0.72		0.01	0.65		0.17	0.17		0.17	0.17	0.17
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	128	3551		17	3190		243	322		220	322	277
v/s Ratio Prot	0.02	c0.30		0.00	c0.44			0.04			0.02	
v/s Ratio Perm							c0.14			0.05		0.01
v/c Ratio	0.34	0.41		0.35	0.68		0.80	0.23		0.29	0.10	0.04
Uniform Delay, d1	66.3	8.6		73.8	16.0		59.4	53.3		53.8	52.0	51.4
Progression Factor	0.77	0.95		1.29	0.45		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	0.3		8.6	0.8		16.5	0.4		0.7	0.1	0.1
Delay (s)	52.1	8.5		104.0	8.1		75.9	53.6		54.5	52.1	51.5
Level of Service	D	A		F	A		E	D		D	D	D
Approach Delay (s)		9.7			8.4			69.3			52.9	
Approach LOS		A			A			E			D	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.5%	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												
Volume (vph)	120	691	40	44	738	237	89	1115	107	213	853	165
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1736	5069		1770	4918		1787	5051		1770	3539	1548
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1736	5069		1770	4918		1787	5051		1770	3539	1548
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)	120	691	40	44	738	237	89	1115	107	213	853	165
RTOR Reduction (vph)	0	5	0	0	43	0	0	8	0	0	0	103
Lane Group Flow (vph)	120	726	0	44	932	0	89	1214	0	213	853	62
Confl. Peds. (#/hr)			5			4			5			1
Confl. Bikes (#/hr)			1						3			
Heavy Vehicles (%)	4%	1%	8%	2%	1%	2%	1%	1%	3%	2%	2%	3%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	13.0	38.6		6.3	31.9		10.7	35.7		19.3	44.3	44.3
Effective Green, g (s)	13.0	38.6		6.3	31.9		10.7	35.7		19.3	44.3	44.3
Actuated g/C Ratio	0.11	0.32		0.05	0.27		0.09	0.30		0.16	0.37	0.37
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	188	1632		93	1308		159	1504		285	1308	572
v/s Ratio Prot	c0.07	0.14		0.02	c0.19		0.05	c0.24		c0.12	0.24	
v/s Ratio Perm												0.04
v/c Ratio	0.64	0.45		0.47	0.71		0.56	0.81		0.75	0.65	0.11
Uniform Delay, d1	51.2	32.2		55.2	39.9		52.3	38.9		48.0	31.4	24.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.9	0.2		3.8	1.9		4.2	3.3		10.2	1.2	0.1
Delay (s)	58.1	32.4		59.0	41.7		56.6	42.2		58.2	32.6	24.9
Level of Service	E	C		E	D		E	D		E	C	C
Approach Delay (s)		36.0			42.5			43.2			36.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	119.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.1%	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												
Volume (vph)	87	660	152	59	873	66	362	631	72	60	375	148
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3539	1558	1656	3539	1494	3467	3505		3433	3264	
Flt Permitted	0.12	1.00	1.00	0.27	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	232	3539	1558	473	3539	1494	3467	3505		3433	3264	
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)	87	660	152	59	873	66	362	631	72	60	375	148
RTOR Reduction (vph)	0	0	70	0	0	45	0	7	0	0	32	0
Lane Group Flow (vph)	87	660	82	59	873	21	362	696	0	60	491	0
Confl. Peds. (#/hr)			11			13			7			22
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	1%	2%	1%	9%	2%	5%	1%	1%	3%	2%	5%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	47.9	40.0	40.0	44.3	38.2	38.2	17.1	48.0		5.9	36.8	
Effective Green, g (s)	47.9	40.0	40.0	44.3	38.2	38.2	17.1	48.0		5.9	36.8	
Actuated g/C Ratio	0.40	0.33	0.33	0.37	0.32	0.32	0.14	0.40		0.05	0.31	
Clearance Time (s)	5.0	5.0	5.0	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)	195	1180	519	235	1127	476	494	1402		169	1001	
v/s Ratio Prot	c0.03	0.19		0.01	c0.25		c0.10	c0.20		0.02	0.15	
v/s Ratio Perm	0.15		0.05	0.08		0.01						
v/c Ratio	0.45	0.56	0.16	0.25	0.77	0.04	0.73	0.50		0.36	0.49	
Uniform Delay, d1	25.8	32.8	28.1	25.5	37.0	28.3	49.3	27.0		55.2	34.0	
Progression Factor	0.69	0.58	0.44	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6	0.1	0.6	3.4	0.0	5.6	1.3		1.3	1.7	
Delay (s)	19.4	19.7	12.5	26.0	40.4	28.3	54.8	28.2		56.5	35.7	
Level of Service	B	B	B	C	D	C	D	C		E	D	
Approach Delay (s)		18.4			38.7			37.3			37.8	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	79.6%	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												
Volume (vph)	83	1221	178	105	1385	71	574	751	74	104	368	118
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	4846		1703	4806		3400	3492		1687	3340	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1736	4846		1703	4806		3400	3492		1687	3340	
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)	83	1221	178	105	1385	71	574	751	74	104	368	118
RTOR Reduction (vph)	0	11	0	0	3	0	0	5	0	0	21	0
Lane Group Flow (vph)	83	1388	0	105	1453	0	574	820	0	104	465	0
Confl. Peds. (#/hr)			20			13			37			15
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	4%	4%	7%	6%	7%	6%	3%	1%	5%	7%	2%	7%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.3	61.0		13.9	63.6		29.6	41.2		13.9	25.5	
Effective Green, g (s)	11.3	61.0		13.9	63.6		29.6	41.2		13.9	25.5	
Actuated g/C Ratio	0.08	0.41		0.09	0.42		0.20	0.27		0.09	0.17	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	131	1971		158	2038		671	959		156	568	
v/s Ratio Prot	0.05	0.29		c0.06	c0.30		c0.17	c0.23		0.06	0.14	
v/s Ratio Perm												
v/c Ratio	0.63	0.70		0.66	0.71		0.86	0.85		0.67	0.82	
Uniform Delay, d1	67.3	37.0		65.8	35.7		58.1	51.6		65.8	60.0	
Progression Factor	1.01	0.82		1.15	0.81		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.1	2.0		8.8	1.9		10.4	7.5		10.3	9.0	
Delay (s)	77.4	32.5		84.8	30.8		68.5	59.1		76.1	69.0	
Level of Service	E	C		F	C		E	E		E	E	
Approach Delay (s)		35.0			34.4			63.0			70.3	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.5%	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												
Volume (vph)	131	1490	92	130	1665	114	106	317	65	143	286	111
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1697	4957		1720	4917		1703	3271		1687	3505	1429
Flt Permitted	0.09	1.00		0.12	1.00		0.43	1.00		0.30	1.00	1.00
Satd. Flow (perm)	169	4957		223	4917		773	3271		539	3505	1429
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)	131	1490	92	130	1665	114	106	317	65	143	286	111
RTOR Reduction (vph)	0	4	0	0	5	0	0	12	0	0	0	45
Lane Group Flow (vph)	131	1578	0	130	1774	0	106	370	0	143	286	66
Confl. Peds. (#/hr)	46		83	83		46			29			27
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	6%	3%	3%	4%	4%	4%	6%	5%	14%	7%	3%	7%
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	102.7	102.7		102.7	102.7		32.3	25.3		32.3	25.3	25.3
Effective Green, g (s)	102.7	102.7		102.7	102.7		32.3	25.3		32.3	25.3	25.3
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.22	0.17		0.22	0.17	0.17
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	116	3394		153	3367		210	552		170	591	241
v/s Ratio Prot		0.32			0.36		0.02	0.11		c0.04	0.08	
v/s Ratio Perm	c0.77			0.58			0.09			c0.14		0.05
v/c Ratio	1.13	0.46		0.85	0.53		0.50	0.67		0.84	0.48	0.27
Uniform Delay, d1	23.6	10.9		17.8	11.7		50.0	58.4		55.0	56.4	54.3
Progression Factor	0.73	0.37		1.19	0.76		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	115.0	0.4		37.0	0.5		1.9	3.2		29.5	0.6	0.6
Delay (s)	132.1	4.4		58.3	9.4		51.9	61.6		84.5	57.1	55.0
Level of Service	F	A		E	A		D	E		F	E	D
Approach Delay (s)		14.2			12.7			59.5			63.9	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.6%	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												
Volume (vph)	103	1304	54	355	1620	47	5	301	231	118	292	123
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1687	4959		1752	4866		1805	3505	1551	1687	3264	
Flt Permitted	0.95	1.00		0.95	1.00		0.20	1.00	1.00	0.54	1.00	
Satd. Flow (perm)	1687	4959		1752	4866		382	3505	1551	952	3264	
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)	103	1304	54	355	1620	47	5	301	231	118	292	123
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	198	0	33	0
Lane Group Flow (vph)	103	1356	0	355	1665	0	5	301	33	118	382	0
Confl. Peds. (#/hr)			10			22			7			11
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	7%	3%	25%	3%	6%	7%	0%	3%	2%	7%	4%	7%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	13.7	63.7		34.5	84.5		21.2	21.2	21.2	30.5	30.5	
Effective Green, g (s)	13.7	63.7		34.5	84.5		21.2	21.2	21.2	30.5	30.5	
Actuated g/C Ratio	0.09	0.42		0.23	0.56		0.14	0.14	0.14	0.20	0.20	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	154	2106		403	2741		66	495	219	246	664	
v/s Ratio Prot	0.06	c0.27		c0.20	0.34		0.00	c0.09		0.03	c0.12	
v/s Ratio Perm							0.01		0.02	0.06		
v/c Ratio	0.67	0.64		0.88	0.61		0.08	0.61	0.15	0.48	0.58	
Uniform Delay, d1	66.0	34.2		55.8	21.7		56.3	60.5	56.5	54.9	53.9	
Progression Factor	1.29	0.48		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.3	1.3		19.6	1.0		0.5	2.1	0.3	1.5	1.2	
Delay (s)	94.4	17.8		75.3	22.8		56.8	62.6	56.8	56.4	55.1	
Level of Service	F	B		E	C		E	E	E	E	E	
Approach Delay (s)		23.2			32.0			60.1			55.4	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.8%	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												
Volume (vph)	0	1463	204	97	1023	2	0	0	0	249	1	1170
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
Lane Util. Factor		0.86		1.00	0.91						1.00	0.88
Frpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Frt		0.98		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)		6148		1703	4892						1676	2682
Flt Permitted		1.00		0.95	1.00						0.95	1.00
Satd. Flow (perm)		6148		1703	4892						1676	2682
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)	0	1463	204	97	1023	2	0	0	0	249	1	1170
RTOR Reduction (vph)	0	23	0	0	0	0	0	0	0	0	0	43
Lane Group Flow (vph)	0	1644	0	97	1025	0	0	0	0	0	250	1127
Confl. Peds. (#/hr)			9			18						
Confl. Bikes (#/hr)						3						
Heavy Vehicles (%)	0%	4%	3%	6%	6%	0%	0%	0%	0%	8%	0%	6%
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Actuated Green, G (s)		36.2		8.7	49.9						50.1	50.1
Effective Green, g (s)		36.2		8.7	49.9						50.1	50.1
Actuated g/C Ratio		0.33		0.08	0.45						0.46	0.46
Clearance Time (s)		5.0		5.0	5.0						5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		2023		135	2219						763	1222
v/s Ratio Prot		c0.27		c0.06	0.21							
v/s Ratio Perm											0.15	c0.42
v/c Ratio		0.81		0.72	0.46						0.33	0.92
Uniform Delay, d1		33.8		49.5	20.8						19.2	28.1
Progression Factor		1.00		1.28	0.26						1.00	1.00
Incremental Delay, d2		3.7		13.3	0.5						0.3	11.5
Delay (s)		37.5		76.7	5.9						19.4	39.6
Level of Service		D		E	A						B	D
Approach Delay (s)		37.5			12.1			0.0			36.0	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	183	104	1536	287	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	183	104	1536	287	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			350			
pX, platoon unblocked						
vC, conflicting volume	1536	768			1823	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1536	768			1823	
tC, single (s)	6.8	7.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	0	67			100	
cM capacity (veh/h)	109	319			340	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3
Volume Total	122	165	1024	608	191
Volume Left	122	61	0	0	0
Volume Right	0	104	0	96	191
cSH	109	294	1700	1700	1700
Volume to Capacity	1.12	0.56	0.60	0.36	0.11
Queue Length 95th (ft)	191	80	0	0	0
Control Delay (s)	197.2	40.9	0.0	0.0	0.0
Lane LOS	F	E			
Approach Delay (s)	107.4		0.0		
Approach LOS	F				

Intersection Summary			
Average Delay	14.6		
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	977	736	49	33	854	455	202	213	82	8	48	55
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		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.91		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.95		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3400	3401		1703	4731		1656	3342		1803	1377	1129
Flt Permitted	0.95	1.00		0.95	1.00		0.73	1.00		0.50	1.00	1.00
Satd. Flow (perm)	3400	3401		1703	4731		1265	3342		943	1377	1129
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)	977	736	49	33	854	455	202	213	82	8	48	55
RTOR Reduction (vph)	0	3	0	0	78	0	0	43	0	0	0	43
Lane Group Flow (vph)	977	782	0	33	1231	0	202	252	0	8	48	12
Confl. Peds. (#/hr)			7			4			2	2		
Heavy Vehicles (%)	3%	4%	19%	6%	3%	4%	9%	2%	6%	0%	38%	43%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	31.3	66.5		4.6	39.8		23.9	23.9		23.9	23.9	23.9
Effective Green, g (s)	31.3	66.5		4.6	39.8		23.9	23.9		23.9	23.9	23.9
Actuated g/C Ratio	0.28	0.60		0.04	0.36		0.22	0.22		0.22	0.22	0.22
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	967	2056		71	1712		275	726		205	299	245
v/s Ratio Prot	c0.29	0.23		0.02	c0.26			0.08			0.03	
v/s Ratio Perm							c0.16			0.01		0.01
v/c Ratio	1.01	0.38		0.46	0.72		0.73	0.35		0.04	0.16	0.05
Uniform Delay, d1	39.4	11.2		51.5	30.3		40.1	36.4		34.0	34.9	34.1
Progression Factor	0.66	0.16		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.4	0.4		4.7	2.6		9.7	0.3		0.1	0.3	0.1
Delay (s)	52.3	2.2		56.2	32.9		49.8	36.7		34.1	35.2	34.1
Level of Service	D	A		E	C		D	D		C	D	C
Approach Delay (s)		30.0			33.5			42.1			34.6	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	702	253	68	1535	32	49
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	702	253	68	1535	32	49
Pedestrians					3	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340			724		
pX, platoon unblocked			0.93		0.90	0.93
vC, conflicting volume			958		1735	480
vC1, stage 1 conf vol					832	
vC2, stage 2 conf vol					904	
vCu, unblocked vol			798		1239	283
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.2		3.5	3.3
p0 queue free %			91		90	93
cM capacity (veh/h)			753		315	658

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	468	487	68	768	768	81
Volume Left	0	0	68	0	0	32
Volume Right	0	253	0	0	0	49
cSH	1700	1700	753	1700	1700	460
Volume to Capacity	0.28	0.29	0.09	0.45	0.45	0.18
Queue Length 95th (ft)	0	0	7	0	0	16
Control Delay (s)	0.0	0.0	10.3	0.0	0.0	14.5
Lane LOS			B			B
Approach Delay (s)	0.0		0.4			14.5
Approach LOS						B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	787	118	143	704	109	170	1127	150	165	1149	236
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	5.0		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91		0.97	0.91		0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1552	3433	4911		3367	5037		3467	5085	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1552	3433	4911		3367	5037		3467	5085	1537
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)	330	787	118	143	704	109	170	1127	150	165	1149	236
RTOR Reduction (vph)	0	0	81	0	18	0	0	14	0	0	0	115
Lane Group Flow (vph)	330	787	37	143	795	0	170	1263	0	165	1149	121
Confl. Peds. (#/hr)			7			17			2			9
Confl. Bikes (#/hr)			3									
Heavy Vehicles (%)	2%	2%	2%	2%	3%	4%	4%	1%	1%	1%	2%	3%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	14.5	32.4	32.4	9.1	27.0		9.4	33.3		8.8	32.7	32.7
Effective Green, g (s)	14.5	32.4	32.4	9.1	27.0		9.4	33.3		8.8	32.7	32.7
Actuated g/C Ratio	0.14	0.31	0.31	0.09	0.26		0.09	0.32		0.08	0.32	0.32
Clearance Time (s)	5.0	5.0	5.0	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)	480	1107	485	302	1280		306	1619		294	1605	485
v/s Ratio Prot	c0.10	c0.22		0.04	0.16		c0.05	c0.25		0.05	0.23	
v/s Ratio Perm			0.02									0.08
v/c Ratio	0.69	0.71	0.08	0.47	0.62		0.56	0.78		0.56	0.72	0.25
Uniform Delay, d1	42.4	31.5	25.1	45.0	33.8		45.1	31.8		45.5	31.3	26.3
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	4.1	2.2	0.1	1.2	0.9		2.2	2.5		2.4	1.5	0.3
Delay (s)	46.5	33.6	25.1	46.1	34.7		47.3	34.3		48.0	32.9	26.6
Level of Service	D	C	C	D	C		D	C		D	C	C
Approach Delay (s)		36.3			36.4			35.9			33.5	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	103.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	78.8%	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												
Volume (vph)	116	684	40	44	695	237	89	1118	107	213	869	148
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1543	1671	4822		3467	5085	1521	3273	4940	1559
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1543	1671	4822		3467	5085	1521	3273	4940	1559
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)	116	684	40	44	695	237	89	1118	107	213	869	148
RTOR Reduction (vph)	0	0	27	0	52	0	0	0	47	0	0	78
Lane Group Flow (vph)	116	684	13	44	880	0	89	1118	60	213	869	70
Confl. Peds. (#/hr)			5			7			11			4
Heavy Vehicles (%)	2%	3%	3%	8%	3%	3%	1%	2%	4%	7%	5%	2%
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	7.7	31.5	31.5	4.7	28.5		5.3	32.6	32.6	11.5	38.8	38.8
Effective Green, g (s)	7.7	31.5	31.5	4.7	28.5		5.3	32.6	32.6	11.5	38.8	38.8
Actuated g/C Ratio	0.08	0.31	0.31	0.05	0.28		0.05	0.33	0.33	0.11	0.39	0.39
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	264	1582	485	78	1370		183	1653	494	375	1911	603
v/s Ratio Prot	c0.03	c0.14		0.03	c0.18		0.03	c0.22		c0.07	0.18	
v/s Ratio Perm			0.01						0.04			0.04
v/c Ratio	0.44	0.43	0.03	0.56	0.64		0.49	0.68	0.12	0.57	0.45	0.12
Uniform Delay, d1	44.2	27.3	23.8	46.8	31.4		46.2	29.3	23.8	42.0	22.9	19.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.2	0.0	9.0	1.0		2.0	1.1	0.1	2.0	0.2	0.1
Delay (s)	45.4	27.5	23.8	55.8	32.5		48.2	30.4	23.9	44.0	23.1	19.8
Level of Service	D	C	C	E	C		D	C	C	D	C	B
Approach Delay (s)		29.8			33.5			31.1			26.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.3	Sum of lost time (s)	25.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	423	1107	1236	501	378	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3467	5085	5036	1567	3400	2715
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3467	5085	5036	1567	3400	2715
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	423	1107	1236	501	378	391
RTOR Reduction (vph)	0	0	0	30	0	10
Lane Group Flow (vph)	423	1107	1236	471	378	381
Confl. Peds. (#/hr)				5		2
Heavy Vehicles (%)	1%	2%	3%	2%	3%	4%
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Actuated Green, G (s)	16.3	50.0	28.7	44.5	15.8	32.1
Effective Green, g (s)	16.3	50.0	28.7	44.5	15.8	32.1
Actuated g/C Ratio	0.22	0.66	0.38	0.59	0.21	0.42
Clearance Time (s)	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
Lane Grp Cap (vph)	746	3354	1907	1023	709	1329
v/s Ratio Prot	c0.12	0.22	c0.25	0.10	c0.11	0.06
v/s Ratio Perm				0.20		0.08
v/c Ratio	0.57	0.33	0.65	0.46	0.53	0.29
Uniform Delay, d1	26.6	5.6	19.4	8.9	26.7	14.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.1	0.8	0.3	0.8	0.1
Delay (s)	27.6	5.7	20.2	9.2	27.5	14.5
Level of Service	C	A	C	A	C	B
Approach Delay (s)		11.7	17.0		20.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.2%	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												
Volume (veh/h)	20	291	0	0	531	15	0	0	0	3	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	20	291	0	0	531	15	0	0	0	3	0	4
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					852							
pX, platoon unblocked	0.97						0.97	0.97		0.97	0.97	0.97
vC, conflicting volume	546			292			602	878	146	724	870	273
vC1, stage 1 conf vol							332	332		538	538	
vC2, stage 2 conf vol							270	546		186	332	
vCu, unblocked vol	475			292			532	816	146	658	809	194
tC, single (s)	4.1			4.1			7.5	6.5	6.9	8.2	6.5	6.9
tC, 2 stage (s)							6.5	5.5		7.2	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.8	4.0	3.3
p0 queue free %	98			100			100	100	100	99	100	99
cM capacity (veh/h)	1067			1280			582	465	880	428	478	798

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	166	146	354	192	0	7
Volume Left	20	0	0	0	0	3
Volume Right	0	0	0	15	0	4
cSH	1067	1700	1700	1700	1700	582
Volume to Capacity	0.02	0.09	0.21	0.11	0.00	0.01
Queue Length 95th (ft)	1	0	0	0	0	1
Control Delay (s)	1.2	0.0	0.0	0.0	0.0	11.3
Lane LOS	A				A	B
Approach Delay (s)	0.6		0.0		0.0	11.3
Approach LOS					A	B

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	33.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	751	0	299	1572	31	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505		1703	3539	1719	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505		1703	3539	1719	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	751	0	299	1572	31	49
RTOR Reduction (vph)	0	0	0	0	0	46
Lane Group Flow (vph)	751	0	299	1572	31	3
Confl. Peds. (#/hr)		3				
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	3%	3%	6%	2%	5%	3%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	70.7		26.6	102.3	7.7	7.7
Effective Green, g (s)	70.7		26.6	102.3	7.7	7.7
Actuated g/C Ratio	0.59		0.22	0.85	0.06	0.06
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2065		377	3017	110	101
v/s Ratio Prot	0.21		c0.18	c0.44	c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.36		0.79	0.52	0.28	0.03
Uniform Delay, d1	12.9		44.1	2.3	53.5	52.7
Progression Factor	0.90		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		10.9	0.6	1.4	0.1
Delay (s)	12.0		55.0	3.0	54.9	52.8
Level of Service	B		E	A	D	D
Approach Delay (s)	12.0			11.3	53.6	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.1%	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												
Volume (vph)	187	940	50	181	1033	118	61	186	113	142	209	215
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3478		1787	3506		1805	1900	1553	1787	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3478		1787	3506		1805	1900	1553	1787	1900	1615
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)	187	940	50	181	1033	118	61	186	113	142	209	215
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	93	0	0	168
Lane Group Flow (vph)	187	987	0	181	1144	0	61	186	20	142	209	47
Confl. Peds. (#/hr)			5			8			7			6
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	2%	3%	0%	1%	1%	1%	0%	0%	2%	1%	0%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Prot
Protected Phases	1	6		5	2		7	4		3	8	8
Permitted Phases									4			
Actuated Green, G (s)	14.4	40.0		14.4	40.0		6.6	18.0	18.0	11.5	22.9	22.9
Effective Green, g (s)	14.4	40.0		14.4	40.0		6.6	18.0	18.0	11.5	22.9	22.9
Actuated g/C Ratio	0.14	0.38		0.14	0.38		0.06	0.17	0.17	0.11	0.22	0.22
Clearance Time (s)	5.0	5.0		5.0	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)	245	1339		248	1350		115	329	269	198	419	356
v/s Ratio Prot	c0.11	0.28		0.10	c0.33		0.03	0.10		c0.08	c0.11	0.03
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.74		0.73	0.85		0.53	0.57	0.07	0.72	0.50	0.13
Uniform Delay, d1	43.1	27.4		42.9	29.2		47.1	39.4	36.0	44.6	35.5	32.5
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	13.2	2.2		10.3	5.1		4.6	2.2	0.1	11.7	0.9	0.2
Delay (s)	56.3	29.6		53.2	34.3		51.8	41.6	36.1	56.3	36.4	32.7
Level of Service	E	C		D	C		D	D	D	E	D	C
Approach Delay (s)		33.8			36.9			41.6			40.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	103.9	Sum of lost time (s)	20.0
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												
Volume (vph)	68	1133	49	174	1269	202	155	181	120	311	182	61
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	5.0		5.0	5.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1787	3549		1805	3574	1515	1770	3341		1643	3382	1578
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1787	3549		1805	3574	1515	1770	3341		1643	3382	1578
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)	68	1133	49	174	1269	202	155	181	120	311	182	61
RTOR Reduction (vph)	0	2	0	0	0	22	0	88	0	0	0	0
Lane Group Flow (vph)	68	1180	0	174	1269	180	155	213	0	162	331	61
Confl. Peds. (#/hr)			11			31						36
Confl. Bikes (#/hr)			3			1						1
Heavy Vehicles (%)	1%	1%	0%	0%	1%	1%	2%	2%	1%	0%	0%	0%
Turn Type	Prot			Prot		Perm	Split			Split		Free
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						Free
Actuated Green, G (s)	9.8	46.2		14.3	50.7	50.7	16.6	16.6		22.0	22.0	119.1
Effective Green, g (s)	9.8	46.2		14.3	50.7	50.7	16.6	16.6		22.0	22.0	119.1
Actuated g/C Ratio	0.08	0.39		0.12	0.43	0.43	0.14	0.14		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	147	1377		217	1521	645	247	466		303	625	1578
v/s Ratio Prot	0.04	0.33		c0.10	c0.36		c0.09	0.06		c0.10	0.10	
v/s Ratio Perm						0.12						0.04
v/c Ratio	0.46	0.86		0.80	0.83	0.28	0.63	0.46		0.53	0.53	0.04
Uniform Delay, d1	52.1	33.4		51.0	30.5	22.3	48.3	47.1		43.9	43.9	0.0
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	2.3	5.5		18.8	4.1	0.2	4.9	0.7		1.8	0.8	0.0
Delay (s)	54.4	38.9		69.9	34.6	22.5	53.2	47.8		45.7	44.7	0.0
Level of Service	D	D		E	C	C	D	D		D	D	A
Approach Delay (s)		39.8			36.8			49.7			40.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	119.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.8%	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												
Volume (vph)	328	924	334	352	986	219	378	1807	220	269	1722	263
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
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)	328	924	334	352	986	219	378	1807	220	269	1722	263
RTOR Reduction (vph)	0	0	192	0	0	138	0	0	146	0	0	104
Lane Group Flow (vph)	328	924	142	352	986	81	378	1807	74	269	1722	159
Confl. Peds. (#/hr)			26			42			25			74
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	1%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.0	37.9	37.9	17.0	40.9	40.9	15.1	43.7	43.7	11.4	40.0	40.0
Effective Green, g (s)	14.0	37.9	37.9	17.0	40.9	40.9	15.1	43.7	43.7	11.4	40.0	40.0
Actuated g/C Ratio	0.11	0.29	0.29	0.13	0.31	0.31	0.12	0.34	0.34	0.09	0.31	0.31
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	373	1482	450	453	1616	479	403	2154	507	304	1991	447
v/s Ratio Prot	c0.09	c0.18		c0.10	0.19		0.11	c0.28		0.08	c0.27	
v/s Ratio Perm			0.09			0.05			0.05			0.11
v/c Ratio	0.88	0.62	0.32	0.78	0.61	0.17	0.94	0.84	0.15	0.88	0.86	0.36
Uniform Delay, d1	57.2	39.9	35.9	54.7	37.8	32.3	57.0	39.9	30.1	58.7	42.5	35.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.79	1.92	1.00	1.00	1.00
Incremental Delay, d2	20.3	0.8	0.4	8.2	0.7	0.2	21.9	2.7	0.4	24.9	5.3	2.2
Delay (s)	77.4	40.7	36.3	62.8	38.5	32.4	68.6	34.4	58.2	83.5	47.8	37.2
Level of Service	E	D	D	E	D	C	E	C	E	F	D	D
Approach Delay (s)		47.4			43.1			41.9			50.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	45.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	99.1%	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												
Volume (vph)	107	516	77	284	511	258	126	2144	270	389	2157	49
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		0.97	0.91	1.00	1.00	0.86	1.00	0.97	0.86	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3493		3467	5136	1534	1805	6471	1510	3433	6443	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3493		3467	5136	1534	1805	6471	1510	3433	6443	
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)	107	516	77	284	511	258	126	2144	270	389	2157	49
RTOR Reduction (vph)	0	9	0	0	0	216	0	0	156	0	2	0
Lane Group Flow (vph)	107	584	0	284	511	42	126	2144	114	389	2204	0
Confl. Peds. (#/hr)			16			13			28			4
Heavy Vehicles (%)	2%	1%	0%	1%	1%	2%	0%	1%	2%	2%	1%	4%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	16.8	25.0		12.8	21.0	21.0	12.2	54.7	54.7	17.5	60.0	
Effective Green, g (s)	16.8	25.0		12.8	21.0	21.0	12.2	54.7	54.7	17.5	60.0	
Actuated g/C Ratio	0.13	0.19		0.10	0.16	0.16	0.09	0.42	0.42	0.13	0.46	
Clearance Time (s)	5.0	5.0		5.0	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)	229	672		341	830	248	169	2723	635	462	2974	
v/s Ratio Prot	0.06	c0.17		c0.08	0.10		0.07	c0.33		0.11	c0.34	
v/s Ratio Perm						0.03			0.08			
v/c Ratio	0.47	0.87		0.83	0.62	0.17	0.75	0.79	0.18	0.84	0.74	
Uniform Delay, d1	52.5	50.9		57.5	50.7	47.0	57.4	32.6	23.6	54.9	28.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.46	0.26	0.50	0.27	
Incremental Delay, d2	1.5	11.5		15.8	1.4	0.3	10.9	1.5	0.4	9.0	1.1	
Delay (s)	54.0	62.5		73.4	52.1	47.3	68.2	16.4	6.5	36.3	8.8	
Level of Service	D	E		E	D	D	E	B	A	D	A	
Approach Delay (s)		61.2			56.7			17.9			12.9	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.8%	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												
Volume (vph)	272	828	168	538	942	212	283	1970	549	317	1955	314
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	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5031		3502	5187	1615	3467	6471	1593	3502	6471	1595
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5031		3502	5187	1615	3467	6471	1593	3502	6471	1595
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)	272	828	168	538	942	212	283	1970	549	317	1955	314
RTOR Reduction (vph)	0	24	0	0	0	140	0	0	0	0	0	0
Lane Group Flow (vph)	272	972	0	538	942	72	283	1970	549	317	1955	314
Confl. Peds. (#/hr)			10			11			5			2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot		Prot	Prot		Free	Prot		Free
Protected Phases	7	4		3	8	8	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	18.6	27.1		22.4	30.9	30.9	13.1	46.6	130.0	13.9	47.4	130.0
Effective Green, g (s)	18.6	27.1		22.4	30.9	30.9	13.1	46.6	130.0	13.9	47.4	130.0
Actuated g/C Ratio	0.14	0.21		0.17	0.24	0.24	0.10	0.36	1.00	0.11	0.36	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	491	1049		603	1233	384	349	2320	1593	374	2359	1595
v/s Ratio Prot	0.08	c0.19		c0.15	0.18	0.04	0.08	c0.30		c0.09	0.30	
v/s Ratio Perm									c0.34			0.20
v/c Ratio	0.55	0.93		0.89	0.76	0.19	0.81	0.85	0.34	0.85	0.83	0.20
Uniform Delay, d1	51.8	50.5		52.6	46.2	39.5	57.2	38.5	0.0	57.0	37.6	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.95	0.54	1.00	0.92	0.50	1.00
Incremental Delay, d2	1.4	13.5		15.4	2.9	0.2	3.7	1.1	0.1	11.3	2.4	0.2
Delay (s)	53.2	63.9		68.1	49.0	39.8	58.0	21.9	0.1	64.0	21.1	0.2
Level of Service	D	E		E	D	D	E	C	A	E	C	A
Approach Delay (s)		61.6			53.9			21.3			23.8	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	90.1%	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												
Volume (vph)	101	445	156	277	663	756	242	1941	137	468	1948	120
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	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.86		0.97	0.91	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3421		1787	3574	1561	1805	6393		3433	5136	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1787	3421		1787	3574	1561	1805	6393		3433	5136	1583
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)	101	445	156	277	663	756	242	1941	137	468	1948	120
RTOR Reduction (vph)	0	27	0	0	0	206	0	8	0	0	0	51
Lane Group Flow (vph)	101	574	0	277	663	550	242	2070	0	468	1948	69
Confl. Peds. (#/hr)			10			7			12			6
Confl. Bikes (#/hr)			2			5			1			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	1%	0%	1%	2%	2%	1%	2%
Turn Type	Prot			Prot		Perm	Prot			Prot		Prot
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases						8						
Actuated Green, G (s)	7.0	31.0		18.0	42.0	42.0	15.0	44.0		17.0	46.0	46.0
Effective Green, g (s)	7.0	31.0		18.0	42.0	42.0	15.0	44.0		17.0	46.0	46.0
Actuated g/C Ratio	0.05	0.24		0.14	0.32	0.32	0.12	0.34		0.13	0.35	0.35
Clearance Time (s)	5.0	5.0		5.0	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)	96	816		247	1155	504	208	2164		449	1817	560
v/s Ratio Prot	0.06	0.17		c0.15	0.19		c0.13	0.32		0.14	c0.38	0.04
v/s Ratio Perm						c0.35						
v/c Ratio	1.05	0.70		1.12	0.57	1.09	1.16	0.96		1.04	1.07	0.12
Uniform Delay, d1	61.5	45.3		56.0	36.6	44.0	57.5	42.1		56.5	42.0	28.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.08	0.49		0.53	0.38	0.15
Incremental Delay, d2	106.7	2.8		93.8	0.7	66.9	109.3	10.3		41.9	38.7	0.2
Delay (s)	168.2	48.1		149.8	37.3	110.9	171.2	31.0		71.9	54.5	4.6
Level of Service	F	D		F	D	F	F	C		E	D	A
Approach Delay (s)		65.4			88.5			45.6			55.3	
Approach LOS		E			F			D			E	

Intersection Summary			
HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	23	10	458	7	550	21	1435	133	246	1997	29
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	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	1.00	0.86		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.85	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1752		1805	1526	1519	1805	6381		1787	5123	
Flt Permitted	0.58	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1105	1752		1805	1526	1519	1805	6381		1787	5123	
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)	57	23	10	458	7	550	21	1435	133	246	1997	29
RTOR Reduction (vph)	0	9	0	0	169	175	0	11	0	0	1	0
Lane Group Flow (vph)	57	24	0	458	108	105	21	1557	0	246	2025	0
Confl. Peds. (#/hr)			2						8			5
Heavy Vehicles (%)	0%	0%	10%	0%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Prot		Prot	Prot			Prot		
Protected Phases		4		3	8	8	5	2		1	6	
Permitted Phases	4											
Actuated Green, G (s)	12.0	12.0		31.8	48.8	48.8	4.2	43.8		22.4	62.0	
Effective Green, g (s)	12.0	12.0		31.8	48.8	48.8	4.2	43.8		22.4	62.0	
Actuated g/C Ratio	0.09	0.09		0.24	0.38	0.38	0.03	0.34		0.17	0.48	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	102	162		442	573	570	58	2150		308	2443	
v/s Ratio Prot		0.01		c0.25	0.07	0.07	0.01	c0.24		0.14	c0.40	
v/s Ratio Perm	c0.05											
v/c Ratio	0.56	0.15		1.04	0.19	0.18	0.36	0.72		0.80	0.83	
Uniform Delay, d1	56.5	54.3		49.1	27.3	27.2	61.6	37.8		51.6	29.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.04	0.37	
Incremental Delay, d2	6.5	0.4		52.5	0.2	0.2	3.8	2.2		1.4	0.3	
Delay (s)	63.0	54.7		101.6	27.5	27.4	65.4	40.0		55.1	11.1	
Level of Service	E	D		F	C	C	E	D		E	B	
Approach Delay (s)		59.9			60.9			40.3			15.9	
Approach LOS		E			E			D			B	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	273	979	309	182	1022	227	300	884	65	370	1452
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		5.0	5.0
Lane Util. Factor		0.95	0.91		1.00	0.91		0.97	0.91		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.97		1.00	0.99		1.00	1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1715	4917		1770	4955		3467	5057		3502	5187
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1715	4917		1770	4955		3467	5057		3502	5187
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)	0	273	979	309	182	1022	227	300	884	65	370	1452
RTOR Reduction (vph)	0	0	38	0	0	24	0	0	5	0	0	0
Lane Group Flow (vph)	0	273	1250	0	182	1225	0	300	944	0	370	1452
Confl. Peds. (#/hr)				10			16			15		
Confl. Bikes (#/hr)				4								
Heavy Vehicles (%)	2%	0%	1%	1%	2%	1%	2%	1%	1%	5%	0%	0%
Turn Type	custom	Prot			Prot			Prot			Prot	
Protected Phases		7	4		3	8		5	2		1	6
Permitted Phases	7											
Actuated Green, G (s)		26.5	51.2		18.0	42.7		14.9	34.2		26.6	45.9
Effective Green, g (s)		26.5	51.2		18.0	42.7		14.9	34.2		26.6	45.9
Actuated g/C Ratio		0.18	0.34		0.12	0.28		0.10	0.23		0.18	0.31
Clearance Time (s)		5.0	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
Lane Grp Cap (vph)		303	1678		212	1411		344	1153		621	1587
v/s Ratio Prot		c0.16	0.25		0.10	c0.25		c0.09	0.19		0.11	c0.28
v/s Ratio Perm												
v/c Ratio		0.90	0.74		0.86	0.87		0.87	0.82		0.60	0.91
Uniform Delay, d1		60.5	43.6		64.8	51.0		66.6	55.0		56.8	50.2
Progression Factor		1.00	1.00		1.09	0.41		1.00	1.00		1.00	1.00
Incremental Delay, d2		27.9	3.0		16.4	4.1		20.8	4.6		1.5	8.5
Delay (s)		88.4	46.7		86.7	25.2		87.4	59.6		58.3	58.7
Level of Service		F	D		F	C		F	E		E	E
Approach Delay (s)			54.0			33.0			66.3			55.6
Approach LOS			D			C			E			E

Intersection Summary			
HCM Average Control Delay	52.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	526
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1563
Flt Permitted	1.00
Satd. Flow (perm)	1563
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	526
RTOR Reduction (vph)	259
Lane Group Flow (vph)	267
Confl. Peds. (#/hr)	7
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	1%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	45.9
Effective Green, g (s)	45.9
Actuated g/C Ratio	0.31
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	478
v/s Ratio Prot	
v/s Ratio Perm	0.17
v/c Ratio	0.56
Uniform Delay, d1	43.6
Progression Factor	1.00
Incremental Delay, d2	1.4
Delay (s)	45.0
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1	3	73	1	367	3	1105	128	419	1134	8
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		5.0	5.0	
Lane Util. Factor		1.00		1.00	0.95	0.95	1.00	0.95		0.97	0.95	
Frpb, ped/bikes		1.00		1.00	0.99	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.97		1.00	0.85	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1772		1787	1470	1468	1805	3384		3467	3571	
Flt Permitted		0.71		0.75	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1299		1409	1470	1468	1805	3384		3467	3571	
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)	9	1	3	73	1	367	3	1105	128	419	1134	8
RTOR Reduction (vph)	0	3	0	0	160	159	0	7	0	0	0	0
Lane Group Flow (vph)	0	10	0	73	25	24	3	1226	0	419	1142	0
Confl. Peds. (#/hr)	2		1			2						
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	3%	0%	5%	3%	1%	1%	0%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.3		11.3	11.3	11.3	0.9	43.9		16.2	59.2	
Effective Green, g (s)		11.3		11.3	11.3	11.3	0.9	43.9		16.2	59.2	
Actuated g/C Ratio		0.13		0.13	0.13	0.13	0.01	0.51		0.19	0.69	
Clearance Time (s)		5.0		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	
Lane Grp Cap (vph)		170		184	192	192	19	1719		650	2447	
v/s Ratio Prot					0.02		0.00	c0.36		c0.12	0.32	
v/s Ratio Perm		0.01		c0.05		0.02						
v/c Ratio		0.06		0.40	0.13	0.12	0.16	0.71		0.64	0.47	
Uniform Delay, d1		32.9		34.4	33.2	33.2	42.4	16.4		32.4	6.3	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2		1.4	0.3	0.3	3.9	1.4		2.2	0.1	
Delay (s)		33.1		35.8	33.5	33.5	46.2	17.8		34.6	6.4	
Level of Service		C		D	C	C	D	B		C	A	
Approach Delay (s)		33.1			33.9			17.9			14.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	86.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.5%	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												
Volume (vph)	170	446	17	225	349	84	19	840	212	129	1099	281
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1626	3370		1787	1900	1563	1805	3539	1568	1770	3574	1615
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1626	3370		1787	1900	1563	1805	3539	1568	1770	3574	1615
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)	170	446	17	225	349	84	19	840	212	129	1099	281
RTOR Reduction (vph)	0	2	0	0	0	52	0	0	58	0	0	170
Lane Group Flow (vph)	153	478	0	225	349	32	19	840	154	129	1099	111
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	1%	2%	0%	1%	0%	2%	0%	2%	3%	2%	1%	0%
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	23.7	23.7		27.3	27.3	27.3	2.4	37.9	37.9	12.3	47.8	47.8
Effective Green, g (s)	23.7	23.7		27.3	27.3	27.3	2.4	37.9	37.9	12.3	47.8	47.8
Actuated g/C Ratio	0.20	0.20		0.23	0.23	0.23	0.02	0.31	0.31	0.10	0.39	0.39
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	318	659		403	428	352	36	1107	490	180	1410	637
v/s Ratio Prot	0.09	c0.14		0.13	c0.18		0.01	0.24		c0.07	c0.31	
v/s Ratio Perm						0.02			0.10			0.07
v/c Ratio	0.48	0.73		0.56	0.82	0.09	0.53	0.76	0.31	0.72	0.78	0.17
Uniform Delay, d1	43.3	45.7		41.6	44.6	37.1	58.8	37.5	31.7	52.8	32.1	23.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	4.0		1.7	11.4	0.1	13.3	3.0	0.4	12.7	2.8	0.1
Delay (s)	44.4	49.7		43.3	55.9	37.3	72.1	40.6	32.1	65.5	34.9	24.0
Level of Service	D	D		D	E	D	E	D	C	E	C	C
Approach Delay (s)		48.4			49.2			39.5			35.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	121.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.5%	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												
Volume (vph)	96	1126	72	72	1230	86	194	20	207	115	48	245
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1736	3532		1805	3494		1715	1521	1552	1770	1456	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (perm)	1736	3532		1805	3494		1715	1521	1552	1770	1456	
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)	96	1126	72	72	1230	86	194	20	207	115	48	245
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	169	0	155	0
Lane Group Flow (vph)	96	1195	0	72	1312	0	107	107	38	115	138	0
Confl. Peds. (#/hr)			3			2			25			
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	1%	3%	0%	1%	18%	0%	75%	0%	2%	76%	2%
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	8.7	48.0		5.3	44.6		19.7	19.7	19.7	13.3	13.3	
Effective Green, g (s)	8.7	48.0		5.3	44.6		19.7	19.7	19.7	13.3	13.3	
Actuated g/C Ratio	0.08	0.45		0.05	0.42		0.19	0.19	0.19	0.13	0.13	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	142	1595		90	1466		318	282	288	221	182	
v/s Ratio Prot	0.06	c0.34		0.04	c0.38		0.06	c0.07		0.06	c0.09	
v/s Ratio Perm									0.02			
v/c Ratio	0.68	0.75		0.80	0.89		0.34	0.38	0.13	0.52	0.76	
Uniform Delay, d1	47.4	24.2		50.0	28.7		37.6	37.9	36.2	43.5	45.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.0	2.0		38.2	7.4		0.6	0.9	0.2	2.2	16.5	
Delay (s)	59.5	26.1		88.2	36.1		38.3	38.8	36.4	45.7	61.4	
Level of Service	E	C		F	D		D	D	D	D	E	
Approach Delay (s)		28.6			38.8			37.5			57.0	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM Average Control Delay	37.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	106.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	92.6%	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												
Volume (vph)	1	1522	60	88	1072	8	90	7	106	20	5	16
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1805	3548		1770	3570		1633	1660	1578	1715	1751	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1805	3548		1770	3570		1633	1660	1578	1715	1751	1615
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)	1	1522	60	88	1072	8	90	7	106	20	5	16
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	95	0	0	15
Lane Group Flow (vph)	1	1580	0	88	1080	0	49	48	11	12	13	1
Confl. Peds. (#/hr)			5			5			1			
Confl. Bikes (#/hr)			4			1						
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	5%	0%	1%	0%	0%	0%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	1.2	71.4		12.2	82.4		12.1	12.1	12.1	4.3	4.3	4.3
Effective Green, g (s)	1.2	71.4		12.2	82.4		12.1	12.1	12.1	4.3	4.3	4.3
Actuated g/C Ratio	0.01	0.60		0.10	0.69		0.10	0.10	0.10	0.04	0.04	0.04
Clearance Time (s)	5.0	5.0		5.0	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)	18	2111		180	2451		165	167	159	61	63	58
v/s Ratio Prot	0.00	c0.45		c0.05	0.30		c0.03	0.03		0.01	c0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.06	0.75		0.49	0.44		0.30	0.29	0.07	0.20	0.21	0.01
Uniform Delay, d1	58.8	17.7		51.0	8.4		50.0	50.0	48.8	56.2	56.2	55.8
Progression Factor	1.00	1.00		1.08	0.87		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	2.5		2.0	0.6		1.0	1.0	0.2	1.6	1.6	0.1
Delay (s)	60.1	20.2		57.3	7.9		51.0	50.9	49.0	57.8	57.8	55.9
Level of Service	E	C		E	A		D	D	D	E	E	E
Approach Delay (s)		20.3			11.6			49.9			57.0	
Approach LOS		C			B			D			E	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	37	825	714	50	57	99
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	37	825	714	50	57	99
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1310			
pX, platoon unblocked	1.00				1.00	1.00
vC, conflicting volume	766				1228	384
vC1, stage 1 conf vol					741	
vC2, stage 2 conf vol					486	
vCu, unblocked vol	755				1219	371
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	96				85	84
cM capacity (veh/h)	833				371	628

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	37	412	412	476	288	57	99
Volume Left	37	0	0	0	0	57	0
Volume Right	0	0	0	0	50	0	99
cSH	833	1700	1700	1700	1700	371	628
Volume to Capacity	0.04	0.24	0.24	0.28	0.17	0.15	0.16
Queue Length 95th (ft)	3	0	0	0	0	13	14
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	16.5	11.8
Lane LOS	A					C	B
Approach Delay (s)	0.4			0.0		13.5	
Approach LOS						B	

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	714	11	42	456	343	16	8	58	382	10	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	0.87		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	3610	1575	1805	3610	1578	1805	1650		1805	1900	1592
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3610	1575	1805	3610	1578	1805	1650		1805	1900	1592
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)	70	714	11	42	456	343	16	8	58	382	10	135
RTOR Reduction (vph)	0	0	6	0	0	239	0	54	0	0	0	98
Lane Group Flow (vph)	70	714	5	42	456	104	16	12	0	382	10	37
Confl. Peds. (#/hr)			3			2						2
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	4.3	26.0	26.0	2.1	23.8	23.8	5.1	5.1		21.3	21.3	21.3
Effective Green, g (s)	4.3	26.0	26.0	2.1	23.8	23.8	5.1	5.1		21.3	21.3	21.3
Actuated g/C Ratio	0.05	0.33	0.33	0.03	0.30	0.30	0.06	0.06		0.27	0.27	0.27
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
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)	99	1196	522	48	1094	478	117	107		490	516	432
v/s Ratio Prot	c0.04	c0.20		0.02	0.13		c0.01	0.01		c0.21	0.01	
v/s Ratio Perm			0.00			0.07						0.02
v/c Ratio	0.71	0.60	0.01	0.88	0.42	0.22	0.14	0.11		0.78	0.02	0.08
Uniform Delay, d1	36.5	21.9	17.6	38.1	21.8	20.4	34.6	34.6		26.4	20.9	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	20.5	0.8	0.0	83.6	0.3	0.2	0.5	0.5		7.7	0.0	0.1
Delay (s)	57.0	22.7	17.6	121.7	22.1	20.6	35.2	35.0		34.1	21.0	21.4
Level of Service	E	C	B	F	C	C	D	D		C	C	C
Approach Delay (s)		25.6			26.5			35.0			30.6	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.9%	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												
Volume (vph)	114	940	107	195	1025	115	173	1361	196	219	1619	169
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3502	3574	1572	3502	5187	1554	3502	4968		3467	5048	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3502	3574	1572	3502	5187	1554	3502	4968		3467	5048	
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)	114	940	107	195	1025	115	173	1361	196	219	1619	169
RTOR Reduction (vph)	0	0	33	0	0	52	0	16	0	0	10	0
Lane Group Flow (vph)	114	940	74	195	1025	63	173	1541	0	219	1778	0
Confl. Peds. (#/hr)			12			6			10			18
Confl. Bikes (#/hr)			5			1			2			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	0%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.7	35.3	35.3	8.9	36.5	36.5	8.0	43.6		9.9	45.5	
Effective Green, g (s)	7.7	35.3	35.3	8.9	36.5	36.5	8.0	43.6		9.9	45.5	
Actuated g/C Ratio	0.07	0.30	0.30	0.08	0.31	0.31	0.07	0.37		0.08	0.39	
Clearance Time (s)	5.0	5.0	5.0	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)	229	1072	471	265	1609	482	238	1840		292	1951	
v/s Ratio Prot	0.03	c0.26		c0.06	0.20		0.05	0.31		c0.06	c0.35	
v/s Ratio Perm			0.05			0.04						
v/c Ratio	0.50	0.88	0.16	0.74	0.64	0.13	0.73	0.84		0.75	0.91	
Uniform Delay, d1	53.1	39.1	30.3	53.2	34.9	29.2	53.8	33.8		52.7	34.2	
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	1.7	8.2	0.2	10.1	0.8	0.1	10.5	3.5		10.3	6.9	
Delay (s)	54.8	47.4	30.4	63.4	35.7	29.3	64.3	37.3		63.0	41.1	
Level of Service	D	D	C	E	D	C	E	D		E	D	
Approach Delay (s)		46.5			39.2			40.0			43.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	42.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	117.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	90.0%	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												
Volume (vph)	123	1155	95	351	1005	156	122	1420	321	309	1448	144
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	5068		3467	3574	1561	3502	5085	1542	3467	5059	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	5068		3467	3574	1561	3502	5085	1542	3467	5059	
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)	123	1155	95	351	1005	156	122	1420	321	309	1448	144
RTOR Reduction (vph)	0	8	0	0	0	44	0	0	112	0	10	0
Lane Group Flow (vph)	123	1242	0	351	1005	112	122	1420	209	309	1582	0
Confl. Peds. (#/hr)			12			2			13			13
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	0%	2%	2%	1%	1%	0%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	7.0	32.6		14.5	40.1	40.1	7.0	38.2	38.2	12.8	44.0	
Effective Green, g (s)	7.0	32.6		14.5	40.1	40.1	7.0	38.2	38.2	12.8	44.0	
Actuated g/C Ratio	0.06	0.28		0.12	0.34	0.34	0.06	0.32	0.32	0.11	0.37	
Clearance Time (s)	5.0	5.0		5.0	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)	205	1399		426	1214	530	208	1645	499	376	1885	
v/s Ratio Prot	0.04	0.25		c0.10	c0.28		0.03	0.28		c0.09	c0.31	
v/s Ratio Perm						0.07			0.14			
v/c Ratio	0.60	0.89		0.82	0.83	0.21	0.59	0.86	0.42	0.82	0.84	
Uniform Delay, d1	54.2	41.0		50.6	35.8	27.7	54.1	37.5	31.3	51.5	33.8	
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	4.7	7.2		12.2	4.8	0.2	4.2	5.0	0.6	13.5	3.5	
Delay (s)	58.9	48.2		62.8	40.6	27.9	58.3	42.5	31.8	65.0	37.3	
Level of Service	E	D		E	D	C	E	D	C	E	D	
Approach Delay (s)		49.2			44.4			41.7			41.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	118.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.5%	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												
Volume (vph)	184	1181	267	497	1152	221	266	1508	694	391	1351	199
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1557	3433	6471	1567	3467	6408	1522	3467	5136	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1557	3433	6471	1567	3467	6408	1522	3467	5136	1565
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)	184	1181	267	497	1152	221	266	1508	694	391	1351	199
RTOR Reduction (vph)	0	0	56	0	0	100	0	0	178	0	0	124
Lane Group Flow (vph)	184	1181	211	497	1152	121	266	1508	516	391	1351	75
Confl. Peds. (#/hr)			12			7			23			8
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%	1%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.9	40.6	40.6	25.0	52.7	52.7	16.6	59.0	59.0	19.0	61.4	61.4
Effective Green, g (s)	12.9	40.6	40.6	25.0	52.7	52.7	16.6	59.0	59.0	19.0	61.4	61.4
Actuated g/C Ratio	0.08	0.25	0.25	0.15	0.32	0.32	0.10	0.36	0.36	0.12	0.38	0.38
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	273	1275	386	525	2084	505	352	2311	549	403	1928	587
v/s Ratio Prot	0.05	c0.23		c0.14	0.18		0.08	0.24		c0.11	0.26	
v/s Ratio Perm			0.14			0.08			c0.34			0.05
v/c Ratio	0.67	0.93	0.55	0.95	0.55	0.24	0.76	0.65	0.94	0.97	0.70	0.13
Uniform Delay, d1	73.3	60.0	53.5	68.6	45.7	40.7	71.5	43.7	50.6	72.0	43.3	33.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.4	11.5	1.6	26.3	0.3	0.2	8.9	0.7	24.0	36.9	1.2	0.1
Delay (s)	79.7	71.5	55.1	94.9	46.1	41.0	80.5	44.4	74.5	108.9	44.5	33.6
Level of Service	E	E	E	F	D	D	F	D	E	F	D	C
Approach Delay (s)		69.8			58.4			56.8			56.4	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM Average Control Delay	59.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	163.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	703	940	205	386	624	187	108	1505	684	156	1421	392
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
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)	703	940	205	386	624	187	108	1505	684	156	1421	392
RTOR Reduction (vph)	0	0	3	0	0	2	0	0	19	0	0	41
Lane Group Flow (vph)	703	940	202	386	624	185	108	1505	665	156	1421	351
Confl. Peds. (#/hr)			24			2			14			9
Confl. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	1%	1%	1%	0%	1%	1%	0%	1%	1%	1%	1%	2%
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	27.1	41.7	58.8	18.1	32.7	44.8	12.1	42.1	65.2	12.1	42.1	69.2
Effective Green, g (s)	27.1	41.7	58.8	18.1	32.7	44.8	12.1	42.1	65.2	12.1	42.1	69.2
Actuated g/C Ratio	0.20	0.31	0.44	0.14	0.24	0.33	0.09	0.31	0.49	0.09	0.31	0.52
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	701	1112	702	473	872	535	163	1614	778	161	1614	817
v/s Ratio Prot	c0.20	c0.26	0.13	0.11	0.17	0.12	0.06	c0.29	c0.42	c0.09	0.28	0.22
v/s Ratio Perm												
v/c Ratio	1.00	0.85	0.29	0.82	0.72	0.35	0.66	0.93	0.85	0.97	0.88	0.43
Uniform Delay, d1	53.5	43.1	24.1	56.3	46.4	33.6	59.0	44.6	30.2	60.8	43.6	20.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	34.7	6.1	0.2	10.4	2.8	0.4	9.7	10.2	9.1	60.9	6.0	0.4
Delay (s)	88.1	49.2	24.4	66.8	49.2	34.0	68.7	54.8	39.3	121.7	49.5	20.5
Level of Service	F	D	C	E	D	C	E	D	D	F	D	C
Approach Delay (s)		61.3			52.5			50.8			49.5	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	53.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	134.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	367	83	44	1795	1678	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1578	1770	5136	5136	1544
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1578	1770	5136	5136	1544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	367	83	44	1795	1678	410
RTOR Reduction (vph)	0	62	0	0	0	126
Lane Group Flow (vph)	367	21	44	1795	1678	284
Confl. Peds. (#/hr)		1				6
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	29.9	29.9	5.9	80.1	69.2	69.2
Effective Green, g (s)	29.9	29.9	5.9	80.1	69.2	69.2
Actuated g/C Ratio	0.25	0.25	0.05	0.67	0.58	0.58
Clearance Time (s)	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
Lane Grp Cap (vph)	450	393	87	3428	2962	890
v/s Ratio Prot	c0.20		0.02	c0.35	c0.33	
v/s Ratio Perm		0.01				0.18
v/c Ratio	0.82	0.05	0.51	0.52	0.57	0.32
Uniform Delay, d1	42.5	34.3	55.6	10.2	16.0	13.2
Progression Factor	1.00	1.00	0.66	0.49	1.00	1.00
Incremental Delay, d2	10.9	0.1	3.5	0.4	0.8	0.9
Delay (s)	53.3	34.3	40.5	5.5	16.8	14.1
Level of Service	D	C	D	A	B	B
Approach Delay (s)	49.8			6.3	16.2	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.2%	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												
Volume (vph)	538	46	552	62	36	59	371	1179	18	32	1390	278
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	5.0	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	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	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1579	1715	1780	1583	3467	5121		1752	5136	1567
Flt Permitted	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	1900	1579	1715	1780	1583	3467	5121		1752	5136	1567
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)	538	46	552	62	36	59	371	1179	18	32	1390	278
RTOR Reduction (vph)	0	0	218	0	0	55	0	1	0	0	0	122
Lane Group Flow (vph)	538	46	334	48	50	4	371	1196	0	32	1390	156
Confl. Peds. (#/hr)			8	8			5		15	15		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	1%	1%	0%	3%	1%	1%
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	36.0	36.0	36.0	7.7	7.7	7.7	15.2	50.7		5.6	41.1	41.1
Effective Green, g (s)	36.0	36.0	36.0	7.7	7.7	7.7	15.2	50.7		5.6	41.1	41.1
Actuated g/C Ratio	0.30	0.30	0.30	0.06	0.06	0.06	0.13	0.42		0.05	0.34	0.34
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	542	570	474	110	114	102	439	2164		82	1759	537
v/s Ratio Prot	c0.30	0.02		0.03	c0.03		c0.11	0.23		0.02	c0.27	
v/s Ratio Perm			0.21			0.00						0.10
v/c Ratio	0.99	0.08	0.70	0.44	0.44	0.04	0.85	0.55		0.39	0.79	0.29
Uniform Delay, d1	41.9	30.1	37.3	54.1	54.1	52.7	51.2	26.1		55.5	35.6	28.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.46		0.65	0.56	0.36
Incremental Delay, d2	36.6	0.1	4.7	2.8	2.7	0.1	11.0	0.8		2.6	3.2	1.2
Delay (s)	78.4	30.2	42.0	56.8	56.8	52.8	48.4	12.9		38.5	22.9	11.5
Level of Service	E	C	D	E	E	D	D	B		D	C	B
Approach Delay (s)		58.8			55.3			21.3			21.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.4%	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												
Volume (vph)	354	126	42	85	59	116	29	1141	29	245	1575	115
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	5.0		5.0	5.0	
Lane Util. Factor	0.95	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1707		1805	1900	1552	1805	5115		1805	5067	
Flt Permitted	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1698	1707		1805	1900	1552	1805	5115		1805	5067	
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)	354	126	42	85	59	116	29	1141	29	245	1575	115
RTOR Reduction (vph)	0	6	0	0	0	103	0	2	0	0	5	0
Lane Group Flow (vph)	262	254	0	85	59	13	29	1168	0	245	1685	0
Confl. Peds. (#/hr)			2			3			2			6
Confl. Bikes (#/hr)						2						1
Heavy Vehicles (%)	1%	0%	5%	0%	0%	2%	0%	1%	0%	0%	1%	2%
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	23.6	23.6		13.7	13.7	13.7	4.5	40.1		22.6	58.2	
Effective Green, g (s)	23.6	23.6		13.7	13.7	13.7	4.5	40.1		22.6	58.2	
Actuated g/C Ratio	0.20	0.20		0.11	0.11	0.11	0.04	0.33		0.19	0.49	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	334	336		206	217	177	68	1709		340	2457	
v/s Ratio Prot	c0.15	0.15		c0.05	0.03		0.02	0.23		c0.14	c0.33	
v/s Ratio Perm						0.01						
v/c Ratio	0.78	0.75		0.41	0.27	0.07	0.43	0.68		0.72	0.69	
Uniform Delay, d1	45.8	45.5		49.4	48.6	47.5	56.5	34.5		45.7	23.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.46	0.32	
Incremental Delay, d2	11.4	9.3		1.3	0.7	0.2	4.3	2.2		4.9	1.0	
Delay (s)	57.2	54.7		50.8	49.3	47.7	60.7	36.7		71.7	8.7	
Level of Service	E	D		D	D	D	E	D		E	A	
Approach Delay (s)		56.0			49.0			37.3			16.7	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	74.6%	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												
Volume (vph)	198	1279	50	391	1294	331	76	632	362	474	982	110
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	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.95		0.97	0.91		1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3516		3433	4932		1787	5136	1529	1805	5080	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	3516		3433	4932		1787	5136	1529	1805	5080	
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)	198	1279	50	391	1294	331	76	632	362	474	982	110
RTOR Reduction (vph)	0	2	0	0	30	0	0	0	155	0	9	0
Lane Group Flow (vph)	198	1327	0	391	1595	0	76	632	207	474	1083	0
Confl. Peds. (#/hr)			7			24			15			10
Heavy Vehicles (%)	1%	2%	2%	2%	1%	1%	1%	1%	2%	0%	0%	3%
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	11.2	52.0		14.0	54.8		10.6	26.3	26.3	37.7	53.4	
Effective Green, g (s)	11.2	52.0		14.0	54.8		10.6	26.3	26.3	37.7	53.4	
Actuated g/C Ratio	0.07	0.35		0.09	0.37		0.07	0.18	0.18	0.25	0.36	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	259	1219		320	1802		126	901	268	454	1808	
v/s Ratio Prot	0.06	c0.38		c0.11	0.32		0.04	0.12		c0.26	0.21	
v/s Ratio Perm									c0.14			
v/c Ratio	0.76	1.09		1.22	0.88		0.60	0.70	0.77	1.04	0.60	
Uniform Delay, d1	68.1	49.0		68.0	44.6		67.7	58.2	59.0	56.1	39.5	
Progression Factor	0.86	0.82		1.09	0.40		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.7	50.6		115.7	4.2		7.9	2.5	12.9	54.2	0.5	
Delay (s)	67.9	90.6		189.5	21.9		75.6	60.6	71.9	110.3	40.1	
Level of Service	E	F		F	C		E	E	E	F	D	
Approach Delay (s)		87.7			54.4			65.5			61.3	
Approach LOS		F			D			E			E	

Intersection Summary			
HCM Average Control Delay	66.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	108.3%	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												
Volume (vph)	166	293	116	41	155	157	137	779	60	278	1085	115
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	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	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1800	1900	1592	1669	1881	1574	1787	5068		1805	5101	
Flt Permitted	0.66	1.00	1.00	0.41	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1241	1900	1592	721	1881	1574	1787	5068		1805	5101	
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)	166	293	116	41	155	157	137	779	60	278	1085	115
RTOR Reduction (vph)	0	0	86	0	0	117	0	7	0	0	11	0
Lane Group Flow (vph)	166	293	30	41	155	40	137	832	0	278	1189	0
Confl. Peds. (#/hr)	5		3	3		5	2		4	4		2
Heavy Vehicles (%)	0%	0%	0%	8%	1%	1%	1%	1%	2%	0%	0%	0%
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	18.8	18.8	18.8	18.8	18.8	18.8	11.9	21.2		17.9	27.2	
Effective Green, g (s)	18.8	18.8	18.8	18.8	18.8	18.8	11.9	21.2		17.9	27.2	
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.29		0.25	0.37	
Clearance Time (s)	5.0	5.0	5.0	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)	320	490	411	186	485	406	292	1474		443	1903	
v/s Ratio Prot		c0.15			0.08		0.08	0.16		c0.15	c0.23	
v/s Ratio Perm	0.13		0.02	0.06		0.03						
v/c Ratio	0.52	0.60	0.07	0.22	0.32	0.10	0.47	0.56		0.63	0.62	
Uniform Delay, d1	23.2	23.7	20.5	21.3	21.9	20.6	27.6	21.9		24.5	18.7	
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	1.4	2.0	0.1	0.6	0.4	0.1	1.2	0.5		2.8	0.6	
Delay (s)	24.6	25.7	20.5	21.9	22.3	20.7	28.8	22.4		27.3	19.3	
Level of Service	C	C	C	C	C	C	C	C		C	B	
Approach Delay (s)		24.3			21.5			23.3			20.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	72.9	Sum of lost time (s)	10.0
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												
Volume (vph)	290	475	42	567	390	69	48	624	398	134	839	211
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	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3423		3502	3515		1770	3574	1583	1805	3574	1563
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3423		3502	3515		1770	3574	1583	1805	3574	1563
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)	290	475	42	567	390	69	48	624	398	134	839	211
RTOR Reduction (vph)	0	6	0	0	13	0	0	0	216	0	0	142
Lane Group Flow (vph)	290	511	0	567	446	0	48	624	182	134	839	69
Confl. Peds. (#/hr)	5		1	1		5	2					2
Heavy Vehicles (%)	1%	4%	5%	0%	0%	1%	2%	1%	2%	0%	1%	1%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	13.2	21.6		19.4	27.8		5.9	28.9	28.9	9.2	32.2	32.2
Effective Green, g (s)	13.2	21.6		19.4	27.8		5.9	28.9	28.9	9.2	32.2	32.2
Actuated g/C Ratio	0.13	0.22		0.20	0.28		0.06	0.29	0.29	0.09	0.32	0.32
Clearance Time (s)	5.0	5.0		5.0	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)	462	746		686	986		105	1042	462	168	1161	508
v/s Ratio Prot	0.08	c0.15		c0.16	0.13		0.03	0.17		c0.07	c0.23	
v/s Ratio Perm									0.11			0.04
v/c Ratio	0.63	0.68		0.83	0.45		0.46	0.60	0.39	0.80	0.72	0.13
Uniform Delay, d1	40.6	35.6		38.2	29.4		45.1	30.1	28.1	44.0	29.5	23.6
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	2.7	2.6		8.1	0.3		3.1	0.9	0.6	22.5	2.3	0.1
Delay (s)	43.3	38.2		46.3	29.7		48.2	31.1	28.6	66.6	31.8	23.7
Level of Service	D	D		D	C		D	C	C	E	C	C
Approach Delay (s)		40.0			38.9			30.9			34.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.8%	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												
Volume (vph)	61	1451	166	61	1019	66	150	59	54	84	172	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			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96		1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99			1.00	
Frt	1.00	0.98		1.00	1.00	0.85		0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1801	3492		1752	3574	1557		1772			1779	
Flt Permitted	0.23	1.00		0.08	1.00	1.00		0.52			0.85	
Satd. Flow (perm)	436	3492		154	3574	1557		949			1523	
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)	61	1451	166	61	1019	66	150	59	54	84	172	85
RTOR Reduction (vph)	0	7	0	0	0	24	0	8	0	0	10	0
Lane Group Flow (vph)	61	1610	0	61	1019	42	0	255	0	0	331	0
Confl. Peds. (#/hr)	4		17	17		4	18		10	10		18
Confl. Bikes (#/hr)			3			6						
Heavy Vehicles (%)	0%	1%	1%	3%	1%	0%	0%	0%	2%	0%	2%	0%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	75.7	75.7		75.7	75.7	75.7		34.3			34.3	
Effective Green, g (s)	75.7	75.7		75.7	75.7	75.7		34.3			34.3	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.29			0.29	
Clearance Time (s)	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	
Lane Grp Cap (vph)	275	2203		97	2255	982		271			435	
v/s Ratio Prot		c0.46			0.29							
v/s Ratio Perm	0.14			0.40		0.03		c0.27			0.22	
v/c Ratio	0.22	0.73		0.63	0.45	0.04		0.94			0.76	
Uniform Delay, d1	9.5	15.2		13.6	11.4	8.4		41.9			39.1	
Progression Factor	1.00	1.00		0.83	0.48	0.63		1.00			1.00	
Incremental Delay, d2	1.9	2.2		21.4	0.5	0.1		39.0			7.7	
Delay (s)	11.4	17.4		32.6	6.0	5.3		80.8			46.8	
Level of Service	B	B		C	A	A		F			D	
Approach Delay (s)		17.1			7.4			80.8			46.8	
Approach LOS		B			A			F			D	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	89.7%	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												
Volume (vph)	176	1784	165	207	1581	74	173	291	206	58	341	161
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	5062		1805	5092		1752	1881	1599	1805	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	5062		1805	5092		1752	1881	1599	1805	1900	1615
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)	176	1784	165	207	1581	74	173	291	206	58	341	161
RTOR Reduction (vph)	0	8	0	0	3	0	0	0	33	0	0	19
Lane Group Flow (vph)	176	1941	0	207	1652	0	173	291	173	58	341	142
Confl. Peds. (#/hr)			5			7			5			17
Confl. Bikes (#/hr)									2			5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	3%	1%	1%	0%	0%	0%
Turn Type	Prot			Prot			Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4		3	8		5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	16.1	57.1		17.5	58.5		15.5	36.0	58.5	7.5	28.0	49.1
Effective Green, g (s)	16.1	57.1		17.5	58.5		15.5	36.0	58.5	7.5	28.0	49.1
Actuated g/C Ratio	0.12	0.41		0.13	0.42		0.11	0.26	0.42	0.05	0.20	0.36
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	210	2093		229	2157		197	490	677	98	385	574
v/s Ratio Prot	0.10	c0.38		c0.11	0.32		c0.10	0.15	0.11	0.03	c0.18	0.09
v/s Ratio Perm												
v/c Ratio	0.84	0.93		0.90	0.77		0.88	0.59	0.25	0.59	0.89	0.25
Uniform Delay, d1	59.7	38.5		59.5	34.0		60.4	44.7	25.7	63.8	53.5	31.5
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	24.2	7.8		34.5	1.7		32.7	1.9	0.2	9.2	20.8	0.2
Delay (s)	84.0	46.3		94.0	35.6		93.1	46.6	25.9	73.0	74.3	31.7
Level of Service	F	D		F	D		F	D	C	E	E	C
Approach Delay (s)		49.4			42.1			52.2			61.9	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	138.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	96.2%	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												
Volume (vph)	65	1284	158	113	910	79	150	285	148	132	373	112
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3531		1805	3512		1787	1881	1574	1805	1881	1554
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3531		1805	3512		1787	1881	1574	1805	1881	1554
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)	65	1284	158	113	910	79	150	285	148	132	373	112
RTOR Reduction (vph)	0	8	0	0	5	0	0	0	116	0	0	48
Lane Group Flow (vph)	65	1434	0	113	984	0	150	285	32	132	373	64
Confl. Peds. (#/hr)			12			11			12			24
Confl. Bikes (#/hr)			3			2			1			2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	3%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.0	50.7		9.0	52.7		10.0	26.0	26.0	14.3	30.3	30.3
Effective Green, g (s)	7.0	50.7		9.0	52.7		10.0	26.0	26.0	14.3	30.3	30.3
Actuated g/C Ratio	0.06	0.42		0.08	0.44		0.08	0.22	0.22	0.12	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	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)	105	1492		135	1542		149	408	341	215	475	392
v/s Ratio Prot	0.04	c0.41		c0.06	0.28		c0.08	0.15		0.07	c0.20	
v/s Ratio Perm									0.02			0.04
v/c Ratio	0.62	0.96		0.84	0.64		1.01	0.70	0.09	0.61	0.79	0.16
Uniform Delay, d1	55.2	33.7		54.8	26.2		55.0	43.4	37.6	50.2	41.8	35.0
Progression Factor	0.94	0.81		0.81	0.73		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.0	11.9		30.3	1.8		75.5	5.2	0.1	5.1	8.3	0.2
Delay (s)	59.1	39.1		74.7	20.9		130.5	48.5	37.7	55.3	50.1	35.2
Level of Service	E	D		E	C		F	D	D	E	D	D
Approach Delay (s)		40.0			26.5			66.9			48.5	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	41.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
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												
Volume (vph)	133	1945	298	88	1820	115	200	221	82	211	283	152
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4969		1805	5078		1787	3370		1787	3364	
Flt Permitted	0.95	1.00		0.95	1.00		0.22	1.00		0.40	1.00	
Satd. Flow (perm)	1770	4969		1805	5078		422	3370		748	3364	
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)	133	1945	298	88	1820	115	200	221	82	211	283	152
RTOR Reduction (vph)	0	13	0	0	4	0	0	26	0	0	48	0
Lane Group Flow (vph)	133	2230	0	88	1931	0	200	277	0	211	387	0
Confl. Peds. (#/hr)			15			19			36			15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	0%	0%	1%	0%	1%	1%	0%	1%	0%	1%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)	18.5	78.8		10.9	71.2		40.3	24.2		40.3	24.2	
Effective Green, g (s)	18.5	78.8		10.9	71.2		40.3	24.2		40.3	24.2	
Actuated g/C Ratio	0.12	0.53		0.07	0.47		0.27	0.16		0.27	0.16	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	218	2610		131	2410		260	544		312	543	
v/s Ratio Prot	c0.08	c0.45		0.05	0.38		c0.08	0.08		0.07	0.12	
v/s Ratio Perm							c0.12			0.11		
v/c Ratio	0.61	0.85		0.67	0.80		0.77	0.51		0.68	0.71	
Uniform Delay, d1	62.3	30.7		67.8	33.4		45.9	57.5		45.7	59.6	
Progression Factor	0.94	0.67		0.89	0.58		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	1.5		10.7	2.4		12.8	0.8		5.7	4.4	
Delay (s)	60.8	22.1		70.9	21.7		58.7	58.2		51.4	64.0	
Level of Service	E	C		E	C		E	E		D	E	
Approach Delay (s)		24.3			23.8			58.4			59.9	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.7%	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												
Volume (vph)	53	1389	93	92	1064	66	58	73	75	93	186	74
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		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3528		1805	3506		1798	1730		1781	1794	
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00		0.56	1.00	
Satd. Flow (perm)	1805	3528		1805	3506		582	1730		1047	1794	
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)	53	1389	93	92	1064	66	58	73	75	93	186	74
RTOR Reduction (vph)	0	3	0	0	3	0	0	34	0	0	13	0
Lane Group Flow (vph)	53	1479	0	92	1127	0	58	114	0	93	247	0
Confl. Peds. (#/hr)			17			4	6		15	15		6
Confl. Bikes (#/hr)			5			3						
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	3%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	13.8	71.3		10.4	67.9		23.3	23.3		23.3	23.3	
Effective Green, g (s)	13.8	71.3		10.4	67.9		23.3	23.3		23.3	23.3	
Actuated g/C Ratio	0.12	0.59		0.09	0.57		0.19	0.19		0.19	0.19	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	208	2096		156	1984		113	336		203	348	
v/s Ratio Prot	0.03	c0.42		0.05	c0.32			0.07			c0.14	
v/s Ratio Perm							0.10			0.09		
v/c Ratio	0.25	0.71		0.59	0.57		0.51	0.34		0.46	0.71	
Uniform Delay, d1	48.4	17.0		52.7	16.7		43.3	41.7		42.8	45.2	
Progression Factor	0.57	0.29		1.03	0.74		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.0		3.4	0.7		3.9	0.6		1.6	6.7	
Delay (s)	28.0	6.0		57.7	13.0		47.2	42.3		44.4	51.9	
Level of Service	C	A		E	B		D	D		D	D	
Approach Delay (s)		6.8			16.4			43.7			49.9	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.1%	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												
Volume (vph)	65	1921	200	20	2072	44	122	50	13	75	102	79
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	4978		1805	5106		1783	1831		1763	1900	1570
Flt Permitted	0.95	1.00		0.95	1.00		0.60	1.00		0.72	1.00	1.00
Satd. Flow (perm)	1805	4978		1805	5106		1119	1831		1329	1900	1570
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)	65	1921	200	20	2072	44	122	50	13	75	102	79
RTOR Reduction (vph)	0	6	0	0	1	0	0	7	0	0	0	68
Lane Group Flow (vph)	65	2115	0	20	2115	0	122	56	0	75	102	11
Confl. Peds. (#/hr)			17			27	9		9	9		9
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.4	109.8		4.9	104.3		20.3	20.3		20.3	20.3	20.3
Effective Green, g (s)	10.4	109.8		4.9	104.3		20.3	20.3		20.3	20.3	20.3
Actuated g/C Ratio	0.07	0.73		0.03	0.70		0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	125	3644		59	3550		151	248		180	257	212
v/s Ratio Prot	0.04	c0.42		0.01	c0.41			0.03			0.05	
v/s Ratio Perm							c0.11			0.06		0.01
v/c Ratio	0.52	0.58		0.34	0.60		0.81	0.23		0.42	0.40	0.05
Uniform Delay, d1	67.4	9.4		71.0	11.9		63.0	57.8		59.4	59.3	56.5
Progression Factor	0.72	0.59		0.89	1.47		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	0.4		1.3	0.3		26.2	0.5		1.6	1.0	0.1
Delay (s)	50.8	5.9		64.2	17.7		89.1	58.3		61.0	60.3	56.6
Level of Service	D	A		E	B		F	E		E	E	E
Approach Delay (s)		7.2			18.2			78.6			59.3	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.6%	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												
Volume (vph)	270	990	114	97	845	159	128	829	116	395	1063	256
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5034		1787	5007		1787	5025		1805	3610	1573
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5034		1787	5007		1787	5025		1805	3610	1573
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)	270	990	114	97	845	159	128	829	116	395	1063	256
RTOR Reduction (vph)	0	10	0	0	20	0	0	13	0	0	0	130
Lane Group Flow (vph)	270	1094	0	97	984	0	128	932	0	395	1063	126
Confl. Peds. (#/hr)			10			6			13			4
Heavy Vehicles (%)	2%	1%	3%	1%	1%	0%	1%	1%	1%	0%	0%	1%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	19.1	39.7		12.0	32.6		12.3	31.8		27.2	46.7	46.7
Effective Green, g (s)	19.1	39.7		12.0	32.6		12.3	31.8		27.2	46.7	46.7
Actuated g/C Ratio	0.15	0.30		0.09	0.25		0.09	0.24		0.21	0.36	0.36
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	259	1529		164	1249		168	1223		376	1290	562
v/s Ratio Prot	c0.15	0.22		0.05	c0.20		0.07	0.19		c0.22	c0.29	
v/s Ratio Perm												0.08
v/c Ratio	1.04	0.72		0.59	0.79		0.76	0.76		1.05	0.82	0.22
Uniform Delay, d1	55.8	40.5		57.0	45.8		57.8	45.9		51.7	38.3	29.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	67.4	1.6		5.6	3.4		18.3	2.9		60.3	4.4	0.2
Delay (s)	123.2	42.1		62.6	49.2		76.0	48.8		112.0	42.7	29.6
Level of Service	F	D		E	D		E	D		F	D	C
Approach Delay (s)		58.0			50.4			52.1			56.7	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	130.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	98.2%	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												
Volume (vph)	180	1090	277	101	828	87	245	550	75	184	805	198
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3610	1536	1805	3574	1496	3335	3531		3467	3411	
Flt Permitted	0.12	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	221	3610	1536	213	3574	1496	3335	3531		3467	3411	
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)	180	1090	277	101	828	87	245	550	75	184	805	198
RTOR Reduction (vph)	0	0	73	0	0	61	0	9	0	0	18	0
Lane Group Flow (vph)	180	1090	204	101	828	26	245	616	0	184	985	0
Confl. Peds. (#/hr)			31			19			17			10
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	2%	0%	0%	0%	1%	4%	5%	0%	0%	1%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	50.3	39.4	39.4	42.9	35.7	35.7	11.3	43.0		10.4	42.1	
Effective Green, g (s)	50.3	39.4	39.4	42.9	35.7	35.7	11.3	43.0		10.4	42.1	
Actuated g/C Ratio	0.42	0.33	0.33	0.36	0.30	0.30	0.09	0.36		0.09	0.35	
Clearance Time (s)	5.0	5.0	5.0	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)	233	1185	504	172	1063	445	314	1265		300	1197	
v/s Ratio Prot	c0.07	c0.30		0.04	0.23		c0.07	0.17		0.05	c0.29	
v/s Ratio Perm	0.25		0.13	0.18		0.02						
v/c Ratio	0.77	0.92	0.40	0.59	0.78	0.06	0.78	0.49		0.61	0.82	
Uniform Delay, d1	26.4	38.8	31.2	30.1	38.5	30.1	53.1	29.9		52.9	35.5	
Progression Factor	1.09	0.53	0.32	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.2	8.9	0.4	5.0	3.7	0.1	11.9	1.3		3.7	6.5	
Delay (s)	39.9	29.5	10.3	35.1	42.2	30.2	65.0	31.3		56.6	42.0	
Level of Service	D	C	B	D	D	C	E	C		E	D	
Approach Delay (s)		27.2			40.5			40.8			44.3	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.2%	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												
Volume (vph)	157	1348	375	114	1487	120	461	607	92	150	805	159
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	4886		1736	5027		3502	3431		1736	3508	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	4886		1736	5027		3502	3431		1736	3508	
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)	157	1348	375	114	1487	120	461	607	92	150	805	159
RTOR Reduction (vph)	0	33	0	0	6	0	0	8	0	0	11	0
Lane Group Flow (vph)	157	1690	0	114	1601	0	461	691	0	150	953	0
Confl. Peds. (#/hr)			17			19			34			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	1%	2%	1%	4%	1%	5%	0%	2%	4%	4%	0%	0%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.2	55.6		11.2	51.6		21.1	45.5		17.7	42.1	
Effective Green, g (s)	15.2	55.6		11.2	51.6		21.1	45.5		17.7	42.1	
Actuated g/C Ratio	0.10	0.37		0.07	0.34		0.14	0.30		0.12	0.28	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	181	1811		130	1729		493	1041		205	985	
v/s Ratio Prot	c0.09	c0.35		0.07	0.32		c0.13	0.20		0.09	c0.27	
v/s Ratio Perm												
v/c Ratio	0.87	0.93		0.88	0.93		0.94	0.66		0.73	0.97	
Uniform Delay, d1	66.4	45.4		68.7	47.4		63.8	45.6		63.9	53.3	
Progression Factor	0.96	0.72		0.90	0.80		1.00	1.00		1.00	1.00	
Incremental Delay, d2	28.6	9.0		40.0	9.0		25.1	1.6		12.6	21.0	
Delay (s)	92.3	41.7		101.9	47.1		88.9	47.2		76.5	74.3	
Level of Service	F	D		F	D		F	D		E	E	
Approach Delay (s)		45.9			50.8			63.8			74.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	56.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	98.3%	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												
Volume (vph)	130	1500	112	68	1481	118	152	326	114	163	322	174
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1799	4975		1733	4995		1752	3285		1703	3574	1548
Flt Permitted	0.12	1.00		0.11	1.00		0.43	1.00		0.25	1.00	1.00
Satd. Flow (perm)	218	4975		207	4995		786	3285		453	3574	1548
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)	130	1500	112	68	1481	118	152	326	114	163	322	174
RTOR Reduction (vph)	0	6	0	0	6	0	0	24	0	0	0	48
Lane Group Flow (vph)	130	1606	0	68	1593	0	152	416	0	163	322	126
Confl. Peds. (#/hr)	32		18	18		32			32			20
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	3%	2%	4%	2%	6%	3%	4%	4%	6%	1%	0%
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	97.3	97.3		97.3	97.3		36.6	27.7		38.8	28.8	28.8
Effective Green, g (s)	97.3	97.3		97.3	97.3		36.6	27.7		38.8	28.8	28.8
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.24	0.18		0.26	0.19	0.19
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	141	3227		134	3240		249	607		201	686	297
v/s Ratio Prot		0.32			0.32		0.04	0.13		c0.05	0.09	
v/s Ratio Perm	c0.60			0.33			0.11			c0.16		0.08
v/c Ratio	0.92	0.50		0.51	0.49		0.61	0.69		0.81	0.47	0.43
Uniform Delay, d1	23.0	13.7		13.8	13.6		48.2	57.1		48.4	53.8	53.3
Progression Factor	0.74	0.28		1.07	0.57		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	40.0	0.3		10.0	0.4		4.4	3.2		21.4	0.5	1.0
Delay (s)	57.1	4.2		24.9	8.2		52.6	60.3		69.8	54.3	54.3
Level of Service	E	A		C	A		D	E		E	D	D
Approach Delay (s)		8.1			8.8			58.3			58.1	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	85.4%	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												
Volume (vph)	146	1640	52	185	1536	78	59	413	362	156	289	139
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	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	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4969		1770	5045		1805	3539	1522	1752	3334	
Flt Permitted	0.95	1.00		0.95	1.00		0.40	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	1770	4969		1770	5045		756	3539	1522	468	3334	
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)	146	1640	52	185	1536	78	59	413	362	156	289	139
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	226	0	40	0
Lane Group Flow (vph)	146	1690	0	185	1611	0	59	413	136	156	388	0
Confl. Peds. (#/hr)			19			9			14			6
Heavy Vehicles (%)	2%	3%	29%	2%	2%	1%	0%	2%	3%	3%	3%	1%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	20.1	70.1		19.7	69.7		34.5	28.3	28.3	45.2	34.0	
Effective Green, g (s)	20.1	70.1		19.7	69.7		34.5	28.3	28.3	45.2	34.0	
Actuated g/C Ratio	0.13	0.47		0.13	0.46		0.23	0.19	0.19	0.30	0.23	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	237	2322		232	2344		217	668	287	243	756	
v/s Ratio Prot	0.08	c0.34		c0.10	0.32		0.01	0.12		c0.05	0.12	
v/s Ratio Perm							0.05		0.09	c0.14		
v/c Ratio	0.62	0.73		0.80	0.69		0.27	0.62	0.47	0.64	0.51	
Uniform Delay, d1	61.3	32.2		63.2	31.6		46.1	55.9	54.2	41.3	50.8	
Progression Factor	0.92	0.50		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.1	1.8		17.1	1.7		0.7	1.7	1.2	5.7	0.6	
Delay (s)	60.4	17.8		80.3	33.2		46.8	57.6	55.4	47.0	51.3	
Level of Service	E	B		F	C		D	E	E	D	D	
Approach Delay (s)		21.2			38.1			55.9			50.2	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.8%	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												
Volume (vph)	0	1904	232	116	939	0	0	0	0	473	4	1041
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
Lane Util. Factor		0.86		1.00	0.91						1.00	0.88
Frpb, ped/bikes		0.99		1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Frt		0.98		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)		6166		1787	5036						1739	2787
Flt Permitted		1.00		0.95	1.00						0.95	1.00
Satd. Flow (perm)		6166		1787	5036						1739	2787
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)	0	1904	232	116	939	0	0	0	0	473	4	1041
RTOR Reduction (vph)	0	19	0	0	0	0	0	0	0	0	0	86
Lane Group Flow (vph)	0	2117	0	116	939	0	0	0	0	0	477	955
Confl. Peds. (#/hr)			17			42			1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	4%	1%	1%	3%	0%	0%	0%	0%	4%	0%	2%
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Actuated Green, G (s)		43.3		9.6	57.9						42.1	42.1
Effective Green, g (s)		43.3		9.6	57.9						42.1	42.1
Actuated g/C Ratio		0.39		0.09	0.53						0.38	0.38
Clearance Time (s)		5.0		5.0	5.0						5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		2427		156	2651						666	1067
v/s Ratio Prot		c0.34		c0.06	0.19							
v/s Ratio Perm											0.27	c0.34
v/c Ratio		0.87		0.74	0.35						0.72	0.90
Uniform Delay, d1		30.8		49.0	15.2						28.9	31.9
Progression Factor		1.00		1.19	0.27						1.00	1.00
Incremental Delay, d2		4.7		13.1	0.3						3.7	9.8
Delay (s)		35.5		71.2	4.4						32.5	41.7
Level of Service		D		E	A						C	D
Approach Delay (s)		35.5			11.8			0.0			38.8	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	246	41	1324	304	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	246	41	1324	304	0	0
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			350			
pX, platoon unblocked						
vC, conflicting volume	1331	669			1635	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1331	669			1635	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	90			100	
cM capacity (veh/h)	148	402			400	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3
Volume Total	164	123	883	543	203
Volume Left	164	82	0	0	0
Volume Right	0	41	0	101	203
cSH	148	221	1700	1700	1700
Volume to Capacity	1.11	0.56	0.52	0.32	0.12
Queue Length 95th (ft)	223	75	0	0	0
Control Delay (s)	167.8	42.5	0.0	0.0	0.0
Lane LOS	F	E			
Approach Delay (s)	114.1		0.0		
Approach LOS	F				

Intersection Summary			
Average Delay	17.1		
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	941	1368	93	44	750	482	250	347	190	39	103	57
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		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.91		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.94		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3452		1719	4666		1719	3239		1805	1863	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.69	1.00		0.29	1.00	1.00
Satd. Flow (perm)	3367	3452		1719	4666		1249	3239		542	1863	1553
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)	941	1368	93	44	750	482	250	347	190	39	103	57
RTOR Reduction (vph)	0	4	0	0	100	0	0	74	0	0	0	43
Lane Group Flow (vph)	941	1457	0	44	1132	0	250	463	0	39	103	14
Confl. Peds. (#/hr)	32		27	27		32			11			
Heavy Vehicles (%)	4%	3%	5%	5%	2%	4%	5%	4%	6%	0%	2%	4%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	32.1	62.7		4.4	35.0		27.9	27.9		27.9	27.9	27.9
Effective Green, g (s)	32.1	62.7		4.4	35.0		27.9	27.9		27.9	27.9	27.9
Actuated g/C Ratio	0.29	0.57		0.04	0.32		0.25	0.25		0.25	0.25	0.25
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	983	1968		69	1485		317	822		137	473	394
v/s Ratio Prot	c0.28	c0.42		0.03	0.24			0.14			0.06	
v/s Ratio Perm							c0.20			0.07		0.01
v/c Ratio	0.96	0.74		0.64	0.76		0.79	0.56		0.28	0.22	0.04
Uniform Delay, d1	38.3	17.6		52.0	33.8		38.3	35.7		33.0	32.4	30.9
Progression Factor	0.79	0.46		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.2	1.4		17.7	3.8		12.2	0.9		1.1	0.2	0.0
Delay (s)	42.6	9.5		69.7	37.5		50.5	36.6		34.2	32.7	31.0
Level of Service	D	A		E	D		D	D		C	C	C
Approach Delay (s)		22.4			38.6			41.1			32.5	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1492	157	110	1031	89	178
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1492	157	110	1031	89	178
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340			724		
pX, platoon unblocked			0.66		0.69	0.66
vC, conflicting volume			1650		2307	826
vC1, stage 1 conf vol					1572	
vC2, stage 2 conf vol					736	
vCu, unblocked vol			966		1698	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			77		57	75
cM capacity (veh/h)			478		207	724

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	995	654	110	516	516	267
Volume Left	0	0	110	0	0	89
Volume Right	0	157	0	0	0	178
cSH	1700	1700	478	1700	1700	395
Volume to Capacity	0.59	0.38	0.23	0.30	0.30	0.68
Queue Length 95th (ft)	0	0	22	0	0	120
Control Delay (s)	0.0	0.0	14.8	0.0	0.0	31.1
Lane LOS			B			D
Approach Delay (s)	0.0		1.4			31.1
Approach LOS						D

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	851	196	303	1036	152	150	1144	135	185	1270	323
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	5.0		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91		0.97	0.91		0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3574	1568	3502	5020		3400	5050		3467	5187	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3574	1568	3502	5020		3400	5050		3467	5187	1583
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)	343	851	196	303	1036	152	150	1144	135	185	1270	323
RTOR Reduction (vph)	0	0	108	0	16	0	0	12	0	0	0	146
Lane Group Flow (vph)	343	851	88	303	1172	0	150	1267	0	185	1270	177
Confl. Peds. (#/hr)			5			5			7			8
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	2%	1%	1%	0%	1%	2%	3%	1%	0%	1%	0%	0%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	14.9	35.0	35.0	13.7	33.8		7.9	35.6		8.9	36.6	36.6
Effective Green, g (s)	14.9	35.0	35.0	13.7	33.8		7.9	35.6		8.9	36.6	36.6
Actuated g/C Ratio	0.13	0.31	0.31	0.12	0.30		0.07	0.31		0.08	0.32	0.32
Clearance Time (s)	5.0	5.0	5.0	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)	452	1105	485	424	1499		237	1588		273	1677	512
v/s Ratio Prot	c0.10	c0.24		0.09	0.23		0.04	c0.25		c0.05	0.24	
v/s Ratio Perm			0.06									0.11
v/c Ratio	0.76	0.77	0.18	0.71	0.78		0.63	0.80		0.68	0.76	0.35
Uniform Delay, d1	47.4	35.5	28.6	47.9	36.3		51.2	35.5		50.8	34.3	29.2
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	7.2	3.4	0.2	5.6	2.7		5.4	2.9		6.5	2.0	0.4
Delay (s)	54.6	38.8	28.8	53.5	39.1		56.7	38.4		57.3	36.3	29.6
Level of Service	D	D	C	D	D		E	D		E	D	C
Approach Delay (s)		41.3			42.0			40.3			37.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	113.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.3%	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												
Volume (vph)	196	1423	165	296	1319	133	167	681	270	161	983	161
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
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)	196	1423	165	296	1319	133	167	681	270	161	983	161
RTOR Reduction (vph)	0	0	62	0	10	0	0	0	194	0	0	76
Lane Group Flow (vph)	196	1423	103	296	1442	0	167	681	76	161	983	85
Confl. Peds. (#/hr)			12			3			24			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	2%	0%	2%	1%	1%	1%	0%
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	10.9	35.0	35.0	20.1	44.2		7.0	32.0	32.0	7.0	32.0	32.0
Effective Green, g (s)	10.9	35.0	35.0	20.1	44.2		7.0	32.0	32.0	7.0	32.0	32.0
Actuated g/C Ratio	0.10	0.31	0.31	0.18	0.39		0.06	0.28	0.28	0.06	0.28	0.28
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	331	1575	484	315	1958		215	1426	433	213	1440	453
v/s Ratio Prot	0.06	c0.28		c0.17	0.29		c0.05	0.13		0.05	c0.19	
v/s Ratio Perm			0.07						0.05			0.05
v/c Ratio	0.59	0.90	0.21	0.94	0.74		0.78	0.48	0.17	0.76	0.68	0.19
Uniform Delay, d1	49.5	37.9	29.3	46.4	30.0		52.8	34.1	31.1	52.7	36.5	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	7.6	0.2	34.7	1.5		16.0	0.3	0.2	14.1	1.4	0.2
Delay (s)	52.3	45.6	29.6	81.1	31.4		68.8	34.4	31.3	66.8	37.9	31.4
Level of Service	D	D	C	F	C		E	C	C	E	D	C
Approach Delay (s)		44.8			39.8			38.8			40.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	376	1398	1333	390	658	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3502	5136	5187	1579	3502	2790
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3502	5136	5187	1579	3502	2790
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	376	1398	1333	390	658	363
RTOR Reduction (vph)	0	0	0	25	0	7
Lane Group Flow (vph)	376	1398	1333	365	658	356
Confl. Peds. (#/hr)				10		2
Heavy Vehicles (%)	0%	1%	0%	1%	0%	1%
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Actuated Green, G (s)	16.0	54.4	33.4	57.7	24.3	40.3
Effective Green, g (s)	16.0	54.4	33.4	57.7	24.3	40.3
Actuated g/C Ratio	0.18	0.61	0.38	0.65	0.27	0.45
Clearance Time (s)	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
Lane Grp Cap (vph)	632	3150	1953	1116	959	1425
v/s Ratio Prot	c0.11	0.27	c0.26	0.09	c0.19	0.05
v/s Ratio Perm				0.14		0.08
v/c Ratio	0.59	0.44	0.68	0.33	0.69	0.25
Uniform Delay, d1	33.4	9.1	23.2	6.9	28.8	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.1	1.0	0.2	2.1	0.1
Delay (s)	34.9	9.2	24.2	7.1	30.8	15.0
Level of Service	C	A	C	A	C	B
Approach Delay (s)		14.7	20.3		25.2	
Approach LOS		B	C		C	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.0%	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												
Volume (veh/h)	164	709	0	0	553	29	0	0	0	37	0	160
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	164	709	0	0	553	29	0	0	0	37	0	160
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					852							
pX, platoon unblocked	0.94						0.94	0.94		0.94	0.94	0.94
vC, conflicting volume	582			710			1474	1620	356	1250	1606	291
vC1, stage 1 conf vol							1038	1038		568	568	
vC2, stage 2 conf vol							436	582		682	1038	
vCu, unblocked vol	416			710			1370	1525	356	1130	1510	105
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	85			100			100	100	100	88	100	82
cM capacity (veh/h)	1080			898			191	229	646	310	243	875

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	518	354	369	213	0	197
Volume Left	164	0	0	0	0	37
Volume Right	0	0	0	29	0	160
cSH	1080	1700	1700	1700	1700	652
Volume to Capacity	0.15	0.21	0.22	0.13	0.00	0.30
Queue Length 95th (ft)	13	0	0	0	0	32
Control Delay (s)	4.0	0.0	0.0	0.0	0.0	12.9
Lane LOS	A				A	B
Approach Delay (s)	2.4		0.0		0.0	12.9
Approach LOS					A	B

Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	62.5%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1670	1	100	965	176	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3574	1544	1805	3539	3502	1615
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3574	1544	1805	3539	3502	1615
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1670	1	100	965	176	282
RTOR Reduction (vph)	0	0	0	0	0	19
Lane Group Flow (vph)	1670	1	100	965	176	263
Confl. Peds. (#/hr)		6				
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	80.9	80.9	12.8	98.7	11.3	24.1
Effective Green, g (s)	80.9	80.9	12.8	98.7	11.3	24.1
Actuated g/C Ratio	0.67	0.67	0.11	0.82	0.09	0.20
Clearance Time (s)	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
Lane Grp Cap (vph)	2409	1041	193	2911	330	392
v/s Ratio Prot	c0.47		0.06	0.27	0.05	c0.07
v/s Ratio Perm		0.00				0.09
v/c Ratio	0.69	0.00	0.52	0.33	0.53	0.67
Uniform Delay, d1	12.0	6.4	50.7	2.6	51.8	44.3
Progression Factor	0.53	0.18	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.0	2.3	0.3	1.7	4.5
Delay (s)	7.6	1.1	53.0	2.9	53.5	48.7
Level of Service	A	A	D	A	D	D
Approach Delay (s)	7.6			7.6	50.6	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Appendix E Costco Trip Generation Data

Record #	Country	State/ Province	County	City	Count Year	Store Size (SF)	Store Type	Number of Fueling Positions?
79	USA	AZ	Maricopa	Scottsdale	2011		Warehouse	20
78	USA	WA	King	Issaquah	2009	150585	Warehouse	12
77	USA	WA	King	Issaquah	2009	150585	Warehouse	12
76	USA	WA	King	Issaquah	2009	150585	Warehouse	12
75	USA	WA	Clark	Vancouver	2010	155465	Warehouse	16
37	USA	WA	Spokane	Spokane	2001	156987	Warehouse	16
36	USA	CA	Ventura	Simi Valley	2001	136296	Warehouse	12
35	USA	FL	Seminole	Altamonte Springs	2001	135229	Warehouse	12
34	USA	CO	Arapahoe	Aurora	2001	133711	Warehouse	12
33	USA	VA	West Henrico		2001	126976	Warehouse	
32	USA	CA	Solano	Vallejo	2001	125434	Warehouse	16
31	USA	NY	Richmond	Staten Island	2001	121216	Warehouse	12
30	USA	OR	Lane	Eugene	2001	140700	Warehouse	16
29	USA	OR	Jackson	Medford	2001	136144	Warehouse	12
28	USA	WA	Thurston	Tumwater	2001	120000	Warehouse	12
16	USA	AZ	Maricopa	Glendale	2009	153876	Warehouse	16
17	USA	CA	San Francisco	South San Francisco	2009	138468	Warehouse	16
18	USA	OR	Multnomah	Portland	2008	162115	Warehouse	16
19	USA	MT	Lewis & Clark	Helena	2008	146217	Warehouse	12
20	USA	MT	Missoula	Missoula	2008	122528	Warehouse	12
21	USA	OR	Linn	Albany	2008	148161	Warehouse	12
22	USA	UT	Salt Lake	Salt Lake City	2006	135444	Warehouse	12
23	USA	CA	San Diego	Morena	2006	161674	Warehouse	16
24	USA	OR	Marion	Salem	2005	145363	Warehouse	12
25	USA	CA	Orange	Laguna Niguel	2004	149705	Warehouse	12
26	USA	CA	Santa Clara		2002/2004	135444	Warehouse	12
27	USA	UT	Salt Lake	Sandy	2002	161600	Warehouse	12

COSTCO TRIP GENERATION DATA

Surveys conducted at established Costco sites have shown that Costco Warehouses typically generate higher traffic volumes than other land uses with similar building sizes. An overview of weekday p.m. peak hour trip generation characteristics is provided that has been collected between 2001 and 2011 at Costco Wholesale locations containing fuel stations. The rates shown for the sites include the fuel station as part of the calculated trip rate. In addition to the driveway trip rates, customer survey information has been included to provide the percentage of primary, pass-by, and diverted trips, as further described below.

- *Primary Trips* (an entirely new trip on the roadway system for the express purpose of driving to and from Costco);
- *Pass-by Trips* (existing trips that are on roadways adjacent to the site which allow the motorist to turn into the Costco development, and then continue on to their ultimate destination when their shopping is concluded); and
- *Diverted-Linked Trips* (existing trips on nearby roadways in which the motorist makes a decision to drive out-of-direction for a distance to stop at Costco, and when their shopping is concluded, continue on their trip to the ultimate destination).

Trip Characteristics Application

The analysis models prepared for the Torrance site should explicitly account for pass-by and diverted trip impacts at the study intersections. Typically, pass-by trips would have an impact only at the site-access driveways, whereas the impact of diverted trips could extend throughout the study area intersections (these would be modeled similar to net new trips at many or all of the study area intersections in the operations models). The key difference between inclusion and omission of the diverted trips is related to the overall vehicle miles traveled (VMT), as diverted trips do not create the same system impacts (air quality, noise, and freeway impacts) that entirely new trips to the system could create.

The previously surveyed Costco buildings are sited in a variety of locations, some adjacent to freeways/arterials, others a couple blocks away. This variation in store locations results in differences in diverted and pass-by trips from store to store. For example, sites adjacent to major arterial roadways tend to exhibit a high percentage of pass-by trips and a lower percentage of diverted trips. Similarly, Costco facilities located a block or two away from a freeway tend to experience a higher percentage of diverted trips. Given these factors, diverted and pass-by trips should be considered together, with engineering judgment used to identify how these two trip characteristics should be applied.

Trip Generation Estimate

Trip generation studies were conducted at Costco Wholesale sites located across the country using industry standard engineering practices consistent with guidance within the Institute of Transportation Engineers (ITE) standard reference, *Trip Generation Handbook, 2nd Edition.* These surveys were conducted between 2001 and 2011, and include surveys of twenty-seven Costco Warehouses with fuel centers[3]. The Costco Wholesale buildings surveyed range in size between 122,528 square-feet and 162,115 square-feet, with an average size of 143,869 square-feet. The fuel centers in the sample range between 12 and 20 fueling positions. The trip generation rates are correlated to the overall warehouse size regardless of the number of fueling positions as trip generation studies are conducted at the site entrances. Table A1 summarizes the average trip rates recorded; additional details on these sites are included at the end of this appendix.

Table A1
Average Trip Characteristics for a Costco Warehouse with Fuel Center

Land Use	Weekday Daily Trip Rate (per KSF)	Weekday AM Peak Hour of Adjacent Street Traffic Trip Rate (per KSF)			Weekday PM Peak Hour of Adjacent Street Traffic Trip Rate (per KSF)		
		Total	In	Out	Total	In	Out
Costco With Fuel Center	72.39	2.38	55%	45%	7.15	48%	52%
Pass-by Trips	*No Data*		34%			35%	
Diverted Trips	*No Data*		43%			32%	

COSTCO FUEL CENTER CHARACTERISTICS

The Costco Wholesale trip generation rates shown in Tables 1, 2, and A1 inherently account for fuel station trips within the overall rate. However, supplemental information on the fuel centers from isolated studies is provided to describe the fuel center characteristics separately. This information was collected to highlight the trip characteristics of adding fuel centers to existing Costco Wholesale sites, but the isolated fuel center data can also be considered applicable to the Torrance site during the weekday a.m. peak hour, when the Costco warehouse is closed.

Information related to internal trip capture and pass-by trip percentages was collected by interviewing Costco Gasoline customers about their trip patterns as they are purchasing fuel. Because Costco member cards are also scanned as part of fuel center and Costco purchases, transaction data was also matched up to identify internalization rates.

[3] Daily trip data was collected at eight of the sites, weekday a.m. peak hour data was collected at two sites, and weekday p.m. peak hour data was collected at 27 sites.

COSTCO FUEL STATION TRIP CHARACTERISTICS

The data collected at existing Costco Gasoline sites indicate the following general trip generation characteristics:

- Costco Gasoline fuel stations are an ancillary use for the warehouse and there is a large proportion of shared trips between the two.
- The fuel stations are member-only and require a membership card for pump activation.
- Credit/debit card is the only method of payment at the fuel stations and they do not provide any other services (automotive or convenience) besides gas.
- The fuel stations are staffed by a minimum of one attendant who is trained to help members operate the pumps and direct waiting vehicles to open pumps to manage on-site queuing and circulation.

The unique nature of Costco operations and its membership requirements result in different trip characteristics than those observed at the standard fuel stations summarized in ITE *Trip Generation*. The percentage of pass-by trips at Costco fuel stations is considerably lower than that reported in ITE *Trip Generation* for typical fuel stations. Correspondingly, membership requirements also have a significant effect on trip internalization (or sharing of trips) between the warehouse and the fuel station. Fewer people exclusively visit a Costco fuel station during the evening commute period (in comparison to a typical stand-alone station) because they have another primary purpose for visiting the site (that being a trip to the warehouse).

Internal Fuel Station Trips

A key finding from the driver surveys conducted at Costco facilities is the fact that approximately 50 percent of the weekday p.m. peak hour trips to and from Costco fueling stations are internal capture trips. Internal capture trips account for those customers who patronize both the warehouse and the gasoline pumps during a single visit to the Costco site. As such, although they account for a trip to both the warehouse and the fuel station, they only result in one overall vehicle trip to the site and on the surrounding transportation system. On average, 50 percent of the customers buying gas during the weekday p.m. peak hour are customers whose main purpose to the site is to visit the Costco warehouse. At some sites this number ranges as high as 75 percent but for the purposes of analysis a conservative average estimate is typically used.

Appendix F Project Impact Analysis Summary Tables

Table F-1 -- Project Impact Analysis Based on ICU Methodology

Intersection	Jurisdiction	EXISTING				CUMULATIVE				CUMULATIVE PLUS PROJECT				AM PROJECT INCREASE (DECREASE)	PM PROJECT INCREASE (DECREASE)	Project Impact?
		AM		PM		AM		PM		AM		PM				
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS			
1. Calle Mayor & Pacific Coast Highway	City of Torrance/Caltrans	83.7%	D	77.0%	C	85.5%	D	80.1%	D	85.2%	D	80.0%	D	(0.30)	(0.10)	No
2. Anza/Vista Montana Ave & Pacific Coast Hwy	City of Torrance/Caltrans	81.5%	D	85.6%	D	82.8%	D	87.8%	D	82.6%	D	88.2%	E	(0.20)	0.40	No
3. Hawthorne Blvd & Torrance Blvd	City of Torrance/Caltrans	95.2%	E	97.5%	E	95.8%	E	99.1%	E	95.7%	E	99.0%	F	(0.10)	(0.10)	No
4. Hawthorne Blvd & W Carson St	City of Torrance/Caltrans	75.4%	C	83.6%	D	76.8%	C	85.8%	D	76.6%	C	85.7%	E	(0.20)	(0.10)	No
5. Hawthorne Blvd & W Sepulveda Blvd	City of Torrance/Caltrans/CMP	85.7%	D	88.2%	D	88.0%	D	90.1%	E	87.3%	D	90.2%	E	(0.70)	0.10	No
6. Hawthorne Blvd & Lomita Blvd	City of Torrance/Caltrans	90.6%	E	100.1%	F	97.8%	E	114.0%	F	96.8%	E	113.9%	F	(1.00)	(0.10)	No
7. Hawthorne Blvd & Skypark Dr	City of Torrance/Caltrans	67.2%	B	82.0%	D	71.3%	C	89.0%	D	68.2%	B	86.4%	E	(3.10)	(2.60)	No
8. Hawthorne Blvd & Pacific Coast Highway	City of Torrance/Caltrans/CMP	90.6%	E	90.1%	E	98.1%	E	99.5%	E	95.0%	E	100.0%	F	(3.10)	0.50	No
9. Hawthorne Blvd & Rolling Hills Rd	City of Torrance	69.0%	B	80.8%	D	70.9%	C	82.5%	D	70.4%	C	83.3%	E	(0.50)	0.80	No
10. Hawthorne Blvd & Palos Verdes Dr	City of Rolling Hills Estates	92.6%	E	80.3%	D	93.7%	E	81.5%	E	93.9%	E	82.3%	E	0.20	0.80	No
11. Early Ave & Lomita Blvd	City of Torrance	75.7%	C	78.7%	C	83.7%	D	92.6%	E	81.4%	D	93.2%	F	(2.30)	0.60	No
12. Garnier St & Lomita Blvd	City of Torrance	64.1%	B	60.7%	B	68.8%	B	71.2%	C	69.3%	B	69.6%	C	0.50	(1.60)	No
13. Garnier St & Skypark Dr	City of Torrance	31.4%	A	32.4%	A	32.7%	A	38.0%	A	30.9%	A	34.1%	A	(1.80)	(3.90)	No
14. Existing Costco Dwy & Skypark Dr	City of Torrance	47.3%	A	63.0%	B	44.5%	A	65.9%	B	38.6%	A	60.6%	B	(5.90)	(5.30)	No
15. Crenshaw Blvd & Torrance Blvd	City of Torrance	84.7%	D	86.4%	D	87.9%	D	90.0%	D	87.5%	D	89.9%	E	(0.40)	(0.10)	No
16. Crenshaw Blvd & W Carson St	City of Torrance	81.1%	D	86.0%	D	83.7%	D	88.5%	D	83.4%	D	88.0%	E	(0.30)	(0.50)	No
17. Crenshaw Blvd & W Sepulveda Blvd	City of Torrance	87.3%	D	103.9%	F	93.0%	E	113.7%	F	90.4%	E	112.0%	F	(2.60)	(1.70)	No
18. Crenshaw Blvd & Lomita Blvd	City of Torrance/City of Lomita	80.6%	D	95.0%	E	99.1%	E	97.2%	E	96.1%	E	97.0%	F	(3.00)	(0.20)	No
19. Creshaw Blvd & Torrance Crossroads	City of Torrance/City of Lomita	38.9%	A	64.0%	B	41.1%	A	65.2%	B	39.8%	A	65.2%	C	(1.30)	0.00	No
20. Crenshaw Blvd & Skypark Dr	City of Torrance	56.3%	A	83.6%	D	58.8%	A	86.4%	D	56.8%	A	85.9%	E	(2.00)	(0.50)	No
21. Crenshaw Blvd & Airport Dr	City of Torrance	55.5%	B	73.0%	C	57.6%	A	74.6%	C	56.6%	A	76.2%	D	(1.00)	1.60	No
22. Crenshaw Blvd & Pacific Coast Highway	City of Torrance/Caltrans/CMP	89.4%	D	99.3%	E	93.1%	E	108.3%	F	91.5%	E	108.1%	F	(1.60)	(0.20)	No
23. Crenshaw Blvd & Rolling Hills Dr	City of Torrance	69.5%	B	68.0%	B	70.9%	C	69.0%	B	70.7%	C	69.3%	C	(0.20)	0.30	No
24. Crenshaw Blvd & Palos Verdes Dr	City of Rolling Hills Estates	73.5%	C	73.8%	C	74.5%	C	74.8%	C	74.5%	C	75.2%	D	0.00	0.40	No
25. Pennsylvannia Ave & Lomita Blvd	***City of Lomita***	90.1%	E	88.0%	D	94.7%	E	89.7%	D	93.2%	E	93.4%	F	(1.50)	3.70	***Yes, PM***
26. Arlington Ave & W Sepulveda Blvd	City of Torrance	93.4%	E	93.5%	E	96.1%	E	96.2%	E	95.1%	E	96.0%	F	(1.00)	(0.20)	No
27. Narbonne Ave & Lomita Blvd	***City of Lomita***	77.6%	C	95.6%	E	80.1%	D	96.8%	E	79.8%	C	98.6%	F	(0.30)	1.80	***Yes, PM***
28. Narbonne Ave & Pacific Coast Highway	City of Lomita/Caltrans	88.5%	D	92.1%	E	91.7%	E	95.7%	E	90.4%	E	95.5%	F	(1.30)	(0.20)	No
29. Eshelman Ave & Lomita Blvd	City of Lomita	66.4%	B	83.0%	D	68.7%	B	84.1%	D	68.2%	B	85.9%	E	(0.50)	1.80	No
30. Eshelman Ave & Pacific Coast Highway	City of Lomita/Caltrans	69.4%	B	71.9%	C	71.5%	C	73.6%	C	70.8%	C	74.3%	D	(0.70)	0.70	No
31. S Western Ave & W Sepulveda Blvd	Torrance/Los Angeles/Caltrans/CMP	79.0%	C	95.5%	E	81.1%	D	98.2%	E	80.3%	D	98.8%	F	(0.80)	0.60	No
32. S Western Ave & Lomita Blvd	City of Los Angeles/Caltrans/CMP	78.5%	C	86.3%	D	79.6%	C	88.2%	D	80.0%	C	89.1%	E	0.40	0.90	No
33. S Western Ave & Pacific Coast Highway	***City of Los Angeles/Caltrans***	82.6%	D	95.4%	E	84.5%	D	98.3%	E	84.0%	C	99.6%	F	(0.50)	1.30	***Yes, PM***
34. Normandie Ave & Pacific Coast Highway	City of Los Angeles/Caltrans	84.5%	D	84.0%	D	86.6%	D	85.4%	D	86.0%	C	86.6%	E	(0.60)	1.20	No
35. S Vermont Ave & Pacific Coast Highway	City of Los Angeles/Caltrans	85.1%	D	84.4%	D	85.8%	D	86.8%	D	85.6%	C	87.0%	E	(0.20)	0.20	No
36. I-110 Ramps & Pacific Coast Highway	City of Los Angeles/Caltrans	71.2%	C	81.4%	D	72.6%	C	83.7%	D	72.3%	B	83.8%	E	(0.30)	0.10	No
37. Figueroa St & I-110 NB Ramps	City of Los Angeles/Caltrans	57.5%	A	52.6%	A	58.6%	A	53.6%	A	58.6%	A	54.6%	A	0.00	1.00	No
38. Figueroa St & Pacific Coast Highway	City of Los Angeles/Caltrans/CMP	84.0%	D	91.7%	E	85.8%	D	93.6%	E	85.6%	D	94.3%	F	(0.20)	0.70	No
39. Existing Private Dwy & Lomita Blvd	City of Torrance	76.0%	C	63.0%	B	53.9%	A	74.6%	C	54.6%	A	77.0%	D	0.70	2.40	No
40. Madrona Ave & Torrance Blvd	City of Torrance	77.7%	C	81.0%	D	78.8%	C	82.3%	D	78.7%	C	82.1%	E	(0.10)	(0.20)	No
41. Madrona Ave & W Carson St	City of Torrance	70.7%	C	87.5%	D	71.6%	C	88.6%	E	71.5%	C	88.5%	E	(0.10)	(0.10)	No
42. Madrona Ave & W Sepulveda Blvd	City of Torrance	59.2%	A	66.5%	B	60.2%	B	68.0%	B	60.1%	B	67.5%	C	(0.10)	(0.50)	No
43. Existing W Costco Dwy & Skypark Dr	City of Torrance	33.0%	A	61.4%	B	33.2%	A	62.5%	B	21.8%	A	59.5%	B	(11.40)	(3.00)	No
44. Project Dwy & Lomita Blvd	City of Torrance	52.9%	A	43.1%	A	55.1%	A	68.4%	B	53.9%	A	81.5%	D	(1.20)	13.10	No
45. Proposed Costco RIRO	City of Torrance	-	-	-	-	-	-	-	-	51.1%	A	68.7%	C	-	-	No

Table F-2-- Project Impact Analysis Based on HCM Methodology

Intersection	Jurisdiction	EXISTING				CUMULATIVE				CUMULATIVE PLUS PROJECT				AM PROJECT INCREASE DECREASE	PM PROJECT INCREASE (DECREASE)	Project Impact?
		AM		PM		AM		PM		AM		PM				
		HCM Delay	LOS	HCM Delay	LOS	HCM Delay	LOS	HCM Delay	LOS	HCM Delay	LOS	HCM Delay	LOS			
1. Calle Mayor & Pacific Coast Highway	City of Torrance/Caltrans	37.6	D	35.4	D	39.2	D	36.8	D	38.9	D	36.9	D	-0.30	0.10	No
2. Anza/Vista Montana Ave & Pacific Coast Hwy	City of Torrance/Caltrans	39.8	D	37.4	D	29.2	C	39.7	D	29.2	C	40.2	D	0.00	0.50	No
3. Hawthorne Blvd & Torrance Blvd	City of Torrance/Caltrans	38.0	D	42.9	D	39.3	D	45.8	D	39.2	D	45.8	D	-0.10	0.00	No
4. Hawthorne Blvd & W Carson St	City of Torrance/Caltrans	23.3	C	26.7	C	24.0	C	26.4	C	23.8	C	26.6	C	-0.20	0.20	No
5. Hawthorne Blvd & W Sepulveda Blvd	City of Torrance/Caltrans/CMP	30.5	C	33.8	C	32.1	C	34.8	C	31.7	C	34.5	C	-0.40	-0.30	No
6. Hawthorne Blvd & Lomita Blvd	***City of Torrance/Caltrans***	34.7	C	36.5	D	45.4	D	60.9	E	42.3	D	66.6	E	-3.10	5.70	***Yes, PM***
7. Hawthorne Blvd & Skypark Dr	City of Torrance/Caltrans	22.5	C	29.5	C	23.7	C	33.7	C	22.2	C	30.7	C	-1.50	-3.00	No
8. Hawthorne Blvd & Pacific Coast Highway	City of Torrance/Caltrans/CMP	45.4	D	54.4	D	51.8	D	52.3	D	48.4	D	53.7	D	-3.40	1.40	No
9. Hawthorne Blvd & Rolling Hills Rd	City of Torrance	14.1	B	17.6	B	15.1	B	18.3	B	15.0	B	18.4	B	-0.10	0.10	No
10. Hawthorne Blvd & Palos Verdes Dr	City of Rolling Hills Estates	50.2	D	40.1	D	51.7	D	41.0	D	51.8	D	41.5	D	0.10	0.50	No
11. Early Ave & Lomita Blvd	City of Torrance	36.2	D	29.0	C	39.4	D	39.8	D	38.0	D	40.4	D	-1.40	0.60	No
12. Garnier St & Lomita Blvd	City of Torrance	8.1	A	11.5	B	6.9	A	12.2	B	6.7	A	17.4	B	-0.20	5.20	No
13. Garnier St & Skypark Dr	City of Torrance	12.3	B	16.0	B	12.8	B	16.5	B	12.2	B	15.9	B	-0.60	-0.60	No
14. Existing Costco Dwy & Skypark Dr	City of Torrance	0.1	A	25.9	C	19.8	B	27.5	C	15.3	B	23.5	C	-4.50	-4.00	No
15. Crenshaw Blvd & Torrance Blvd	City of Torrance	35.6	D	39.0	D	38.8	D	42.2	D	38.6	D	41.9	D	-0.20	-0.30	No
16. Crenshaw Blvd & W Carson St	City of Torrance	38.4	D	41.6	D	40.3	D	43.9	D	40.0	D	43.7	D	-0.30	-0.20	No
17. Crenshaw Blvd & W Sepulveda Blvd	City of Torrance	45.6	D	51.7	D	51.1	D	59.7	E	48.8	D	58.4	E	-2.30	-1.30	No
18. Crenshaw Blvd & Lomita Blvd	City of Torrance/City of Lomita	38.3	D	46.3	D	57.5	E	53.4	D	49.4	D	55.0	E	-8.10	1.60	No
19. Creshaw Blvd & Torrance Crossroads	City of Torrance/City of Lomita	8.2	A	19.8	B	8.6	A	15.5	B	8.7	A	15.7	B	0.10	0.20	No
20. Crenshaw Blvd & Skypark Dr	City of Torrance	17.9	B	30.7	C	18.1	B	31.8	C	17.1	B	29.5	C	-1.00	-2.30	No
21. Crenshaw Blvd & Airport Dr	City of Torrance	15.9	B	29.9	C	16.4	B	30.4	C	16.3	B	30.8	C	-0.10	0.40	No
22. Crenshaw Blvd & Pacific Coast Highway	City of Torrance/Caltrans/CMP	41.6	D	48.5	D	43.5	D	66.3	E	42.6	D	66.2	E	-0.90	-0.10	No
23. Crenshaw Blvd & Rolling Hills Dr	City of Torrance	20.7	C	21.6	C	21.2	C	22.2	C	21.1	C	22.2	C	-0.10	0.00	No
24. Crenshaw Blvd & Palos Verdes Dr	City of Rolling Hills Estates	34.3	C	34.8	C	35.0	D	35.7	D	35.0	D	36.3	D	0.00	0.60	No
25. Pennsylvannia Ave & Lomita Blvd	City of Lomita	17.9	B	21.7	C	17.6	B	21.7	C	17.4	B	22.9	C	-0.20	1.20	No
26. Arlington Ave & W Sepulveda Blvd	City of Torrance	43.6	D	55.1	E	45.4	D	48.5	D	44.5	D	47.8	D	-0.90	-0.70	No
27. Narbonne Ave & Lomita Blvd	City of Lomita	28.6	C	40.2	D	30.8	C	41.6	D	30.7	C	43.4	D	-0.10	1.80	No
28. Narbonne Ave & Pacific Coast Highway	City of Lomita/Caltrans	29.4	C	30.0	C	31.9	C	31.3	C	30.5	C	31.0	C	-1.40	-0.30	No
29. Eshelman Ave & Lomita Blvd	City of Lomita	14.7	B	17.3	B	15.8	B	17.2	B	15.2	B	17.4	B	-0.60	0.20	No
30. Eshelman Ave & Pacific Coast Highway	City of Lomita/Caltrans	15.6	B	16.4	B	14.6	B	17.7	B	15.1	B	17.7	B	0.50	0.00	No
31. S Western Ave & W Sepulveda Blvd	***Torrance/Los Angeles/Caltrans/CMP***	38.0	D	50.9	D	39.6	D	54.8	D	39.0	D	55.5	E	-0.60	0.70	***Yes, PM***
32. S Western Ave & Lomita Blvd	City of Los Angeles/Caltrans/CMP	33.0	C	35.4	D	33.0	C	37.1	D	33.0	C	37.9	D	0.00	0.80	No
33. S Western Ave & Pacific Coast Highway	City of Los Angeles/Caltrans	44.9	D	55.4	E	46.7	D	56.3	E	46.5	D	58.3	E	-0.20	2.00	No
34. Normandie Ave & Pacific Coast Highway	City of Los Angeles/Caltrans	22.4	C	20.8	C	24.1	C	21.8	C	23.7	C	23.4	C	-0.40	1.60	No
35. S Vermont Ave & Pacific Coast Highway	City of Los Angeles/Caltrans	34.7	C	34.5	C	35.2	D	36.3	D	35.2	D	36.4	D	0.00	0.10	No
36. I-110 Ramps & Pacific Coast Highway	City of Los Angeles/Caltrans	28.9	C	30.0	C	30.2	C	31.2	C	30.0	C	31.9	C	-0.20	0.70	No
37. Figueroa St & I-110 NB Ramps	City of Los Angeles/Caltrans	302.7	F	144.8	F	197.2	F	167.8	F	197.2	F	195.5	F	0.00	27.70	No
38. Figueroa St & Pacific Coast Highway	City of Los Angeles/Caltrans/CMP	30.0	C	28.0	C	33.0	C	30.4	C	32.6	C	32.0	C	-0.40	1.60	No
39. Existing Private Dwy & Lomita Blvd	City of Torrance	12.9	B	14.0	B	14.5	B	25.4	D	13.5	B	24.3	C	-1.00	-1.10	No
40. Madrona Ave & Torrance Blvd	City of Torrance	34.7	C	39.3	D	35.4	D	40.1	D	35.3	D	40.0	D	-0.10	-0.10	No
41. Madrona Ave & W Carson St	City of Torrance	29.5	C	40.8	D	30.0	C	41.3	D	29.9	C	41.3	D	-0.10	0.00	No
42. Madrona Ave & W Sepulveda Blvd	City of Torrance	15.4	B	18.5	B	15.7	B	19.2	B	15.7	B	18.9	B	0.00	-0.30	No
43. Existing W Costco Dwy & Skypark Dr	City of Torrance	11.7	B	12.8	B	11.3	B	12.9	B	1.0	A	11.8	B	-10.30	-1.10	No
44. Project Dwy & Lomita Blvd	City of Torrance	-	-	-	-	12.8	B	12.5	B	9.6	B	18.4	B	-3.20	5.90	No
45. Proposed Costco RIRO	City of Torrance	-	-	-	-	-	-	-	-	9.3	A	12.1	B	-	-	No

Appendix G Year 2016 Cumulative Plus Project Level-of-Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	753	35	169	944	285	88	270	206	115	167	139
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3480		1805	3381		1805	1900	1555	1770	1863	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3480		1805	3381		1805	1900	1555	1770	1863	1553
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)	160	753	35	169	944	285	88	270	206	115	167	139
RTOR Reduction (vph)	0	2	0	0	24	0	0	0	163	0	0	107
Lane Group Flow (vph)	160	786	0	169	1205	0	88	270	43	115	167	32
Confl. Peds. (#/hr)			7			16			13			
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	1%	2%	2%	4%
Turn Type	Prot			Prot			Prot		Perm	Prot		Prot
Protected Phases	1	6		5	2		7	4		3	8	8
Permitted Phases									4			
Actuated Green, G (s)	12.5	42.5		14.3	44.3		6.9	22.9	22.9	9.2	25.2	25.2
Effective Green, g (s)	12.5	42.5		14.3	44.3		6.9	22.9	22.9	9.2	25.2	25.2
Actuated g/C Ratio	0.11	0.39		0.13	0.41		0.06	0.21	0.21	0.08	0.23	0.23
Clearance Time (s)	5.0	5.0		5.0	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)	207	1358		237	1375		114	400	327	150	431	359
v/s Ratio Prot	0.09	0.23		c0.09	c0.36		0.05	c0.14		c0.06	0.09	0.02
v/s Ratio Perm									0.03			
v/c Ratio	0.77	0.58		0.71	0.88		0.77	0.68	0.13	0.77	0.39	0.09
Uniform Delay, d1	46.8	26.1		45.3	29.8		50.2	39.6	34.9	48.8	35.3	32.8
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	16.3	0.6		9.7	6.6		27.0	4.5	0.2	20.6	0.6	0.1
Delay (s)	63.1	26.7		55.1	36.4		77.2	44.0	35.1	69.4	35.9	33.0
Level of Service	E	C		E	D		E	D	D	E	D	C
Approach Delay (s)		32.9			38.6			46.0			44.1	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	108.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.2%	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												
Volume (vph)	53	1139	17	27	1385	103	118	130	123	243	89	209
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	5.0		5.0	5.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.90	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	3531		1736	3539	1439	1787	3243		1610	3309	1564
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	3531		1736	3539	1439	1787	3243		1610	3309	1564
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)	53	1139	17	27	1385	103	118	130	123	243	89	209
RTOR Reduction (vph)	0	1	0	0	0	9	0	109	0	0	0	0
Lane Group Flow (vph)	53	1155	0	27	1385	94	118	144	0	121	211	209
Confl. Peds. (#/hr)			12			71						34
Confl. Bikes (#/hr)						1			1			
Heavy Vehicles (%)	2%	2%	0%	4%	2%	1%	1%	2%	3%	2%	1%	1%
Turn Type	Prot			Prot		Perm	Split			Split		Free
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						Free
Actuated Green, G (s)	6.3	54.7		5.3	53.7	53.7	13.2	13.2		20.3	20.3	113.5
Effective Green, g (s)	6.3	54.7		5.3	53.7	53.7	13.2	13.2		20.3	20.3	113.5
Actuated g/C Ratio	0.06	0.48		0.05	0.47	0.47	0.12	0.12		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	98	1702		81	1674	681	208	377		288	592	1564
v/s Ratio Prot	c0.03	0.33		0.02	c0.39		c0.07	0.04		c0.08	0.06	
v/s Ratio Perm						0.06						c0.13
v/c Ratio	0.54	0.68		0.33	0.83	0.14	0.57	0.38		0.42	0.36	0.13
Uniform Delay, d1	52.2	22.6		52.4	25.9	16.8	47.4	46.4		41.4	40.9	0.0
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	6.0	1.1		2.4	3.5	0.1	3.5	0.6		1.0	0.4	0.2
Delay (s)	58.2	23.7		54.8	29.4	16.9	51.0	47.0		42.4	41.2	0.2
Level of Service	E	C		D	C	B	D	D		D	D	A
Approach Delay (s)		25.2			29.0			48.3			25.6	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	113.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.6%	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												
Volume (vph)	280	1013	199	238	893	143	260	1781	187	186	1579	228
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.94	1.00	1.00	0.97	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	5136	1452	3303	5085	1470	3400	6408	1500	3433	6346	1483
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	5136	1452	3303	5085	1470	3400	6408	1500	3433	6346	1483
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)	280	1013	199	238	893	143	260	1781	187	186	1579	228
RTOR Reduction (vph)	0	0	140	0	0	98	0	0	121	0	0	97
Lane Group Flow (vph)	280	1013	59	238	893	45	260	1781	66	186	1579	131
Confl. Peds. (#/hr)			24			56			21			48
Confl. Bikes (#/hr)			7			3						1
Heavy Vehicles (%)	3%	1%	7%	6%	2%	3%	3%	2%	4%	2%	3%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.6	38.5	38.5	15.7	40.6	40.6	13.1	46.0	46.0	9.8	42.7	42.7
Effective Green, g (s)	13.6	38.5	38.5	15.7	40.6	40.6	13.1	46.0	46.0	9.8	42.7	42.7
Actuated g/C Ratio	0.10	0.30	0.30	0.12	0.31	0.31	0.10	0.35	0.35	0.08	0.33	0.33
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	356	1521	430	399	1588	459	343	2267	531	259	2084	487
v/s Ratio Prot	0.08	c0.20		0.07	c0.18		0.08	c0.28		0.05	c0.25	
v/s Ratio Perm			0.04			0.03			0.04			0.09
v/c Ratio	0.79	0.67	0.14	0.60	0.56	0.10	0.76	0.79	0.12	0.72	0.76	0.27
Uniform Delay, d1	56.8	40.1	33.6	54.1	37.3	31.7	56.9	37.6	28.4	58.7	39.0	32.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.69	1.07	1.00	1.00	1.00
Incremental Delay, d2	10.9	1.1	0.1	2.4	0.5	0.1	6.8	2.1	0.3	9.1	2.6	1.3
Delay (s)	67.7	41.2	33.7	56.5	37.7	31.8	50.2	27.9	30.8	67.9	41.7	33.5
Level of Service	E	D	C	E	D	C	D	C	C	E	D	C
Approach Delay (s)		45.2			40.6			30.7			43.2	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	39.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.7%	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												
Volume (vph)	103	591	71	154	489	176	72	2203	177	134	1642	62
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		0.97	0.91	1.00	1.00	0.86	1.00	0.97	0.86	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	3508		3433	5136	1492	1805	6471	1552	3335	6301	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	3508		3433	5136	1492	1805	6471	1552	3335	6301	
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)	103	591	71	154	489	176	72	2203	177	134	1642	62
RTOR Reduction (vph)	0	7	0	0	0	140	0	0	94	0	4	0
Lane Group Flow (vph)	103	655	0	154	489	36	72	2203	83	134	1700	0
Confl. Peds. (#/hr)			14			6			14			9
Heavy Vehicles (%)	0%	1%	0%	2%	1%	6%	0%	1%	1%	5%	3%	5%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	11.9	29.0		9.6	26.7	26.7	8.3	61.0	61.0	10.4	63.1	
Effective Green, g (s)	11.9	29.0		9.6	26.7	26.7	8.3	61.0	61.0	10.4	63.1	
Actuated g/C Ratio	0.09	0.22		0.07	0.21	0.21	0.06	0.47	0.47	0.08	0.49	
Clearance Time (s)	5.0	5.0		5.0	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)	165	783		254	1055	306	115	3036	728	267	3058	
v/s Ratio Prot	c0.06	c0.19		0.04	0.10		0.04	c0.34		0.04	c0.27	
v/s Ratio Perm						0.02			0.05			
v/c Ratio	0.62	0.84		0.61	0.46	0.12	0.63	0.73	0.11	0.50	0.56	
Uniform Delay, d1	56.9	48.2		58.4	45.4	42.1	59.3	27.8	19.3	57.3	23.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.15	0.32	0.12	0.64	0.58	
Incremental Delay, d2	7.2	7.7		4.1	0.3	0.2	6.6	1.0	0.2	1.1	0.5	
Delay (s)	64.1	56.0		62.4	45.7	42.2	74.6	9.9	2.5	37.6	14.1	
Level of Service	E	E		E	D	D	E	A	A	D	B	
Approach Delay (s)		57.1			48.1			11.3			15.8	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.6%	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												
Volume (vph)	401	1086	114	482	780	248	124	1850	382	145	1467	187
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	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5046		3433	5085	1599	3400	6471	1563	3367	6408	1533
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5046		3433	5085	1599	3400	6471	1563	3367	6408	1533
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)	401	1086	114	482	780	248	124	1850	382	145	1467	187
RTOR Reduction (vph)	0	10	0	0	0	94	0	0	0	0	0	0
Lane Group Flow (vph)	401	1190	0	482	780	154	124	1850	382	145	1467	187
Confl. Peds. (#/hr)			7			6			3			3
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	1%	2%	2%	2%	1%	3%	1%	2%	4%	2%	4%
Turn Type	Prot			Prot		Prot	Prot		Free	Prot		Free
Protected Phases	7	4		3	8	8	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	19.5	33.7		21.7	35.9	35.9	8.0	46.3	130.0	8.3	46.6	130.0
Effective Green, g (s)	19.5	33.7		21.7	35.9	35.9	8.0	46.3	130.0	8.3	46.6	130.0
Actuated g/C Ratio	0.15	0.26		0.17	0.28	0.28	0.06	0.36	1.00	0.06	0.36	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	520	1308		573	1404	442	209	2305	1563	215	2297	1533
v/s Ratio Prot	0.12	c0.24		c0.14	0.15	0.10	0.04	c0.29		c0.04	0.23	
v/s Ratio Perm									c0.24			0.12
v/c Ratio	0.77	0.91		0.84	0.56	0.35	0.59	0.80	0.24	0.67	0.64	0.12
Uniform Delay, d1	53.1	46.7		52.5	40.2	37.7	59.4	37.7	0.0	59.5	34.7	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.39	0.24	1.00	1.16	0.48	1.00
Incremental Delay, d2	7.0	9.6		10.8	0.5	0.5	2.4	1.6	0.2	6.8	1.2	0.1
Delay (s)	60.1	56.3		63.2	40.7	38.2	84.8	10.6	0.2	75.9	17.7	0.1
Level of Service	E	E		E	D	D	F	B	A	E	B	A
Approach Delay (s)		57.3			47.5			12.8			20.6	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
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												
Volume (vph)	143	681	157	135	386	366	98	1778	205	600	1299	69
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	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.86		0.97	0.91	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3453		1736	3539	1525	1736	6349		3467	4988	1615
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3453		1736	3539	1525	1736	6349		3467	4988	1615
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)	143	681	157	135	386	366	98	1778	205	600	1299	69
RTOR Reduction (vph)	0	15	0	0	0	244	0	15	0	0	0	45
Lane Group Flow (vph)	143	823	0	135	386	122	98	1968	0	600	1299	24
Confl. Peds. (#/hr)			14			4			2			4
Confl. Bikes (#/hr)			4			1						
Heavy Vehicles (%)	2%	1%	1%	4%	2%	4%	4%	1%	3%	1%	4%	0%
Turn Type	Prot			Prot		Perm	Prot			Prot		Prot
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases						8						
Actuated Green, G (s)	22.8	34.8		10.2	22.2	22.2	19.3	43.0		22.0	45.7	45.7
Effective Green, g (s)	22.8	34.8		10.2	22.2	22.2	19.3	43.0		22.0	45.7	45.7
Actuated g/C Ratio	0.18	0.27		0.08	0.17	0.17	0.15	0.33		0.17	0.35	0.35
Clearance Time (s)	5.0	5.0		5.0	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)	310	924		136	604	260	258	2100		587	1753	568
v/s Ratio Prot	0.08	c0.24		c0.08	0.11		0.06	c0.31		c0.17	0.26	0.02
v/s Ratio Perm						0.08						
v/c Ratio	0.46	0.89		0.99	0.64	0.47	0.38	0.94		1.02	0.74	0.04
Uniform Delay, d1	48.1	45.8		59.9	50.2	48.6	49.9	42.2		54.0	37.0	27.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.97	0.57		0.90	0.33	0.34
Incremental Delay, d2	1.1	10.7		74.6	2.2	1.3	0.8	8.3		37.1	2.1	0.1
Delay (s)	49.2	56.5		134.5	52.4	49.9	49.4	32.3		85.8	14.1	9.5
Level of Service	D	E		F	D	D	D	C		F	B	A
Approach Delay (s)		55.4			63.9			33.1			35.8	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM Average Control Delay	42.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
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												
Volume (vph)	21	8	2	114	6	222	9	1885	161	228	1111	23
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	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	1.00	0.86		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.86	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1836		1805	1520	1504	1626	6325		1787	5015	
Flt Permitted	0.68	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1291	1836		1805	1520	1504	1626	6325		1787	5015	
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)	21	8	2	114	6	222	9	1885	161	228	1111	23
RTOR Reduction (vph)	0	2	0	0	88	91	0	8	0	0	1	0
Lane Group Flow (vph)	21	8	0	114	27	22	9	2038	0	228	1133	0
Confl. Peds. (#/hr)			5						9			7
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	11%	2%	1%	1%	3%	4%
Turn Type	Perm			Prot		Prot	Prot			Prot		
Protected Phases		4		3	8	8	5	2		1	6	
Permitted Phases	4											
Actuated Green, G (s)	8.1	8.1		12.3	25.4	25.4	4.6	68.7		20.9	85.0	
Effective Green, g (s)	8.1	8.1		12.3	25.4	25.4	4.6	68.7		20.9	85.0	
Actuated g/C Ratio	0.06	0.06		0.09	0.20	0.20	0.04	0.53		0.16	0.65	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	80	114		171	297	294	58	3343		287	3279	
v/s Ratio Prot		0.00		c0.06	0.02	0.01	0.01	c0.32		c0.13	0.23	
v/s Ratio Perm	c0.02											
v/c Ratio	0.26	0.07		0.67	0.09	0.08	0.16	0.61		0.79	0.35	
Uniform Delay, d1	58.1	57.4		56.9	42.9	42.7	60.8	21.3		52.5	10.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.86	0.53	
Incremental Delay, d2	1.8	0.3		9.4	0.1	0.1	1.2	0.8		10.2	0.2	
Delay (s)	59.9	57.7		66.3	43.0	42.8	62.1	22.2		55.6	5.5	
Level of Service	E	E		E	D	D	E	C		E	A	
Approach Delay (s)		59.2			50.7			22.3			13.9	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	332	998	242	144	888	239	264	1430	60	178	731
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		5.0	5.0
Lane Util. Factor		0.95	0.91		1.00	0.91		0.97	0.91		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.97		1.00	0.99		1.00	1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1681	4941		1703	4830		3467	5029		3400	5036
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1681	4941		1703	4830		3467	5029		3400	5036
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)	0	332	998	242	144	888	239	264	1430	60	178	731
RTOR Reduction (vph)	0	0	27	0	0	33	0	0	3	0	0	0
Lane Group Flow (vph)	0	332	1213	0	144	1094	0	264	1487	0	178	731
Confl. Peds. (#/hr)				10			34			8		
Confl. Bikes (#/hr)							1					
Heavy Vehicles (%)	2%	2%	1%	3%	6%	2%	5%	1%	1%	36%	3%	3%
Turn Type	custom	Prot			Prot			Prot			Prot	
Protected Phases		7	4		3	8		5	2		1	6
Permitted Phases	7											
Actuated Green, G (s)		31.6	53.6		17.2	39.2		15.6	49.2		10.0	43.6
Effective Green, g (s)		31.6	53.6		17.2	39.2		15.6	49.2		10.0	43.6
Actuated g/C Ratio		0.21	0.36		0.11	0.26		0.10	0.33		0.07	0.29
Clearance Time (s)		5.0	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
Lane Grp Cap (vph)		354	1766		195	1262		361	1650		227	1464
v/s Ratio Prot		c0.20	0.25		0.08	c0.23		0.08	c0.30		c0.05	0.15
v/s Ratio Perm												
v/c Ratio		0.94	0.69		0.74	0.87		0.73	0.90		0.78	0.50
Uniform Delay, d1		58.2	41.1		64.2	52.9		65.2	48.1		68.9	44.1
Progression Factor		1.00	1.00		0.78	0.34		1.00	1.00		1.00	1.00
Incremental Delay, d2		31.9	2.2		7.1	4.3		7.4	8.4		16.1	1.2
Delay (s)		90.1	43.3		56.9	22.1		72.6	56.5		85.0	45.4
Level of Service		F	D		E	C		E	E		F	D
Approach Delay (s)			53.1			26.1			58.9			50.6
Approach LOS			D			C			E			D

Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	219
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.95
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1511
Flt Permitted	1.00
Satd. Flow (perm)	1511
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	219
RTOR Reduction (vph)	155
Lane Group Flow (vph)	64
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	43.6
Effective Green, g (s)	43.6
Actuated g/C Ratio	0.29
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	439
v/s Ratio Prot	
v/s Ratio Perm	0.04
v/c Ratio	0.15
Uniform Delay, d1	39.4
Progression Factor	1.00
Incremental Delay, d2	0.7
Delay (s)	40.1
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	1	2	74	2	351	2	1009	66	207	603	6
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		5.0	5.0	
Lane Util. Factor		1.00		1.00	0.95	0.95	1.00	0.95		0.97	0.95	
Frt		0.95		1.00	0.85	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1328		1736	1537	1534	1805	3507		3433	3340	
Flt Permitted		0.84		0.75	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1140		1377	1537	1534	1805	3507		3433	3340	
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)	3	1	2	74	2	351	2	1009	66	207	603	6
RTOR Reduction (vph)	0	2	0	0	150	150	0	5	0	0	1	0
Lane Group Flow (vph)	0	4	0	74	28	25	2	1070	0	207	608	0
Heavy Vehicles (%)	0%	0%	100%	4%	0%	0%	0%	2%	2%	2%	8%	0%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		9.8		9.8	9.8	9.8	0.9	32.7		9.8	41.6	
Effective Green, g (s)		9.8		9.8	9.8	9.8	0.9	32.7		9.8	41.6	
Actuated g/C Ratio		0.15		0.15	0.15	0.15	0.01	0.49		0.15	0.62	
Clearance Time (s)		5.0		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	
Lane Grp Cap (vph)		166		201	224	223	24	1704		500	2065	
v/s Ratio Prot					0.02		0.00	c0.31		c0.06	0.18	
v/s Ratio Perm		0.00		c0.05		0.02						
v/c Ratio		0.03		0.37	0.12	0.11	0.08	0.63		0.41	0.29	
Uniform Delay, d1		24.7		26.0	25.0	25.0	32.8	12.8		26.1	6.0	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		1.1	0.2	0.2	1.5	0.7		0.6	0.1	
Delay (s)		24.7		27.1	25.3	25.2	34.3	13.5		26.7	6.1	
Level of Service		C		C	C	C	C	B		C	A	
Approach Delay (s)		24.7			25.6			13.6			11.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	67.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	364	528	17	242	363	138	18	992	298	133	495	170
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1643	3388		1736	1810	1532	1805	3505	1561	1719	3471	1568
Flt Permitted	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1643	3388		1736	1810	1532	1805	3505	1561	1719	3471	1568
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)	364	528	17	242	363	138	18	992	298	133	495	170
RTOR Reduction (vph)	0	2	0	0	0	82	0	0	70	0	0	104
Lane Group Flow (vph)	295	612	0	242	363	56	18	992	228	133	495	66
Confl. Peds. (#/hr)			3			24			2			
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	0%	1%	6%	4%	5%	1%	0%	3%	2%	5%	4%	3%
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	29.7	29.7		30.2	30.2	30.2	2.6	43.4	43.4	11.1	51.9	51.9
Effective Green, g (s)	29.7	29.7		30.2	30.2	30.2	2.6	43.4	43.4	11.1	51.9	51.9
Actuated g/C Ratio	0.22	0.22		0.22	0.22	0.22	0.02	0.32	0.32	0.08	0.39	0.39
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	363	749		390	407	344	35	1132	504	142	1340	606
v/s Ratio Prot	0.18	c0.18		0.14	c0.20		0.01	c0.28		c0.08	0.14	
v/s Ratio Perm						0.04			0.15			0.04
v/c Ratio	0.81	0.82		0.62	0.89	0.16	0.51	0.88	0.45	0.94	0.37	0.11
Uniform Delay, d1	49.7	49.8		46.9	50.5	41.9	65.3	43.0	36.1	61.3	29.5	26.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.0	6.9		3.1	21.0	0.2	12.2	7.8	0.6	56.1	0.2	0.1
Delay (s)	62.7	56.7		50.0	71.5	42.1	77.4	50.8	36.7	117.4	29.7	26.5
Level of Service	E	E		D	E	D	E	D	D	F	C	C
Approach Delay (s)		58.6			59.1			47.9			43.6	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	134.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.9%	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												
Volume (vph)	134	1101	221	194	1161	31	50	21	71	17	33	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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.93	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3458		1736	3480		1649	1147	1417	1399	1299	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3458		1736	3480		1649	1147	1417	1399	1299	
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)	134	1101	221	194	1161	31	50	21	71	17	33	39
RTOR Reduction (vph)	0	11	0	0	1	0	0	0	58	0	30	0
Lane Group Flow (vph)	134	1311	0	194	1191	0	35	36	13	17	42	0
Confl. Peds. (#/hr)			7			3			44			
Confl. Bikes (#/hr)			4			1			1			
Heavy Vehicles (%)	2%	1%	1%	4%	3%	13%	4%	90%	6%	29%	56%	16%
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	20.9	57.8		18.6	55.5		22.9	22.9	22.9	8.1	8.1	
Effective Green, g (s)	20.9	57.8		18.6	55.5		22.9	22.9	22.9	8.1	8.1	
Actuated g/C Ratio	0.16	0.45		0.15	0.44		0.18	0.18	0.18	0.06	0.06	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	290	1569		253	1516		296	206	255	89	83	
v/s Ratio Prot	0.08	c0.38		0.11	c0.34		0.02	c0.03		0.01	c0.03	
v/s Ratio Perm									0.01			
v/c Ratio	0.46	0.84		0.77	0.79		0.12	0.17	0.05	0.19	0.51	
Uniform Delay, d1	48.2	30.6		52.3	30.8		43.8	44.2	43.2	56.5	57.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	4.0		13.0	2.8		0.2	0.4	0.1	1.0	4.8	
Delay (s)	49.3	34.6		65.3	33.6		44.0	44.7	43.3	57.6	62.5	
Level of Service	D	C		E	C		D	D	D	E	E	
Approach Delay (s)		36.0			38.0			43.8			61.6	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	127.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.4%	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												
Volume (vph)	5	812	47	92	1605	29	49	5	43	5	3	2
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1503	3477		1768	3529		1649	1680	1568	1715	1783	1077
Flt Permitted	0.11	1.00		0.31	1.00		0.95	0.96	1.00	0.95	0.99	1.00
Satd. Flow (perm)	175	3477		583	3529		1649	1680	1568	1715	1783	1077
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)	5	812	47	92	1605	29	49	5	43	5	3	2
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	40	0	0	2
Lane Group Flow (vph)	5	857	0	92	1633	0	27	27	3	4	4	0
Confl. Peds. (#/hr)	4		2	2		4						
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	20%	3%	0%	2%	2%	0%	4%	0%	3%	0%	0%	50%
Turn Type	Perm			Perm			Split		Perm	Split		Perm
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	65.4	65.4		65.4	65.4		7.1	7.1	7.1	2.5	2.5	2.5
Effective Green, g (s)	65.4	65.4		65.4	65.4		7.1	7.1	7.1	2.5	2.5	2.5
Actuated g/C Ratio	0.73	0.73		0.73	0.73		0.08	0.08	0.08	0.03	0.03	0.03
Clearance Time (s)	5.0	5.0		5.0	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)	127	2527		424	2564		130	133	124	48	50	30
v/s Ratio Prot		0.25			c0.46		c0.02	0.02		c0.00	0.00	
v/s Ratio Perm	0.03			0.16					0.00			0.00
v/c Ratio	0.04	0.34		0.22	0.64		0.21	0.20	0.03	0.08	0.08	0.00
Uniform Delay, d1	3.5	4.5		4.0	6.3		38.8	38.8	38.3	42.6	42.6	42.5
Progression Factor	1.00	1.00		0.90	0.75		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.4		1.1	1.1		0.8	0.8	0.1	0.7	0.7	0.0
Delay (s)	4.0	4.8		4.6	5.8		39.6	39.6	38.4	43.4	43.3	42.6
Level of Service	A	A		A	A		D	D	D	D	D	D
Approach Delay (s)		4.8			5.7			39.0			43.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	52	299	445	60	13	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	52	299	445	60	13	21
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1310			
pX, platoon unblocked						
vC, conflicting volume	506				730	254
vC1, stage 1 conf vol					476	
vC2, stage 2 conf vol					254	
vCu, unblocked vol	506				730	254
tC, single (s)	4.1				7.0	7.0
tC, 2 stage (s)					6.0	
tF (s)	2.2				3.6	3.4
p0 queue free %	95				97	97
cM capacity (veh/h)	1068				512	733

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	52	150	150	297	208	13	21
Volume Left	52	0	0	0	0	13	0
Volume Right	0	0	0	0	60	0	21
cSH	1068	1700	1700	1700	1700	512	733
Volume to Capacity	0.05	0.09	0.09	0.17	0.12	0.03	0.03
Queue Length 95th (ft)	4	0	0	0	0	2	2
Control Delay (s)	8.5	0.0	0.0	0.0	0.0	12.2	10.1
Lane LOS	A					B	B
Approach Delay (s)	1.3			0.0		10.9	
Approach LOS						B	

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	212	8	20	597	0	6	0	14	7	7	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.97		1.00	1.00	0.99
Flpb, ped/bikes	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	0.85	1.00	1.00		1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3610	1581	1805	3610		1805	1571		1805	1900	1594
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3610	1581	1805	3610		1805	1571		1805	1900	1594
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)	4	212	8	20	597	0	6	0	14	7	7	1
RTOR Reduction (vph)	0	0	4	0	0	0	0	14	0	0	0	1
Lane Group Flow (vph)	4	212	4	20	597	0	6	0	0	7	7	0
Confl. Peds. (#/hr)			1						1			1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	0.5	26.7	26.7	0.5	26.7		0.7	0.7		0.7	0.7	0.7
Effective Green, g (s)	0.5	26.7	26.7	0.5	26.7		0.7	0.7		0.7	0.7	0.7
Actuated g/C Ratio	0.01	0.51	0.51	0.01	0.51		0.01	0.01		0.01	0.01	0.01
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	6.0
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)	17	1832	803	17	1832		24	21		24	25	21
v/s Ratio Prot	0.00	0.06		c0.01	c0.17		c0.00	0.00		c0.00	0.00	
v/s Ratio Perm			0.00									0.00
v/c Ratio	0.24	0.12	0.01	1.18	0.33		0.25	0.01		0.29	0.28	0.00
Uniform Delay, d1	25.9	6.8	6.4	26.1	7.6		25.7	25.6		25.7	25.7	25.6
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	7.0	0.0	0.0	279.8	0.1		5.4	0.2		6.7	6.0	0.0
Delay (s)	32.9	6.8	6.4	305.8	7.7		31.1	25.8		32.4	31.7	25.6
Level of Service	C	A	A	F	A		C	C		C	C	C
Approach Delay (s)		7.3			17.4			27.4			31.6	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	52.6	Sum of lost time (s)	24.0
Intersection Capacity Utilization	38.6%	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												
Volume (vph)	186	819	101	214	982	190	143	1514	264	92	1236	95
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3467	3574	1480	3502	5085	1550	3433	4959		3367	4974	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3467	3574	1480	3502	5085	1550	3433	4959		3367	4974	
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)	186	819	101	214	982	190	143	1514	264	92	1236	95
RTOR Reduction (vph)	0	0	37	0	0	92	0	20	0	0	7	0
Lane Group Flow (vph)	186	819	64	214	982	98	143	1758	0	92	1324	0
Confl. Peds. (#/hr)			16			18			16			10
Confl. Bikes (#/hr)			3			3						1
Heavy Vehicles (%)	1%	1%	6%	0%	2%	1%	2%	2%	1%	4%	3%	3%
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	9.6	32.1	32.1	9.8	32.3	32.3	8.6	44.9		6.9	43.2	
Effective Green, g (s)	9.6	32.1	32.1	9.8	32.3	32.3	8.6	44.9		6.9	43.2	
Actuated g/C Ratio	0.08	0.28	0.28	0.09	0.28	0.28	0.08	0.39		0.06	0.38	
Clearance Time (s)	5.0	5.0	5.0	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)	293	1009	418	302	1445	440	260	1958		204	1890	
v/s Ratio Prot	0.05	c0.23		c0.06	0.19		c0.04	c0.35		0.03	0.27	
v/s Ratio Perm			0.04			0.06						
v/c Ratio	0.63	0.81	0.15	0.71	0.68	0.22	0.55	0.90		0.45	0.70	
Uniform Delay, d1	50.4	38.0	30.6	50.6	36.1	31.1	50.7	32.3		51.6	29.8	
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	4.5	5.1	0.2	7.4	1.3	0.3	2.5	5.9		1.6	1.2	
Delay (s)	54.8	43.0	30.8	58.0	37.4	31.4	53.2	38.2		53.2	31.0	
Level of Service	D	D	C	E	D	C	D	D		D	C	
Approach Delay (s)		43.9			39.7			39.3			32.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	113.7	Sum of lost time (s)	15.0
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												
Volume (vph)	221	882	70	315	936	199	95	1464	237	200	1248	91
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3502	5019		3400	3505	1543	3467	5085	1550	3367	5027	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3502	5019		3400	3505	1543	3467	5085	1550	3367	5027	
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)	221	882	70	315	936	199	95	1464	237	200	1248	91
RTOR Reduction (vph)	0	8	0	0	0	62	0	0	79	0	7	0
Lane Group Flow (vph)	221	944	0	315	936	137	95	1464	158	200	1332	0
Confl. Peds. (#/hr)			24			13			9			16
Heavy Vehicles (%)	0%	2%	1%	3%	3%	2%	1%	2%	2%	4%	2%	1%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	9.8	31.8		14.1	36.1	36.1	6.9	39.5	39.5	9.7	42.3	
Effective Green, g (s)	9.8	31.8		14.1	36.1	36.1	6.9	39.5	39.5	9.7	42.3	
Actuated g/C Ratio	0.09	0.28		0.12	0.31	0.31	0.06	0.34	0.34	0.08	0.37	
Clearance Time (s)	5.0	5.0		5.0	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)	298	1387		417	1099	484	208	1745	532	284	1847	
v/s Ratio Prot	0.06	0.19		c0.09	c0.27		0.03	c0.29		c0.06	c0.26	
v/s Ratio Perm						0.09			0.10			
v/c Ratio	0.74	0.68		0.76	0.85	0.28	0.46	0.84	0.30	0.70	0.72	
Uniform Delay, d1	51.4	37.1		48.8	37.0	29.8	52.3	34.9	27.6	51.3	31.3	
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	9.5	1.4		7.6	6.5	0.3	1.6	3.7	0.3	7.7	1.4	
Delay (s)	61.0	38.5		56.4	43.5	30.1	53.9	38.6	27.9	59.0	32.7	
Level of Service	E	D		E	D	C	D	D	C	E	C	
Approach Delay (s)		42.7			44.5			38.0			36.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	115.1	Sum of lost time (s)	25.0
Intersection Capacity Utilization	83.4%	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												
Volume (vph)	257	876	172	682	1187	291	241	1319	261	206	1210	157
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1551	3467	6408	1562	3433	6408	1540	3467	5085	1529
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1551	3467	6408	1562	3433	6408	1540	3467	5085	1529
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)	257	876	172	682	1187	291	241	1319	261	206	1210	157
RTOR Reduction (vph)	0	0	50	0	0	133	0	0	111	0	0	111
Lane Group Flow (vph)	257	876	122	682	1187	158	241	1319	150	206	1210	46
Confl. Peds. (#/hr)			7			11			14			12
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	2%	2%	2%	1%	2%	1%	2%	2%	2%	1%	2%	3%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.0	33.3	33.3	33.5	50.8	50.8	14.9	43.6	43.6	13.6	42.3	42.3
Effective Green, g (s)	16.0	33.3	33.3	33.5	50.8	50.8	14.9	43.6	43.6	13.6	42.3	42.3
Actuated g/C Ratio	0.11	0.23	0.23	0.23	0.35	0.35	0.10	0.30	0.30	0.09	0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	381	1176	359	807	2261	551	355	1940	466	327	1494	449
v/s Ratio Prot	0.07	c0.17		c0.20	0.19		c0.07	0.21		0.06	c0.24	
v/s Ratio Perm			0.08			0.10			0.10			0.03
v/c Ratio	0.67	0.74	0.34	0.85	0.52	0.29	0.68	0.68	0.32	0.63	0.81	0.10
Uniform Delay, d1	61.5	51.4	46.2	52.8	37.0	33.5	62.2	44.1	38.8	62.8	47.1	37.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	2.6	0.6	8.1	0.2	0.3	5.1	1.0	0.4	3.8	3.4	0.1
Delay (s)	66.2	54.0	46.7	60.9	37.2	33.8	67.3	45.0	39.2	66.6	50.5	37.1
Level of Service	E	D	D	E	D	C	E	D	D	E	D	D
Approach Delay (s)		55.4			44.2			47.1			51.3	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	48.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.4%	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												
Volume (vph)	260	498	69	308	1041	199	147	1105	176	141	1146	640
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1509	3467	3539	1553	1736	5136	1583	1770	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1509	3467	3539	1553	1736	5136	1583	1770	5085	1583
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)	260	498	69	308	1041	199	147	1105	176	141	1146	640
RTOR Reduction (vph)	0	0	10	0	0	7	0	0	61	0	0	37
Lane Group Flow (vph)	260	498	59	308	1041	192	147	1105	115	141	1146	603
Confl. Peds. (#/hr)			16			1			9			4
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	4%	4%	7%	1%	2%	4%	4%	1%	2%	2%	2%	2%
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	13.7	29.4	49.3	26.8	42.5	63.2	14.9	48.1	74.9	15.7	48.9	62.6
Effective Green, g (s)	13.7	29.4	49.3	26.8	42.5	63.2	14.9	48.1	74.9	15.7	48.9	62.6
Actuated g/C Ratio	0.10	0.21	0.35	0.19	0.30	0.45	0.11	0.34	0.54	0.11	0.35	0.45
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	329	729	531	664	1074	701	185	1765	847	198	1776	708
v/s Ratio Prot	0.08	0.14	0.04	0.09	c0.29	0.12	c0.08	0.22	0.07	0.08	0.23	c0.38
v/s Ratio Perm												
v/c Ratio	0.79	0.68	0.11	0.46	0.97	0.27	0.79	0.63	0.14	0.71	0.65	0.85
Uniform Delay, d1	61.7	51.0	30.6	50.2	48.1	24.0	61.1	38.4	16.3	60.0	38.3	34.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.2	2.7	0.1	0.5	20.1	0.2	20.5	1.7	0.1	11.4	1.8	9.7
Delay (s)	73.9	53.7	30.7	50.7	68.2	24.3	81.6	40.1	16.4	71.4	40.1	44.2
Level of Service	E	D	C	D	E	C	F	D	B	E	D	D
Approach Delay (s)		58.1			59.1			41.5			43.8	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	49.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	103	41	31	1317	1260	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1612	1442	1687	5085	5085	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1612	1442	1687	5085	5085	1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	41	31	1317	1260	260
RTOR Reduction (vph)	0	37	0	0	0	72
Lane Group Flow (vph)	103	4	31	1317	1260	188
Confl. Peds. (#/hr)						2
Heavy Vehicles (%)	12%	12%	7%	2%	2%	5%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	13.0	13.0	5.3	97.0	86.7	86.7
Effective Green, g (s)	13.0	13.0	5.3	97.0	86.7	86.7
Actuated g/C Ratio	0.11	0.11	0.04	0.81	0.72	0.72
Clearance Time (s)	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
Lane Grp Cap (vph)	175	156	75	4110	3674	1084
v/s Ratio Prot	c0.06		0.02	c0.26	c0.25	
v/s Ratio Perm		0.00				0.13
v/c Ratio	0.59	0.03	0.41	0.32	0.34	0.17
Uniform Delay, d1	51.0	47.9	55.8	3.0	6.1	5.3
Progression Factor	1.00	1.00	0.88	1.80	1.00	1.00
Incremental Delay, d2	5.0	0.1	3.4	0.2	0.3	0.3
Delay (s)	55.9	47.9	52.7	5.6	6.4	5.6
Level of Service	E	D	D	A	A	A
Approach Delay (s)	53.7			6.6	6.3	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	39.8%	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												
Volume (vph)	68	28	113	29	41	46	264	1260	15	45	935	260
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	5.0	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	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)	1752	1900	1528	1649	1714	1583	3467	5120		1770	5085	1570
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1900	1528	1649	1714	1583	3467	5120		1770	5085	1570
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)	68	28	113	29	41	46	264	1260	15	45	935	260
RTOR Reduction (vph)	0	0	98	0	0	43	0	1	0	0	0	127
Lane Group Flow (vph)	68	28	15	26	44	3	264	1274	0	45	935	133
Confl. Peds. (#/hr)			18						10			4
Heavy Vehicles (%)	3%	0%	2%	4%	5%	2%	1%	1%	7%	2%	2%	1%
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	16.1	16.1	16.1	7.4	7.4	7.4	15.3	69.1		7.4	61.2	61.2
Effective Green, g (s)	16.1	16.1	16.1	7.4	7.4	7.4	15.3	69.1		7.4	61.2	61.2
Actuated g/C Ratio	0.13	0.13	0.13	0.06	0.06	0.06	0.13	0.58		0.06	0.51	0.51
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	235	255	205	102	106	98	442	2948		109	2593	801
v/s Ratio Prot	c0.04	0.01		0.02	c0.03		c0.08	c0.25		0.03	c0.18	
v/s Ratio Perm			0.01			0.00						0.08
v/c Ratio	0.29	0.11	0.07	0.25	0.42	0.03	0.60	0.43		0.41	0.36	0.17
Uniform Delay, d1	46.8	45.7	45.4	53.7	54.2	52.9	49.4	14.4		54.2	17.7	15.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.42		0.91	0.68	0.92
Incremental Delay, d2	0.7	0.2	0.2	1.3	2.6	0.1	2.0	0.4		2.4	0.4	0.4
Delay (s)	47.5	45.8	45.6	55.0	56.8	53.0	42.0	6.5		51.7	12.5	14.8
Level of Service	D	D	D	D	E	D	D	A		D	B	B
Approach Delay (s)		46.2			54.9			12.5			14.4	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	25.0
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												
Volume (vph)	85	26	9	16	18	34	29	1393	19	90	844	124
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	5.0		5.0	5.0	
Lane Util. Factor	0.95	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1715	1724		1805	1712	1586	1687	5124		1787	4994	
Flt Permitted	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1715	1724		1805	1712	1586	1687	5124		1787	4994	
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)	85	26	9	16	18	34	29	1393	19	90	844	124
RTOR Reduction (vph)	0	6	0	0	0	31	0	1	0	0	10	0
Lane Group Flow (vph)	60	54	0	16	18	3	29	1411	0	90	958	0
Confl. Peds. (#/hr)			4			5			3			
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	7%	1%	0%	1%	2%	1%
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	11.6	11.6		9.8	9.8	9.8	9.8	68.2		10.4	68.8	
Effective Green, g (s)	11.6	11.6		9.8	9.8	9.8	9.8	68.2		10.4	68.8	
Actuated g/C Ratio	0.10	0.10		0.08	0.08	0.08	0.08	0.57		0.09	0.57	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	166	167		147	140	130	138	2912		155	2863	
v/s Ratio Prot	c0.03	0.03		0.01	c0.01		0.02	c0.28		c0.05	0.19	
v/s Ratio Perm						0.00						
v/c Ratio	0.36	0.32		0.11	0.13	0.02	0.21	0.48		0.58	0.33	
Uniform Delay, d1	50.7	50.5		51.1	51.1	50.7	51.5	15.4		52.7	13.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.99	0.35	
Incremental Delay, d2	1.3	1.1		0.3	0.4	0.1	0.8	0.6		5.2	0.3	
Delay (s)	52.1	51.6		51.4	51.6	50.8	52.2	16.0		57.5	5.1	
Level of Service	D	D		D	D	D	D	B		E	A	
Approach Delay (s)		51.9			51.1			16.7			9.5	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
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												
Volume (vph)	171	829	26	470	1494	346	65	1025	485	146	552	81
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	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.95		0.97	0.91		1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	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	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	3382		3183	4866		1752	5136	1526	1736	4951	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	3382		3183	4866		1752	5136	1526	1736	4951	
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)	171	829	26	470	1494	346	65	1025	485	146	552	81
RTOR Reduction (vph)	0	1	0	0	26	0	0	0	152	0	13	0
Lane Group Flow (vph)	171	854	0	470	1814	0	65	1025	333	146	620	0
Confl. Peds. (#/hr)			5			13			10			4
Heavy Vehicles (%)	2%	6%	12%	10%	3%	3%	3%	1%	3%	4%	2%	6%
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.9	46.2		25.0	61.3		8.4	43.6	43.6	15.2	50.4	
Effective Green, g (s)	9.9	46.2		25.0	61.3		8.4	43.6	43.6	15.2	50.4	
Actuated g/C Ratio	0.07	0.31		0.17	0.41		0.06	0.29	0.29	0.10	0.34	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	227	1042		531	1989		98	1493	444	176	1664	
v/s Ratio Prot	0.05	c0.25		0.15	c0.37		0.04	0.20		c0.08	0.13	
v/s Ratio Perm									c0.22			
v/c Ratio	0.75	0.82		0.89	0.91		0.66	0.69	0.75	0.83	0.37	
Uniform Delay, d1	68.8	48.0		61.1	41.8		69.4	47.1	48.3	66.1	37.8	
Progression Factor	0.59	0.41		0.78	0.69		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.3	5.1		10.6	5.0		15.6	2.6	11.1	26.4	0.1	
Delay (s)	50.0	24.8		58.5	33.9		85.0	49.7	59.4	92.5	37.9	
Level of Service	D	C		E	C		F	D	E	F	D	
Approach Delay (s)		29.0			38.9			54.2			48.2	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	42.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
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												
Volume (vph)	156	142	60	21	162	171	130	1232	61	171	817	137
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	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	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1732	1900	1592	1638	1863	1575	1805	5090		1719	4762	
Flt Permitted	0.62	1.00	1.00	0.67	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1139	1900	1592	1147	1863	1575	1805	5090		1719	4762	
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)	156	142	60	21	162	171	130	1232	61	171	817	137
RTOR Reduction (vph)	0	0	46	0	0	131	0	4	0	0	20	0
Lane Group Flow (vph)	156	142	14	21	162	40	130	1289	0	171	934	0
Confl. Peds. (#/hr)	4		3	3		4			6			5
Heavy Vehicles (%)	4%	0%	0%	10%	2%	1%	0%	1%	2%	5%	6%	7%
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.7	29.7		14.1	32.1	
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.7	29.7		14.1	32.1	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23	0.23	0.15	0.39		0.18	0.42	
Clearance Time (s)	5.0	5.0	5.0	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)	267	445	373	269	437	369	275	1968		316	1990	
v/s Ratio Prot		0.07			0.09		0.07	c0.25		c0.10	0.20	
v/s Ratio Perm	c0.14		0.01	0.02		0.03						
v/c Ratio	0.58	0.32	0.04	0.08	0.37	0.11	0.47	0.65		0.54	0.47	
Uniform Delay, d1	26.1	24.3	22.7	22.9	24.7	23.1	29.7	19.3		28.4	16.2	
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	3.2	0.4	0.0	0.1	0.5	0.1	1.3	0.8		1.9	0.2	
Delay (s)	29.3	24.7	22.8	23.1	25.2	23.2	31.0	20.1		30.3	16.4	
Level of Service	C	C	C	C	C	C	C	C		C	B	
Approach Delay (s)		26.4			24.1			21.1			18.5	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	76.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.7%	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												
Volume (vph)	465	460	45	474	444	90	85	871	528	51	661	248
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	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3462		3433	3389		1805	3610	1579	1805	3374	1516
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3462		3433	3389		1805	3610	1579	1805	3374	1516
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)	465	460	45	474	444	90	85	871	528	51	661	248
RTOR Reduction (vph)	0	7	0	0	16	0	0	0	193	0	0	168
Lane Group Flow (vph)	465	498	0	474	518	0	85	871	335	51	661	80
Confl. Peds. (#/hr)	4		2	2		4	3		1	1		3
Confl. Bikes (#/hr)			2			4						
Heavy Vehicles (%)	2%	3%	0%	2%	4%	1%	0%	0%	1%	0%	7%	4%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	17.9	22.0		18.0	22.1		7.3	34.3	34.3	5.3	32.3	32.3
Effective Green, g (s)	17.9	22.0		18.0	22.1		7.3	34.3	34.3	5.3	32.3	32.3
Actuated g/C Ratio	0.18	0.22		0.18	0.22		0.07	0.34	0.34	0.05	0.32	0.32
Clearance Time (s)	5.0	5.0		5.0	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)	617	765		620	752		132	1243	544	96	1094	492
v/s Ratio Prot	0.14	0.14		c0.14	c0.15		c0.05	c0.24		0.03	0.20	
v/s Ratio Perm									0.21			0.05
v/c Ratio	0.75	0.65		0.76	0.69		0.64	0.70	0.62	0.53	0.60	0.16
Uniform Delay, d1	38.8	35.3		38.8	35.6		44.9	28.2	27.2	45.9	28.3	24.0
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	5.2	2.0		5.6	2.6		10.3	1.8	2.1	5.5	0.9	0.2
Delay (s)	44.0	37.3		44.4	38.2		55.2	30.0	29.3	51.5	29.2	24.2
Level of Service	D	D		D	D		E	C	C	D	C	C
Approach Delay (s)		40.5			41.1			31.2			29.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	99.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.5%	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												
Volume (vph)	54	637	53	31	1363	69	178	109	41	36	39	96
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			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00			0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00		1.00			1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.98			0.92	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1736	3440		1666	3539	1560		1763			1663	
Flt Permitted	0.08	1.00		0.32	1.00	1.00		0.72			0.88	
Satd. Flow (perm)	154	3440		567	3539	1560		1310			1481	
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)	54	637	53	31	1363	69	178	109	41	36	39	96
RTOR Reduction (vph)	0	6	0	0	0	24	0	4	0	0	24	0
Lane Group Flow (vph)	54	684	0	31	1363	45	0	324	0	0	147	0
Confl. Peds. (#/hr)	1		14	14		1	11		6	6		11
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	4%	3%	6%	7%	2%	1%	4%	0%	2%	6%	3%	2%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	60.1	60.1		60.1	60.1	60.1		49.9			49.9	
Effective Green, g (s)	60.1	60.1		60.1	60.1	60.1		49.9			49.9	
Actuated g/C Ratio	0.50	0.50		0.50	0.50	0.50		0.42			0.42	
Clearance Time (s)	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	
Lane Grp Cap (vph)	77	1723		284	1772	781		545			616	
v/s Ratio Prot		0.20			c0.39							
v/s Ratio Perm	0.35			0.05		0.03		c0.25			0.10	
v/c Ratio	0.70	0.40		0.11	0.77	0.06		0.59			0.24	
Uniform Delay, d1	23.0	18.7		15.8	24.3	15.4		27.2			22.7	
Progression Factor	1.00	1.00		0.13	0.38	0.06		1.00			1.00	
Incremental Delay, d2	41.9	0.7		0.5	2.1	0.1		4.7			0.9	
Delay (s)	64.9	19.3		2.5	11.4	1.0		31.9			23.6	
Level of Service	E	B		A	B	A		C			C	
Approach Delay (s)		22.7			10.8			31.9			23.6	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	93.2%	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												
Volume (vph)	117	1036	69	165	2035	64	178	379	198	44	318	175
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	4968		1770	5008		1770	1881	1599	1719	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	4968		1770	5008		1770	1881	1599	1719	1863	1583
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)	117	1036	69	165	2035	64	178	379	198	44	318	175
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	30	0	0	16
Lane Group Flow (vph)	117	1100	0	165	2097	0	178	379	168	44	318	159
Confl. Peds. (#/hr)			4			7			11			35
Confl. Bikes (#/hr)									6			3
Heavy Vehicles (%)	1%	3%	7%	2%	3%	2%	2%	1%	1%	5%	2%	2%
Turn Type	Prot			Prot			Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4		3	8		5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	10.8	56.7		17.4	63.3		15.6	38.1	60.5	4.7	27.2	43.0
Effective Green, g (s)	10.8	56.7		17.4	63.3		15.6	38.1	60.5	4.7	27.2	43.0
Actuated g/C Ratio	0.08	0.41		0.13	0.46		0.11	0.28	0.44	0.03	0.20	0.31
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	141	2058		225	2316		202	523	707	59	370	497
v/s Ratio Prot	0.07	0.22		c0.09	c0.42		c0.10	0.20	0.10	0.03	c0.17	0.10
v/s Ratio Perm												
v/c Ratio	0.83	0.53		0.73	0.91		0.88	0.72	0.24	0.75	0.86	0.32
Uniform Delay, d1	62.1	30.2		57.5	34.0		59.7	44.7	23.8	65.5	53.0	35.8
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	31.4	0.3		11.7	5.5		33.0	4.9	0.2	39.6	17.7	0.4
Delay (s)	93.6	30.4		69.2	39.6		92.8	49.6	24.0	105.1	70.7	36.2
Level of Service	F	C		E	D		F	D	C	F	E	D
Approach Delay (s)		36.5			41.7			53.1			62.3	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	44.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	136.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	95.1%	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												
Volume (vph)	69	598	91	36	1235	84	150	297	81	73	172	83
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3448		1656	3468		1787	1863	1567	1752	1827	1509
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	3448		1656	3468		1787	1863	1567	1752	1827	1509
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)	69	598	91	36	1235	84	150	297	81	73	172	83
RTOR Reduction (vph)	0	9	0	0	4	0	0	0	63	0	0	66
Lane Group Flow (vph)	69	680	0	36	1315	0	150	297	18	73	172	17
Confl. Peds. (#/hr)			7			6			7			6
Confl. Bikes (#/hr)						1			1			1
Heavy Vehicles (%)	1%	2%	3%	9%	3%	1%	1%	2%	1%	3%	4%	5%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.6	51.0		13.3	56.7		11.3	27.3	27.3	8.4	24.4	24.4
Effective Green, g (s)	7.6	51.0		13.3	56.7		11.3	27.3	27.3	8.4	24.4	24.4
Actuated g/C Ratio	0.06	0.42		0.11	0.47		0.09	0.23	0.23	0.07	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	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)	113	1465		184	1639		168	424	356	123	371	307
v/s Ratio Prot	0.04	c0.20		0.02	c0.38		c0.08	c0.16		0.04	c0.09	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.61	0.46		0.20	0.80		0.89	0.70	0.05	0.59	0.46	0.05
Uniform Delay, d1	54.8	24.7		48.5	26.9		53.8	42.6	36.2	54.1	42.0	38.5
Progression Factor	0.78	0.80		0.67	0.60		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.0	1.0		0.4	3.6		40.1	5.2	0.1	7.5	0.9	0.1
Delay (s)	51.8	20.7		33.1	19.6		93.9	47.8	36.3	61.6	43.0	38.6
Level of Service	D	C		C	B		F	D	D	E	D	D
Approach Delay (s)		23.5			20.0			59.1			46.0	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
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												
Volume (vph)	79	1316	108	67	2055	80	307	301	68	97	110	124
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	4874		1388	4913		1719	3382		1719	3172	
Flt Permitted	0.95	1.00		0.95	1.00		0.27	1.00		0.53	1.00	
Satd. Flow (perm)	1736	4874		1388	4913		480	3382		963	3172	
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)	79	1316	108	67	2055	80	307	301	68	97	110	124
RTOR Reduction (vph)	0	5	0	0	2	0	0	15	0	0	113	0
Lane Group Flow (vph)	79	1419	0	67	2133	0	307	354	0	97	121	0
Confl. Peds. (#/hr)			8			10			6			8
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	4%	4%	17%	30%	5%	1%	5%	0%	18%	5%	6%	1%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.2	84.0		10.5	83.3		40.5	26.5		21.9	12.9	
Effective Green, g (s)	11.2	84.0		10.5	83.3		40.5	26.5		21.9	12.9	
Actuated g/C Ratio	0.07	0.56		0.07	0.56		0.27	0.18		0.15	0.09	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	130	2729		97	2728		316	597		186	273	
v/s Ratio Prot	0.05	c0.29		0.05	c0.43		c0.15	0.10		0.03	0.04	
v/s Ratio Perm							c0.12			0.04		
v/c Ratio	0.61	0.52		0.69	0.78		0.97	0.59		0.52	0.44	
Uniform Delay, d1	67.3	20.5		68.2	26.2		49.7	56.8		58.0	65.1	
Progression Factor	0.81	0.63		1.27	0.68		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.7	0.4		15.4	1.8		42.7	1.6		2.6	1.1	
Delay (s)	59.3	13.3		101.6	19.8		92.4	58.4		60.6	66.3	
Level of Service	E	B		F	B		F	E		E	E	
Approach Delay (s)		15.7			22.3			73.8			64.6	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	90.4%	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												
Volume (vph)	25	715	25	35	1335	47	82	100	118	58	69	41
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		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3486		1805	3487		1768	1720		1715	1718	
Flt Permitted	0.95	1.00		0.95	1.00		0.64	1.00		0.36	1.00	
Satd. Flow (perm)	1736	3486		1805	3487		1187	1720		655	1718	
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)	25	715	25	35	1335	47	82	100	118	58	69	41
RTOR Reduction (vph)	0	1	0	0	2	0	0	41	0	0	21	0
Lane Group Flow (vph)	25	739	0	35	1380	0	82	177	0	58	89	0
Confl. Peds. (#/hr)			9			5	11		3	3		11
Confl. Bikes (#/hr)						1			3			2
Heavy Vehicles (%)	4%	3%	0%	0%	3%	0%	1%	1%	0%	5%	0%	9%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.5	79.1		5.1	79.7		20.8	20.8		20.8	20.8	
Effective Green, g (s)	4.5	79.1		5.1	79.7		20.8	20.8		20.8	20.8	
Actuated g/C Ratio	0.04	0.66		0.04	0.66		0.17	0.17		0.17	0.17	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	65	2298		77	2316		206	298		114	298	
v/s Ratio Prot	0.01	c0.21		0.02	c0.40			c0.10			0.05	
v/s Ratio Perm							0.07			0.09		
v/c Ratio	0.38	0.32		0.45	0.60		0.40	0.60		0.51	0.30	
Uniform Delay, d1	56.4	8.8		56.1	11.2		44.0	45.7		45.0	43.2	
Progression Factor	0.48	0.44		1.18	0.68		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	0.3		3.3	0.9		1.3	3.2		3.5	0.6	
Delay (s)	30.7	4.3		69.6	8.5		45.3	48.9		48.5	43.8	
Level of Service	C	A		E	A		D	D		D	D	
Approach Delay (s)		5.1			10.0			47.9			45.4	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.2%	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												
Volume (vph)	42	1417	39	6	2064	55	194	67	14	64	32	57
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	4960		1805	4872		1794	1844		1757	1845	1585
Flt Permitted	0.95	1.00		0.95	1.00		0.74	1.00		0.68	1.00	1.00
Satd. Flow (perm)	1805	4960		1805	4872		1390	1844		1261	1845	1585
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)	42	1417	39	6	2064	55	194	67	14	64	32	57
RTOR Reduction (vph)	0	1	0	0	1	0	0	6	0	0	0	47
Lane Group Flow (vph)	42	1455	0	6	2118	0	194	75	0	64	32	10
Confl. Peds. (#/hr)			11			9	4		5	5		4
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	4%	3%	0%	6%	2%	0%	0%	0%	2%	3%	0%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.5	107.4		1.4	98.3		26.2	26.2		26.2	26.2	26.2
Effective Green, g (s)	10.5	107.4		1.4	98.3		26.2	26.2		26.2	26.2	26.2
Actuated g/C Ratio	0.07	0.72		0.01	0.66		0.17	0.17		0.17	0.17	0.17
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	126	3551		17	3193		243	322		220	322	277
v/s Ratio Prot	0.02	c0.29		0.00	c0.43			0.04			0.02	
v/s Ratio Perm							c0.14			0.05		0.01
v/c Ratio	0.33	0.41		0.35	0.66		0.80	0.23		0.29	0.10	0.04
Uniform Delay, d1	66.4	8.6		73.8	15.8		59.4	53.3		53.8	52.0	51.4
Progression Factor	0.78	1.01		1.29	0.49		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	0.3		8.9	0.8		16.5	0.4		0.7	0.1	0.1
Delay (s)	53.2	9.0		104.1	8.6		75.9	53.6		54.6	52.1	51.5
Level of Service	D	A		F	A		E	D		D	D	D
Approach Delay (s)		10.2			8.9			69.3			52.9	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.8%	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												
Volume (vph)	117	685	40	44	701	237	89	1119	107	213	858	152
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1736	5069		1770	4909		1787	5051		1770	3539	1548
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1736	5069		1770	4909		1787	5051		1770	3539	1548
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)	117	685	40	44	701	237	89	1119	107	213	858	152
RTOR Reduction (vph)	0	5	0	0	45	0	0	8	0	0	0	94
Lane Group Flow (vph)	117	720	0	44	893	0	89	1218	0	213	858	58
Confl. Peds. (#/hr)			5			4			5			1
Confl. Bikes (#/hr)			1						3			
Heavy Vehicles (%)	4%	1%	8%	2%	1%	2%	1%	1%	3%	2%	2%	3%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	12.8	37.1		6.3	30.6		10.7	35.6		19.2	44.1	44.1
Effective Green, g (s)	12.8	37.1		6.3	30.6		10.7	35.6		19.2	44.1	44.1
Actuated g/C Ratio	0.11	0.31		0.05	0.26		0.09	0.30		0.16	0.37	0.37
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	188	1591		94	1271		162	1521		288	1320	578
v/s Ratio Prot	c0.07	0.14		0.02	c0.18		0.05	c0.24		c0.12	0.24	
v/s Ratio Perm												0.04
v/c Ratio	0.62	0.45		0.47	0.70		0.55	0.80		0.74	0.65	0.10
Uniform Delay, d1	50.4	32.4		54.3	39.7		51.4	38.0		47.1	30.7	24.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.3	0.2		3.7	1.8		3.8	3.1		9.6	1.2	0.1
Delay (s)	56.7	32.6		58.0	41.5		55.2	41.2		56.7	31.8	24.2
Level of Service	E	C		E	D		E	D		E	C	C
Approach Delay (s)		36.0			42.2			42.1			35.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	118.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.3%	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												
Volume (vph)	91	659	162	59	864	66	374	631	72	60	375	150
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3539	1558	1656	3539	1494	3467	3505		3433	3262	
Flt Permitted	0.12	1.00	1.00	0.27	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	235	3539	1558	474	3539	1494	3467	3505		3433	3262	
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)	91	659	162	59	864	66	374	631	72	60	375	150
RTOR Reduction (vph)	0	0	75	0	0	45	0	7	0	0	33	0
Lane Group Flow (vph)	91	659	87	59	864	21	374	696	0	60	492	0
Confl. Peds. (#/hr)			11			13			7			22
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	1%	2%	1%	9%	2%	5%	1%	1%	3%	2%	5%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	47.8	39.8	39.8	44.0	37.9	37.9	17.4	48.1		6.0	36.7	
Effective Green, g (s)	47.8	39.8	39.8	44.0	37.9	37.9	17.4	48.1		6.0	36.7	
Actuated g/C Ratio	0.40	0.33	0.33	0.37	0.32	0.32	0.14	0.40		0.05	0.31	
Clearance Time (s)	5.0	5.0	5.0	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)	197	1174	517	234	1118	472	503	1405		172	998	
v/s Ratio Prot	c0.03	0.19		0.01	c0.24		c0.11	c0.20		0.02	0.15	
v/s Ratio Perm	0.15		0.06	0.08		0.01						
v/c Ratio	0.46	0.56	0.17	0.25	0.77	0.04	0.74	0.50		0.35	0.49	
Uniform Delay, d1	25.9	32.9	28.4	25.6	37.2	28.5	49.2	26.9		55.1	34.0	
Progression Factor	0.70	0.57	0.43	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.6	0.1	0.6	3.4	0.0	5.9	1.3		1.2	1.7	
Delay (s)	19.8	19.3	12.3	26.2	40.5	28.5	55.0	28.1		56.3	35.8	
Level of Service	B	B	B	C	D	C	E	C		E	D	
Approach Delay (s)		18.1			38.9			37.5			37.9	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	80.0%	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												
Volume (vph)	83	1211	176	105	1340	82	561	757	74	111	371	119
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	4846		1703	4799		3400	3492		1687	3340	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1736	4846		1703	4799		3400	3492		1687	3340	
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)	83	1211	176	105	1340	82	561	757	74	111	371	119
RTOR Reduction (vph)	0	11	0	0	4	0	0	5	0	0	21	0
Lane Group Flow (vph)	83	1376	0	105	1418	0	561	826	0	111	469	0
Confl. Peds. (#/hr)	13		20	20		13	15		37	37		15
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	4%	4%	7%	6%	7%	6%	3%	1%	5%	7%	2%	7%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.3	60.7		13.9	63.3		29.2	41.1		14.3	26.2	
Effective Green, g (s)	11.3	60.7		13.9	63.3		29.2	41.1		14.3	26.2	
Actuated g/C Ratio	0.08	0.40		0.09	0.42		0.19	0.27		0.10	0.17	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	131	1961		158	2025		662	957		161	583	
v/s Ratio Prot	0.05	0.28		c0.06	c0.30		c0.17	c0.24		0.07	0.14	
v/s Ratio Perm												
v/c Ratio	0.63	0.70		0.66	0.70		0.85	0.86		0.69	0.81	
Uniform Delay, d1	67.3	37.1		65.8	35.6		58.3	51.8		65.7	59.4	
Progression Factor	1.01	0.80		1.16	0.80		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.1	2.0		8.9	1.8		9.8	8.1		11.6	8.0	
Delay (s)	77.1	31.7		85.2	30.3		68.1	59.9		77.3	67.4	
Level of Service	E	C		F	C		E	E		E	E	
Approach Delay (s)		34.3			34.0			63.2			69.2	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.0%	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												
Volume (vph)	131	1487	91	130	1636	114	101	317	65	143	286	112
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1697	4958		1720	4916		1703	3271		1687	3505	1429
Flt Permitted	0.10	1.00		0.12	1.00		0.43	1.00		0.30	1.00	1.00
Satd. Flow (perm)	176	4958		224	4916		773	3271		539	3505	1429
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)	131	1487	91	130	1636	114	101	317	65	143	286	112
RTOR Reduction (vph)	0	4	0	0	5	0	0	12	0	0	0	47
Lane Group Flow (vph)	131	1574	0	130	1745	0	101	370	0	143	286	65
Confl. Peds. (#/hr)	46		83	83		46			29			27
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	6%	3%	3%	4%	4%	4%	6%	5%	14%	7%	3%	7%
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	102.7	102.7		102.7	102.7		32.3	25.3		32.3	25.3	25.3
Effective Green, g (s)	102.7	102.7		102.7	102.7		32.3	25.3		32.3	25.3	25.3
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.22	0.17		0.22	0.17	0.17
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	121	3395		153	3366		210	552		170	591	241
v/s Ratio Prot		0.32			0.36		0.02	0.11		c0.04	0.08	
v/s Ratio Perm	c0.74			0.58			0.08			c0.14		0.05
v/c Ratio	1.08	0.46		0.85	0.52		0.48	0.67		0.84	0.48	0.27
Uniform Delay, d1	23.6	10.9		17.8	11.6		49.6	58.4		55.0	56.4	54.3
Progression Factor	0.72	0.38		1.21	0.75		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	98.3	0.4		37.2	0.5		1.7	3.2		29.5	0.6	0.6
Delay (s)	115.3	4.5		58.8	9.2		51.3	61.6		84.5	57.1	54.9
Level of Service	F	A		E	A		D	E		F	E	D
Approach Delay (s)		13.0			12.6			59.5			63.9	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.0%	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												
Volume (vph)	102	1301	54	355	1600	47	6	301	231	118	292	118
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1687	4959		1752	4865		1805	3505	1551	1687	3270	
Flt Permitted	0.95	1.00		0.95	1.00		0.20	1.00	1.00	0.54	1.00	
Satd. Flow (perm)	1687	4959		1752	4865		384	3505	1551	956	3270	
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)	102	1301	54	355	1600	47	6	301	231	118	292	118
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	198	0	30	0
Lane Group Flow (vph)	102	1353	0	355	1645	0	6	301	33	118	380	0
Confl. Peds. (#/hr)			10			22			7			11
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	7%	3%	25%	3%	6%	7%	0%	3%	2%	7%	4%	7%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	13.6	63.6		34.5	84.5		21.2	21.2	21.2	30.5	30.5	
Effective Green, g (s)	13.6	63.6		34.5	84.5		21.2	21.2	21.2	30.5	30.5	
Actuated g/C Ratio	0.09	0.42		0.23	0.56		0.14	0.14	0.14	0.20	0.20	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	153	2103		403	2741		68	495	219	247	665	
v/s Ratio Prot	0.06	c0.27		c0.20	0.34		0.00	c0.09		0.03	c0.12	
v/s Ratio Perm							0.01		0.02	0.06		
v/c Ratio	0.67	0.64		0.88	0.60		0.09	0.61	0.15	0.48	0.57	
Uniform Delay, d1	66.0	34.2		55.8	21.6		56.3	60.5	56.5	54.8	53.9	
Progression Factor	1.29	0.48		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.3	1.3		19.6	1.0		0.6	2.1	0.3	1.5	1.2	
Delay (s)	94.4	17.9		75.3	22.6		56.9	62.6	56.8	56.3	55.0	
Level of Service	F	B		E	C		E	E	E	E	E	
Approach Delay (s)		23.3			31.9			60.1			55.3	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.6%	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												
Volume (vph)	0	1462	203	97	1018	2	0	0	0	249	1	1162
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
Lane Util. Factor		0.86		1.00	0.91						1.00	0.88
Frpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Frt		0.98		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)		6149		1703	4892						1676	2682
Flt Permitted		1.00		0.95	1.00						0.95	1.00
Satd. Flow (perm)		6149		1703	4892						1676	2682
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)	0	1462	203	97	1018	2	0	0	0	249	1	1162
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	0	0	0	44
Lane Group Flow (vph)	0	1643	0	97	1020	0	0	0	0	0	250	1118
Confl. Peds. (#/hr)			9			18						
Confl. Bikes (#/hr)						3						
Heavy Vehicles (%)	0%	4%	3%	6%	6%	0%	0%	0%	0%	8%	0%	6%
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Actuated Green, G (s)		36.3		8.7	50.0						50.0	50.0
Effective Green, g (s)		36.3		8.7	50.0						50.0	50.0
Actuated g/C Ratio		0.33		0.08	0.45						0.45	0.45
Clearance Time (s)		5.0		5.0	5.0						5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		2029		135	2224						762	1219
v/s Ratio Prot		c0.27		c0.06	0.21							
v/s Ratio Perm											0.15	c0.42
v/c Ratio		0.81		0.72	0.46						0.33	0.92
Uniform Delay, d1		33.7		49.5	20.7						19.2	28.1
Progression Factor		1.00		1.28	0.26						1.00	1.00
Incremental Delay, d2		3.6		13.3	0.5						0.3	10.9
Delay (s)		37.3		76.7	5.9						19.5	38.9
Level of Service		D		E	A						B	D
Approach Delay (s)		37.3			12.1			0.0			35.5	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	183	104	1536	287	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	183	104	1536	287	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			350			
pX, platoon unblocked						
vC, conflicting volume	1536	768			1823	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1536	768			1823	
tC, single (s)	6.8	7.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	0	67			100	
cM capacity (veh/h)	109	319			340	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3
Volume Total	122	165	1024	608	191
Volume Left	122	61	0	0	0
Volume Right	0	104	0	96	191
cSH	109	294	1700	1700	1700
Volume to Capacity	1.12	0.56	0.60	0.36	0.11
Queue Length 95th (ft)	191	80	0	0	0
Control Delay (s)	197.2	40.9	0.0	0.0	0.0
Lane LOS	F	E			
Approach Delay (s)	107.4		0.0		
Approach LOS	F				

Intersection Summary			
Average Delay	14.6		
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	976	735	49	33	849	455	200	213	82	8	48	55
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		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.91		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.95		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3400	3401		1703	4729		1656	3342		1803	1377	1129
Flt Permitted	0.95	1.00		0.95	1.00		0.73	1.00		0.50	1.00	1.00
Satd. Flow (perm)	3400	3401		1703	4729		1265	3342		942	1377	1129
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)	976	735	49	33	849	455	200	213	82	8	48	55
RTOR Reduction (vph)	0	3	0	0	78	0	0	43	0	0	0	43
Lane Group Flow (vph)	976	781	0	33	1226	0	200	252	0	8	48	12
Confl. Peds. (#/hr)			7			4			2	2		
Heavy Vehicles (%)	3%	4%	19%	6%	3%	4%	9%	2%	6%	0%	38%	43%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	31.4	66.6		4.6	39.8		23.8	23.8		23.8	23.8	23.8
Effective Green, g (s)	31.4	66.6		4.6	39.8		23.8	23.8		23.8	23.8	23.8
Actuated g/C Ratio	0.29	0.61		0.04	0.36		0.22	0.22		0.22	0.22	0.22
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	971	2059		71	1711		274	723		204	298	244
v/s Ratio Prot	c0.29	0.23		0.02	c0.26			0.08			0.03	
v/s Ratio Perm							c0.16			0.01		0.01
v/c Ratio	1.01	0.38		0.46	0.72		0.73	0.35		0.04	0.16	0.05
Uniform Delay, d1	39.3	11.1		51.5	30.2		40.1	36.5		34.1	35.0	34.1
Progression Factor	0.66	0.16		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.0	0.4		4.7	2.6		9.4	0.3		0.1	0.3	0.1
Delay (s)	51.0	2.2		56.2	32.8		49.5	36.8		34.1	35.2	34.2
Level of Service	D	A		E	C		D	D		C	D	C
Approach Delay (s)		29.3			33.4			41.9			34.7	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	745	100	48	1565	35	44
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	745	100	48	1565	35	44
Pedestrians					3	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340			724		
pX, platoon unblocked			0.92		0.87	0.92
vC, conflicting volume			848		1676	426
vC1, stage 1 conf vol					798	
vC2, stage 2 conf vol					878	
vCu, unblocked vol			658		1066	198
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.2		3.5	3.3
p0 queue free %			94		90	94
cM capacity (veh/h)			842		359	739

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	497	348	48	782	782	79
Volume Left	0	0	48	0	0	35
Volume Right	0	100	0	0	0	44
cSH	1700	1700	842	1700	1700	503
Volume to Capacity	0.29	0.20	0.06	0.46	0.46	0.16
Queue Length 95th (ft)	0	0	5	0	0	14
Control Delay (s)	0.0	0.0	9.5	0.0	0.0	13.5
Lane LOS			A			B
Approach Delay (s)	0.0		0.3			13.5
Approach LOS						B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	787	118	143	699	109	170	1125	150	165	1136	236
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	5.0		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91		0.97	0.91		0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1552	3433	4910		3367	5037		3467	5085	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1552	3433	4910		3367	5037		3467	5085	1537
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)	330	787	118	143	699	109	170	1125	150	165	1136	236
RTOR Reduction (vph)	0	0	81	0	18	0	0	14	0	0	0	116
Lane Group Flow (vph)	330	787	37	143	790	0	170	1261	0	165	1136	120
Confl. Peds. (#/hr)			7			17			2			9
Confl. Bikes (#/hr)			3									
Heavy Vehicles (%)	2%	2%	2%	2%	3%	4%	4%	1%	1%	1%	2%	3%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	14.5	32.4	32.4	9.1	27.0		9.4	33.2		8.8	32.6	32.6
Effective Green, g (s)	14.5	32.4	32.4	9.1	27.0		9.4	33.2		8.8	32.6	32.6
Actuated g/C Ratio	0.14	0.31	0.31	0.09	0.26		0.09	0.32		0.09	0.31	0.31
Clearance Time (s)	5.0	5.0	5.0	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)	481	1108	486	302	1281		306	1616		295	1602	484
v/s Ratio Prot	c0.10	c0.22		0.04	0.16		c0.05	c0.25		0.05	0.22	
v/s Ratio Perm			0.02									0.08
v/c Ratio	0.69	0.71	0.08	0.47	0.62		0.56	0.78		0.56	0.71	0.25
Uniform Delay, d1	42.3	31.4	25.0	44.9	33.7		45.0	31.8		45.5	31.3	26.3
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	2.2	0.1	1.2	0.9		2.2	2.5		2.3	1.5	0.3
Delay (s)	46.4	33.6	25.1	46.1	34.6		47.2	34.4		47.8	32.7	26.6
Level of Service	D	C	C	D	C		D	C		D	C	C
Approach Delay (s)		36.2			36.3			35.9			33.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	35.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	103.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	78.7%	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												
Volume (vph)	116	684	40	44	690	237	89	1116	107	213	857	148
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1543	1671	4821		3467	5085	1521	3273	4940	1559
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1543	1671	4821		3467	5085	1521	3273	4940	1559
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)	116	684	40	44	690	237	89	1116	107	213	857	148
RTOR Reduction (vph)	0	0	28	0	53	0	0	0	47	0	0	79
Lane Group Flow (vph)	116	684	12	44	874	0	89	1116	60	213	857	69
Confl. Peds. (#/hr)			5			7			11			4
Heavy Vehicles (%)	2%	3%	3%	8%	3%	3%	1%	2%	4%	7%	5%	2%
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	7.8	31.1	31.1	4.7	28.0		5.4	32.5	32.5	11.5	38.6	38.6
Effective Green, g (s)	7.8	31.1	31.1	4.7	28.0		5.4	32.5	32.5	11.5	38.6	38.6
Actuated g/C Ratio	0.08	0.31	0.31	0.05	0.28		0.05	0.33	0.33	0.12	0.39	0.39
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	268	1569	481	79	1353		188	1656	495	377	1911	603
v/s Ratio Prot	c0.03	c0.14		0.03	c0.18		0.03	c0.22		c0.07	0.17	
v/s Ratio Perm			0.01						0.04			0.04
v/c Ratio	0.43	0.44	0.03	0.56	0.65		0.47	0.67	0.12	0.56	0.45	0.11
Uniform Delay, d1	43.9	27.4	23.8	46.5	31.5		45.8	29.1	23.6	41.8	22.7	19.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.2	0.0	8.3	1.1		1.9	1.1	0.1	1.9	0.2	0.1
Delay (s)	45.0	27.6	23.9	54.8	32.6		47.7	30.2	23.7	43.7	22.9	19.7
Level of Service	D	C	C	D	C		D	C	C	D	C	B
Approach Delay (s)		29.8			33.6			30.8			26.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	99.8	Sum of lost time (s)	25.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	420	1107	1231	501	378	379
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3467	5085	5036	1567	3400	2715
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3467	5085	5036	1567	3400	2715
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	420	1107	1231	501	378	379
RTOR Reduction (vph)	0	0	0	31	0	10
Lane Group Flow (vph)	420	1107	1231	470	378	369
Confl. Peds. (#/hr)				5		2
Heavy Vehicles (%)	1%	2%	3%	2%	3%	4%
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Actuated Green, G (s)	16.2	49.8	28.6	44.4	15.8	32.0
Effective Green, g (s)	16.2	49.8	28.6	44.4	15.8	32.0
Actuated g/C Ratio	0.21	0.66	0.38	0.59	0.21	0.42
Clearance Time (s)	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
Lane Grp Cap (vph)	743	3350	1905	1024	711	1329
v/s Ratio Prot	c0.12	0.22	c0.24	c0.10	0.11	0.06
v/s Ratio Perm				0.20		0.08
v/c Ratio	0.57	0.33	0.65	0.46	0.53	0.28
Uniform Delay, d1	26.6	5.6	19.3	8.8	26.6	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.1	0.8	0.3	0.8	0.1
Delay (s)	27.5	5.7	20.1	9.1	27.4	14.4
Level of Service	C	A	C	A	C	B
Approach Delay (s)		11.7	16.9		20.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	60.1%	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												
Volume (veh/h)	15	265	0	0	534	2	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	15	265	0	0	534	2	0	0	0	0	0	0
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					852							
pX, platoon unblocked												
vC, conflicting volume	536			266			563	832	134	698	831	268
vC1, stage 1 conf vol							296	296		535	535	
vC2, stage 2 conf vol							267	536		162	296	
vCu, unblocked vol	536			266			563	832	134	698	831	268
tC, single (s)	4.1			4.1			7.5	6.5	6.9	8.2	6.5	6.9
tC, 2 stage (s)							6.5	5.5		7.2	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.8	4.0	3.3
p0 queue free %	99			100			100	100	100	100	100	100
cM capacity (veh/h)	1042			1308			584	463	897	403	472	736

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	148	132	356	180	0	0
Volume Left	15	0	0	0	0	0
Volume Right	0	0	0	2	0	0
cSH	1042	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.08	0.21	0.11	0.00	0.00
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	1.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				A	A
Approach Delay (s)	0.5		0.0		0.0	0.0
Approach LOS					A	A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	746	43	202	1527	86	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1521	1703	3539	3335	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1521	1703	3539	3335	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	746	43	202	1527	86	45
RTOR Reduction (vph)	0	18	0	0	0	41
Lane Group Flow (vph)	746	25	202	1527	86	4
Confl. Peds. (#/hr)		3				
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	3%	3%	6%	2%	5%	3%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	51.3	51.3	16.0	72.3	7.7	7.7
Effective Green, g (s)	51.3	51.3	16.0	72.3	7.7	7.7
Actuated g/C Ratio	0.57	0.57	0.18	0.80	0.09	0.09
Clearance Time (s)	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
Lane Grp Cap (vph)	1998	867	303	2843	285	134
v/s Ratio Prot	0.21		c0.12	c0.43	c0.03	
v/s Ratio Perm		0.02				0.00
v/c Ratio	0.37	0.03	0.67	0.54	0.30	0.03
Uniform Delay, d1	10.6	8.5	34.5	3.1	38.6	37.7
Progression Factor	0.74	0.40	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	5.5	0.7	0.6	0.1
Delay (s)	8.4	3.5	40.0	3.8	39.2	37.8
Level of Service	A	A	D	A	D	D
Approach Delay (s)	8.1			8.0	38.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	772	19	0	1729	0	50
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	772	19	0	1729	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	357					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			791		1636	386
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			510		1463	54
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	94
cM capacity (veh/h)			933		106	889

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	386	386	19	864	864	50
Volume Left	0	0	0	0	0	0
Volume Right	0	0	19	0	0	50
cSH	1700	1700	1700	1700	1700	889
Volume to Capacity	0.23	0.23	0.01	0.51	0.51	0.06
Queue Length 95th (ft)	0	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.3
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.3
Approach LOS						A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	187	964	50	181	1028	116	61	186	119	144	209	215
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3478		1787	3507		1805	1900	1553	1787	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3478		1787	3507		1805	1900	1553	1787	1900	1615
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)	187	964	50	181	1028	116	61	186	119	144	209	215
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	98	0	0	168
Lane Group Flow (vph)	187	1011	0	181	1137	0	61	186	21	144	209	47
Confl. Peds. (#/hr)			5			8			7			6
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	2%	3%	0%	1%	1%	1%	0%	0%	2%	1%	0%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Prot
Protected Phases	1	6		5	2		7	4		3	8	8
Permitted Phases									4			
Actuated Green, G (s)	14.4	39.9		14.4	39.9		6.6	17.9	17.9	11.6	22.9	22.9
Effective Green, g (s)	14.4	39.9		14.4	39.9		6.6	17.9	17.9	11.6	22.9	22.9
Actuated g/C Ratio	0.14	0.38		0.14	0.38		0.06	0.17	0.17	0.11	0.22	0.22
Clearance Time (s)	5.0	5.0		5.0	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)	246	1337		248	1348		115	328	268	200	419	356
v/s Ratio Prot	c0.11	0.29		0.10	c0.32		0.03	0.10		c0.08	c0.11	0.03
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.76		0.73	0.84		0.53	0.57	0.08	0.72	0.50	0.13
Uniform Delay, d1	43.0	27.7		42.8	29.1		47.1	39.4	36.0	44.5	35.4	32.5
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	12.9	2.5		10.3	5.0		4.6	2.2	0.1	11.7	0.9	0.2
Delay (s)	56.0	30.2		53.1	34.1		51.7	41.6	36.1	56.3	36.4	32.7
Level of Service	E	C		D	C		D	D	D	E	D	C
Approach Delay (s)		34.2			36.7			41.5			40.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.0%	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												
Volume (vph)	68	1164	49	167	1263	197	155	181	118	310	182	61
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	5.0		5.0	5.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1787	3550		1805	3574	1514	1770	3343		1643	3382	1578
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1787	3550		1805	3574	1514	1770	3343		1643	3382	1578
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)	68	1164	49	167	1263	197	155	181	118	310	182	61
RTOR Reduction (vph)	0	2	0	0	0	22	0	84	0	0	0	0
Lane Group Flow (vph)	68	1211	0	167	1263	175	155	215	0	161	331	61
Confl. Peds. (#/hr)			11			31						36
Confl. Bikes (#/hr)			3			1						1
Heavy Vehicles (%)	1%	1%	0%	0%	1%	1%	2%	2%	1%	0%	0%	0%
Turn Type	Prot			Prot		Perm	Split			Split		Free
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						Free
Actuated Green, G (s)	11.1	47.6		14.0	50.5	50.5	16.6	16.6		22.0	22.0	120.2
Effective Green, g (s)	11.1	47.6		14.0	50.5	50.5	16.6	16.6		22.0	22.0	120.2
Actuated g/C Ratio	0.09	0.40		0.12	0.42	0.42	0.14	0.14		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	165	1406		210	1502	636	244	462		301	619	1578
v/s Ratio Prot	0.04	0.34		c0.09	c0.35		c0.09	0.06		c0.10	0.10	
v/s Ratio Perm						0.12						0.04
v/c Ratio	0.41	0.86		0.80	0.84	0.28	0.64	0.46		0.53	0.53	0.04
Uniform Delay, d1	51.5	33.3		51.7	31.2	22.8	48.9	47.7		44.5	44.5	0.0
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	1.7	5.7		18.5	4.4	0.2	5.3	0.7		1.8	0.9	0.0
Delay (s)	53.1	38.9		70.2	35.7	23.1	54.3	48.4		46.3	45.4	0.0
Level of Service	D	D		E	D	C	D	D		D	D	A
Approach Delay (s)		39.7			37.7			50.4			40.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.2%	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												
Volume (vph)	328	924	337	354	986	219	375	1793	217	269	1734	263
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
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)	328	924	337	354	986	219	375	1793	217	269	1734	263
RTOR Reduction (vph)	0	0	192	0	0	138	0	0	144	0	0	103
Lane Group Flow (vph)	328	924	145	354	986	81	375	1793	73	269	1734	160
Confl. Peds. (#/hr)			26			42			25			74
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	1%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.0	37.9	37.9	17.0	40.9	40.9	15.0	43.7	43.7	11.4	40.1	40.1
Effective Green, g (s)	14.0	37.9	37.9	17.0	40.9	40.9	15.0	43.7	43.7	11.4	40.1	40.1
Actuated g/C Ratio	0.11	0.29	0.29	0.13	0.31	0.31	0.12	0.34	0.34	0.09	0.31	0.31
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	373	1482	450	453	1616	479	400	2154	507	304	1996	449
v/s Ratio Prot	c0.09	c0.18		c0.10	0.19		0.11	c0.28		0.08	c0.27	
v/s Ratio Perm			0.09			0.05			0.05			0.11
v/c Ratio	0.88	0.62	0.32	0.78	0.61	0.17	0.94	0.83	0.14	0.88	0.87	0.36
Uniform Delay, d1	57.2	39.9	36.0	54.7	37.8	32.3	57.0	39.8	30.1	58.7	42.5	34.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.79	1.88	1.00	1.00	1.00
Incremental Delay, d2	20.3	0.8	0.4	8.5	0.7	0.2	22.1	2.6	0.4	24.9	5.5	2.2
Delay (s)	77.4	40.7	36.4	63.2	38.5	32.4	68.6	34.0	57.0	83.5	47.9	37.1
Level of Service	E	D	D	E	D	C	E	C	E	F	D	D
Approach Delay (s)		47.4			43.2			41.5			50.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	45.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	99.0%	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												
Volume (vph)	107	516	80	286	511	258	130	2125	268	389	2176	49
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		0.97	0.91	1.00	1.00	0.86	1.00	0.97	0.86	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3490		3467	5136	1534	1805	6471	1510	3433	6443	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3490		3467	5136	1534	1805	6471	1510	3433	6443	
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)	107	516	80	286	511	258	130	2125	268	389	2176	49
RTOR Reduction (vph)	0	10	0	0	0	216	0	0	155	0	2	0
Lane Group Flow (vph)	107	586	0	286	511	42	130	2125	113	389	2223	0
Confl. Peds. (#/hr)			16			13			28			4
Heavy Vehicles (%)	2%	1%	0%	1%	1%	2%	0%	1%	2%	2%	1%	4%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	16.9	25.0		12.9	21.0	21.0	12.3	54.6	54.6	17.5	59.8	
Effective Green, g (s)	16.9	25.0		12.9	21.0	21.0	12.3	54.6	54.6	17.5	59.8	
Actuated g/C Ratio	0.13	0.19		0.10	0.16	0.16	0.09	0.42	0.42	0.13	0.46	
Clearance Time (s)	5.0	5.0		5.0	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)	230	671		344	830	248	171	2718	634	462	2964	
v/s Ratio Prot	0.06	c0.17		c0.08	0.10		0.07	c0.33		0.11	c0.34	
v/s Ratio Perm						0.03			0.07			
v/c Ratio	0.47	0.87		0.83	0.62	0.17	0.76	0.78	0.18	0.84	0.75	
Uniform Delay, d1	52.4	51.0		57.5	50.7	47.0	57.4	32.6	23.6	54.9	28.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.99	0.46	0.27	0.50	0.27	
Incremental Delay, d2	1.5	12.1		15.6	1.4	0.3	12.2	1.5	0.4	8.9	1.2	
Delay (s)	53.9	63.1		73.1	52.1	47.3	69.1	16.5	6.7	36.4	9.0	
Level of Service	D	E		E	D	D	E	B	A	D	A	
Approach Delay (s)		61.7			56.6			18.2			13.1	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM Average Control Delay	26.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.7%	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												
Volume (vph)	272	828	171	536	942	212	281	1952	533	317	1979	314
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	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5029		3502	5187	1615	3467	6471	1593	3502	6471	1595
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5029		3502	5187	1615	3467	6471	1593	3502	6471	1595
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)	272	828	171	536	942	212	281	1952	533	317	1979	314
RTOR Reduction (vph)	0	25	0	0	0	140	0	0	0	0	0	0
Lane Group Flow (vph)	272	974	0	536	942	72	281	1952	533	317	1979	314
Confl. Peds. (#/hr)			10			11			5			2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot		Prot	Prot		Free	Prot		Free
Protected Phases	7	4		3	8	8	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	18.6	27.1		22.4	30.9	30.9	12.8	46.6	130.0	13.9	47.7	130.0
Effective Green, g (s)	18.6	27.1		22.4	30.9	30.9	12.8	46.6	130.0	13.9	47.7	130.0
Actuated g/C Ratio	0.14	0.21		0.17	0.24	0.24	0.10	0.36	1.00	0.11	0.37	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	491	1048		603	1233	384	341	2320	1593	374	2374	1595
v/s Ratio Prot	0.08	c0.19		c0.15	0.18	0.04	0.08	0.30		c0.09	c0.31	
v/s Ratio Perm									c0.33			0.20
v/c Ratio	0.55	0.93		0.89	0.76	0.19	0.82	0.84	0.33	0.85	0.83	0.20
Uniform Delay, d1	51.8	50.5		52.6	46.2	39.5	57.5	38.3	0.0	57.0	37.5	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.94	0.53	1.00	0.92	0.50	1.00
Incremental Delay, d2	1.4	13.8		14.9	2.9	0.2	1.6	0.4	0.1	11.2	2.4	0.2
Delay (s)	53.2	64.3		67.5	49.0	39.8	55.6	20.6	0.1	63.8	21.3	0.2
Level of Service	D	E		E	D	D	E	C	A	E	C	A
Approach Delay (s)		61.9			53.7			20.2			23.9	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	90.2%	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												
Volume (vph)	101	442	159	334	657	726	242	1932	220	497	1945	120
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	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.86		0.97	0.91	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3418		1787	3574	1561	1805	6349		3433	5136	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1787	3418		1787	3574	1561	1805	6349		3433	5136	1583
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)	101	442	159	334	657	726	242	1932	220	497	1945	120
RTOR Reduction (vph)	0	28	0	0	0	206	0	15	0	0	0	51
Lane Group Flow (vph)	101	573	0	334	657	520	242	2137	0	497	1945	69
Confl. Peds. (#/hr)			10			7			12			6
Confl. Bikes (#/hr)			2			5			1			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	1%	0%	1%	2%	2%	1%	2%
Turn Type	Prot			Prot		Perm	Prot			Prot		Prot
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases						8						
Actuated Green, G (s)	7.0	31.0		18.0	42.0	42.0	15.0	44.0		17.0	46.0	46.0
Effective Green, g (s)	7.0	31.0		18.0	42.0	42.0	15.0	44.0		17.0	46.0	46.0
Actuated g/C Ratio	0.05	0.24		0.14	0.32	0.32	0.12	0.34		0.13	0.35	0.35
Clearance Time (s)	5.0	5.0		5.0	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)	96	815		247	1155	504	208	2149		449	1817	560
v/s Ratio Prot	0.06	0.17		c0.19	0.18		c0.13	0.34		0.14	c0.38	0.04
v/s Ratio Perm						c0.33						
v/c Ratio	1.05	0.70		1.35	0.57	1.03	1.16	0.99		1.11	1.07	0.12
Uniform Delay, d1	61.5	45.3		56.0	36.5	44.0	57.5	42.9		56.5	42.0	28.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.09	0.49		0.53	0.37	0.15
Incremental Delay, d2	106.7	2.8		182.8	0.6	48.2	109.2	16.7		63.8	38.0	0.2
Delay (s)	168.2	48.1		238.8	37.1	92.2	171.7	37.7		93.9	53.6	4.5
Level of Service	F	D		F	D	F	F	D		F	D	A
Approach Delay (s)		65.3			99.7			51.2			59.1	
Approach LOS		E			F			D			E	

Intersection Summary			
HCM Average Control Delay	66.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	113.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	23	10	396	7	541	21	1518	112	242	2039	29
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	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	1.00	0.86		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.85	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1752		1805	1526	1519	1805	6398		1787	5123	
Flt Permitted	0.58	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1110	1752		1805	1526	1519	1805	6398		1787	5123	
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)	57	23	10	396	7	541	21	1518	112	242	2039	29
RTOR Reduction (vph)	0	9	0	0	169	176	0	8	0	0	1	0
Lane Group Flow (vph)	57	24	0	396	103	100	21	1622	0	242	2067	0
Confl. Peds. (#/hr)			2				5		8			5
Heavy Vehicles (%)	0%	0%	10%	0%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Prot		Prot	Prot			Prot		
Protected Phases		4		3	8	8	5	2		1	6	
Permitted Phases	4											
Actuated Green, G (s)	12.0	12.0		30.2	47.2	47.2	4.2	45.8		22.0	63.6	
Effective Green, g (s)	12.0	12.0		30.2	47.2	47.2	4.2	45.8		22.0	63.6	
Actuated g/C Ratio	0.09	0.09		0.23	0.36	0.36	0.03	0.35		0.17	0.49	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	102	162		419	554	552	58	2254		302	2506	
v/s Ratio Prot		0.01		c0.22	0.07	0.07	0.01	c0.25		0.14	c0.40	
v/s Ratio Perm	c0.05											
v/c Ratio	0.56	0.15		0.95	0.19	0.18	0.36	0.72		0.80	0.82	
Uniform Delay, d1	56.5	54.3		49.1	28.3	28.2	61.6	36.5		51.9	28.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.05	0.39	
Incremental Delay, d2	6.5	0.4		30.1	0.2	0.2	3.8	2.0		1.4	0.3	
Delay (s)	63.0	54.7		79.2	28.4	28.4	65.4	38.5		55.8	11.3	
Level of Service	E	D		E	C	C	E	D		E	B	
Approach Delay (s)		59.9			49.7			38.9			16.0	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	302	979	309	182	1022	225	300	917	65	365	1468
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		5.0	5.0
Lane Util. Factor		0.95	0.91		1.00	0.91		0.97	0.91		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.97		1.00	0.99		1.00	1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1715	4917		1770	4956		3467	5060		3502	5187
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1715	4917		1770	4956		3467	5060		3502	5187
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)	0	302	979	309	182	1022	225	300	917	65	365	1468
RTOR Reduction (vph)	0	0	38	0	0	23	0	0	5	0	0	0
Lane Group Flow (vph)	0	302	1250	0	182	1224	0	300	977	0	365	1468
Confl. Peds. (#/hr)				10			16			15		
Confl. Bikes (#/hr)				4								
Heavy Vehicles (%)	2%	0%	1%	1%	2%	1%	2%	1%	1%	5%	0%	0%
Turn Type	custom	Prot			Prot			Prot			Prot	
Protected Phases		7	4		3	8		5	2		1	6
Permitted Phases	7											
Actuated Green, G (s)		27.7	51.3		18.0	41.6		14.9	34.9		25.8	45.8
Effective Green, g (s)		27.7	51.3		18.0	41.6		14.9	34.9		25.8	45.8
Actuated g/C Ratio		0.18	0.34		0.12	0.28		0.10	0.23		0.17	0.31
Clearance Time (s)		5.0	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
Lane Grp Cap (vph)		317	1682		212	1374		344	1177		602	1584
v/s Ratio Prot		c0.18	0.25		0.10	c0.25		c0.09	0.19		0.10	c0.28
v/s Ratio Perm												
v/c Ratio		0.95	0.74		0.86	0.89		0.87	0.83		0.61	0.93
Uniform Delay, d1		60.5	43.5		64.8	52.0		66.6	54.7		57.4	50.5
Progression Factor		1.00	1.00		1.08	0.44		1.00	1.00		1.00	1.00
Incremental Delay, d2		37.9	3.0		14.9	4.6		20.8	5.0		1.7	9.7
Delay (s)		98.4	46.6		85.0	27.4		87.4	59.7		59.1	60.2
Level of Service		F	D		F	C		F	E		E	E
Approach Delay (s)			56.4			34.7			66.2			56.7
Approach LOS			E			C			E			E

Intersection Summary			
HCM Average Control Delay	53.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	508
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1563
Flt Permitted	1.00
Satd. Flow (perm)	1563
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	508
RTOR Reduction (vph)	247
Lane Group Flow (vph)	261
Confl. Peds. (#/hr)	7
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	1%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	45.8
Effective Green, g (s)	45.8
Actuated g/C Ratio	0.31
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	477
v/s Ratio Prot	
v/s Ratio Perm	0.17
v/c Ratio	0.55
Uniform Delay, d1	43.4
Progression Factor	1.00
Incremental Delay, d2	1.3
Delay (s)	44.7
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1	3	73	1	369	3	1136	128	417	1151	8
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		5.0	5.0	
Lane Util. Factor		1.00		1.00	0.95	0.95	1.00	0.95		0.97	0.95	
Frpb, ped/bikes		1.00		1.00	0.99	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.97		1.00	0.85	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1772		1785	1470	1468	1805	3385		3467	3571	
Flt Permitted		0.69		0.75	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1269		1407	1470	1468	1805	3385		3467	3571	
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)	9	1	3	73	1	369	3	1136	128	417	1151	8
RTOR Reduction (vph)	0	3	0	0	161	160	0	7	0	0	0	0
Lane Group Flow (vph)	0	10	0	73	25	24	3	1257	0	417	1159	0
Confl. Peds. (#/hr)	2		1	1		2						
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	3%	0%	5%	3%	1%	1%	0%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.3		11.3	11.3	11.3	0.9	45.1		16.4	60.6	
Effective Green, g (s)		11.3		11.3	11.3	11.3	0.9	45.1		16.4	60.6	
Actuated g/C Ratio		0.13		0.13	0.13	0.13	0.01	0.51		0.19	0.69	
Clearance Time (s)		5.0		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	
Lane Grp Cap (vph)		163		181	189	189	19	1739		648	2465	
v/s Ratio Prot					0.02		0.00	c0.37		c0.12	0.32	
v/s Ratio Perm		0.01		c0.05		0.02						
v/c Ratio		0.06		0.40	0.13	0.13	0.16	0.72		0.64	0.47	
Uniform Delay, d1		33.6		35.2	33.9	33.9	43.1	16.5		33.0	6.2	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2		1.5	0.3	0.3	3.9	1.5		2.2	0.1	
Delay (s)		33.8		36.6	34.2	34.2	46.9	18.0		35.2	6.4	
Level of Service		C		D	C	C	D	B		D	A	
Approach Delay (s)		33.8			34.6			18.1			14.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	87.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.3%	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												
Volume (vph)	181	446	17	225	349	84	19	868	212	129	1128	294
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1626	3369		1787	1900	1563	1805	3539	1568	1770	3574	1615
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1626	3369		1787	1900	1563	1805	3539	1568	1770	3574	1615
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)	181	446	17	225	349	84	19	868	212	129	1128	294
RTOR Reduction (vph)	0	2	0	0	0	52	0	0	57	0	0	177
Lane Group Flow (vph)	163	479	0	225	349	32	19	868	155	129	1128	117
Confl. Peds. (#/hr)						1						
Heavy Vehicles (%)	1%	2%	0%	1%	0%	2%	0%	2%	3%	2%	1%	0%
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	23.8	23.8		27.4	27.4	27.4	2.4	38.5	38.5	12.4	48.5	48.5
Effective Green, g (s)	23.8	23.8		27.4	27.4	27.4	2.4	38.5	38.5	12.4	48.5	48.5
Actuated g/C Ratio	0.19	0.19		0.22	0.22	0.22	0.02	0.32	0.32	0.10	0.40	0.40
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	317	657		401	426	351	35	1116	494	180	1420	642
v/s Ratio Prot	0.10	c0.14		0.13	c0.18		0.01	0.25		c0.07	c0.32	
v/s Ratio Perm						0.02			0.10			0.07
v/c Ratio	0.51	0.73		0.56	0.82	0.09	0.54	0.78	0.31	0.72	0.79	0.18
Uniform Delay, d1	44.0	46.1		42.0	45.0	37.5	59.3	37.9	31.8	53.1	32.4	23.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	4.1		1.8	11.7	0.1	16.1	3.5	0.4	12.7	3.2	0.1
Delay (s)	45.4	50.2		43.8	56.7	37.6	75.4	41.4	32.1	65.9	35.6	24.0
Level of Service	D	D		D	E	D	E	D	C	E	D	C
Approach Delay (s)		49.0			49.8			40.2			35.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	122.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	82.3%	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												
Volume (vph)	96	1235	72	72	1250	86	194	20	207	115	48	245
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1736	3535		1805	3495		1715	1521	1544	1770	1456	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (perm)	1736	3535		1805	3495		1715	1521	1544	1770	1456	
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)	96	1235	72	72	1250	86	194	20	207	115	48	245
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	146	0	126	0
Lane Group Flow (vph)	96	1304	0	72	1333	0	107	107	61	115	167	0
Confl. Peds. (#/hr)			3			2			25			
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	1%	3%	0%	1%	18%	0%	75%	0%	2%	76%	2%
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	12.3	61.0		6.7	55.4		20.1	20.1	20.1	19.0	19.0	
Effective Green, g (s)	12.3	61.0		6.7	55.4		20.1	20.1	20.1	19.0	19.0	
Actuated g/C Ratio	0.10	0.48		0.05	0.44		0.16	0.16	0.16	0.15	0.15	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	168	1701		95	1527		272	241	245	265	218	
v/s Ratio Prot	0.06	c0.37		0.04	c0.38		0.06	c0.07		0.06	c0.11	
v/s Ratio Perm									0.04			
v/c Ratio	0.57	0.77		0.76	0.87		0.39	0.44	0.25	0.43	0.77	
Uniform Delay, d1	54.7	27.1		59.2	32.5		47.9	48.3	46.8	49.0	51.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.6	2.1		28.6	5.8		0.9	1.3	0.5	1.1	14.8	
Delay (s)	59.4	29.2		87.9	38.3		48.8	49.6	47.3	50.2	66.6	
Level of Service	E	C		F	D		D	D	D	D	E	
Approach Delay (s)		31.2			40.8			48.3			62.0	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	126.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	93.2%	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												
Volume (vph)	1	1632	60	53	1091	8	90	7	98	20	5	16
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1805	3550		1770	3570		1633	1660	1578	1715	1751	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1805	3550		1770	3570		1633	1660	1578	1715	1751	1615
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)	1	1632	60	53	1091	8	90	7	98	20	5	16
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	88	0	0	15
Lane Group Flow (vph)	1	1691	0	53	1099	0	49	48	10	12	13	1
Confl. Peds. (#/hr)			5			5			1			
Confl. Bikes (#/hr)			4			1						
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	5%	0%	1%	0%	0%	0%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	1.2	75.7		7.9	82.4		12.1	12.1	12.1	4.3	4.3	4.3
Effective Green, g (s)	1.2	75.7		7.9	82.4		12.1	12.1	12.1	4.3	4.3	4.3
Actuated g/C Ratio	0.01	0.63		0.07	0.69		0.10	0.10	0.10	0.04	0.04	0.04
Clearance Time (s)	5.0	5.0		5.0	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)	18	2239		117	2451		165	167	159	61	63	58
v/s Ratio Prot	0.00	c0.48		c0.03	0.31		c0.03	0.03		0.01	c0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.06	0.76		0.45	0.45		0.30	0.29	0.06	0.20	0.21	0.01
Uniform Delay, d1	58.8	15.6		54.0	8.5		50.0	50.0	48.8	56.2	56.2	55.8
Progression Factor	1.00	1.00		1.01	0.78		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	2.4		2.6	0.6		1.0	1.0	0.2	1.6	1.6	0.1
Delay (s)	60.1	18.0		57.3	7.2		51.0	50.9	49.0	57.8	57.8	55.9
Level of Service	E	B		E	A		D	D	D	E	E	E
Approach Delay (s)		18.1			9.5			50.0			57.0	
Approach LOS		B			A			D			E	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	29	814	696	50	57	64
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	814	696	50	57	64
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1310			
pX, platoon unblocked	0.99				0.99	0.99
vC, conflicting volume	748				1188	375
vC1, stage 1 conf vol					723	
vC2, stage 2 conf vol					465	
vCu, unblocked vol	716				1162	338
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				85	90
cM capacity (veh/h)	854				388	654

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	29	407	407	464	282	57	64
Volume Left	29	0	0	0	0	57	0
Volume Right	0	0	0	0	50	0	64
cSH	854	1700	1700	1700	1700	388	654
Volume to Capacity	0.03	0.24	0.24	0.27	0.17	0.15	0.10
Queue Length 95th (ft)	3	0	0	0	0	13	8
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	15.9	11.1
Lane LOS	A					C	B
Approach Delay (s)	0.3			0.0		13.4	
Approach LOS						B	

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	773	11	42	529	259	16	8	58	257	10	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	0.87		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	3610	1576	1805	3610	1578	1805	1620		1805	1900	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3610	1576	1805	3610	1578	1805	1620		1805	1900	1615
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)	32	773	11	42	529	259	16	8	58	257	10	90
RTOR Reduction (vph)	0	0	6	0	0	172	0	54	0	0	0	69
Lane Group Flow (vph)	32	773	5	42	529	87	16	12	0	257	10	21
Confl. Peds. (#/hr)			3			2			2			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.0	24.2	24.2	2.0	24.2	24.2	5.1	5.1		16.4	16.4	16.4
Effective Green, g (s)	2.0	24.2	24.2	2.0	24.2	24.2	5.1	5.1		16.4	16.4	16.4
Actuated g/C Ratio	0.03	0.34	0.34	0.03	0.34	0.34	0.07	0.07		0.23	0.23	0.23
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
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)	50	1218	532	50	1218	533	128	115		413	435	369
v/s Ratio Prot	0.02	c0.21		c0.02	0.15		c0.01	0.01		c0.14	0.01	
v/s Ratio Perm			0.00			0.06						0.01
v/c Ratio	0.64	0.63	0.01	0.84	0.43	0.16	0.12	0.11		0.62	0.02	0.06
Uniform Delay, d1	34.5	20.0	15.8	34.7	18.4	16.7	31.2	31.2		24.9	21.4	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	24.7	1.1	0.0	69.8	0.2	0.1	0.4	0.4		2.9	0.0	0.1
Delay (s)	59.2	21.1	15.8	104.5	18.7	16.8	31.7	31.6		27.8	21.5	21.7
Level of Service	E	C	B	F	B	B	C	C		C	C	C
Approach Delay (s)		22.5			22.4			31.6			26.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	24.0
Intersection Capacity Utilization	60.6%	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												
Volume (vph)	114	940	110	195	1025	115	177	1326	190	219	1611	169
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3502	3574	1572	3502	5187	1554	3502	4969		3467	5048	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3502	3574	1572	3502	5187	1554	3502	4969		3467	5048	
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)	114	940	110	195	1025	115	177	1326	190	219	1611	169
RTOR Reduction (vph)	0	0	34	0	0	52	0	16	0	0	10	0
Lane Group Flow (vph)	114	940	76	195	1025	63	177	1500	0	219	1770	0
Confl. Peds. (#/hr)			12			6			10			18
Confl. Bikes (#/hr)			5			1			2			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	0%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.7	35.3	35.3	8.9	36.5	36.5	8.0	43.5		9.9	45.4	
Effective Green, g (s)	7.7	35.3	35.3	8.9	36.5	36.5	8.0	43.5		9.9	45.4	
Actuated g/C Ratio	0.07	0.30	0.30	0.08	0.31	0.31	0.07	0.37		0.08	0.39	
Clearance Time (s)	5.0	5.0	5.0	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)	229	1073	472	265	1610	482	238	1838		292	1949	
v/s Ratio Prot	0.03	c0.26		c0.06	0.20		0.05	0.30		c0.06	c0.35	
v/s Ratio Perm			0.05			0.04						
v/c Ratio	0.50	0.88	0.16	0.74	0.64	0.13	0.74	0.82		0.75	0.91	
Uniform Delay, d1	53.1	39.1	30.3	53.2	34.9	29.2	53.8	33.4		52.6	34.1	
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	1.7	8.2	0.2	10.1	0.8	0.1	11.9	2.9		10.3	6.6	
Delay (s)	54.8	47.3	30.4	63.3	35.7	29.3	65.7	36.4		63.0	40.7	
Level of Service	D	D	C	E	D	C	E	D		E	D	
Approach Delay (s)		46.4			39.2			39.4			43.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	89.9%	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												
Volume (vph)	123	1155	99	350	1005	156	126	1381	309	309	1445	144
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	5065		3467	3574	1561	3502	5085	1542	3467	5059	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	5065		3467	3574	1561	3502	5085	1542	3467	5059	
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)	123	1155	99	350	1005	156	126	1381	309	309	1445	144
RTOR Reduction (vph)	0	8	0	0	0	44	0	0	110	0	10	0
Lane Group Flow (vph)	123	1246	0	350	1005	112	126	1381	199	309	1579	0
Confl. Peds. (#/hr)			12			2			13			13
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	0%	2%	2%	1%	1%	0%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	7.0	32.6		14.5	40.1	40.1	7.0	38.0	38.0	12.8	43.8	
Effective Green, g (s)	7.0	32.6		14.5	40.1	40.1	7.0	38.0	38.0	12.8	43.8	
Actuated g/C Ratio	0.06	0.28		0.12	0.34	0.34	0.06	0.32	0.32	0.11	0.37	
Clearance Time (s)	5.0	5.0		5.0	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)	206	1401		426	1216	531	208	1639	497	376	1879	
v/s Ratio Prot	0.04	0.25		c0.10	c0.28		0.04	0.27		c0.09	c0.31	
v/s Ratio Perm						0.07			0.13			
v/c Ratio	0.60	0.89		0.82	0.83	0.21	0.61	0.84	0.40	0.82	0.84	
Uniform Delay, d1	54.1	40.9		50.4	35.7	27.6	54.1	37.2	31.1	51.4	33.9	
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	4.6	7.3		12.0	4.7	0.2	4.9	4.1	0.5	13.5	3.6	
Delay (s)	58.7	48.2		62.5	40.4	27.8	59.0	41.3	31.6	64.9	37.4	
Level of Service	E	D		E	D	C	E	D	C	E	D	
Approach Delay (s)		49.1			44.2			40.9			41.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	43.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	117.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.0%	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												
Volume (vph)	184	1181	271	509	1152	221	270	1462	661	391	1350	199
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1558	3433	6471	1567	3467	6408	1522	3467	5136	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1558	3433	6471	1567	3467	6408	1522	3467	5136	1565
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)	184	1181	271	509	1152	221	270	1462	661	391	1350	199
RTOR Reduction (vph)	0	0	57	0	0	99	0	0	181	0	0	126
Lane Group Flow (vph)	184	1181	214	509	1152	122	270	1462	480	391	1350	73
Confl. Peds. (#/hr)			12			7			23			8
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%	1%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.8	40.2	40.2	25.1	52.5	52.5	16.5	56.8	56.8	19.0	59.3	59.3
Effective Green, g (s)	12.8	40.2	40.2	25.1	52.5	52.5	16.5	56.8	56.8	19.0	59.3	59.3
Actuated g/C Ratio	0.08	0.25	0.25	0.16	0.33	0.33	0.10	0.35	0.35	0.12	0.37	0.37
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	275	1282	389	535	2109	511	355	2259	537	409	1891	576
v/s Ratio Prot	0.05	c0.23		c0.15	0.18		0.08	0.23		c0.11	0.26	
v/s Ratio Perm			0.14			0.08			c0.32			0.05
v/c Ratio	0.67	0.92	0.55	0.95	0.55	0.24	0.76	0.65	0.89	0.96	0.71	0.13
Uniform Delay, d1	72.1	58.9	52.6	67.4	44.5	39.7	70.4	43.7	49.3	70.6	43.6	33.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	10.9	1.7	27.1	0.3	0.2	9.3	0.6	17.2	33.0	1.3	0.1
Delay (s)	78.1	69.8	54.3	94.5	44.8	39.9	79.6	44.4	66.5	103.6	44.9	33.8
Level of Service	E	E	D	F	D	D	E	D	E	F	D	C
Approach Delay (s)		68.2			57.7			54.5			55.6	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	161.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	632	965	261	372	680	187	189	1501	658	156	1419	409
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
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)	632	965	261	372	680	187	189	1501	658	156	1419	409
RTOR Reduction (vph)	0	0	4	0	0	3	0	0	18	0	0	20
Lane Group Flow (vph)	632	965	257	372	680	184	189	1501	640	156	1419	389
Confl. Peds. (#/hr)			24			2			14			9
Confl. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	1%	1%	1%	0%	1%	1%	0%	1%	1%	1%	1%	2%
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	26.4	42.8	59.8	18.0	34.4	46.4	12.0	42.1	65.1	12.0	42.1	68.5
Effective Green, g (s)	26.4	42.8	59.8	18.0	34.4	46.4	12.0	42.1	65.1	12.0	42.1	68.5
Actuated g/C Ratio	0.20	0.32	0.44	0.13	0.26	0.34	0.09	0.31	0.48	0.09	0.31	0.51
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	678	1134	709	467	911	550	161	1603	772	159	1603	804
v/s Ratio Prot	0.18	c0.27	0.16	0.11	0.19	0.11	c0.10	c0.29	c0.40	0.09	0.28	0.25
v/s Ratio Perm												
v/c Ratio	0.93	0.85	0.36	0.80	0.75	0.33	1.17	0.94	0.83	0.98	0.89	0.48
Uniform Delay, d1	53.4	43.1	24.9	56.7	46.2	32.8	61.5	45.1	30.1	61.3	44.1	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.7	6.3	0.3	9.1	3.4	0.4	125.4	10.7	7.3	65.4	6.2	0.5
Delay (s)	73.1	49.4	25.2	65.8	49.6	33.2	186.8	55.8	37.4	126.8	50.3	22.1
Level of Service	E	D	C	E	D	C	F	E	D	F	D	C
Approach Delay (s)		54.0			52.0			61.2			50.5	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	55.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	134.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	367	83	44	1847	1718	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1578	1770	5136	5136	1544
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1578	1770	5136	5136	1544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	367	83	44	1847	1718	410
RTOR Reduction (vph)	0	62	0	0	0	123
Lane Group Flow (vph)	367	21	44	1847	1718	287
Confl. Peds. (#/hr)		1				6
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	29.9	29.9	5.9	80.1	69.2	69.2
Effective Green, g (s)	29.9	29.9	5.9	80.1	69.2	69.2
Actuated g/C Ratio	0.25	0.25	0.05	0.67	0.58	0.58
Clearance Time (s)	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
Lane Grp Cap (vph)	450	393	87	3428	2962	890
v/s Ratio Prot	c0.20		0.02	c0.36	c0.33	
v/s Ratio Perm		0.01				0.19
v/c Ratio	0.82	0.05	0.51	0.54	0.58	0.32
Uniform Delay, d1	42.5	34.3	55.6	10.4	16.2	13.2
Progression Factor	1.00	1.00	0.68	0.52	1.00	1.00
Incremental Delay, d2	10.9	0.1	3.6	0.5	0.8	1.0
Delay (s)	53.3	34.3	41.2	5.8	17.0	14.2
Level of Service	D	C	D	A	B	B
Approach Delay (s)	49.8			6.7	16.4	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.2%	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												
Volume (vph)	507	46	515	62	36	59	376	1261	18	32	1446	263
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	5.0	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	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	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1579	1715	1780	1583	3467	5122		1752	5136	1567
Flt Permitted	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	1900	1579	1715	1780	1583	3467	5122		1752	5136	1567
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)	507	46	515	62	36	59	376	1261	18	32	1446	263
RTOR Reduction (vph)	0	0	219	0	0	55	0	1	0	0	0	110
Lane Group Flow (vph)	507	46	296	48	50	4	376	1278	0	32	1446	153
Confl. Peds. (#/hr)			8						15			5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	1%	1%	0%	3%	1%	1%
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	35.6	35.6	35.6	7.7	7.7	7.7	15.0	51.9		4.8	41.7	41.7
Effective Green, g (s)	35.6	35.6	35.6	7.7	7.7	7.7	15.0	51.9		4.8	41.7	41.7
Actuated g/C Ratio	0.30	0.30	0.30	0.06	0.06	0.06	0.12	0.43		0.04	0.35	0.35
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	535	564	468	110	114	102	433	2215		70	1785	545
v/s Ratio Prot	c0.28	0.02		0.03	c0.03		c0.11	0.25		0.02	c0.28	
v/s Ratio Perm			0.19			0.00						0.10
v/c Ratio	0.95	0.08	0.63	0.44	0.44	0.04	0.87	0.58		0.46	0.81	0.28
Uniform Delay, d1	41.3	30.4	36.5	54.1	54.1	52.7	51.5	25.7		56.3	35.6	28.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.42		0.64	0.56	0.35
Incremental Delay, d2	26.1	0.1	2.8	2.8	2.7	0.1	12.7	0.8		3.9	3.5	1.1
Delay (s)	67.4	30.5	39.3	56.8	56.8	52.8	50.4	11.6		39.8	23.6	10.9
Level of Service	E	C	D	E	E	D	D	B		D	C	B
Approach Delay (s)		52.3			55.3			20.4			22.0	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.9%	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												
Volume (vph)	354	126	42	85	59	116	29	1228	29	245	1568	115
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	5.0		5.0	5.0	
Lane Util. Factor	0.95	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1707		1805	1900	1552	1805	5116		1805	5067	
Flt Permitted	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1698	1707		1805	1900	1552	1805	5116		1805	5067	
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)	354	126	42	85	59	116	29	1228	29	245	1568	115
RTOR Reduction (vph)	0	6	0	0	0	103	0	2	0	0	5	0
Lane Group Flow (vph)	262	254	0	85	59	13	29	1255	0	245	1678	0
Confl. Peds. (#/hr)			2			3			2			6
Confl. Bikes (#/hr)						2						1
Heavy Vehicles (%)	1%	0%	5%	0%	0%	2%	0%	1%	0%	0%	1%	2%
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	23.6	23.6		13.7	13.7	13.7	4.5	40.1		22.6	58.2	
Effective Green, g (s)	23.6	23.6		13.7	13.7	13.7	4.5	40.1		22.6	58.2	
Actuated g/C Ratio	0.20	0.20		0.11	0.11	0.11	0.04	0.33		0.19	0.49	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	334	336		206	217	177	68	1710		340	2457	
v/s Ratio Prot	c0.15	0.15		c0.05	0.03		0.02	c0.25		c0.14	0.33	
v/s Ratio Perm						0.01						
v/c Ratio	0.78	0.75		0.41	0.27	0.07	0.43	0.73		0.72	0.68	
Uniform Delay, d1	45.8	45.5		49.4	48.6	47.5	56.5	35.2		45.7	23.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.48	0.29	
Incremental Delay, d2	11.4	9.3		1.3	0.7	0.2	4.3	2.8		4.9	1.0	
Delay (s)	57.2	54.7		50.8	49.3	47.7	60.7	38.1		72.8	8.0	
Level of Service	E	D		D	D	D	E	D		E	A	
Approach Delay (s)		56.0			49.0			38.6			16.3	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.2%	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												
Volume (vph)	198	1279	50	391	1294	402	76	647	362	468	983	110
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	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.95		0.97	0.91		1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3516		3433	4899		1787	5136	1529	1805	5080	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	3516		3433	4899		1787	5136	1529	1805	5080	
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)	198	1279	50	391	1294	402	76	647	362	468	983	110
RTOR Reduction (vph)	0	2	0	0	38	0	0	0	156	0	9	0
Lane Group Flow (vph)	198	1327	0	391	1658	0	76	647	206	468	1084	0
Confl. Peds. (#/hr)			7			24			15			10
Heavy Vehicles (%)	1%	2%	2%	2%	1%	1%	1%	1%	2%	0%	0%	3%
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	10.5	52.0		14.0	55.5		10.6	26.4	26.4	37.6	53.4	
Effective Green, g (s)	10.5	52.0		14.0	55.5		10.6	26.4	26.4	37.6	53.4	
Actuated g/C Ratio	0.07	0.35		0.09	0.37		0.07	0.18	0.18	0.25	0.36	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	243	1219		320	1813		126	904	269	452	1808	
v/s Ratio Prot	0.06	c0.38		c0.11	0.34		0.04	0.13		c0.26	0.21	
v/s Ratio Perm									c0.13			
v/c Ratio	0.81	1.09		1.22	0.91		0.60	0.72	0.77	1.04	0.60	
Uniform Delay, d1	68.8	49.0		68.0	45.0		67.7	58.3	58.9	56.2	39.5	
Progression Factor	0.85	0.80		1.10	0.43		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.4	50.6		115.1	5.3		7.9	2.7	12.3	51.8	0.5	
Delay (s)	72.7	89.6		189.7	24.5		75.6	61.0	71.2	108.0	40.1	
Level of Service	E	F		F	C		E	E	E	F	D	
Approach Delay (s)		87.4			55.4			65.4			60.4	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM Average Control Delay	66.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	108.1%	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												
Volume (vph)	166	293	116	41	155	157	137	794	60	278	1081	115
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	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	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1800	1900	1592	1669	1881	1574	1787	5069		1805	5101	
Flt Permitted	0.66	1.00	1.00	0.41	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1241	1900	1592	721	1881	1574	1787	5069		1805	5101	
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)	166	293	116	41	155	157	137	794	60	278	1081	115
RTOR Reduction (vph)	0	0	86	0	0	117	0	7	0	0	11	0
Lane Group Flow (vph)	166	293	30	41	155	40	137	847	0	278	1185	0
Confl. Peds. (#/hr)	5		3	3		5			4			2
Heavy Vehicles (%)	0%	0%	0%	8%	1%	1%	1%	1%	2%	0%	0%	0%
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	18.8	18.8	18.8	18.8	18.8	18.8	11.9	21.2		17.9	27.2	
Effective Green, g (s)	18.8	18.8	18.8	18.8	18.8	18.8	11.9	21.2		17.9	27.2	
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.29		0.25	0.37	
Clearance Time (s)	5.0	5.0	5.0	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)	320	490	411	186	485	406	292	1474		443	1903	
v/s Ratio Prot		c0.15			0.08		0.08	0.17		c0.15	c0.23	
v/s Ratio Perm	0.13		0.02	0.06		0.03						
v/c Ratio	0.52	0.60	0.07	0.22	0.32	0.10	0.47	0.57		0.63	0.62	
Uniform Delay, d1	23.2	23.7	20.5	21.3	21.9	20.6	27.6	22.0		24.5	18.7	
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	1.4	2.0	0.1	0.6	0.4	0.1	1.2	0.5		2.8	0.6	
Delay (s)	24.6	25.7	20.5	21.9	22.3	20.7	28.8	22.6		27.3	19.3	
Level of Service	C	C	C	C	C	C	C	C		C	B	
Approach Delay (s)		24.3			21.5			23.4			20.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	72.9	Sum of lost time (s)	10.0
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												
Volume (vph)	290	475	42	567	390	74	48	640	398	140	855	211
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	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3423		3502	3509		1770	3574	1583	1805	3574	1563
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3423		3502	3509		1770	3574	1583	1805	3574	1563
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)	290	475	42	567	390	74	48	640	398	140	855	211
RTOR Reduction (vph)	0	6	0	0	14	0	0	0	209	0	0	142
Lane Group Flow (vph)	290	511	0	567	450	0	48	640	189	140	855	69
Confl. Peds. (#/hr)			1			5						2
Heavy Vehicles (%)	1%	4%	5%	0%	0%	1%	2%	1%	2%	0%	1%	1%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	13.3	21.8		19.4	27.9		5.9	29.5	29.5	9.2	32.8	32.8
Effective Green, g (s)	13.3	21.8		19.4	27.9		5.9	29.5	29.5	9.2	32.8	32.8
Actuated g/C Ratio	0.13	0.22		0.19	0.28		0.06	0.30	0.30	0.09	0.33	0.33
Clearance Time (s)	5.0	5.0		5.0	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)	462	747		680	980		105	1055	467	166	1173	513
v/s Ratio Prot	0.08	c0.15		c0.16	0.13		0.03	0.18		c0.08	c0.24	
v/s Ratio Perm									0.12			0.04
v/c Ratio	0.63	0.68		0.83	0.46		0.46	0.61	0.40	0.84	0.73	0.14
Uniform Delay, d1	41.0	35.9		38.7	29.8		45.5	30.2	28.2	44.6	29.6	23.6
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	2.7	2.6		8.7	0.3		3.1	1.0	0.6	30.4	2.3	0.1
Delay (s)	43.6	38.5		47.4	30.1		48.6	31.2	28.7	75.0	31.9	23.7
Level of Service	D	D		D	C		D	C	C	E	C	C
Approach Delay (s)		40.3			39.6			31.1			35.5	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	99.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.2%	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												
Volume (vph)	65	1522	170	61	1060	66	153	59	54	84	172	83
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			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96		1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99			1.00	
Frt	1.00	0.98		1.00	1.00	0.85		0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1802	3494		1752	3574	1557		1772			1780	
Flt Permitted	0.22	1.00		0.07	1.00	1.00		0.52			0.84	
Satd. Flow (perm)	412	3494		130	3574	1557		948			1523	
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)	65	1522	170	61	1060	66	153	59	54	84	172	83
RTOR Reduction (vph)	0	7	0	0	0	24	0	8	0	0	10	0
Lane Group Flow (vph)	65	1685	0	61	1060	42	0	258	0	0	329	0
Confl. Peds. (#/hr)	4		17	17		4	18		10	10		18
Confl. Bikes (#/hr)			3			6						
Heavy Vehicles (%)	0%	1%	1%	3%	1%	0%	0%	0%	2%	0%	2%	0%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	75.8	75.8		75.8	75.8	75.8		34.2			34.2	
Effective Green, g (s)	75.8	75.8		75.8	75.8	75.8		34.2			34.2	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.29			0.29	
Clearance Time (s)	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	
Lane Grp Cap (vph)	260	2207		82	2258	984		270			434	
v/s Ratio Prot		c0.48			0.30							
v/s Ratio Perm	0.16			0.47		0.03		c0.27			0.22	
v/c Ratio	0.25	0.76		0.74	0.47	0.04		0.96			0.76	
Uniform Delay, d1	9.7	15.7		15.4	11.6	8.4		42.2			39.1	
Progression Factor	1.00	1.00		0.97	0.63	0.81		1.00			1.00	
Incremental Delay, d2	2.3	2.6		36.2	0.5	0.1		42.4			7.4	
Delay (s)	12.0	18.3		51.0	7.8	6.8		84.6			46.5	
Level of Service	B	B		D	A	A		F			D	
Approach Delay (s)		18.1			10.0			84.6			46.5	
Approach LOS		B			B			F			D	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	93.4%	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												
Volume (vph)	161	1764	165	207	1595	74	176	291	206	58	341	157
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	5061		1805	5093		1752	1881	1599	1805	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	5061		1805	5093		1752	1881	1599	1805	1900	1615
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)	161	1764	165	207	1595	74	176	291	206	58	341	157
RTOR Reduction (vph)	0	8	0	0	3	0	0	0	34	0	0	18
Lane Group Flow (vph)	161	1921	0	207	1666	0	176	291	172	58	341	139
Confl. Peds. (#/hr)			5			7			5			17
Confl. Bikes (#/hr)									2			5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	3%	1%	1%	0%	0%	0%
Turn Type	Prot			Prot			Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4		3	8		5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	15.6	57.1		17.5	59.0		15.6	36.0	58.5	7.5	27.9	48.5
Effective Green, g (s)	15.6	57.1		17.5	59.0		15.6	36.0	58.5	7.5	27.9	48.5
Actuated g/C Ratio	0.11	0.41		0.13	0.43		0.11	0.26	0.42	0.05	0.20	0.35
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	204	2093		229	2176		198	490	677	98	384	567
v/s Ratio Prot	0.09	c0.38		c0.11	0.33		c0.10	0.15	0.11	0.03	c0.18	0.09
v/s Ratio Perm												
v/c Ratio	0.79	0.92		0.90	0.77		0.89	0.59	0.25	0.59	0.89	0.25
Uniform Delay, d1	59.6	38.3		59.5	33.7		60.4	44.7	25.7	63.8	53.6	31.8
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	18.1	6.9		34.5	1.7		34.7	1.9	0.2	9.2	21.2	0.2
Delay (s)	77.7	45.2		94.0	35.3		95.1	46.6	25.9	73.0	74.7	32.0
Level of Service	E	D		F	D		F	D	C	E	E	C
Approach Delay (s)		47.7			41.8			52.9			62.5	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	138.1	Sum of lost time (s)	20.0
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												
Volume (vph)	72	1344	162	113	952	79	151	285	148	132	373	110
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3532		1805	3515		1787	1881	1574	1805	1881	1554
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3532		1805	3515		1787	1881	1574	1805	1881	1554
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)	72	1344	162	113	952	79	151	285	148	132	373	110
RTOR Reduction (vph)	0	8	0	0	4	0	0	0	116	0	0	46
Lane Group Flow (vph)	72	1498	0	113	1027	0	151	285	32	132	373	64
Confl. Peds. (#/hr)			12			11			12			24
Confl. Bikes (#/hr)			3			2			1			2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	3%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.1	50.7		9.0	52.6		10.0	26.0	26.0	14.3	30.3	30.3
Effective Green, g (s)	7.1	50.7		9.0	52.6		10.0	26.0	26.0	14.3	30.3	30.3
Actuated g/C Ratio	0.06	0.42		0.08	0.44		0.08	0.22	0.22	0.12	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	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)	107	1492		135	1541		149	408	341	215	475	392
v/s Ratio Prot	0.04	c0.42		0.06	c0.29		c0.08	0.15		0.07	c0.20	
v/s Ratio Perm									0.02			0.04
v/c Ratio	0.67	1.00		0.84	0.67		1.01	0.70	0.09	0.61	0.79	0.16
Uniform Delay, d1	55.3	34.6		54.8	26.7		55.0	43.4	37.6	50.2	41.8	35.0
Progression Factor	1.01	0.71		0.82	0.73		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.9	19.4		29.9	1.9		77.3	5.2	0.1	5.1	8.3	0.2
Delay (s)	65.9	43.9		74.8	21.6		132.3	48.5	37.7	55.3	50.1	35.2
Level of Service	E	D		E	C		F	D	D	E	D	D
Approach Delay (s)		44.9			26.8			67.5			48.6	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	98.6%	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												
Volume (vph)	136	1947	287	88	1883	115	200	221	82	211	283	155
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4973		1805	5080		1787	3370		1787	3361	
Flt Permitted	0.95	1.00		0.95	1.00		0.22	1.00		0.40	1.00	
Satd. Flow (perm)	1770	4973		1805	5080		415	3370		748	3361	
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)	136	1947	287	88	1883	115	200	221	82	211	283	155
RTOR Reduction (vph)	0	12	0	0	4	0	0	26	0	0	49	0
Lane Group Flow (vph)	136	2222	0	88	1994	0	200	277	0	211	389	0
Confl. Peds. (#/hr)			15			19			36			15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	0%	0%	1%	0%	1%	1%	0%	1%	0%	1%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)	17.8	78.8		10.9	71.9		40.3	24.2		40.3	24.2	
Effective Green, g (s)	17.8	78.8		10.9	71.9		40.3	24.2		40.3	24.2	
Actuated g/C Ratio	0.12	0.53		0.07	0.48		0.27	0.16		0.27	0.16	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	210	2612		131	2435		259	544		312	542	
v/s Ratio Prot	c0.08	c0.45		0.05	0.39		c0.08	0.08		0.07	0.12	
v/s Ratio Perm							c0.12			0.11		
v/c Ratio	0.65	0.85		0.67	0.82		0.77	0.51		0.68	0.72	
Uniform Delay, d1	63.1	30.5		67.8	33.5		45.9	57.5		45.7	59.7	
Progression Factor	0.94	0.66		0.87	0.55		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	1.5		10.6	2.7		13.3	0.8		5.7	4.5	
Delay (s)	62.2	21.8		69.3	21.2		59.2	58.2		51.4	64.1	
Level of Service	E	C		E	C		E	E		D	E	
Approach Delay (s)		24.1			23.3			58.6			60.0	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.5%	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												
Volume (vph)	59	1446	99	92	1112	66	56	73	75	93	186	73
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		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3527		1805	3507		1798	1730		1781	1795	
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00		0.56	1.00	
Satd. Flow (perm)	1805	3527		1805	3507		586	1730		1047	1795	
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)	59	1446	99	92	1112	66	56	73	75	93	186	73
RTOR Reduction (vph)	0	4	0	0	3	0	0	34	0	0	13	0
Lane Group Flow (vph)	59	1541	0	92	1175	0	56	114	0	93	246	0
Confl. Peds. (#/hr)			17			4	6		15	15		6
Confl. Bikes (#/hr)			5			3						
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	3%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	13.2	71.3		10.4	68.5		23.3	23.3		23.3	23.3	
Effective Green, g (s)	13.2	71.3		10.4	68.5		23.3	23.3		23.3	23.3	
Actuated g/C Ratio	0.11	0.59		0.09	0.57		0.19	0.19		0.19	0.19	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	199	2096		156	2002		114	336		203	349	
v/s Ratio Prot	0.03	c0.44		0.05	c0.33			0.07			c0.14	
v/s Ratio Perm							0.10			0.09		
v/c Ratio	0.30	0.74		0.59	0.59		0.49	0.34		0.46	0.71	
Uniform Delay, d1	49.1	17.6		52.7	16.6		43.1	41.7		42.8	45.1	
Progression Factor	0.60	0.31		1.03	0.78		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.0		3.3	0.7		3.3	0.6		1.6	6.4	
Delay (s)	29.6	6.4		57.8	13.7		46.4	42.3		44.4	51.5	
Level of Service	C	A		E	B		D	D		D	D	
Approach Delay (s)		7.3			16.9			43.4			49.6	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.9%	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												
Volume (vph)	65	1923	200	20	2131	43	122	50	13	75	102	82
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	4978		1805	5108		1783	1831		1763	1900	1570
Flt Permitted	0.95	1.00		0.95	1.00		0.60	1.00		0.72	1.00	1.00
Satd. Flow (perm)	1805	4978		1805	5108		1119	1831		1329	1900	1570
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)	65	1923	200	20	2131	43	122	50	13	75	102	82
RTOR Reduction (vph)	0	6	0	0	1	0	0	7	0	0	0	71
Lane Group Flow (vph)	65	2117	0	20	2173	0	122	56	0	75	102	11
Confl. Peds. (#/hr)			17			27	9		9	9		9
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.0	109.8		4.9	104.7		20.3	20.3		20.3	20.3	20.3
Effective Green, g (s)	10.0	109.8		4.9	104.7		20.3	20.3		20.3	20.3	20.3
Actuated g/C Ratio	0.07	0.73		0.03	0.70		0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	120	3644		59	3565		151	248		180	257	212
v/s Ratio Prot	0.04	c0.43		0.01	c0.43			0.03			0.05	
v/s Ratio Perm							c0.11			0.06		0.01
v/c Ratio	0.54	0.58		0.34	0.61		0.81	0.23		0.42	0.40	0.05
Uniform Delay, d1	67.8	9.4		71.0	11.9		63.0	57.8		59.4	59.3	56.5
Progression Factor	0.70	0.49		0.85	1.54		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.7	0.4		1.1	0.3		26.2	0.5		1.6	1.0	0.1
Delay (s)	50.0	4.9		61.3	18.6		89.1	58.3		61.0	60.3	56.6
Level of Service	D	A		E	B		F	E		E	E	E
Approach Delay (s)		6.3			19.0			78.6			59.3	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.3%	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												
Volume (vph)	283	950	114	100	834	159	127	829	121	395	1064	278
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5030		1787	5006		1787	5021		1805	3610	1573
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5030		1787	5006		1787	5021		1805	3610	1573
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)	283	950	114	100	834	159	127	829	121	395	1064	278
RTOR Reduction (vph)	0	10	0	0	20	0	0	14	0	0	0	140
Lane Group Flow (vph)	283	1054	0	100	973	0	127	936	0	395	1064	138
Confl. Peds. (#/hr)			10			6			13			4
Heavy Vehicles (%)	2%	1%	3%	1%	1%	0%	1%	1%	1%	0%	0%	1%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	19.1	39.3		12.1	32.3		12.3	31.7		27.2	46.6	46.6
Effective Green, g (s)	19.1	39.3		12.1	32.3		12.3	31.7		27.2	46.6	46.6
Actuated g/C Ratio	0.15	0.30		0.09	0.25		0.09	0.24		0.21	0.36	0.36
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	259	1517		166	1241		169	1222		377	1291	563
v/s Ratio Prot	c0.16	0.21		0.06	c0.19		0.07	0.19		c0.22	c0.29	
v/s Ratio Perm												0.09
v/c Ratio	1.09	0.69		0.60	0.78		0.75	0.77		1.05	0.82	0.25
Uniform Delay, d1	55.6	40.2		56.8	45.7		57.5	45.9		51.6	38.1	29.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	82.9	1.4		6.0	3.3		17.0	2.9		59.4	4.4	0.2
Delay (s)	138.5	41.6		62.8	49.1		74.6	48.8		110.9	42.5	29.7
Level of Service	F	D		E	D		E	D		F	D	C
Approach Delay (s)		62.0			50.3			51.8			56.0	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM Average Control Delay	55.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	130.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	98.8%	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												
Volume (vph)	177	1087	302	101	831	87	282	550	75	184	805	197
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3610	1536	1805	3574	1496	3335	3531		3467	3412	
Flt Permitted	0.12	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	216	3610	1536	213	3574	1496	3335	3531		3467	3412	
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)	177	1087	302	101	831	87	282	550	75	184	805	197
RTOR Reduction (vph)	0	0	80	0	0	61	0	9	0	0	18	0
Lane Group Flow (vph)	177	1087	222	101	831	26	282	616	0	184	984	0
Confl. Peds. (#/hr)			31			19			17			10
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	2%	0%	0%	0%	1%	4%	5%	0%	0%	1%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	50.1	39.4	39.4	42.5	35.6	35.6	12.0	43.3		10.4	41.7	
Effective Green, g (s)	50.1	39.4	39.4	42.5	35.6	35.6	12.0	43.3		10.4	41.7	
Actuated g/C Ratio	0.42	0.33	0.33	0.35	0.30	0.30	0.10	0.36		0.09	0.35	
Clearance Time (s)	5.0	5.0	5.0	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)	229	1185	504	167	1060	444	334	1274		300	1186	
v/s Ratio Prot	c0.07	c0.30		0.03	0.23		c0.08	0.17		0.05	c0.29	
v/s Ratio Perm	0.25		0.14	0.18		0.02						
v/c Ratio	0.77	0.92	0.44	0.60	0.78	0.06	0.84	0.48		0.61	0.83	
Uniform Delay, d1	26.5	38.7	31.6	30.3	38.7	30.2	53.1	29.7		52.9	35.9	
Progression Factor	1.10	0.56	0.34	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.9	8.3	0.4	6.1	3.9	0.1	17.4	1.3		3.7	6.8	
Delay (s)	40.2	30.1	11.1	36.4	42.5	30.3	70.5	31.0		56.6	42.7	
Level of Service	D	C	B	D	D	C	E	C		E	D	
Approach Delay (s)		27.5			40.9			43.3			44.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	37.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	89.1%	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												
Volume (vph)	157	1337	388	114	1515	151	483	615	92	168	814	158
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	4879		1736	5004		3502	3432		1736	3509	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	4879		1736	5004		3502	3432		1736	3509	
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)	157	1337	388	114	1515	151	483	615	92	168	814	158
RTOR Reduction (vph)	0	35	0	0	8	0	0	8	0	0	11	0
Lane Group Flow (vph)	157	1690	0	114	1658	0	483	699	0	168	961	0
Confl. Peds. (#/hr)			17			19			34			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	1%	2%	1%	4%	1%	5%	0%	2%	4%	4%	0%	0%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.9	55.7		11.2	52.0		21.0	44.4		18.7	42.1	
Effective Green, g (s)	14.9	55.7		11.2	52.0		21.0	44.4		18.7	42.1	
Actuated g/C Ratio	0.10	0.37		0.07	0.35		0.14	0.30		0.12	0.28	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	178	1812		130	1735		490	1016		216	985	
v/s Ratio Prot	c0.09	c0.35		0.07	0.33		c0.14	0.20		0.10	c0.27	
v/s Ratio Perm												
v/c Ratio	0.88	0.93		0.88	0.96		0.99	0.69		0.78	0.98	
Uniform Delay, d1	66.7	45.3		68.7	47.9		64.4	46.7		63.6	53.4	
Progression Factor	0.93	0.69		0.91	0.79		1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.0	8.9		39.7	12.1		36.6	2.0		16.0	22.7	
Delay (s)	93.8	40.0		102.0	50.1		101.0	48.6		79.7	76.2	
Level of Service	F	D		F	D		F	D		E	E	
Approach Delay (s)		44.5			53.4			69.9			76.7	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	58.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.6%	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												
Volume (vph)	133	1508	107	68	1535	118	151	326	114	163	322	178
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1800	4977		1732	4998		1752	3285		1703	3574	1548
Flt Permitted	0.11	1.00		0.12	1.00		0.40	1.00		0.26	1.00	1.00
Satd. Flow (perm)	209	4977		211	4998		740	3285		469	3574	1548
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)	133	1508	107	68	1535	118	151	326	114	163	322	178
RTOR Reduction (vph)	0	5	0	0	6	0	0	24	0	0	0	44
Lane Group Flow (vph)	133	1610	0	68	1647	0	151	416	0	163	322	134
Confl. Peds. (#/hr)	32		18	18		32			32			20
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	3%	2%	4%	2%	6%	3%	4%	4%	6%	1%	0%
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	100.4	100.4		100.4	100.4		34.6	27.6		34.6	27.6	27.6
Effective Green, g (s)	100.4	100.4		100.4	100.4		34.6	27.6		34.6	27.6	27.6
Actuated g/C Ratio	0.67	0.67		0.67	0.67		0.23	0.18		0.23	0.18	0.18
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	140	3331		141	3345		218	604		166	658	285
v/s Ratio Prot		0.32			0.33		0.03	0.13		c0.05	0.09	
v/s Ratio Perm	c0.64			0.32			0.13			c0.18		0.09
v/c Ratio	0.95	0.48		0.48	0.49		0.69	0.69		0.98	0.49	0.47
Uniform Delay, d1	22.5	12.1		12.1	12.2		51.7	57.2		56.0	54.9	54.7
Progression Factor	0.76	0.27		1.03	0.55		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	45.2	0.3		8.5	0.4		9.1	3.3		64.2	0.6	1.2
Delay (s)	62.3	3.6		20.9	7.1		60.9	60.5		120.2	55.5	55.9
Level of Service	E	A		C	A		E	E		F	E	E
Approach Delay (s)		8.1			7.7			60.6			71.5	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.6%	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												
Volume (vph)	141	1649	55	185	1590	78	63	413	362	156	289	137
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	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	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4965		1770	5046		1805	3539	1522	1752	3336	
Flt Permitted	0.95	1.00		0.95	1.00		0.40	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	1770	4965		1770	5046		758	3539	1522	470	3336	
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)	141	1649	55	185	1590	78	63	413	362	156	289	137
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	226	0	39	0
Lane Group Flow (vph)	141	1702	0	185	1665	0	63	413	136	156	387	0
Confl. Peds. (#/hr)			19			9			14			6
Heavy Vehicles (%)	2%	3%	29%	2%	2%	1%	0%	2%	3%	3%	3%	1%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	19.6	70.0		19.7	70.1		34.7	28.4	28.4	45.3	34.0	
Effective Green, g (s)	19.6	70.0		19.7	70.1		34.7	28.4	28.4	45.3	34.0	
Actuated g/C Ratio	0.13	0.47		0.13	0.47		0.23	0.19	0.19	0.30	0.23	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	231	2317		232	2358		219	670	288	244	756	
v/s Ratio Prot	0.08	c0.34		c0.10	0.33		0.01	0.12		c0.05	0.12	
v/s Ratio Perm							0.05		0.09	c0.14		
v/c Ratio	0.61	0.73		0.80	0.71		0.29	0.62	0.47	0.64	0.51	
Uniform Delay, d1	61.6	32.5		63.2	31.8		46.0	55.8	54.1	41.2	50.7	
Progression Factor	0.92	0.50		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.1	1.8		17.1	1.8		0.7	1.7	1.2	5.4	0.6	
Delay (s)	60.5	18.1		80.3	33.6		46.8	57.5	55.3	46.6	51.3	
Level of Service	E	B		F	C		D	E	E	D	D	
Approach Delay (s)		21.3			38.2			55.8			50.1	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.0%	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												
Volume (vph)	0	1918	226	116	975	0	0	0	0	473	4	1061
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
Lane Util. Factor		0.86		1.00	0.91						1.00	0.88
Frpb, ped/bikes		0.99		1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Frt		0.98		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)		6169		1787	5036						1739	2787
Flt Permitted		1.00		0.95	1.00						0.95	1.00
Satd. Flow (perm)		6169		1787	5036						1739	2787
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)	0	1918	226	116	975	0	0	0	0	473	4	1061
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	0	2126	0	116	975	0	0	0	0	0	477	984
Confl. Peds. (#/hr)			17			42			1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	4%	1%	1%	3%	0%	0%	0%	0%	4%	0%	2%
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Actuated Green, G (s)		43.0		9.6	57.6						42.4	42.4
Effective Green, g (s)		43.0		9.6	57.6						42.4	42.4
Actuated g/C Ratio		0.39		0.09	0.52						0.39	0.39
Clearance Time (s)		5.0		5.0	5.0						5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		2412		156	2637						670	1074
v/s Ratio Prot		c0.34		c0.06	0.19							
v/s Ratio Perm											0.27	c0.35
v/c Ratio		0.88		0.74	0.37						0.71	0.92
Uniform Delay, d1		31.1		49.0	15.5						28.6	32.1
Progression Factor		1.00		1.19	0.27						1.00	1.00
Incremental Delay, d2		5.1		12.6	0.3						3.6	11.9
Delay (s)		36.2		70.7	4.5						32.2	44.0
Level of Service		D		E	A						C	D
Approach Delay (s)		36.2			11.6			0.0			40.3	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	249	41	1357	308	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	249	41	1357	308	0	0
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			350			
pX, platoon unblocked						
vC, conflicting volume	1364	686			1672	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1364	686			1672	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	90			100	
cM capacity (veh/h)	140	393			387	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3
Volume Total	166	124	905	555	205
Volume Left	166	83	0	0	0
Volume Right	0	41	0	103	205
cSH	140	210	1700	1700	1700
Volume to Capacity	1.18	0.59	0.53	0.33	0.12
Queue Length 95th (ft)	241	83	0	0	0
Control Delay (s)	195.5	46.7	0.0	0.0	0.0
Lane LOS	F	E			
Approach Delay (s)	131.9		0.0		
Approach LOS	F				

Intersection Summary			
Average Delay	19.6		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	954	1369	93	44	769	482	264	347	190	39	103	61
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		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.91		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.94		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3452		1719	4672		1719	3239		1798	1863	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.69	1.00		0.29	1.00	1.00
Satd. Flow (perm)	3367	3452		1719	4672		1249	3239		558	1863	1553
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)	954	1369	93	44	769	482	264	347	190	39	103	61
RTOR Reduction (vph)	0	4	0	0	99	0	0	73	0	0	0	45
Lane Group Flow (vph)	954	1458	0	44	1152	0	264	464	0	39	103	16
Confl. Peds. (#/hr)			27			32			11	11		
Heavy Vehicles (%)	4%	3%	5%	5%	2%	4%	5%	4%	6%	0%	2%	4%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	31.7	61.8		4.2	34.3		29.0	29.0		29.0	29.0	29.0
Effective Green, g (s)	31.7	61.8		4.2	34.3		29.0	29.0		29.0	29.0	29.0
Actuated g/C Ratio	0.29	0.56		0.04	0.31		0.26	0.26		0.26	0.26	0.26
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	970	1939		66	1457		329	854		147	491	409
v/s Ratio Prot	c0.28	c0.42		0.03	0.25			0.14			0.06	
v/s Ratio Perm							c0.21			0.07		0.01
v/c Ratio	0.98	0.75		0.67	0.79		0.80	0.54		0.27	0.21	0.04
Uniform Delay, d1	38.9	18.3		52.2	34.6		37.8	34.8		32.1	31.6	30.1
Progression Factor	0.79	0.46		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.9	1.4		22.6	4.5		13.2	0.7		1.0	0.2	0.0
Delay (s)	47.7	9.9		74.8	39.0		51.0	35.5		33.0	31.8	30.2
Level of Service	D	A		E	D		D	D		C	C	C
Approach Delay (s)		24.8			40.2			40.6			31.5	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1598	153	97	1092	60	151
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1598	153	97	1092	60	151
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340			724		
pX, platoon unblocked			0.65		0.68	0.65
vC, conflicting volume			1752		2416	876
vC1, stage 1 conf vol					1676	
vC2, stage 2 conf vol					740	
vCu, unblocked vol			1079		1787	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			77		68	79
cM capacity (veh/h)			425		185	708

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1065	686	97	546	546	211
Volume Left	0	0	97	0	0	60
Volume Right	0	153	0	0	0	151
cSH	1700	1700	425	1700	1700	393
Volume to Capacity	0.63	0.40	0.23	0.32	0.32	0.54
Queue Length 95th (ft)	0	0	22	0	0	77
Control Delay (s)	0.0	0.0	16.0	0.0	0.0	24.3
Lane LOS			C			C
Approach Delay (s)	0.0		1.3			24.3
Approach LOS						C

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	851	196	303	1035	152	150	1129	135	185	1266	323
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	5.0		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91		0.97	0.91		0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3574	1568	3502	5020		3400	5049		3467	5187	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3574	1568	3502	5020		3400	5049		3467	5187	1583
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)	343	851	196	303	1035	152	150	1129	135	185	1266	323
RTOR Reduction (vph)	0	0	108	0	16	0	0	12	0	0	0	147
Lane Group Flow (vph)	343	851	88	303	1171	0	150	1252	0	185	1266	176
Confl. Peds. (#/hr)			5			5			7			8
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	2%	1%	1%	0%	1%	2%	3%	1%	0%	1%	0%	0%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	14.9	35.0	35.0	13.7	33.8		7.9	35.6		8.9	36.6	36.6
Effective Green, g (s)	14.9	35.0	35.0	13.7	33.8		7.9	35.6		8.9	36.6	36.6
Actuated g/C Ratio	0.13	0.31	0.31	0.12	0.30		0.07	0.31		0.08	0.32	0.32
Clearance Time (s)	5.0	5.0	5.0	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)	452	1105	485	424	1499		237	1588		273	1677	512
v/s Ratio Prot	c0.10	c0.24		0.09	0.23		0.04	c0.25		c0.05	0.24	
v/s Ratio Perm			0.06									0.11
v/c Ratio	0.76	0.77	0.18	0.71	0.78		0.63	0.79		0.68	0.75	0.34
Uniform Delay, d1	47.4	35.5	28.6	47.9	36.3		51.2	35.4		50.8	34.3	29.2
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	7.2	3.4	0.2	5.6	2.7		5.4	2.7		6.5	2.0	0.4
Delay (s)	54.6	38.8	28.8	53.5	39.0		56.7	38.0		57.3	36.3	29.6
Level of Service	D	D	C	D	D		E	D		E	D	C
Approach Delay (s)		41.3			42.0			40.0			37.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	113.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.1%	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												
Volume (vph)	196	1424	165	296	1318	133	167	666	270	161	978	161
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
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)	196	1424	165	296	1318	133	167	666	270	161	978	161
RTOR Reduction (vph)	0	0	61	0	10	0	0	0	194	0	0	77
Lane Group Flow (vph)	196	1424	104	296	1441	0	167	666	76	161	978	84
Confl. Peds. (#/hr)			12			3			24			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	2%	0%	2%	1%	1%	1%	0%
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	10.9	35.1	35.1	20.1	44.3		7.0	32.0	32.0	7.0	32.0	32.0
Effective Green, g (s)	10.9	35.1	35.1	20.1	44.3		7.0	32.0	32.0	7.0	32.0	32.0
Actuated g/C Ratio	0.10	0.31	0.31	0.18	0.39		0.06	0.28	0.28	0.06	0.28	0.28
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	331	1579	485	315	1961		215	1425	433	213	1439	453
v/s Ratio Prot	0.06	c0.28		c0.17	0.29		c0.05	0.13		0.05	c0.19	
v/s Ratio Perm			0.07						0.05			0.05
v/c Ratio	0.59	0.90	0.21	0.94	0.73		0.78	0.47	0.17	0.76	0.68	0.19
Uniform Delay, d1	49.5	37.9	29.3	46.5	29.9		52.8	34.0	31.1	52.8	36.5	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	7.5	0.2	34.7	1.5		16.0	0.2	0.2	14.1	1.3	0.2
Delay (s)	52.3	45.4	29.6	81.1	31.4		68.9	34.3	31.3	66.9	37.8	31.4
Level of Service	D	D	C	F	C		E	C	C	E	D	C
Approach Delay (s)		44.7			39.8			38.8			40.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	114.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	361	1398	1332	390	658	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3502	5136	5187	1579	3502	2790
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3502	5136	5187	1579	3502	2790
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	361	1398	1332	390	658	358
RTOR Reduction (vph)	0	0	0	27	0	7
Lane Group Flow (vph)	361	1398	1332	363	658	351
Confl. Peds. (#/hr)				10		2
Heavy Vehicles (%)	0%	1%	0%	1%	0%	1%
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Actuated Green, G (s)	15.5	53.7	33.2	57.3	24.1	39.6
Effective Green, g (s)	15.5	53.7	33.2	57.3	24.1	39.6
Actuated g/C Ratio	0.18	0.61	0.38	0.65	0.27	0.45
Clearance Time (s)	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
Lane Grp Cap (vph)	618	3141	1961	1120	961	1417
v/s Ratio Prot	c0.10	0.27	c0.26	0.09	c0.19	0.04
v/s Ratio Perm				0.14		0.08
v/c Ratio	0.58	0.45	0.68	0.32	0.68	0.25
Uniform Delay, d1	33.2	9.1	22.8	6.7	28.5	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.1	1.0	0.2	2.0	0.1
Delay (s)	34.6	9.2	23.8	6.9	30.5	15.0
Level of Service	C	A	C	A	C	B
Approach Delay (s)		14.4	20.0		25.0	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	87.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.5%	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												
Volume (veh/h)	125	737	0	0	583	27	0	0	0	29	0	112
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	125	737	0	0	583	27	0	0	0	29	0	112
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					852							
pX, platoon unblocked	0.92						0.92	0.92		0.92	0.92	0.92
vC, conflicting volume	610			738			1392	1598	370	1215	1584	305
vC1, stage 1 conf vol							988	988		596	596	
vC2, stage 2 conf vol							404	610		618	988	
vCu, unblocked vol	412			738			1258	1482	370	1067	1467	82
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	88			100			100	100	100	92	100	87
cM capacity (veh/h)	1069			877			221	251	633	342	264	894

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	494	368	389	221	0	141
Volume Left	125	0	0	0	0	29
Volume Right	0	0	0	27	0	112
cSH	1069	1700	1700	1700	1700	671
Volume to Capacity	0.12	0.22	0.23	0.13	0.00	0.21
Queue Length 95th (ft)	10	0	0	0	0	20
Control Delay (s)	3.2	0.0	0.0	0.0	0.0	11.8
Lane LOS	A				A	B
Approach Delay (s)	1.8		0.0		0.0	11.8
Approach LOS					A	B

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	59.5%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1608	140	317	944	245	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3574	1543	1805	3539	3502	1615
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3574	1543	1805	3539	3502	1615
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1608	140	317	944	245	243
RTOR Reduction (vph)	0	36	0	0	0	9
Lane Group Flow (vph)	1608	104	317	944	245	234
Confl. Peds. (#/hr)		6				
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	66.5	66.5	25.1	96.6	13.4	38.5
Effective Green, g (s)	66.5	66.5	25.1	96.6	13.4	38.5
Actuated g/C Ratio	0.55	0.55	0.21	0.80	0.11	0.32
Clearance Time (s)	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
Lane Grp Cap (vph)	1981	855	378	2849	391	585
v/s Ratio Prot	c0.45		c0.18	0.27	c0.07	0.08
v/s Ratio Perm		0.07				0.06
v/c Ratio	0.81	0.12	0.84	0.33	0.63	0.40
Uniform Delay, d1	21.7	12.8	45.5	3.1	50.9	31.8
Progression Factor	0.45	0.11	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2	14.9	0.3	3.1	0.5
Delay (s)	12.8	1.6	60.4	3.4	54.0	32.2
Level of Service	B	A	E	A	D	C
Approach Delay (s)	11.9			17.8	43.2	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1771	80	0	1261	0	170
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1771	80	0	1261	0	170
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	360					
pX, platoon unblocked			0.62		0.62	0.62
vC, conflicting volume			1857		2448	932
vC1, stage 1 conf vol					1817	
vC2, stage 2 conf vol					630	
vCu, unblocked vol			1165		2113	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	75
cM capacity (veh/h)			376		162	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1181	670	630	630	170
Volume Left	0	0	0	0	0
Volume Right	0	80	0	0	170
cSH	1700	1700	1700	1700	676
Volume to Capacity	0.69	0.39	0.37	0.37	0.25
Queue Length 95th (ft)	0	0	0	0	25
Control Delay (s)	0.0	0.0	0.0	0.0	12.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.1
Approach LOS					B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

Appendix H Mitigated Year 2016 Cumulative Plus Project Level of Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	187	964	50	181	1028	116	61	186	119	144	209	215
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3478		1787	3507		1805	1900	1553	1787	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3478		1787	3507		1805	1900	1553	1787	1900	1615
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)	187	964	50	181	1028	116	61	186	119	144	209	215
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	98	0	0	168
Lane Group Flow (vph)	187	1011	0	181	1137	0	61	186	21	144	209	47
Confl. Peds. (#/hr)			5			8			7			6
Confl. Bikes (#/hr)			3									1
Heavy Vehicles (%)	2%	3%	0%	1%	1%	1%	0%	0%	2%	1%	0%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Prot
Protected Phases	1	6		5	2		7	4		3	8	8
Permitted Phases									4			
Actuated Green, G (s)	14.4	39.9		14.4	39.9		6.6	17.9	17.9	11.6	22.9	22.9
Effective Green, g (s)	14.4	39.9		14.4	39.9		6.6	17.9	17.9	11.6	22.9	22.9
Actuated g/C Ratio	0.14	0.38		0.14	0.38		0.06	0.17	0.17	0.11	0.22	0.22
Clearance Time (s)	5.0	5.0		5.0	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)	246	1337		248	1348		115	328	268	200	419	356
v/s Ratio Prot	c0.11	0.29		0.10	c0.32		0.03	0.10		c0.08	c0.11	0.03
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.76		0.73	0.84		0.53	0.57	0.08	0.72	0.50	0.13
Uniform Delay, d1	43.0	27.7		42.8	29.1		47.1	39.4	36.0	44.5	35.4	32.5
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	12.9	2.5		10.3	5.0		4.6	2.2	0.1	11.7	0.9	0.2
Delay (s)	56.0	30.2		53.1	34.1		51.7	41.6	36.1	56.3	36.4	32.7
Level of Service	E	C		D	C		D	D	D	E	D	C
Approach Delay (s)		34.2			36.7			41.5			40.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.0%	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												
Volume (vph)	68	1164	49	167	1263	197	155	181	118	310	182	61
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	5.0		5.0	5.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1787	3550		1805	3574	1514	1770	3343		1643	3382	1578
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1787	3550		1805	3574	1514	1770	3343		1643	3382	1578
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)	68	1164	49	167	1263	197	155	181	118	310	182	61
RTOR Reduction (vph)	0	2	0	0	0	22	0	84	0	0	0	0
Lane Group Flow (vph)	68	1211	0	167	1263	175	155	215	0	161	331	61
Confl. Peds. (#/hr)			11			31						36
Confl. Bikes (#/hr)			3			1						1
Heavy Vehicles (%)	1%	1%	0%	0%	1%	1%	2%	2%	1%	0%	0%	0%
Turn Type	Prot			Prot		Perm	Split			Split		Free
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						Free
Actuated Green, G (s)	11.1	47.6		14.0	50.5	50.5	16.6	16.6		22.0	22.0	120.2
Effective Green, g (s)	11.1	47.6		14.0	50.5	50.5	16.6	16.6		22.0	22.0	120.2
Actuated g/C Ratio	0.09	0.40		0.12	0.42	0.42	0.14	0.14		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	165	1406		210	1502	636	244	462		301	619	1578
v/s Ratio Prot	0.04	0.34		c0.09	c0.35		c0.09	0.06		c0.10	0.10	
v/s Ratio Perm						0.12						0.04
v/c Ratio	0.41	0.86		0.80	0.84	0.28	0.64	0.46		0.53	0.53	0.04
Uniform Delay, d1	51.5	33.3		51.7	31.2	22.8	48.9	47.7		44.5	44.5	0.0
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	1.7	5.7		18.5	4.4	0.2	5.3	0.7		1.8	0.9	0.0
Delay (s)	53.1	38.9		70.2	35.7	23.1	54.3	48.4		46.3	45.4	0.0
Level of Service	D	D		E	D	C	D	D		D	D	A
Approach Delay (s)		39.7			37.7			50.4			40.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.2%	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												
Volume (vph)	328	924	337	354	986	219	375	1793	217	269	1734	263
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5085	1544	3467	5136	1521	3467	6408	1508	3467	6471	1454
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)	328	924	337	354	986	219	375	1793	217	269	1734	263
RTOR Reduction (vph)	0	0	192	0	0	138	0	0	144	0	0	103
Lane Group Flow (vph)	328	924	145	354	986	81	375	1793	73	269	1734	160
Confl. Peds. (#/hr)			26			42			25			74
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	1%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.0	37.9	37.9	17.0	40.9	40.9	15.0	43.7	43.7	11.4	40.1	40.1
Effective Green, g (s)	14.0	37.9	37.9	17.0	40.9	40.9	15.0	43.7	43.7	11.4	40.1	40.1
Actuated g/C Ratio	0.11	0.29	0.29	0.13	0.31	0.31	0.12	0.34	0.34	0.09	0.31	0.31
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	373	1482	450	453	1616	479	400	2154	507	304	1996	449
v/s Ratio Prot	c0.09	c0.18		c0.10	0.19		0.11	c0.28		0.08	c0.27	
v/s Ratio Perm			0.09			0.05			0.05			0.11
v/c Ratio	0.88	0.62	0.32	0.78	0.61	0.17	0.94	0.83	0.14	0.88	0.87	0.36
Uniform Delay, d1	57.2	39.9	36.0	54.7	37.8	32.3	57.0	39.8	30.1	58.7	42.5	34.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.79	1.88	1.00	1.00	1.00
Incremental Delay, d2	20.3	0.8	0.4	8.5	0.7	0.2	22.1	2.6	0.4	24.9	5.5	2.2
Delay (s)	77.4	40.7	36.4	63.2	38.5	32.4	68.6	34.0	57.0	83.5	47.9	37.1
Level of Service	E	D	D	E	D	C	E	C	E	F	D	D
Approach Delay (s)		47.4			43.2			41.5			50.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	45.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	99.0%	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												
Volume (vph)	107	516	80	286	511	258	130	2125	268	389	2176	49
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		0.97	0.91	1.00	1.00	0.86	1.00	0.97	0.86	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3490		3467	5136	1534	1805	6471	1510	3433	6443	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3490		3467	5136	1534	1805	6471	1510	3433	6443	
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)	107	516	80	286	511	258	130	2125	268	389	2176	49
RTOR Reduction (vph)	0	10	0	0	0	216	0	0	155	0	2	0
Lane Group Flow (vph)	107	586	0	286	511	42	130	2125	113	389	2223	0
Confl. Peds. (#/hr)			16	16		13			28			4
Heavy Vehicles (%)	2%	1%	0%	1%	1%	2%	0%	1%	2%	2%	1%	4%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	16.9	25.0		12.9	21.0	21.0	12.3	54.6	54.6	17.5	59.8	
Effective Green, g (s)	16.9	25.0		12.9	21.0	21.0	12.3	54.6	54.6	17.5	59.8	
Actuated g/C Ratio	0.13	0.19		0.10	0.16	0.16	0.09	0.42	0.42	0.13	0.46	
Clearance Time (s)	5.0	5.0		5.0	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)	230	671		344	830	248	171	2718	634	462	2964	
v/s Ratio Prot	0.06	c0.17		c0.08	0.10		0.07	c0.33		0.11	c0.34	
v/s Ratio Perm						0.03			0.07			
v/c Ratio	0.47	0.87		0.83	0.62	0.17	0.76	0.78	0.18	0.84	0.75	
Uniform Delay, d1	52.4	51.0		57.5	50.7	47.0	57.4	32.6	23.6	54.9	28.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.99	0.46	0.27	0.50	0.27	
Incremental Delay, d2	1.5	12.1		15.6	1.4	0.3	12.2	1.5	0.4	8.9	1.2	
Delay (s)	53.9	63.1		73.1	52.1	47.3	69.0	16.5	6.7	36.4	9.0	
Level of Service	D	E		E	D	D	E	B	A	D	A	
Approach Delay (s)		61.7			56.6			18.2			13.1	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM Average Control Delay	26.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.7%	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												
Volume (vph)	272	828	171	536	942	212	281	1952	533	317	1979	314
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	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5029		3502	5187	1615	3467	6471	1593	3502	6471	1595
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5029		3502	5187	1615	3467	6471	1593	3502	6471	1595
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)	272	828	171	536	942	212	281	1952	533	317	1979	314
RTOR Reduction (vph)	0	25	0	0	0	140	0	0	0	0	0	0
Lane Group Flow (vph)	272	974	0	536	942	72	281	1952	533	317	1979	314
Confl. Peds. (#/hr)			10			11			5			2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot		Prot	Prot		Free	Prot		Free
Protected Phases	7	4		3	8	8	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	18.6	27.1		22.4	30.9	30.9	12.8	46.6	130.0	13.9	47.7	130.0
Effective Green, g (s)	18.6	27.1		22.4	30.9	30.9	12.8	46.6	130.0	13.9	47.7	130.0
Actuated g/C Ratio	0.14	0.21		0.17	0.24	0.24	0.10	0.36	1.00	0.11	0.37	1.00
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	491	1048		603	1233	384	341	2320	1593	374	2374	1595
v/s Ratio Prot	0.08	c0.19		c0.15	0.18	0.04	0.08	0.30		c0.09	c0.31	
v/s Ratio Perm									c0.33			0.20
v/c Ratio	0.55	0.93		0.89	0.76	0.19	0.82	0.84	0.33	0.85	0.83	0.20
Uniform Delay, d1	51.8	50.5		52.6	46.2	39.5	57.5	38.3	0.0	57.0	37.5	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.95	0.53	1.00	0.92	0.50	1.00
Incremental Delay, d2	1.4	13.8		14.9	2.9	0.2	4.7	1.2	0.2	11.2	2.4	0.2
Delay (s)	53.2	64.3		67.5	49.0	39.8	59.1	21.5	0.2	63.8	21.3	0.2
Level of Service	D	E		E	D	D	E	C	A	E	C	A
Approach Delay (s)		61.9			53.7			21.2			23.9	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	90.2%	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												
Volume (vph)	101	442	159	334	657	726	242	1932	220	497	1945	120
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	0.97	0.81	0.81	0.97	0.91	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3418		1787	3574	1561	3502	6082	1250	3433	5136	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	3418		1787	3574	1561	3502	6082	1250	3433	5136	1583
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)	101	442	159	334	657	726	242	1932	220	497	1945	120
RTOR Reduction (vph)	0	28	0	0	0	206	0	1	122	0	0	50
Lane Group Flow (vph)	101	573	0	334	657	520	242	1953	76	497	1945	70
Confl. Peds. (#/hr)			10			7			12			6
Confl. Bikes (#/hr)			2			5			1			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	1%	0%	1%	2%	2%	1%	2%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Prot
Protected Phases	7	4		3	8		5	2		1	6	6
Permitted Phases						8			2			
Actuated Green, G (s)	7.0	31.0		18.0	42.0	42.0	13.5	44.0	44.0	17.0	47.5	47.5
Effective Green, g (s)	7.0	31.0		18.0	42.0	42.0	13.5	44.0	44.0	17.0	47.5	47.5
Actuated g/C Ratio	0.05	0.24		0.14	0.32	0.32	0.10	0.34	0.34	0.13	0.37	0.37
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	96	815		247	1155	504	364	2059	423	449	1877	578
v/s Ratio Prot	0.06	0.17		c0.19	0.18		0.07	c0.32		0.14	c0.38	0.04
v/s Ratio Perm						c0.33			0.06			
v/c Ratio	1.05	0.70		1.35	0.57	1.03	0.66	0.95	0.18	1.11	1.04	0.12
Uniform Delay, d1	61.5	45.3		56.0	36.5	44.0	56.1	41.9	30.3	56.5	41.2	27.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.15	0.48	0.08	0.53	0.35	0.15
Incremental Delay, d2	106.7	2.8		182.8	0.6	48.2	3.9	9.7	0.8	63.8	25.2	0.2
Delay (s)	168.2	48.1		238.8	37.1	92.2	68.4	30.0	3.3	93.9	39.7	4.3
Level of Service	F	D		F	D	F	E	C	A	F	D	A
Approach Delay (s)		65.3			99.7			31.7			48.5	
Approach LOS		E			F			C			D	

Intersection Summary			
HCM Average Control Delay	56.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	113.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	23	10	396	7	541	21	1518	112	242	2039	29
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	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	1.00	0.86		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.85	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1752		1805	1526	1519	1805	6398		1787	5123	
Flt Permitted	0.58	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1110	1752		1805	1526	1519	1805	6398		1787	5123	
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)	57	23	10	396	7	541	21	1518	112	242	2039	29
RTOR Reduction (vph)	0	9	0	0	169	176	0	8	0	0	1	0
Lane Group Flow (vph)	57	24	0	396	103	100	21	1622	0	242	2067	0
Confl. Peds. (#/hr)			2						8			5
Heavy Vehicles (%)	0%	0%	10%	0%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Prot		Prot	Prot			Prot		
Protected Phases		4		3	8	8	5	2		1	6	
Permitted Phases	4											
Actuated Green, G (s)	12.0	12.0		30.2	47.2	47.2	4.2	45.8		22.0	63.6	
Effective Green, g (s)	12.0	12.0		30.2	47.2	47.2	4.2	45.8		22.0	63.6	
Actuated g/C Ratio	0.09	0.09		0.23	0.36	0.36	0.03	0.35		0.17	0.49	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	102	162		419	554	552	58	2254		302	2506	
v/s Ratio Prot		0.01		c0.22	0.07	0.07	0.01	c0.25		0.14	c0.40	
v/s Ratio Perm	c0.05											
v/c Ratio	0.56	0.15		0.95	0.19	0.18	0.36	0.72		0.80	0.82	
Uniform Delay, d1	56.5	54.3		49.1	28.3	28.2	61.6	36.5		51.9	28.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.04	0.40	
Incremental Delay, d2	6.5	0.4		30.1	0.2	0.2	3.8	2.0		1.4	0.3	
Delay (s)	63.0	54.7		79.2	28.4	28.4	65.4	38.5		55.6	11.5	
Level of Service	E	D		E	C	C	E	D		E	B	
Approach Delay (s)		59.9			49.7			38.9			16.2	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	302	979	309	182	1022	225	300	917	65	365	1468
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	5.0	5.0	5.0
Lane Util. Factor		0.95	0.91		1.00	0.91		0.97	0.91	1.00	0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1715	4917		1770	4956		3467	5136	1538	3502	5187
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1715	4917		1770	4956		3467	5136	1538	3502	5187
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)	0	302	979	309	182	1022	225	300	917	65	365	1468
RTOR Reduction (vph)	0	0	38	0	0	23	0	0	0	18	0	0
Lane Group Flow (vph)	0	302	1250	0	182	1224	0	300	917	47	365	1468
Confl. Peds. (#/hr)				10			16			15		
Confl. Bikes (#/hr)				4								
Heavy Vehicles (%)	2%	0%	1%	1%	2%	1%	2%	1%	1%	5%	0%	0%
Turn Type	custom	Prot			Prot			Prot		pt+ov	Prot	
Protected Phases		7	4		3	8		5	2	2 3	1	6
Permitted Phases	7!											
Actuated Green, G (s)		27.7	52.0		18.0	42.3		14.9	33.7	51.7	26.3	45.1
Effective Green, g (s)		27.7	52.0		18.0	42.3		14.9	33.7	51.7	26.3	45.1
Actuated g/C Ratio		0.18	0.35		0.12	0.28		0.10	0.22	0.34	0.18	0.30
Clearance Time (s)		5.0	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
Lane Grp Cap (vph)		317	1705		212	1398		344	1154	530	614	1560
v/s Ratio Prot		c0.18	0.25		0.10	c0.25		c0.09	0.18	0.03	0.10	c0.28
v/s Ratio Perm												
v/c Ratio		0.95	0.73		0.86	0.88		0.87	0.79	0.09	0.59	0.94
Uniform Delay, d1		60.5	42.9		64.8	51.3		66.6	54.9	33.2	56.9	51.2
Progression Factor		1.00	1.00		1.10	0.44		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		37.9	2.8		14.9	4.0		20.8	3.9	0.1	1.6	11.6
Delay (s)		98.4	45.8		86.0	26.8		87.4	58.7	33.3	58.5	62.7
Level of Service		F	D		F	C		F	E	C	E	E
Approach Delay (s)			55.7			34.3			64.2			54.9
Approach LOS			E			C			E			D

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	508
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1577
Flt Permitted	1.00
Satd. Flow (perm)	1577
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	508
RTOR Reduction (vph)	5
Lane Group Flow (vph)	503
Confl. Peds. (#/hr)	7
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	1%
Turn Type	pm+ov
Protected Phases	7!
Permitted Phases	6
Actuated Green, G (s)	72.8
Effective Green, g (s)	72.8
Actuated g/C Ratio	0.49
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	818
v/s Ratio Prot	0.11
v/s Ratio Perm	0.21
v/c Ratio	0.61
Uniform Delay, d1	28.3
Progression Factor	1.00
Incremental Delay, d2	1.4
Delay (s)	29.7
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1	3	73	1	369	3	1136	128	417	1151	8
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		5.0	5.0	
Lane Util. Factor		1.00		1.00	0.95	0.95	1.00	0.95		0.97	0.95	
Frpb, ped/bikes		1.00		1.00	0.99	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.97		1.00	0.85	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1772		1785	1470	1468	1805	3385		3467	3571	
Flt Permitted		0.69		0.75	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1269		1407	1470	1468	1805	3385		3467	3571	
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)	9	1	3	73	1	369	3	1136	128	417	1151	8
RTOR Reduction (vph)	0	3	0	0	161	160	0	7	0	0	0	0
Lane Group Flow (vph)	0	10	0	73	25	24	3	1257	0	417	1159	0
Confl. Peds. (#/hr)	2		1	1		2						
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	3%	0%	5%	3%	1%	1%	0%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.3		11.3	11.3	11.3	0.9	45.1		16.4	60.6	
Effective Green, g (s)		11.3		11.3	11.3	11.3	0.9	45.1		16.4	60.6	
Actuated g/C Ratio		0.13		0.13	0.13	0.13	0.01	0.51		0.19	0.69	
Clearance Time (s)		5.0		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	
Lane Grp Cap (vph)		163		181	189	189	19	1739		648	2465	
v/s Ratio Prot					0.02		0.00	c0.37		c0.12	0.32	
v/s Ratio Perm		0.01		c0.05		0.02						
v/c Ratio		0.06		0.40	0.13	0.13	0.16	0.72		0.64	0.47	
Uniform Delay, d1		33.6		35.2	33.9	33.9	43.1	16.5		33.0	6.2	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2		1.5	0.3	0.3	3.9	1.5		2.2	0.1	
Delay (s)		33.8		36.6	34.2	34.2	46.9	18.0		35.2	6.4	
Level of Service		C		D	C	C	D	B		D	A	
Approach Delay (s)		33.8			34.6			18.1			14.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	87.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.3%	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												
Volume (vph)	181	446	17	225	349	84	19	868	212	129	1128	294
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1626	3369		1787	1900	1563	1805	3539	1568	1770	3574	1615
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1626	3369		1787	1900	1563	1805	3539	1568	1770	3574	1615
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)	181	446	17	225	349	84	19	868	212	129	1128	294
RTOR Reduction (vph)	0	2	0	0	0	52	0	0	57	0	0	177
Lane Group Flow (vph)	163	479	0	225	349	32	19	868	155	129	1128	117
Confl. Peds. (#/hr)						1						
Heavy Vehicles (%)	1%	2%	0%	1%	0%	2%	0%	2%	3%	2%	1%	0%
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	23.8	23.8		27.4	27.4	27.4	2.4	38.5	38.5	12.4	48.5	48.5
Effective Green, g (s)	23.8	23.8		27.4	27.4	27.4	2.4	38.5	38.5	12.4	48.5	48.5
Actuated g/C Ratio	0.19	0.19		0.22	0.22	0.22	0.02	0.32	0.32	0.10	0.40	0.40
Clearance Time (s)	5.0	5.0		5.0	5.0	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	3.0
Lane Grp Cap (vph)	317	657		401	426	351	35	1116	494	180	1420	642
v/s Ratio Prot	0.10	c0.14		0.13	c0.18		0.01	0.25		c0.07	c0.32	
v/s Ratio Perm						0.02			0.10			0.07
v/c Ratio	0.51	0.73		0.56	0.82	0.09	0.54	0.78	0.31	0.72	0.79	0.18
Uniform Delay, d1	44.0	46.1		42.0	45.0	37.5	59.3	37.9	31.8	53.1	32.4	23.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	4.1		1.8	11.7	0.1	16.1	3.5	0.4	12.7	3.2	0.1
Delay (s)	45.4	50.2		43.8	56.7	37.6	75.4	41.4	32.1	65.9	35.6	24.0
Level of Service	D	D		D	E	D	E	D	C	E	D	C
Approach Delay (s)		49.0			49.8			40.2			35.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	122.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	82.3%	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												
Volume (vph)	96	1235	72	72	1250	86	194	20	207	115	48	245
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1736	3535		1805	3495		1715	1521	1544	1770	1456	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	1.00	
Satd. Flow (perm)	1736	3535		1805	3495		1715	1521	1544	1770	1456	
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)	96	1235	72	72	1250	86	194	20	207	115	48	245
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	146	0	126	0
Lane Group Flow (vph)	96	1304	0	72	1333	0	107	107	61	115	167	0
Confl. Peds. (#/hr)			3			2			25			
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	1%	3%	0%	1%	18%	0%	75%	0%	2%	76%	2%
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	12.3	61.0		6.7	55.4		20.1	20.1	20.1	19.0	19.0	
Effective Green, g (s)	12.3	61.0		6.7	55.4		20.1	20.1	20.1	19.0	19.0	
Actuated g/C Ratio	0.10	0.48		0.05	0.44		0.16	0.16	0.16	0.15	0.15	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	168	1701		95	1527		272	241	245	265	218	
v/s Ratio Prot	0.06	c0.37		0.04	c0.38		0.06	c0.07		0.06	c0.11	
v/s Ratio Perm									0.04			
v/c Ratio	0.57	0.77		0.76	0.87		0.39	0.44	0.25	0.43	0.77	
Uniform Delay, d1	54.7	27.1		59.2	32.5		47.9	48.3	46.8	49.0	51.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.6	2.1		28.6	5.8		0.9	1.3	0.5	1.1	14.8	
Delay (s)	59.4	29.2		87.9	38.3		48.8	49.6	47.3	50.2	66.6	
Level of Service	E	C		F	D		D	D	D	D	E	
Approach Delay (s)		31.2			40.8			48.3			62.0	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	126.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	93.2%	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												
Volume (vph)	1	1632	60	53	1091	8	90	7	98	20	5	16
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1805	3550		1770	3570		1633	1660	1578	1715	1751	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1805	3550		1770	3570		1633	1660	1578	1715	1751	1615
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)	1	1632	60	53	1091	8	90	7	98	20	5	16
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	88	0	0	15
Lane Group Flow (vph)	1	1691	0	53	1099	0	49	48	10	12	13	1
Confl. Peds. (#/hr)			5			5			1			
Confl. Bikes (#/hr)			4			1						
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	5%	0%	1%	0%	0%	0%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	1.2	75.7		7.9	82.4		12.1	12.1	12.1	4.3	4.3	4.3
Effective Green, g (s)	1.2	75.7		7.9	82.4		12.1	12.1	12.1	4.3	4.3	4.3
Actuated g/C Ratio	0.01	0.63		0.07	0.69		0.10	0.10	0.10	0.04	0.04	0.04
Clearance Time (s)	5.0	5.0		5.0	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)	18	2239		117	2451		165	167	159	61	63	58
v/s Ratio Prot	0.00	c0.48		c0.03	0.31		c0.03	0.03		0.01	c0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.06	0.76		0.45	0.45		0.30	0.29	0.06	0.20	0.21	0.01
Uniform Delay, d1	58.8	15.6		54.0	8.5		50.0	50.0	48.8	56.2	56.2	55.8
Progression Factor	1.00	1.00		1.01	0.78		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	2.4		2.6	0.6		1.0	1.0	0.2	1.6	1.6	0.1
Delay (s)	60.1	18.0		57.3	7.2		51.0	50.9	49.0	57.8	57.8	55.9
Level of Service	E	B		E	A		D	D	D	E	E	E
Approach Delay (s)		18.1			9.5			50.0			57.0	
Approach LOS		B			A			D			E	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	29	814	696	50	57	64
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	814	696	50	57	64
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1310			
pX, platoon unblocked	0.99				0.99	0.99
vC, conflicting volume	748				1188	375
vC1, stage 1 conf vol					723	
vC2, stage 2 conf vol					465	
vCu, unblocked vol	716				1162	338
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				85	90
cM capacity (veh/h)	854				388	654

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	29	407	407	464	282	57	64
Volume Left	29	0	0	0	0	57	0
Volume Right	0	0	0	0	50	0	64
cSH	854	1700	1700	1700	1700	388	654
Volume to Capacity	0.03	0.24	0.24	0.27	0.17	0.15	0.10
Queue Length 95th (ft)	3	0	0	0	0	13	8
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	15.9	11.1
Lane LOS	A					C	B
Approach Delay (s)	0.3			0.0		13.4	
Approach LOS						B	

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	773	11	42	529	259	16	8	58	257	10	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	1.00	0.85	1.00	0.87		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	3610	1576	1805	3610	1578	1805	1620		1805	1900	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3610	1576	1805	3610	1578	1805	1620		1805	1900	1615
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)	32	773	11	42	529	259	16	8	58	257	10	90
RTOR Reduction (vph)	0	0	6	0	0	172	0	54	0	0	0	69
Lane Group Flow (vph)	32	773	5	42	529	87	16	12	0	257	10	21
Confl. Peds. (#/hr)			3			2			2			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.0	24.2	24.2	2.0	24.2	24.2	5.1	5.1		16.4	16.4	16.4
Effective Green, g (s)	2.0	24.2	24.2	2.0	24.2	24.2	5.1	5.1		16.4	16.4	16.4
Actuated g/C Ratio	0.03	0.34	0.34	0.03	0.34	0.34	0.07	0.07		0.23	0.23	0.23
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
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)	50	1218	532	50	1218	533	128	115		413	435	369
v/s Ratio Prot	0.02	c0.21		c0.02	0.15		c0.01	0.01		c0.14	0.01	
v/s Ratio Perm			0.00			0.06						0.01
v/c Ratio	0.64	0.63	0.01	0.84	0.43	0.16	0.12	0.11		0.62	0.02	0.06
Uniform Delay, d1	34.5	20.0	15.8	34.7	18.4	16.7	31.2	31.2		24.9	21.4	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	24.7	1.1	0.0	69.8	0.2	0.1	0.4	0.4		2.9	0.0	0.1
Delay (s)	59.2	21.1	15.8	104.5	18.7	16.8	31.7	31.6		27.8	21.5	21.7
Level of Service	E	C	B	F	B	B	C	C		C	C	C
Approach Delay (s)		22.5			22.4			31.6			26.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	24.0
Intersection Capacity Utilization	60.6%	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												
Volume (vph)	114	940	110	195	1025	115	177	1326	190	219	1611	169
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3502	3574	1572	3502	5187	1554	3502	4969		3467	5048	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3502	3574	1572	3502	5187	1554	3502	4969		3467	5048	
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)	114	940	110	195	1025	115	177	1326	190	219	1611	169
RTOR Reduction (vph)	0	0	34	0	0	52	0	16	0	0	10	0
Lane Group Flow (vph)	114	940	76	195	1025	63	177	1500	0	219	1770	0
Confl. Peds. (#/hr)			12			6			10			18
Confl. Bikes (#/hr)			5			1			2			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	0%	2%	3%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.7	35.3	35.3	8.9	36.5	36.5	8.0	43.5		9.9	45.4	
Effective Green, g (s)	7.7	35.3	35.3	8.9	36.5	36.5	8.0	43.5		9.9	45.4	
Actuated g/C Ratio	0.07	0.30	0.30	0.08	0.31	0.31	0.07	0.37		0.08	0.39	
Clearance Time (s)	5.0	5.0	5.0	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)	229	1073	472	265	1610	482	238	1838		292	1949	
v/s Ratio Prot	0.03	c0.26		c0.06	0.20		0.05	0.30		c0.06	c0.35	
v/s Ratio Perm			0.05			0.04						
v/c Ratio	0.50	0.88	0.16	0.74	0.64	0.13	0.74	0.82		0.75	0.91	
Uniform Delay, d1	53.1	39.1	30.3	53.2	34.9	29.2	53.8	33.4		52.6	34.1	
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	1.7	8.2	0.2	10.1	0.8	0.1	11.9	2.9		10.3	6.6	
Delay (s)	54.8	47.3	30.4	63.3	35.7	29.3	65.7	36.4		63.0	40.7	
Level of Service	D	D	C	E	D	C	E	D		E	D	
Approach Delay (s)		46.4			39.2			39.4			43.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	89.9%	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												
Volume (vph)	123	1155	99	350	1005	156	126	1381	309	309	1445	144
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	5.0	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	5065		3467	3574	1561	3502	5085	1542	3467	5059	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	5065		3467	3574	1561	3502	5085	1542	3467	5059	
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)	123	1155	99	350	1005	156	126	1381	309	309	1445	144
RTOR Reduction (vph)	0	8	0	0	0	44	0	0	110	0	10	0
Lane Group Flow (vph)	123	1246	0	350	1005	112	126	1381	199	309	1579	0
Confl. Peds. (#/hr)			12			2			13			13
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	0%	2%	2%	1%	1%	0%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	7.0	32.6		14.5	40.1	40.1	7.0	38.0	38.0	12.8	43.8	
Effective Green, g (s)	7.0	32.6		14.5	40.1	40.1	7.0	38.0	38.0	12.8	43.8	
Actuated g/C Ratio	0.06	0.28		0.12	0.34	0.34	0.06	0.32	0.32	0.11	0.37	
Clearance Time (s)	5.0	5.0		5.0	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)	206	1401		426	1216	531	208	1639	497	376	1879	
v/s Ratio Prot	0.04	0.25		c0.10	c0.28		0.04	0.27		c0.09	c0.31	
v/s Ratio Perm						0.07			0.13			
v/c Ratio	0.60	0.89		0.82	0.83	0.21	0.61	0.84	0.40	0.82	0.84	
Uniform Delay, d1	54.1	40.9		50.4	35.7	27.6	54.1	37.2	31.1	51.4	33.9	
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	4.6	7.3		12.0	4.7	0.2	4.9	4.1	0.5	13.5	3.6	
Delay (s)	58.7	48.2		62.5	40.4	27.8	59.0	41.3	31.6	64.9	37.4	
Level of Service	E	D		E	D	C	E	D	C	E	D	
Approach Delay (s)		49.1			44.2			40.9			41.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	43.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	117.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.0%	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												
Volume (vph)	184	1181	271	509	1152	221	270	1462	661	391	1350	199
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	1.00	0.97	0.86	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1558	3433	6471	1567	3467	6408	1522	3467	5136	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1558	3433	6471	1567	3467	6408	1522	3467	5136	1565
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)	184	1181	271	509	1152	221	270	1462	661	391	1350	199
RTOR Reduction (vph)	0	0	57	0	0	99	0	0	181	0	0	126
Lane Group Flow (vph)	184	1181	214	509	1152	122	270	1462	480	391	1350	73
Confl. Peds. (#/hr)			12			7			23			8
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%	1%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.8	40.2	40.2	25.1	52.5	52.5	16.5	56.8	56.8	19.0	59.3	59.3
Effective Green, g (s)	12.8	40.2	40.2	25.1	52.5	52.5	16.5	56.8	56.8	19.0	59.3	59.3
Actuated g/C Ratio	0.08	0.25	0.25	0.16	0.33	0.33	0.10	0.35	0.35	0.12	0.37	0.37
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	275	1282	389	535	2109	511	355	2259	537	409	1891	576
v/s Ratio Prot	0.05	c0.23		c0.15	0.18		0.08	0.23		c0.11	0.26	
v/s Ratio Perm			0.14			0.08			c0.32			0.05
v/c Ratio	0.67	0.92	0.55	0.95	0.55	0.24	0.76	0.65	0.89	0.96	0.71	0.13
Uniform Delay, d1	72.1	58.9	52.6	67.4	44.5	39.7	70.4	43.7	49.3	70.6	43.6	33.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	10.9	1.7	27.1	0.3	0.2	9.3	0.6	17.2	33.0	1.3	0.1
Delay (s)	78.1	69.8	54.3	94.5	44.8	39.9	79.6	44.4	66.5	103.6	44.9	33.8
Level of Service	E	E	D	F	D	D	E	D	E	F	D	C
Approach Delay (s)		68.2			57.7			54.5			55.6	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	161.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	632	965	261	372	680	187	189	1501	658	156	1419	409
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	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	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	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3574	1599	3502	3574	1599	1805	5136	1599	1787	5136	1583
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)	632	965	261	372	680	187	189	1501	658	156	1419	409
RTOR Reduction (vph)	0	0	4	0	0	3	0	0	18	0	0	20
Lane Group Flow (vph)	632	965	257	372	680	184	189	1501	640	156	1419	389
Confl. Peds. (#/hr)			24			2			14			9
Confl. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	1%	1%	1%	0%	1%	1%	0%	1%	1%	1%	1%	2%
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	26.4	42.8	59.8	18.0	34.4	46.4	12.0	42.1	65.1	12.0	42.1	68.5
Effective Green, g (s)	26.4	42.8	59.8	18.0	34.4	46.4	12.0	42.1	65.1	12.0	42.1	68.5
Actuated g/C Ratio	0.20	0.32	0.44	0.13	0.26	0.34	0.09	0.31	0.48	0.09	0.31	0.51
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	678	1134	709	467	911	550	161	1603	772	159	1603	804
v/s Ratio Prot	0.18	c0.27	0.16	0.11	0.19	0.11	c0.10	c0.29	c0.40	0.09	0.28	0.25
v/s Ratio Perm												
v/c Ratio	0.93	0.85	0.36	0.80	0.75	0.33	1.17	0.94	0.83	0.98	0.89	0.48
Uniform Delay, d1	53.4	43.1	24.9	56.7	46.2	32.8	61.5	45.1	30.1	61.3	44.1	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.7	6.3	0.3	9.1	3.4	0.4	125.4	10.7	7.3	65.4	6.2	0.5
Delay (s)	73.1	49.4	25.2	65.8	49.6	33.2	186.8	55.8	37.4	126.8	50.3	22.1
Level of Service	E	D	C	E	D	C	F	E	D	F	D	C
Approach Delay (s)		54.0			52.0			61.2			50.5	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	55.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	134.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	367	83	44	1847	1718	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1578	1770	5136	5136	1544
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1805	1578	1770	5136	5136	1544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	367	83	44	1847	1718	410
RTOR Reduction (vph)	0	62	0	0	0	123
Lane Group Flow (vph)	367	21	44	1847	1718	287
Confl. Peds. (#/hr)		1				6
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	29.9	29.9	5.9	80.1	69.2	69.2
Effective Green, g (s)	29.9	29.9	5.9	80.1	69.2	69.2
Actuated g/C Ratio	0.25	0.25	0.05	0.67	0.58	0.58
Clearance Time (s)	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
Lane Grp Cap (vph)	450	393	87	3428	2962	890
v/s Ratio Prot	c0.20		0.02	c0.36	c0.33	
v/s Ratio Perm		0.01				0.19
v/c Ratio	0.82	0.05	0.51	0.54	0.58	0.32
Uniform Delay, d1	42.5	34.3	55.6	10.4	16.2	13.2
Progression Factor	1.00	1.00	0.68	0.52	1.00	1.00
Incremental Delay, d2	10.9	0.1	3.6	0.5	0.8	1.0
Delay (s)	53.3	34.3	41.2	5.8	17.0	14.2
Level of Service	D	C	D	A	B	B
Approach Delay (s)	49.8			6.7	16.4	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.2%	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												
Volume (vph)	507	46	515	62	36	59	376	1261	18	32	1446	263
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	5.0	5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	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	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	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1579	1715	1780	1583	3467	5122		1752	5136	1567
Flt Permitted	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	1900	1579	1715	1780	1583	3467	5122		1752	5136	1567
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)	507	46	515	62	36	59	376	1261	18	32	1446	263
RTOR Reduction (vph)	0	0	219	0	0	55	0	1	0	0	0	110
Lane Group Flow (vph)	507	46	296	48	50	4	376	1278	0	32	1446	153
Confl. Peds. (#/hr)			8	8			5		15	15		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	1%	1%	0%	3%	1%	1%
Turn Type	Split		Perm	Split		Perm	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	35.6	35.6	35.6	7.7	7.7	7.7	15.0	51.9		4.8	41.7	41.7
Effective Green, g (s)	35.6	35.6	35.6	7.7	7.7	7.7	15.0	51.9		4.8	41.7	41.7
Actuated g/C Ratio	0.30	0.30	0.30	0.06	0.06	0.06	0.12	0.43		0.04	0.35	0.35
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	535	564	468	110	114	102	433	2215		70	1785	545
v/s Ratio Prot	c0.28	0.02		0.03	c0.03		c0.11	0.25		0.02	c0.28	
v/s Ratio Perm			0.19			0.00						0.10
v/c Ratio	0.95	0.08	0.63	0.44	0.44	0.04	0.87	0.58		0.46	0.81	0.28
Uniform Delay, d1	41.3	30.4	36.5	54.1	54.1	52.7	51.5	25.7		56.3	35.6	28.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.42		0.64	0.56	0.35
Incremental Delay, d2	26.1	0.1	2.8	2.8	2.7	0.1	12.7	0.8		3.9	3.5	1.1
Delay (s)	67.4	30.5	39.3	56.8	56.8	52.8	50.4	11.6		39.8	23.6	10.9
Level of Service	E	C	D	E	E	D	D	B		D	C	B
Approach Delay (s)		52.3			55.3			20.4			22.0	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.9%	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												
Volume (vph)	354	126	42	85	59	116	29	1228	29	245	1568	115
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	5.0		5.0	5.0	
Lane Util. Factor	0.95	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1707		1805	1900	1552	1805	5116		1805	5067	
Flt Permitted	0.95	0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1698	1707		1805	1900	1552	1805	5116		1805	5067	
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)	354	126	42	85	59	116	29	1228	29	245	1568	115
RTOR Reduction (vph)	0	6	0	0	0	103	0	2	0	0	5	0
Lane Group Flow (vph)	262	254	0	85	59	13	29	1255	0	245	1678	0
Confl. Peds. (#/hr)	3		2	2		3	6		2	2		6
Confl. Bikes (#/hr)						2						1
Heavy Vehicles (%)	1%	0%	5%	0%	0%	2%	0%	1%	0%	0%	1%	2%
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	23.6	23.6		13.7	13.7	13.7	4.5	40.1		22.6	58.2	
Effective Green, g (s)	23.6	23.6		13.7	13.7	13.7	4.5	40.1		22.6	58.2	
Actuated g/C Ratio	0.20	0.20		0.11	0.11	0.11	0.04	0.33		0.19	0.49	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	334	336		206	217	177	68	1710		340	2457	
v/s Ratio Prot	c0.15	0.15		c0.05	0.03		0.02	c0.25		c0.14	0.33	
v/s Ratio Perm						0.01						
v/c Ratio	0.78	0.75		0.41	0.27	0.07	0.43	0.73		0.72	0.68	
Uniform Delay, d1	45.8	45.5		49.4	48.6	47.5	56.5	35.2		45.7	23.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.48	0.29	
Incremental Delay, d2	11.4	9.3		1.3	0.7	0.2	4.3	2.8		4.9	1.0	
Delay (s)	57.2	54.7		50.8	49.3	47.7	60.7	38.1		72.8	8.0	
Level of Service	E	D		D	D	D	E	D		E	A	
Approach Delay (s)		56.0			49.0			38.6			16.3	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.2%	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												
Volume (vph)	198	1279	50	391	1294	402	76	647	362	468	983	110
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	5.0	5.0	5.0	
Lane Util. Factor	0.97	0.95		0.97	0.91		1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3516		3433	4899		1787	5136	1529	1805	5080	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3467	3516		3433	4899		1787	5136	1529	1805	5080	
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)	198	1279	50	391	1294	402	76	647	362	468	983	110
RTOR Reduction (vph)	0	2	0	0	38	0	0	0	156	0	9	0
Lane Group Flow (vph)	198	1327	0	391	1658	0	76	647	206	468	1084	0
Confl. Peds. (#/hr)			7			24			15			10
Heavy Vehicles (%)	1%	2%	2%	2%	1%	1%	1%	1%	2%	0%	0%	3%
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	10.5	52.0		14.0	55.5		10.6	26.4	26.4	37.6	53.4	
Effective Green, g (s)	10.5	52.0		14.0	55.5		10.6	26.4	26.4	37.6	53.4	
Actuated g/C Ratio	0.07	0.35		0.09	0.37		0.07	0.18	0.18	0.25	0.36	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	243	1219		320	1813		126	904	269	452	1808	
v/s Ratio Prot	0.06	c0.38		c0.11	0.34		0.04	0.13		c0.26	0.21	
v/s Ratio Perm									c0.13			
v/c Ratio	0.81	1.09		1.22	0.91		0.60	0.72	0.77	1.04	0.60	
Uniform Delay, d1	68.8	49.0		68.0	45.0		67.7	58.3	58.9	56.2	39.5	
Progression Factor	0.83	0.78		1.07	0.44		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	15.0	51.0		115.1	5.3		7.9	2.7	12.3	51.8	0.5	
Delay (s)	72.2	89.3		187.9	25.2		75.6	61.0	71.2	108.0	40.1	
Level of Service	E	F		F	C		E	E	E	F	D	
Approach Delay (s)		87.1			55.7			65.4			60.4	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM Average Control Delay	66.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	108.1%	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												
Volume (vph)	166	293	116	41	155	157	137	794	60	278	1081	115
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	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	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1800	1900	1592	1669	1881	1574	1787	5069		1805	5101	
Flt Permitted	0.66	1.00	1.00	0.41	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1241	1900	1592	721	1881	1574	1787	5069		1805	5101	
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)	166	293	116	41	155	157	137	794	60	278	1081	115
RTOR Reduction (vph)	0	0	86	0	0	117	0	7	0	0	11	0
Lane Group Flow (vph)	166	293	30	41	155	40	137	847	0	278	1185	0
Confl. Peds. (#/hr)	5		3	3		5			4			2
Heavy Vehicles (%)	0%	0%	0%	8%	1%	1%	1%	1%	2%	0%	0%	0%
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	18.8	18.8	18.8	18.8	18.8	18.8	11.9	21.2		17.9	27.2	
Effective Green, g (s)	18.8	18.8	18.8	18.8	18.8	18.8	11.9	21.2		17.9	27.2	
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.29		0.25	0.37	
Clearance Time (s)	5.0	5.0	5.0	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)	320	490	411	186	485	406	292	1474		443	1903	
v/s Ratio Prot		c0.15			0.08		0.08	0.17		c0.15	c0.23	
v/s Ratio Perm	0.13		0.02	0.06		0.03						
v/c Ratio	0.52	0.60	0.07	0.22	0.32	0.10	0.47	0.57		0.63	0.62	
Uniform Delay, d1	23.2	23.7	20.5	21.3	21.9	20.6	27.6	22.0		24.5	18.7	
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	1.4	2.0	0.1	0.6	0.4	0.1	1.2	0.5		2.8	0.6	
Delay (s)	24.6	25.7	20.5	21.9	22.3	20.7	28.8	22.6		27.3	19.3	
Level of Service	C	C	C	C	C	C	C	C		C	B	
Approach Delay (s)		24.3			21.5			23.4			20.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	72.9	Sum of lost time (s)	10.0
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												
Volume (vph)	290	475	42	567	390	74	48	640	398	140	855	211
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	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3423		3502	3509		1770	3574	1583	1805	3574	1563
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3423		3502	3509		1770	3574	1583	1805	3574	1563
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)	290	475	42	567	390	74	48	640	398	140	855	211
RTOR Reduction (vph)	0	6	0	0	14	0	0	0	209	0	0	142
Lane Group Flow (vph)	290	511	0	567	450	0	48	640	189	140	855	69
Confl. Peds. (#/hr)			1			5						2
Heavy Vehicles (%)	1%	4%	5%	0%	0%	1%	2%	1%	2%	0%	1%	1%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	13.3	21.8		19.4	27.9		5.9	29.5	29.5	9.2	32.8	32.8
Effective Green, g (s)	13.3	21.8		19.4	27.9		5.9	29.5	29.5	9.2	32.8	32.8
Actuated g/C Ratio	0.13	0.22		0.19	0.28		0.06	0.30	0.30	0.09	0.33	0.33
Clearance Time (s)	5.0	5.0		5.0	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)	462	747		680	980		105	1055	467	166	1173	513
v/s Ratio Prot	0.08	c0.15		c0.16	0.13		0.03	0.18		c0.08	c0.24	
v/s Ratio Perm									0.12			0.04
v/c Ratio	0.63	0.68		0.83	0.46		0.46	0.61	0.40	0.84	0.73	0.14
Uniform Delay, d1	41.0	35.9		38.7	29.8		45.5	30.2	28.2	44.6	29.6	23.6
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	2.7	2.6		8.7	0.3		3.1	1.0	0.6	30.4	2.3	0.1
Delay (s)	43.6	38.5		47.4	30.1		48.6	31.2	28.7	75.0	31.9	23.7
Level of Service	D	D		D	C		D	C	C	E	C	C
Approach Delay (s)		40.3			39.6			31.1			35.5	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	99.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.2%	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												
Volume (vph)	65	1522	170	61	1060	66	153	59	54	84	172	83
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	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00			1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.93			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1802	3494		1752	3574	1557	1789	1728			1779	
Flt Permitted	0.23	1.00		0.08	1.00	1.00	0.38	1.00			0.87	
Satd. Flow (perm)	431	3494		153	3574	1557	712	1728			1571	
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)	65	1522	170	61	1060	66	153	59	54	84	172	83
RTOR Reduction (vph)	0	6	0	0	0	22	0	26	0	0	11	0
Lane Group Flow (vph)	65	1686	0	61	1060	44	153	87	0	0	328	0
Confl. Peds. (#/hr)	4		17	17		4	18		10	10		18
Confl. Bikes (#/hr)			3			6						
Heavy Vehicles (%)	0%	1%	1%	3%	1%	0%	0%	0%	2%	0%	2%	0%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	80.5	80.5		80.5	80.5	80.5	29.5	29.5			29.5	
Effective Green, g (s)	80.5	80.5		80.5	80.5	80.5	29.5	29.5			29.5	
Actuated g/C Ratio	0.67	0.67		0.67	0.67	0.67	0.25	0.25			0.25	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	289	2344		103	2398	1044	175	425			386	
v/s Ratio Prot		c0.48			0.30			0.05				
v/s Ratio Perm	0.15			0.40		0.03	c0.21				0.21	
v/c Ratio	0.22	0.72		0.59	0.44	0.04	0.87	0.20			0.85	
Uniform Delay, d1	7.7	12.6		10.8	9.2	6.7	43.5	35.9			43.2	
Progression Factor	1.00	1.00		0.89	0.52	0.58	1.00	1.00			1.00	
Incremental Delay, d2	1.8	1.9		17.3	0.4	0.1	35.0	0.2			16.3	
Delay (s)	9.5	14.5		26.9	5.3	3.9	78.5	36.2			59.4	
Level of Service	A	B		C	A	A	E	D			E	
Approach Delay (s)		14.3			6.3			60.5			59.4	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	89.7%	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												
Volume (vph)	161	1764	165	207	1595	74	176	291	206	58	341	157
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	5061		1805	5093		1752	1881	1599	1805	1900	1615
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	5061		1805	5093		1752	1881	1599	1805	1900	1615
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)	161	1764	165	207	1595	74	176	291	206	58	341	157
RTOR Reduction (vph)	0	8	0	0	3	0	0	0	34	0	0	18
Lane Group Flow (vph)	161	1921	0	207	1666	0	176	291	172	58	341	139
Confl. Peds. (#/hr)			5			7			5			17
Confl. Bikes (#/hr)									2			5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	3%	1%	1%	0%	0%	0%
Turn Type	Prot			Prot			Prot		pt+ov	Prot		pt+ov
Protected Phases	7	4		3	8		5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	15.6	57.1		17.5	59.0		15.6	36.0	58.5	7.5	27.9	48.5
Effective Green, g (s)	15.6	57.1		17.5	59.0		15.6	36.0	58.5	7.5	27.9	48.5
Actuated g/C Ratio	0.11	0.41		0.13	0.43		0.11	0.26	0.42	0.05	0.20	0.35
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	204	2093		229	2176		198	490	677	98	384	567
v/s Ratio Prot	0.09	c0.38		c0.11	0.33		c0.10	0.15	0.11	0.03	c0.18	0.09
v/s Ratio Perm												
v/c Ratio	0.79	0.92		0.90	0.77		0.89	0.59	0.25	0.59	0.89	0.25
Uniform Delay, d1	59.6	38.3		59.5	33.7		60.4	44.7	25.7	63.8	53.6	31.8
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	18.1	6.9		34.5	1.7		34.7	1.9	0.2	9.2	21.2	0.2
Delay (s)	77.7	45.2		94.0	35.3		95.1	46.6	25.9	73.0	74.7	32.0
Level of Service	E	D		F	D		F	D	C	E	E	C
Approach Delay (s)		47.7			41.8			52.9			62.5	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	138.1	Sum of lost time (s)	20.0
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												
Volume (vph)	72	1344	162	113	952	79	151	285	148	132	373	110
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	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	5075		1805	3520		1787	3574	1574	1805	1881	1554
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	5075		1805	3520		1787	3574	1574	1805	1881	1554
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)	72	1344	162	113	952	79	151	285	148	132	373	110
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	121	0	0	46
Lane Group Flow (vph)	72	1494	0	113	1026	0	151	285	27	132	373	64
Confl. Peds. (#/hr)			12			11			12			24
Confl. Bikes (#/hr)			3			2			1			2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	3%	1%	1%	0%	0%	1%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.1	46.9		11.0	50.8		11.9	21.8	21.8	20.3	30.2	30.2
Effective Green, g (s)	7.1	46.9		11.0	50.8		11.9	21.8	21.8	20.3	30.2	30.2
Actuated g/C Ratio	0.06	0.39		0.09	0.42		0.10	0.18	0.18	0.17	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	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)	107	1983		165	1490		177	649	286	305	473	391
v/s Ratio Prot	0.04	c0.29		0.06	c0.29		c0.08	0.08		0.07	c0.20	
v/s Ratio Perm									0.02			0.04
v/c Ratio	0.67	0.75		0.68	0.69		0.85	0.44	0.09	0.43	0.79	0.16
Uniform Delay, d1	55.3	31.6		52.8	28.2		53.2	43.7	40.9	44.7	41.9	35.0
Progression Factor	0.95	0.70		0.80	0.72		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.1	1.9		9.5	2.2		30.7	0.5	0.1	1.0	8.5	0.2
Delay (s)	63.5	24.1		51.7	22.6		83.9	44.1	41.0	45.7	50.4	35.2
Level of Service	E	C		D	C		F	D	D	D	D	D
Approach Delay (s)		25.9			25.5			53.6			46.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.9%	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												
Volume (vph)	136	1947	287	88	1883	115	200	221	82	211	283	155
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4973		1805	5080		1787	3370		1787	3361	
Flt Permitted	0.95	1.00		0.95	1.00		0.22	1.00		0.40	1.00	
Satd. Flow (perm)	1770	4973		1805	5080		415	3370		748	3361	
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)	136	1947	287	88	1883	115	200	221	82	211	283	155
RTOR Reduction (vph)	0	12	0	0	4	0	0	26	0	0	49	0
Lane Group Flow (vph)	136	2222	0	88	1994	0	200	277	0	211	389	0
Confl. Peds. (#/hr)			15			19			36			15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	0%	0%	1%	0%	1%	1%	0%	1%	0%	1%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)	17.8	78.8		10.9	71.9		40.3	24.2		40.3	24.2	
Effective Green, g (s)	17.8	78.8		10.9	71.9		40.3	24.2		40.3	24.2	
Actuated g/C Ratio	0.12	0.53		0.07	0.48		0.27	0.16		0.27	0.16	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	210	2612		131	2435		259	544		312	542	
v/s Ratio Prot	c0.08	c0.45		0.05	0.39		c0.08	0.08		0.07	0.12	
v/s Ratio Perm							c0.12			0.11		
v/c Ratio	0.65	0.85		0.67	0.82		0.77	0.51		0.68	0.72	
Uniform Delay, d1	63.1	30.5		67.8	33.5		45.9	57.5		45.7	59.7	
Progression Factor	0.94	0.66		0.86	0.61		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	1.5		10.6	2.7		13.3	0.8		5.7	4.5	
Delay (s)	62.2	21.8		68.9	23.0		59.2	58.2		51.4	64.1	
Level of Service	E	C		E	C		E	E		D	E	
Approach Delay (s)		24.1			24.9			58.6			60.0	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.5%	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												
Volume (vph)	59	1446	99	92	1112	66	56	73	75	93	186	73
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		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3527		1805	3507		1805	1730		1805	1795	
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00		0.56	1.00	
Satd. Flow (perm)	1805	3527		1805	3507		589	1730		1061	1795	
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)	59	1446	99	92	1112	66	56	73	75	93	186	73
RTOR Reduction (vph)	0	4	0	0	3	0	0	34	0	0	13	0
Lane Group Flow (vph)	59	1541	0	92	1175	0	56	114	0	93	246	0
Confl. Peds. (#/hr)	4		17	17		4			15			6
Confl. Bikes (#/hr)			5			3						
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	3%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	13.2	71.3		10.4	68.5		23.3	23.3		23.3	23.3	
Effective Green, g (s)	13.2	71.3		10.4	68.5		23.3	23.3		23.3	23.3	
Actuated g/C Ratio	0.11	0.59		0.09	0.57		0.19	0.19		0.19	0.19	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	199	2096		156	2002		114	336		206	349	
v/s Ratio Prot	0.03	c0.44		0.05	c0.33			0.07			c0.14	
v/s Ratio Perm							0.10			0.09		
v/c Ratio	0.30	0.74		0.59	0.59		0.49	0.34		0.45	0.71	
Uniform Delay, d1	49.1	17.6		52.7	16.6		43.1	41.7		42.7	45.1	
Progression Factor	0.65	0.44		1.03	0.78		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.7		3.3	0.7		3.3	0.6		1.6	6.4	
Delay (s)	32.5	9.4		57.8	13.7		46.4	42.3		44.3	51.5	
Level of Service	C	A		E	B		D	D		D	D	
Approach Delay (s)		10.3			16.9			43.4			49.6	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.9%	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												
Volume (vph)	65	1923	200	20	2131	43	122	50	13	75	102	82
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	4978		1805	5108		1783	1831		1763	1900	1570
Flt Permitted	0.95	1.00		0.95	1.00		0.60	1.00		0.72	1.00	1.00
Satd. Flow (perm)	1805	4978		1805	5108		1119	1831		1329	1900	1570
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)	65	1923	200	20	2131	43	122	50	13	75	102	82
RTOR Reduction (vph)	0	6	0	0	1	0	0	7	0	0	0	71
Lane Group Flow (vph)	65	2117	0	20	2173	0	122	56	0	75	102	11
Confl. Peds. (#/hr)			17			27	9		9	9		9
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.0	109.8		4.9	104.7		20.3	20.3		20.3	20.3	20.3
Effective Green, g (s)	10.0	109.8		4.9	104.7		20.3	20.3		20.3	20.3	20.3
Actuated g/C Ratio	0.07	0.73		0.03	0.70		0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	120	3644		59	3565		151	248		180	257	212
v/s Ratio Prot	0.04	c0.43		0.01	c0.43			0.03			0.05	
v/s Ratio Perm							c0.11			0.06		0.01
v/c Ratio	0.54	0.58		0.34	0.61		0.81	0.23		0.42	0.40	0.05
Uniform Delay, d1	67.8	9.4		71.0	11.9		63.0	57.8		59.4	59.3	56.5
Progression Factor	0.70	0.49		0.86	1.56		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.7	0.4		1.6	0.4		26.2	0.5		1.6	1.0	0.1
Delay (s)	50.1	4.9		62.6	18.9		89.1	58.3		61.0	60.3	56.6
Level of Service	D	A		E	B		F	E		E	E	E
Approach Delay (s)		6.3			19.3			78.6			59.3	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.3%	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												
Volume (vph)	283	950	114	100	834	159	127	829	121	395	1064	278
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5030		1787	5006		3467	5021		1805	3610	1573
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5030		1787	5006		3467	5021		1805	3610	1573
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)	283	950	114	100	834	159	127	829	121	395	1064	278
RTOR Reduction (vph)	0	10	0	0	20	0	0	14	0	0	0	137
Lane Group Flow (vph)	283	1054	0	100	973	0	127	936	0	395	1064	141
Confl. Peds. (#/hr)			10			6			13			4
Heavy Vehicles (%)	2%	1%	3%	1%	1%	0%	1%	1%	1%	0%	0%	1%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	19.1	39.2		12.0	32.1		10.1	31.0		27.2	48.1	48.1
Effective Green, g (s)	19.1	39.2		12.0	32.1		10.1	31.0		27.2	48.1	48.1
Actuated g/C Ratio	0.15	0.30		0.09	0.25		0.08	0.24		0.21	0.37	0.37
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	261	1524		166	1242		271	1203		379	1342	585
v/s Ratio Prot	c0.16	0.21		0.06	c0.19		0.04	0.19		c0.22	c0.29	
v/s Ratio Perm												0.09
v/c Ratio	1.08	0.69		0.60	0.78		0.47	0.78		1.04	0.79	0.24
Uniform Delay, d1	55.2	39.8		56.4	45.4		57.1	46.0		51.1	36.2	28.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	80.0	1.4		6.0	3.3		1.3	3.2		57.6	3.3	0.2
Delay (s)	135.1	41.1		62.4	48.7		58.4	49.2		108.7	39.5	28.3
Level of Service	F	D		E	D		E	D		F	D	C
Approach Delay (s)		60.9			50.0			50.3			53.5	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	54.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	129.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	98.8%	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												
Volume (vph)	177	1087	302	101	831	87	282	550	75	184	805	197
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	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	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	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3610	1536	1805	3574	1496	3335	3531		3467	3412	
Flt Permitted	0.12	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	216	3610	1536	213	3574	1496	3335	3531		3467	3412	
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)	177	1087	302	101	831	87	282	550	75	184	805	197
RTOR Reduction (vph)	0	0	80	0	0	61	0	9	0	0	18	0
Lane Group Flow (vph)	177	1087	222	101	831	26	282	616	0	184	984	0
Confl. Peds. (#/hr)			31			19			17			10
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	2%	0%	0%	0%	1%	4%	5%	0%	0%	1%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	50.1	39.4	39.4	42.5	35.6	35.6	12.0	43.3		10.4	41.7	
Effective Green, g (s)	50.1	39.4	39.4	42.5	35.6	35.6	12.0	43.3		10.4	41.7	
Actuated g/C Ratio	0.42	0.33	0.33	0.35	0.30	0.30	0.10	0.36		0.09	0.35	
Clearance Time (s)	5.0	5.0	5.0	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)	229	1185	504	167	1060	444	334	1274		300	1186	
v/s Ratio Prot	c0.07	c0.30		0.03	0.23		c0.08	0.17		0.05	c0.29	
v/s Ratio Perm	0.25		0.14	0.18		0.02						
v/c Ratio	0.77	0.92	0.44	0.60	0.78	0.06	0.84	0.48		0.61	0.83	
Uniform Delay, d1	26.5	38.7	31.6	30.3	38.7	30.2	53.1	29.7		52.9	35.9	
Progression Factor	1.10	0.59	0.37	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.9	8.4	0.4	6.1	3.9	0.1	17.4	1.3		3.7	6.8	
Delay (s)	40.1	31.0	12.0	36.4	42.5	30.3	70.5	31.0		56.6	42.7	
Level of Service	D	C	B	D	D	C	E	C		E	D	
Approach Delay (s)		28.4			40.9			43.3			44.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	89.1%	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												
Volume (vph)	157	1337	388	114	1515	151	483	615	92	168	814	158
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		5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	4879		1736	5004		3502	3432		3367	5042	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	4879		1736	5004		3502	3432		3367	5042	
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)	157	1337	388	114	1515	151	483	615	92	168	814	158
RTOR Reduction (vph)	0	34	0	0	8	0	0	7	0	0	21	0
Lane Group Flow (vph)	157	1691	0	114	1658	0	483	700	0	168	951	0
Confl. Peds. (#/hr)			17			19			34			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	1%	2%	1%	4%	1%	5%	0%	2%	4%	4%	0%	0%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.8	57.7		11.6	54.5		24.7	47.9		12.8	36.0	
Effective Green, g (s)	14.8	57.7		11.6	54.5		24.7	47.9		12.8	36.0	
Actuated g/C Ratio	0.10	0.38		0.08	0.36		0.16	0.32		0.09	0.24	
Clearance Time (s)	5.0	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	
Lane Grp Cap (vph)	176	1877		134	1818		577	1096		287	1210	
v/s Ratio Prot	c0.09	c0.35		0.07	0.33		c0.14	0.20		0.05	c0.19	
v/s Ratio Perm												
v/c Ratio	0.89	0.90		0.85	0.91		0.84	0.64		0.59	0.79	
Uniform Delay, d1	66.8	43.5		68.3	45.5		60.7	43.6		66.0	53.4	
Progression Factor	0.92	0.67		0.90	0.77		1.00	1.00		1.00	1.00	
Incremental Delay, d2	34.3	6.4		33.8	7.5		10.2	1.2		3.0	3.4	
Delay (s)	95.9	35.3		95.5	42.7		70.9	44.9		69.1	56.8	
Level of Service	F	D		F	D		E	D		E	E	
Approach Delay (s)		40.4			46.1			55.5			58.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.4%	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												
Volume (vph)	133	1508	107	68	1535	118	151	326	114	163	322	178
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		5.0	5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1800	4977		1732	4998		1752	3285		1703	3574	1548
Flt Permitted	0.11	1.00		0.12	1.00		0.40	1.00		0.26	1.00	1.00
Satd. Flow (perm)	209	4977		211	4998		740	3285		469	3574	1548
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)	133	1508	107	68	1535	118	151	326	114	163	322	178
RTOR Reduction (vph)	0	5	0	0	6	0	0	24	0	0	0	44
Lane Group Flow (vph)	133	1610	0	68	1647	0	151	416	0	163	322	134
Confl. Peds. (#/hr)	32		18	18		32			32			20
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	3%	2%	4%	2%	6%	3%	4%	4%	6%	1%	0%
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	100.4	100.4		100.4	100.4		34.6	27.6		34.6	27.6	27.6
Effective Green, g (s)	100.4	100.4		100.4	100.4		34.6	27.6		34.6	27.6	27.6
Actuated g/C Ratio	0.67	0.67		0.67	0.67		0.23	0.18		0.23	0.18	0.18
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	140	3331		141	3345		218	604		166	658	285
v/s Ratio Prot		0.32			0.33		0.03	0.13		c0.05	0.09	
v/s Ratio Perm	c0.64			0.32			0.13			c0.18		0.09
v/c Ratio	0.95	0.48		0.48	0.49		0.69	0.69		0.98	0.49	0.47
Uniform Delay, d1	22.5	12.1		12.1	12.2		51.7	57.2		56.0	54.9	54.7
Progression Factor	0.77	0.28		1.03	0.55		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	48.7	0.3		8.5	0.4		9.1	3.3		64.2	0.6	1.2
Delay (s)	66.0	3.7		20.9	7.1		60.9	60.5		120.2	55.5	55.9
Level of Service	E	A		C	A		E	E		F	E	E
Approach Delay (s)		8.4			7.7			60.6			71.5	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.6%	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												
Volume (vph)	141	1649	55	185	1590	78	63	413	362	156	289	137
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	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	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	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4965		1770	5046		1805	3539	1522	1752	3336	
Flt Permitted	0.95	1.00		0.95	1.00		0.40	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	1770	4965		1770	5046		758	3539	1522	470	3336	
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)	141	1649	55	185	1590	78	63	413	362	156	289	137
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	226	0	39	0
Lane Group Flow (vph)	141	1702	0	185	1665	0	63	413	136	156	387	0
Confl. Peds. (#/hr)			19			9			14			6
Heavy Vehicles (%)	2%	3%	29%	2%	2%	1%	0%	2%	3%	3%	3%	1%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	19.6	70.0		19.7	70.1		34.7	28.4	28.4	45.3	34.0	
Effective Green, g (s)	19.6	70.0		19.7	70.1		34.7	28.4	28.4	45.3	34.0	
Actuated g/C Ratio	0.13	0.47		0.13	0.47		0.23	0.19	0.19	0.30	0.23	
Clearance Time (s)	5.0	5.0		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	
Lane Grp Cap (vph)	231	2317		232	2358		219	670	288	244	756	
v/s Ratio Prot	0.08	c0.34		c0.10	0.33		0.01	0.12		c0.05	0.12	
v/s Ratio Perm							0.05		0.09	c0.14		
v/c Ratio	0.61	0.73		0.80	0.71		0.29	0.62	0.47	0.64	0.51	
Uniform Delay, d1	61.6	32.5		63.2	31.8		46.0	55.8	54.1	41.2	50.7	
Progression Factor	0.92	0.52		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.1	1.8		17.1	1.8		0.7	1.7	1.2	5.4	0.6	
Delay (s)	60.7	18.6		80.3	33.6		46.8	57.5	55.3	46.6	51.3	
Level of Service	E	B		F	C		D	E	E	D	D	
Approach Delay (s)		21.8			38.2			55.8			50.1	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.0%	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												
Volume (vph)	0	1918	226	116	975	0	0	0	0	473	4	1061
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
Lane Util. Factor		0.86		1.00	0.91						1.00	0.88
Frpb, ped/bikes		0.99		1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00						1.00	1.00
Frt		0.98		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)		6169		1787	5036						1739	2787
Flt Permitted		1.00		0.95	1.00						0.95	1.00
Satd. Flow (perm)		6169		1787	5036						1739	2787
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)	0	1918	226	116	975	0	0	0	0	473	4	1061
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	0	2126	0	116	975	0	0	0	0	0	477	984
Confl. Peds. (#/hr)			17			42			1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	4%	1%	1%	3%	0%	0%	0%	0%	4%	0%	2%
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Actuated Green, G (s)		43.0		9.6	57.6						42.4	42.4
Effective Green, g (s)		43.0		9.6	57.6						42.4	42.4
Actuated g/C Ratio		0.39		0.09	0.52						0.39	0.39
Clearance Time (s)		5.0		5.0	5.0						5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		2412		156	2637						670	1074
v/s Ratio Prot		c0.34		c0.06	0.19							
v/s Ratio Perm											0.27	c0.35
v/c Ratio		0.88		0.74	0.37						0.71	0.92
Uniform Delay, d1		31.1		49.0	15.5						28.6	32.1
Progression Factor		1.00		1.19	0.27						1.00	1.00
Incremental Delay, d2		5.1		12.6	0.3						3.6	11.9
Delay (s)		36.2		70.7	4.5						32.2	44.0
Level of Service		D		E	A						C	D
Approach Delay (s)		36.2			11.6			0.0			40.3	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	249	41	1352	308	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0		
Lane Util. Factor	0.97	1.00	0.91	0.91		
Frpb, ped/bikes	1.00	1.00	1.00	0.98		
Flpb, ped/bikes	1.00	1.00	1.00	1.00		
Frt	1.00	0.85	1.00	0.85		
Flt Protected	1.00	1.00	1.00	1.00		
Satd. Flow (prot)	3686	1615	3347	1441		
Flt Permitted	1.00	1.00	1.00	1.00		
Satd. Flow (perm)	3686	1615	3347	1441		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	249	41	1352	308	0	0
RTOR Reduction (vph)	0	34	2	94	0	0
Lane Group Flow (vph)	249	7	1381	183	0	0
Confl. Peds. (#/hr)				7	7	
Heavy Vehicles (%)	0%	0%	3%	0%	0%	2%
Turn Type		Perm		custom		
Protected Phases	4					
Permitted Phases		4	2	2		
Actuated Green, G (s)	10.0	10.0	39.0	39.0		
Effective Green, g (s)	10.0	10.0	39.0	39.0		
Actuated g/C Ratio	0.17	0.17	0.66	0.66		
Clearance Time (s)	5.0	5.0	5.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	625	274	2212	953		
v/s Ratio Prot	c0.07					
v/s Ratio Perm		0.00	c0.41	0.13		
v/c Ratio	0.40	0.03	0.62	0.19		
Uniform Delay, d1	21.8	20.4	5.8	3.9		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.4	0.0	0.6	0.1		
Delay (s)	22.2	20.5	6.3	4.0		
Level of Service	C	C	A	A		
Approach Delay (s)	22.0		5.9			0.0
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.1%	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												
Volume (vph)	954	1369	93	44	769	482	264	347	190	39	103	61
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		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.91		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.94		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3452		1719	4672		1719	3239		1798	1863	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.69	1.00		0.29	1.00	1.00
Satd. Flow (perm)	3367	3452		1719	4672		1249	3239		558	1863	1553
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)	954	1369	93	44	769	482	264	347	190	39	103	61
RTOR Reduction (vph)	0	4	0	0	99	0	0	73	0	0	0	45
Lane Group Flow (vph)	954	1458	0	44	1152	0	264	464	0	39	103	16
Confl. Peds. (#/hr)			27			32			11	11		
Heavy Vehicles (%)	4%	3%	5%	5%	2%	4%	5%	4%	6%	0%	2%	4%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	31.7	61.8		4.2	34.3		29.0	29.0		29.0	29.0	29.0
Effective Green, g (s)	31.7	61.8		4.2	34.3		29.0	29.0		29.0	29.0	29.0
Actuated g/C Ratio	0.29	0.56		0.04	0.31		0.26	0.26		0.26	0.26	0.26
Clearance Time (s)	5.0	5.0		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
Lane Grp Cap (vph)	970	1939		66	1457		329	854		147	491	409
v/s Ratio Prot	c0.28	c0.42		0.03	0.25			0.14			0.06	
v/s Ratio Perm							c0.21			0.07		0.01
v/c Ratio	0.98	0.75		0.67	0.79		0.80	0.54		0.27	0.21	0.04
Uniform Delay, d1	38.9	18.3		52.2	34.6		37.8	34.8		32.1	31.6	30.1
Progression Factor	0.79	0.46		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.9	1.4		22.6	4.5		13.2	0.7		1.0	0.2	0.0
Delay (s)	47.7	9.9		74.8	39.0		51.0	35.5		33.0	31.8	30.2
Level of Service	D	A		E	D		D	D		C	C	C
Approach Delay (s)		24.8			40.2			40.6			31.5	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1598	153	97	1092	60	151
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1598	153	97	1092	60	151
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340			724		
pX, platoon unblocked			0.65		0.68	0.65
vC, conflicting volume			1752		2416	876
vC1, stage 1 conf vol					1676	
vC2, stage 2 conf vol					740	
vCu, unblocked vol			1079		1787	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			77		68	79
cM capacity (veh/h)			425		185	708

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1065	686	97	546	546	211
Volume Left	0	0	97	0	0	60
Volume Right	0	153	0	0	0	151
cSH	1700	1700	425	1700	1700	393
Volume to Capacity	0.63	0.40	0.23	0.32	0.32	0.54
Queue Length 95th (ft)	0	0	22	0	0	77
Control Delay (s)	0.0	0.0	16.0	0.0	0.0	24.3
Lane LOS			C			C
Approach Delay (s)	0.0		1.3			24.3
Approach LOS						C

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	851	196	303	1035	152	150	1129	135	185	1266	323
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	5.0		5.0	5.0	5.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.91		0.97	0.91		0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	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	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3574	1568	3502	5020		3400	5049		3467	5187	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3574	1568	3502	5020		3400	5049		3467	5187	1583
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)	343	851	196	303	1035	152	150	1129	135	185	1266	323
RTOR Reduction (vph)	0	0	108	0	16	0	0	12	0	0	0	147
Lane Group Flow (vph)	343	851	88	303	1171	0	150	1252	0	185	1266	176
Confl. Peds. (#/hr)			5			5			7			8
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	2%	1%	1%	0%	1%	2%	3%	1%	0%	1%	0%	0%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	14.9	35.0	35.0	13.7	33.8		7.9	35.6		8.9	36.6	36.6
Effective Green, g (s)	14.9	35.0	35.0	13.7	33.8		7.9	35.6		8.9	36.6	36.6
Actuated g/C Ratio	0.13	0.31	0.31	0.12	0.30		0.07	0.31		0.08	0.32	0.32
Clearance Time (s)	5.0	5.0	5.0	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)	452	1105	485	424	1499		237	1588		273	1677	512
v/s Ratio Prot	c0.10	c0.24		0.09	0.23		0.04	c0.25		c0.05	0.24	
v/s Ratio Perm			0.06									0.11
v/c Ratio	0.76	0.77	0.18	0.71	0.78		0.63	0.79		0.68	0.75	0.34
Uniform Delay, d1	47.4	35.5	28.6	47.9	36.3		51.2	35.4		50.8	34.3	29.2
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	7.2	3.4	0.2	5.6	2.7		5.4	2.7		6.5	2.0	0.4
Delay (s)	54.6	38.8	28.8	53.5	39.0		56.7	38.0		57.3	36.3	29.6
Level of Service	D	D	C	D	D		E	D		E	D	C
Approach Delay (s)		41.3			42.0			40.0			37.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	113.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.1%	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												
Volume (vph)	196	1424	165	296	1318	133	167	666	270	161	978	161
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	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	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	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5136	1577	1787	5054		3502	5085	1545	3467	5136	1615
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)	196	1424	165	296	1318	133	167	666	270	161	978	161
RTOR Reduction (vph)	0	0	61	0	10	0	0	0	194	0	0	77
Lane Group Flow (vph)	196	1424	104	296	1441	0	167	666	76	161	978	84
Confl. Peds. (#/hr)			12			3			24			
Heavy Vehicles (%)	1%	1%	0%	1%	1%	2%	0%	2%	1%	1%	1%	0%
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	10.9	35.1	35.1	20.1	44.3		7.0	32.0	32.0	7.0	32.0	32.0
Effective Green, g (s)	10.9	35.1	35.1	20.1	44.3		7.0	32.0	32.0	7.0	32.0	32.0
Actuated g/C Ratio	0.10	0.31	0.31	0.18	0.39		0.06	0.28	0.28	0.06	0.28	0.28
Clearance Time (s)	5.0	5.0	5.0	5.0	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	3.0
Lane Grp Cap (vph)	331	1579	485	315	1961		215	1425	433	213	1439	453
v/s Ratio Prot	0.06	c0.28		c0.17	0.29		c0.05	0.13		0.05	c0.19	
v/s Ratio Perm			0.07						0.05			0.05
v/c Ratio	0.59	0.90	0.21	0.94	0.73		0.78	0.47	0.17	0.76	0.68	0.19
Uniform Delay, d1	49.5	37.9	29.3	46.5	29.9		52.8	34.0	31.1	52.8	36.5	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	7.5	0.2	34.7	1.5		16.0	0.2	0.2	14.1	1.3	0.2
Delay (s)	52.3	45.4	29.6	81.1	31.4		68.9	34.3	31.3	66.9	37.8	31.4
Level of Service	D	D	C	F	C		E	C	C	E	D	C
Approach Delay (s)		44.7			39.8			38.8			40.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	114.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	361	1398	1332	390	658	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3502	5136	5187	1579	3502	2790
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3502	5136	5187	1579	3502	2790
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	361	1398	1332	390	658	358
RTOR Reduction (vph)	0	0	0	27	0	7
Lane Group Flow (vph)	361	1398	1332	363	658	351
Confl. Peds. (#/hr)				10		2
Heavy Vehicles (%)	0%	1%	0%	1%	0%	1%
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Actuated Green, G (s)	15.5	53.7	33.2	57.3	24.1	39.6
Effective Green, g (s)	15.5	53.7	33.2	57.3	24.1	39.6
Actuated g/C Ratio	0.18	0.61	0.38	0.65	0.27	0.45
Clearance Time (s)	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
Lane Grp Cap (vph)	618	3141	1961	1120	961	1417
v/s Ratio Prot	c0.10	0.27	c0.26	0.09	c0.19	0.04
v/s Ratio Perm				0.14		0.08
v/c Ratio	0.58	0.45	0.68	0.32	0.68	0.25
Uniform Delay, d1	33.2	9.1	22.8	6.7	28.5	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.1	1.0	0.2	2.0	0.1
Delay (s)	34.6	9.2	23.8	6.9	30.5	15.0
Level of Service	C	A	C	A	C	B
Approach Delay (s)		14.4	20.0		25.0	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	87.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.5%	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												
Volume (veh/h)	125	737	0	0	583	27	0	0	0	29	0	112
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	125	737	0	0	583	27	0	0	0	29	0	112
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					852							
pX, platoon unblocked	0.92						0.92	0.92		0.92	0.92	0.92
vC, conflicting volume	610			738			1392	1598	370	1215	1584	305
vC1, stage 1 conf vol							988	988		596	596	
vC2, stage 2 conf vol							404	610		618	988	
vCu, unblocked vol	412			738			1258	1482	370	1067	1467	82
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	88			100			100	100	100	92	100	87
cM capacity (veh/h)	1069			877			221	251	633	342	264	894

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	494	368	389	221	0	141
Volume Left	125	0	0	0	0	29
Volume Right	0	0	0	27	0	112
cSH	1069	1700	1700	1700	1700	671
Volume to Capacity	0.12	0.22	0.23	0.13	0.00	0.21
Queue Length 95th (ft)	10	0	0	0	0	20
Control Delay (s)	3.2	0.0	0.0	0.0	0.0	11.8
Lane LOS	A				A	B
Approach Delay (s)	1.8		0.0		0.0	11.8
Approach LOS					A	B

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	59.5%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1608	140	317	944	245	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3574	1543	1805	3539	3502	1615
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3574	1543	1805	3539	3502	1615
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1608	140	317	944	245	243
RTOR Reduction (vph)	0	36	0	0	0	9
Lane Group Flow (vph)	1608	104	317	944	245	234
Confl. Peds. (#/hr)		6				
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	66.5	66.5	25.1	96.6	13.4	38.5
Effective Green, g (s)	66.5	66.5	25.1	96.6	13.4	38.5
Actuated g/C Ratio	0.55	0.55	0.21	0.80	0.11	0.32
Clearance Time (s)	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
Lane Grp Cap (vph)	1981	855	378	2849	391	585
v/s Ratio Prot	c0.45		c0.18	0.27	c0.07	0.08
v/s Ratio Perm		0.07				0.06
v/c Ratio	0.81	0.12	0.84	0.33	0.63	0.40
Uniform Delay, d1	21.7	12.8	45.5	3.1	50.9	31.8
Progression Factor	0.45	0.11	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2	14.9	0.3	3.1	0.5
Delay (s)	12.8	1.6	60.4	3.4	54.0	32.2
Level of Service	B	A	E	A	D	C
Approach Delay (s)	11.9			17.8	43.2	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1771	80	0	1261	0	170
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1771	80	0	1261	0	170
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	360					
pX, platoon unblocked			0.62		0.62	0.62
vC, conflicting volume			1857		2448	932
vC1, stage 1 conf vol					1817	
vC2, stage 2 conf vol					630	
vCu, unblocked vol			1165		2113	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	75
cM capacity (veh/h)			376		162	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1181	670	630	630	170
Volume Left	0	0	0	0	0
Volume Right	0	80	0	0	170
cSH	1700	1700	1700	1700	676
Volume to Capacity	0.69	0.39	0.37	0.37	0.25
Queue Length 95th (ft)	0	0	0	0	25
Control Delay (s)	0.0	0.0	0.0	0.0	12.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.1
Approach LOS					B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

Appendix I Queuing Analysis Worksheets

Table I-1: Cumulative Plus Project 95th-Percentile Queue Lengths at Lomita Boulevard Site Driveways – Weekday PM Peak Hour

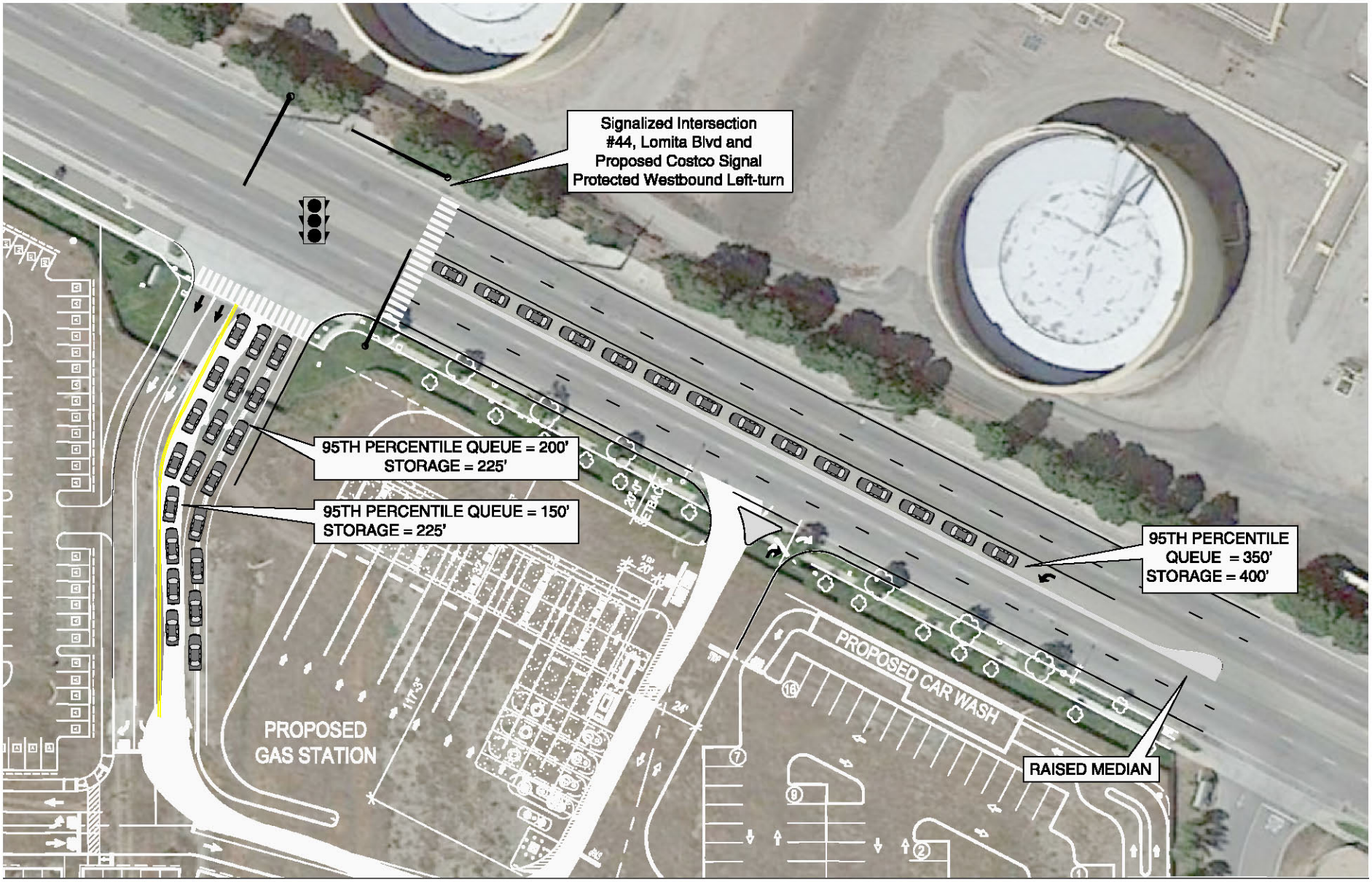
Lomita Boulevard Driveways	95th Percentile Queue Length (feet)					
	Eastbound		Westbound		Northbound	
	T	R	L	T	L	R
West (Unsignalized)	-	-	25	-	100	
Central Access (Signalized)	100	-	325	125	100	125
East (Unsignalized)	-	-	-	-	-	25

Table I-2: Available (and Planned) Queue Storage

Lomita Boulevard Driveways	Queue Storage (feet)					
	Eastbound		Westbound		Northbound	
	T	R	L	T	L	R
West (Unsignalized)	-	-	500	-	100	
Central Access (Signalized)	500	-	400	425	225	225
East (Unsignalized)	-	-	-	-	-	150

The Cumulative Plus Project 95th percentile queue analysis was conducted for all site driveways on Lomita Boulevard. The results, based on HCM 2000 methodology, for the weekday p.m. peak hour, are summarized in Table I-1 and illustrated in Figure I-1. Forecast queuing for the Cumulative Plus Project condition was compared to available storage. Available storage exceeds forecast queues during the weekday p.m. peak hour. Queuing Analysis Worksheets are attached on the following pages that include traffic volumes for each peak hour period.

The northbound approaches represent traffic exiting the Project Site onto Lomita Boulevard. Westbound queuing at the central access (signalized driveway) is forecast to have the longest queue, but there is at least 400 feet of storage available, assuming a raised median is in place to restrict the eastern project driveway to right-in, right-out access only.



95TH PERCENTILE QUEUE LENGTH
CUMULATIVE PLUS PROJECT - WEEKDAY PM PEAK HOUR
TORRANCE, CA

Figure
I-1

K:\H_Portland\profile\17319 - Torrance CA Costco\dwgs\figs\SiteAccess.dwg Jul 23, 2014 - 6:11pm - cbergh Layout Tab: Layout1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1598	153	97	1092	60	151
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1598	153	97	1092	60	151
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340			724		
pX, platoon unblocked			0.65		0.68	0.65
vC, conflicting volume			1752		2416	876
vC1, stage 1 conf vol					1676	
vC2, stage 2 conf vol					740	
vCu, unblocked vol			1079		1787	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			77		68	79
cM capacity (veh/h)			425		185	708

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1065	686	97	546	546	211
Volume Left	0	0	97	0	0	60
Volume Right	0	153	0	0	0	151
cSH	1700	1700	425	1700	1700	393
Volume to Capacity	0.63	0.40	0.23	0.32	0.32	0.54
Queue Length 95th (ft)	0	0	22	0	0	77
Control Delay (s)	0.0	0.0	16.0	0.0	0.0	24.3
Lane LOS			C			C
Approach Delay (s)	0.0		1.3			24.3
Approach LOS						C

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1608	140	317	944	245	243
v/c Ratio	0.81	0.16	0.84	0.33	0.63	0.41
Control Delay	14.0	1.1	65.0	3.6	58.1	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.0	1.1	65.0	3.6	58.1	28.2
Queue Length 50th (ft)	528	8	234	83	94	129
Queue Length 95th (ft)	85	m1	332	116	135	187
Internal Link Dist (ft)	644			280	137	
Turn Bay Length (ft)		180	350			
Base Capacity (vph)	1982	891	436	2850	467	587
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.16	0.73	0.33	0.52	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1608	140	317	944	245	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3574	1543	1805	3539	3502	1615
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3574	1543	1805	3539	3502	1615
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1608	140	317	944	245	243
RTOR Reduction (vph)	0	36	0	0	0	9
Lane Group Flow (vph)	1608	104	317	944	245	234
Confl. Peds. (#/hr)		6				
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	66.5	66.5	25.1	96.6	13.4	38.5
Effective Green, g (s)	66.5	66.5	25.1	96.6	13.4	38.5
Actuated g/C Ratio	0.55	0.55	0.21	0.80	0.11	0.32
Clearance Time (s)	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
Lane Grp Cap (vph)	1981	855	378	2849	391	585
v/s Ratio Prot	c0.45		c0.18	0.27	c0.07	0.08
v/s Ratio Perm		0.07				0.06
v/c Ratio	0.81	0.12	0.84	0.33	0.63	0.40
Uniform Delay, d1	21.7	12.8	45.5	3.1	50.9	31.8
Progression Factor	0.45	0.11	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2	14.9	0.3	3.1	0.5
Delay (s)	12.8	1.6	60.4	3.4	54.0	32.2
Level of Service	B	A	E	A	D	C
Approach Delay (s)	11.9			17.8	43.2	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1771	80	0	1261	0	170
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1771	80	0	1261	0	170
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	360					
pX, platoon unblocked			0.62		0.62	0.62
vC, conflicting volume			1857		2448	932
vC1, stage 1 conf vol					1817	
vC2, stage 2 conf vol					630	
vCu, unblocked vol			1165		2113	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	75
cM capacity (veh/h)			376		162	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1181	670	630	630	170
Volume Left	0	0	0	0	0
Volume Right	0	80	0	0	170
cSH	1700	1700	1700	1700	676
Volume to Capacity	0.69	0.39	0.37	0.37	0.25
Queue Length 95th (ft)	0	0	0	0	25
Control Delay (s)	0.0	0.0	0.0	0.0	12.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.1
Approach LOS					B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	745	100	48	1565	35	44
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	745	100	48	1565	35	44
Pedestrians					3	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	340			724		
pX, platoon unblocked			0.92		0.87	0.92
vC, conflicting volume			848		1676	426
vC1, stage 1 conf vol					798	
vC2, stage 2 conf vol					878	
vCu, unblocked vol			658		1066	198
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.2		3.5	3.3
p0 queue free %			94		90	94
cM capacity (veh/h)			842		359	739

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	497	348	48	782	782	79
Volume Left	0	0	48	0	0	35
Volume Right	0	100	0	0	0	44
cSH	1700	1700	842	1700	1700	503
Volume to Capacity	0.29	0.20	0.06	0.46	0.46	0.16
Queue Length 95th (ft)	0	0	5	0	0	14
Control Delay (s)	0.0	0.0	9.5	0.0	0.0	13.5
Lane LOS			A			B
Approach Delay (s)	0.0		0.3			13.5
Approach LOS						B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	746	43	202	1527	86	45
v/c Ratio	0.37	0.05	0.67	0.54	0.30	0.08
Control Delay	9.2	1.7	44.8	4.0	40.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	1.7	44.8	4.0	40.9	5.9
Queue Length 50th (ft)	75	0	108	115	24	0
Queue Length 95th (ft)	72	4	167	171	45	20
Internal Link Dist (ft)	644			277	137	
Turn Bay Length (ft)		180	350			
Base Capacity (vph)	1998	884	530	2843	593	734
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.05	0.38	0.54	0.15	0.06

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	772	19	0	1729	0	50
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	772	19	0	1729	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	357					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			791		1636	386
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			510		1463	54
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	94
cM capacity (veh/h)			933		106	889

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	386	386	19	864	864	50
Volume Left	0	0	0	0	0	0
Volume Right	0	0	19	0	0	50
cSH	1700	1700	1700	1700	1700	889
Volume to Capacity	0.23	0.23	0.01	0.51	0.51	0.06
Queue Length 95th (ft)	0	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.3
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.3
Approach LOS						A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		