Fehr & Peers

COVA Transportation Analysis Report

Prepared for:
City of Coachella
Relevant Partners

Submitted:
November 2025

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Executive Summary

Fehr & Peers has completed a transportation analysis for the proposed COVA development (Project) in Coachella, California. This study presents the Level of Service (LOS) and Vehicle Miles Traveled (VMT) analysis consistent with the *County of Riverside's Transportation Analysis Guidelines for Level of Service & Vehicle Miles Traveled* (December 2020)[1]. This study is consistent with the requirements of Senate Bill 743 (SB 743), the California Governor's Office of Land Use and Climate Innovation's *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018).

Project Description

The Project is an 85-acre mixed-use development (proposed rezoning from regional commercial) in the City of Coachella bounded by Avenue 52 to the north, Van Buren Street to the east, Calhoun Street to the west, and generally Avenue 53 to the south. The Project will feature two primary components:

- **Private Sector**: Includes 165 single-family recreational home dwelling units and 244 condo-hotel recreational home units, both operating under fractional ownership, timeshare, second home, and short-term and long-term rental models. These accommodations will be complemented by significant on-site resort amenities (i.e. dining, entertainment, recreational).
- **Public Sector**: Includes a beach club, restaurant, and an event tent. These sub-areas are expected to operate with a typical weekday capacity of 500 persons and a weekend capacity of 1,500. The public sector components will generally be operational between 11:00 AM and 2:00 AM, with the highest level of activity occurring in the evening between 7:00 PM and 8:00 PM, and on weekends.

The Project's unique resort features—dwelling units, dining, amenities, outdoor/recreational spaces, and entertainment—create a self-contained destination. This will provide substantial local options for Coachella and regional appeal for the Coachella Valley, drawing visitors already in the area for vacations or events. COVA expects high internal trip capture, with most guests staying onsite for lodging, recreation, dining, and entertainment. A significant portion of public-facing restaurants, beach club, and event spaces will serve onsite guests.

CEQA Transportation Impact Analysis

CEQA Guidelines Section §15064.3 requires Vehicle Miles of Travel (VMT) analysis for land use projects. A full VMT assessment was performed since the Project did not qualify for any of the screening criteria outlined in the County Guidelines.

The Project was run in RIVCOM and the net regional change in total VMT within the City and County boundaries is forecast to decrease, resulting in a **less-than-significant transportation impact**. The Project commute VMT per employee was also reviewed and resulted in a decrease.

[1] County of Riverside TIA Guidelines (2020)

The CEQA Transportation Impact Study also evaluated the Project's consistency with established programs, plans, ordinances, and policies and potential for creating geometric design hazards or hindering emergency access.

Level of Service (LOS) Analysis

Fehr & Peers evaluated the Project's effects on the transportation system in the following Level of Service (LOS) Analysis (Analysis) consistent with procedures outlined by the County's Guidelines.

The LOS analysis prepared traffic forecasts for the following scenarios, and evaluated operations of study intersections:

- Existing (2025) Conditions, one intersection operates at D or worse
- Opening Year (2030) Plus Project, two intersections operate at D or worse
- Opening Year (2030) Plus Project Plus Cumulative, five intersections operate at D or worse

The Study identified improvements to bring the operationally deficient intersection to acceptable levels (LOS D or better), which will require a traffic signal, traffic signal timing updates, and converting a turn lane to a shared turn lane through. The Project's fair share contribution towards these improvements was also identified.

1. Introduction

Fehr & Peers completed a transportation assessment for the proposed COVA development (Project) in the City of Coachella, California [Pre-App (23-06)]. This report presents the methodology, analysis, and findings of the Transportation Impact Assessment (TIA) prepared for the Project. The analysis comprises of a California Environmental Quality Act (CEQA) Vehicle Miles Traveled (VMT) assessment and a local transportation Level of Service (LOS) assessment. The purpose of this assessment is to evaluate potential CEQA transportation impacts and assess changes to the local transportation system with the Project.

This chapter outlines the project description, geographic scope of the transportation impact analysis, and analysis scenarios. This assessment is consistent with the requirements outlined in *County of Riverside Transportation Analysis Guidelines for Level of Service & Vehicle Miles Traveled (2020).* The scoping agreement was approved by the City on May 5th, 2025 (see **Appendix A** – *Scoping Agreement for Transportation LOS Analysis*).

1.1 Project Description

The Project is an 85-acre mixed-use development in the City of Coachella bounded by Avenue 52 to the north, Van Buren Street to the east, Calhoun Street to the west, and generally Avenue 53, which is located to the south of the site. The Project proposes rezoning of the site from existing regional commercial (R-C) to Planned Unit Development.

The Project will feature two primary components – a private sector and public sector.

- **Private Sector**: Includes 165 single-family recreational home dwelling units comprised of estate lots, zero lot line lots, bungalow lots, and VIP suites; 244 condo-hotel recreational home units, which will operate like the single-family lots. These units will all operate under fractional ownership, timeshare, second homes, and/or short-term and long-term rental models. These accommodations will be complemented by on-site resort amenities (i.e. recreational courts, spa/pool, lagoon and water features, bar and entertainment, library, restaurant), which can be used by guests/owners of this sector.
- **Public Sector**: Includes a 10 TSF[2] beach club, 6 TSF restaurant, and a 7 TSF event tent. These sub-areas are anticipated to operate with an assumed typical weekday capacity of 500 persons [100 person beach club, 200 person restaurant, and 200 person event tent] and an assumed weekend capacity of 1,500 [1,000 person beach club, 200 person restaurant, and 300 person event tent]; other special events with higher capacity would be rare and may require additional traffic control. The public sector components will generally be operational between 11:00 AM and 2:00 AM, with the highest level of activity occurring in the evening between 7:00 PM and 8:00 PM, and on weekends.

The resort characteristics of the Project are unique, designed to function as an internal destination with resort home dwelling units, dining experiences, on-site resort amenities, outdoor and recreational spaces, and entertainment areas. This is projected to result in significant locally serving

[2] TSF: Thousand Square Feet

options for the City of Coachella and regionally for the Coachella Valley, attracting those already in the area vacationing or visiting for local events.

The Project would be affected by typical seasonality trends observed within the Coachella Valley, and further confirmed through market research conducted by the Developer (**Table 1.1**). Time of year use distribution will be concentrated between mid-February through May, with the lowest demand generally occurring mid-July through the end of September, and the first half of December.

COVA is positioned to achieve significant internal capture of trips between the onsite uses with the expectation that a majority of onsite guests will stay on the property once they arrive. Many of guest daily needs would be accommodated by the resort lodging, recreation, dining, and entertainment options without leaving the property. A significant share of the public facing restaurant, beach club and event space are anticipated to be used by onsite guests.

Access to and from the Project will be provided via five proposed driveways along Calhoun Street (2), Avenue 52 (2), and Van Burent Street (1). The Project includes three full access driveways on Calhoun Street (1), Avenue 52 (1), and Van Buren Street (1). In addition, Calhoun Street will have a right in, right out driveway and Avenue 52 will have a right out exit only driveway. Public sector access is available exclusively off Calhoun Street; private sector access can be made via Avenue 52 or Van Buren Street, as well as through the Calhoun Street driveway. **Figure 1.1** shows the proposed site plan.

Table 1.1 Coachella Valley Seasonality Travel Demand Trends

Week	% of Capacity
1	62%
2	67%
3	67%
4	95%
5	95%
6	71%
7	100%
8	100%
9	100%
10	100%
11	100%
12	100%
13	100%
14	100%
15	100%
16	100%
17	100%
18	62%
19	67%
20	62%
21	62%
22	52%
23	52%
24	52%
25	52%
26	52%
27	43%
28	38%
29	38%
30	43%
31	38%
32	38%
33	33%
34	38%
35	38%
36	43%
37	38%
38	43%
39	57%
40	52%
41	57%
42	57%
43	57%
44	62%
45	62%
46	62%
47	76%
48	43%
49	43%
50	48%
51	86%
52	86%
Average	*65%*

Source: 2023 The Ranch - Coachella Market Area Analysis Report (CA Desert Travel Demand)



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THE CITY OF COACHELLA OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TECHNICAL SITE PLAN

EXHIBIT DATE: JULY 3, 2025

REVISIONS

NO.	DATE	DESCRIPTION

DATA TABLE

APPLICANT / LAND OWNER	RELEVANT COACHELLA OWNER, LLC		
ADDRESS	6417 SELMA AVENUE HOLLYWOOD, CALIFORNIA 90028		
CONTACT	GRANT KING		
EXHIBIT PREPARER	MSA CONSULTING, INC.		
ADDRESS	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT	PAUL DEPALATIS, AICP	**TELEPHONE**	(760) 320-9811
SOURCE OF TOPOGRAPHY	INLAND AERIAL SURVEYS, INC.		
ADDRESS	7117 ARLINGTON AVENUE, SUITE A RIVERSIDE, CALIFORNIA 92503		
DATE OF TOPOGRAPHY	DECEMBER 22, 2021	**TELEPHONE**	(951) 687-4252
ASSESSOR'S PARCEL NUMBERS	780-040-001, 780-040-003, 780-060-001 & 780-060-002		

LEGAL DESCRIPTION

BEING A PORTION OF NE 1/4 OF SECTION 12, TOWNSHIP 6 SOUTH, RANGE 7 EAST, SAN BERNARDINO MERIDIAN.

LAND USE DESCRIPTION	ACREAGE
EXISTING GROSS AREA	87.16 AC.
PROPOSED PUBLIC RIGHT OF WAY DEDICATION (CALHOUN STREET, AVENUE 52 & VAN BUREN STREET)	6.02 AC.
PROPOSED NET AREA	**81.14 AC.**

PROJECT STATISTICS

SINGLE-FAMILY RESIDENTIAL	LOT SIZE	# BEDS	# STORIES	# UNITS	FLOOR AREA (SF)
GRAND ESTATE LOT	100' X 160'	6	2	6	8,665 SF/UNIT [1]
ESTATE LOT (STANDARD)+ADU [4]	75' X 150'	4-5	2	17	4,721 SF/UNIT [1]
ESTATE LOT (COMPACT)	75' X 150'	4-5	2	10	4,403 SF/UNIT [1]
ZERO LOT LINE RESIDENCE	60' X 150'	4-5	2	12	4,585 SF/UNIT [1]
LAGOON BUNGALOW	NA	3-4	2	61	2,600 SF/UNIT [1]
LAKE BUNGALOW	NA	3-4	2	51	2,600 SF/UNIT [1]
TOTAL				**157**	**613,932 SF** [2]
CONDO HOTEL					
HOTEL COTTAGES (1ST FLR.)	NA	1	1	120	1,248 SF/UNIT
HOTEL COTTAGES (2ND FLR.LOCKOFF)	NA	1	1	120	1,149 SF/UNIT
TOTAL				**240**	**287,640 SF**
BEACH CLUB					
BEACH CLUB VIP VILLAS	NA	1	1	5	4,629 SF/UNIT [1]
TOTAL					**32,245 SF** [2]
MAIN CLUB AMENITIES					256,531 SF [3]
PUBLIC BEACH AREA					16,173 SF [3]
SPORTS CENTER					5,100 SF [3]

PARKING PROVIDED	CAR SPACES	PARKING RATIO	CART SPACES
HOTEL (2-LEVEL BASEMENT PARKING GARAGE)	360		-
BEACH CLUB (2-LEVEL PARKING GARAGE)	143		-
HOTEL COTTAGES	47	0.2 SPACES/UNIT	50
BUNGALOWS	56	0.5 SPACES/UNIT	104
ZERO LOT LINE LOTS	24	2.0 SPACES/UNIT	-
ESTATE LOTS	54	2.0 SPACES/UNIT	27
GRAND ESTATE LOTS	12	2.0 SPACES/UNIT	12
TOTAL	**696**		**193**

NOTES :

1. INTERIOR FLOOR AREA ONLY. DOESN'T INCLUDE EXT. COVERED AREA AND ADU AREA
2. INCLUDES EXT. COVERED AREA AND ADU AREA
3. PLEASE REFER TO LANDSCAPE PACKAGE FOR COMPLETE BLDG. PROGRAMMING
4. ADU FLOOR AREA, 518 SF

WATER AMENITIES	AREA
HOTEL LAGOON	9.4 ACRES
LAKE	2.5 ACRES
BEACH CLUB LAGOON	0.4 ACRES
TOTAL	12.0 ACRES

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1.2 CEQA Transportation Impact Analysis

According to current CEQA guidelines and the County's VMT Analysis Guidelines, a project's transportation impact is considered significant if the associated change to the transportation system with the project will:

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit roadway, bicycle, and pedestrian facilities.

B. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

D. Result in inadequate emergency access.

1.2.1 Analysis Scenarios

As part of the CEQA VMT assessment, Fehr & Peers analyzed the following scenarios described below:

- Project Level Assessment – Compares daily total Origin-Destination (OD) VMT generated by the Project per service population to the No Project (2045) City and County average total VMT per service population
    - Cumulative (2025) No Project Conditions (Threshold)
    - Cumulative (2045) Plus Project Conditions
- Cumulative Level Assessment – Analyzes the Project's effect on total VMT per service population at the City and County level; calculates the net regional change in VMT between the threshold and Plus Project Conditions.
    - Cumulative (2025) No Project Conditions (Threshold)
    - Cumulative (2045) Plus Project Conditions

1.3 Level of Service (LOS) Analysis

The LOS analysis identifies improvements at study intersections to maintain acceptable intersection operations. LOS is a qualitative description of traffic flow from a vehicle driver's perspective based on factors such as speed, travel time, delay, and freedom to maneuver. The Highway Capacity Manual 7th Edition (HCM) identifies six levels of service ranging from LOS A (free-flow conditions) to LOS F (over capacity conditions). The City of Coachella utilizes a "LOS D or better" minimum standard for intersection operations.

1.3.1 Study Area

The study area was selected based on trip generation and distribution estimates, and consists of intersections where more than 50 peak hour trips are likely to be added as a result of the Project.

Figure 1.2 shows the study area. Fehr & Peers evaluated operations at the following 14 study intersections:

1. West Driveway 1 and Calhoun Street
2. West Driveway 2 and Calhoun Street
3. Calhoun Street and Avenue 52
4. North Driveway 1 and Avenue 52
5. North Driveway 2 and Avenue 52
6. Van Buren Street and 52nd Avenue
7. East Driveway and Van Buren Street
8. Calhoun Street and Avenue 50
9. Van Buren Street and Avenue 50
10. Calhoun Street and Avenue 48
11. Van Buren Street and Avenue 48
12. Dillon Road and Avenue 48
13. SR-86 SB Ramps and Dillon Road
14. SR-86 NB Ramps and Dillon Road

1.3.2 Analysis Scenarios

Fehr & Peers studied the AM and PM peak hour LOS at the identified study intersections for the following scenarios:

- Existing (2025) Conditions: Existing (2025) traffic volumes, lane geometries, and traffic signal timing.
- Opening Year (2030) Plus Project Conditions: Background traffic volumes during the Project's opening year with traffic volumes generated by the Project. The opening year volumes were developed by applying an ambient growth rate of two percent to the Existing (2025) traffic volumes.
- Opening Year (2030) Plus Project Plus Cumulative Projects Conditions: Opening Year Plus Project traffic volumes plus traffic generated by cumulative projects within a five-mile radius of the Project.

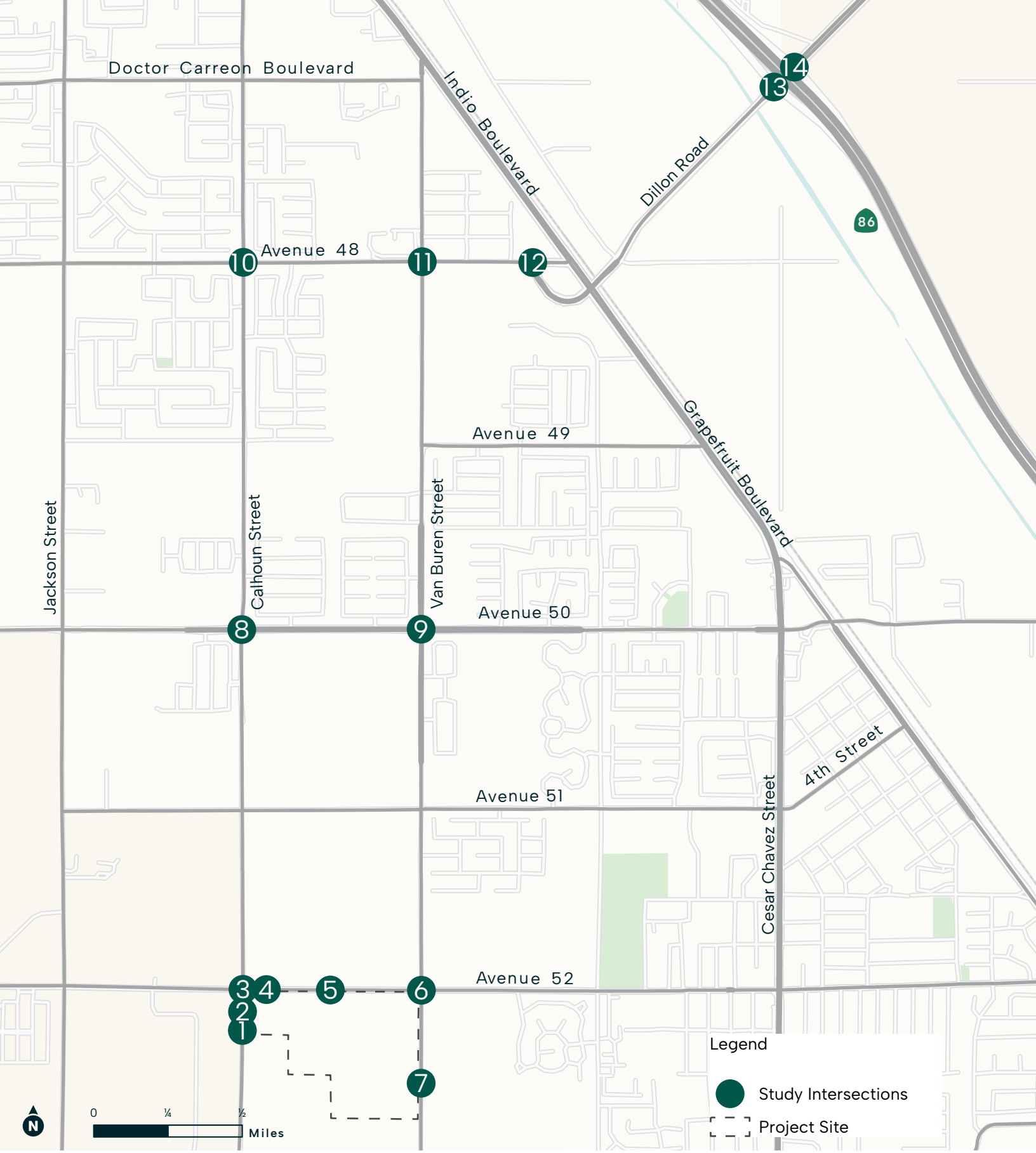


FIGURE 1.2

Study Area

Fehr & Peers

1.4 Report Organization

The remainder of this report is organized into the following chapters:

- **Chapter 2 – Analysis Methodology** describes the methods and assumptions used to complete the local transportation study which are consistent with the County's guidelines.
- **Chapter 3 – Existing Year (2025) Conditions** describes the transportation system in the Project vicinity, including the surrounding roadway network, AM and PM peak period intersection turning movement volumes and intersection LOS, and existing bicycle, pedestrian, and transit facilities.
- **Chapter 4 – Project Characteristics** presents relevant Project information including Project trip generation, distribution, and assignment.
- **Chapter 5 – CEQA Transportation Study** evaluates the Project's potential impact on transportation according to CEQA. This includes a full VMT assessment and evaluation of the CEQA Appendix G checklist items.
- **Chapter 6 – Local Transportation Study** evaluates the Project's potential effects on the surrounding roadway network including intersection operations and intersection queueing. Improvements and the Project's fair share contribution towards improvements at deficient locations are identified.

2. Analysis Methodology

The analysis methodologies and assumptions used to evaluate the Project are described below and consistent with the scoping memorandum that was approved by the City of Coachella on May 5, 2025, included as **Appendix A**.

2.1 Intersection Analysis

Intersection operating conditions were evaluated using the Transportation Research Board (TRB) *Highway Capacity Manual* (HCM) *7th Edition* methodology, which is considered the state-of-the practice methodology for evaluating intersection operations.

The HCM 7th Edition methodology for signalized and all-way stop-controlled intersections estimates the average control delay for vehicles at intersections. For side-street stop-controlled intersections, The HCM 7th Edition methodology estimates the worst-case approach delay.

After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in **Table 2.1**.

Fehr & Peers used the Synchro 12 software to facilitate the HCM calculations intersections. The following parameters are consistent with the County's Guidelines (*County of Riverside Transportation Analysis Guidelines for Level of Service & Vehicle Miles Traveled* (2020)) and HCM for use in the LOS analysis:

- Measured Peak Hour Factors (PHF) were utilized in the Existing (2025) and Opening Year (2030) scenarios.
- Signal timing information for study intersections 6, 8, 9, 10, 11, and 12 were provided by the City of Coachella. Signal timing information for study intersections 13 and 14 were provided by Caltrans. These signal timings were used for the Existing (2025) and Opening Year (2030) Plus Project scenarios.
- A standard heavy vehicle factor of 2% was used for all analysis scenarios.

Table 2.1 Intersection Level of Service (LOS) Grades

Level of Service	Description	Signalized Delay (Seconds)	Unsignalized Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences	> 55.0 to 80.0	> 35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	> 80.0	> 50.0

Source: Highway Capacity Manual 7th Edition (Transportation Research Board, 2022).

2.2 LOS Standards

Based on the relevant guidelines, the following performance criteria were used to determine deficiencies at study intersections:

- **City of Coachella** – The City of Coachella utilizes a LOS od "D or better" as its minimum standard for intersection operations.
- **Caltrans** – Caltrans no longer defines acceptable LOS standards with their latest adoption of the Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG), May 2020. This study assumes the LOS D minimum acceptable standard at the Caltrans study intersections, SR-86 and Dillion Road.

2.3 Travel Demand Modeling

VMT forecasts were prepared using the Riverside County Travel Demand Model (RIVCOM). The latest version of RIVCOM (version 4.0.1) was released in February 2024 and is considered the best tool available for VMT estimation in Riverside County. RIVCOM has a 2018 base year and 2045 cumulative year, with land uses and roadway networks consistent with the *2020 Southern California Association of Governments Regional Transportation Plan and Sustainable Communities Strategy* (2024 SCAG RTP/SCS).

The RIVCOM 2045 model was updated to include all pending and approved development projects within a five-mile radius of the Project site; a list of these projects was provided as part of the Scoping Agreement approval and is included in **Appendix B**. No roadway network changes were made to the model.

The Project was assigned to a mix of employment categories shown in **Table 2.2**. The Project's employment was updated to reflect both traditional on-site employees (hospitality, food service, maintenance, and operations staff) and the Project's unique customer base (as detailed in the Project Description). The customer population is represented through visitor-based trip generation inputs that reflect the recreational and hospitality nature of the Project, with average daily customer projections provided in **Table 2.3**. This approach ensures that the model inputs align with the expected travel behavior of the site, where guests often stay multiple days, utilize on site amenities, and generate trips distinct from a typical residential development.

Due to the seasonal nature of tourist activity in the Coachella region, along with the heavier weekend programming at the public facing elements of the Project, an average daily population was derived to represent in the typical weekday model. This represents a midpoint between minimum and maximum employment and guest population that is reflective of the annualized demand.

Table 2.2 Average Daily Employment Categories for the Project

Total Employment	Retail	Arts and Entertainment	Other Services
330	31%	66%	3%

Notes:
1. Retail includes convenience, clothing, and other retail trade.
2. Arts and Entertainment includes traveler accommodation, food services, and drinking places
3. Other services includes can include on-site professional management or concierge services

Table 2.3 Average Daily Customer Projections for the Project

Private On-site Guests	Public Guests
950	1,100

2.5 Transportation Impact Analysis Methodology

The County's Guidelines establish VMT impact thresholds for typical projects that do not screen from VMT assessment. These guidelines specify that a land use project will have a significant impact if:

- **Residential** land use VMT per capita exceeds the county-wide averages, or
- **Office** land uses employee VMT per employee exceeds county-wide averages, or
- **Retail** land uses there is a net change in total VMT.

Two other VMT thresholds of significance – "**Other Employment**" and "**Other Customer**" – are provided for all other service and goods providers that are not included in the basic office/retail categories. Given the unique resort characteristics of the Project, which most resemble the retail and/or other customer land use type, the VMT analysis used the net regional change metric (Boundary Method VMT), consistent with the County Guidelines for retail uses, rather than a household or employee only per capita comparison. This metric accounts for the regional impacts of visitor travel patterns, which are more appropriate for land use that will serve as a destination for visitors to the Coachella Valley. Given the significant onsite guest component, this Project is not like a typical retail/customer project and the threshold of significance should utilize a per service population (residents and employees) and/or per employee metric based on employees to best reflect the Project's operations.

Net change on VMT from the Project was measured within multiple regional areas to compare the traffic redistribution with the Project. The Boundary Method is utilized to measure the project's net change in total VMT. The Boundary Method is the sum of all weekday VMT on a roadway network within a designated boundary. Boundary Method VMT estimates VMT by multiplying the number of trips on each roadway segment by the length of that segment. This approach includes all trips, including those trips that do not begin or end in the designated boundary. This is the only VMT method that captures the effect of cut-through and/or displaced traffic. The two boundaries chosen to measure the net change in total VMT are the Coachella City Limits and the Riverside County Limits.

Consistent with the City approval/recommendation for retail and other customer-oriented land uses, the analysis also evaluated customer trips separately from employee trips. The County Guidelines recommend that the total Project VMT impact is therefore evaluated as the sum of the regional VMT delta for customers and the regional VMT delta for employees, calculated using the County's recommended formula:

$$\Delta = E \times (VMT_E - VMT_T)$$

Where:

- **Δ** = Change in VMT relative to threshold
- **E** = Number of employees
- **VMT_E** = Estimated VMT per employee for the project
- **VMT_T** = Threshold VMT per employee

This approach ensures the analysis aligns with the Project's actual operations and provides a fair, context-sensitive assessment of its transportation effects.

3. Existing Year (2025) Conditions

This chapter summarizes the Existing Year (2025) Conditions of the roadway, transit, bicycle, and pedestrian networks within the Project study area and documents existing traffic volumes and intersection operations.

3.1 Existing Roadway Facilities

3.1.1 Regional Roadways

Regional roadways in the Project vicinity include:

- **Interstate 10 Freeway (I-10)**: I-10 is an east/west interstate highway located north of the Project site. Near the Project study area, I-10 is generally a four- or six-lane facility. Access to I-10 near the Project study area is provided via Dillon Road.
- **State Route 86 (SR-86)**: SR-86 is an east/west state highway that extends from Coachella at the northernmost end to Borrego Springs at the southernmost end. SR-86 is located to the east of the Project site and is generally four lanes. Access to SR-86 near the Project study area is provided via Dillon Road.

3.1.2 Local Roadways

Local roadways in the Project vicinity include:

- **Van Buren Street**: Classified as a major north/south arterial in the City's General Plan, connecting Coachella to Indio and communities to the south. It provides access to residential, agricultural, and commercial uses and is provides access to the Project site to the east.
- **Calhoun Street**: A north/south collector as classified in the City's General Plan. It provides connectivity between neighborhoods, agricultural lands, and east–west avenues such as 50th Avenue and 52nd Avenue. Calhoun Street provides access to the Project's western side.
- **52nd Avenue**: Classified as an east/west as a Primary Arterial to the west of Van Buren Street and Major Arterial to the east in the City's General Plan. It serves local circulation and access to agricultural and residential areas. It connects to Van Buren Street and Calhoun Street and provides access to the northern side of the Project.

3.2 Bicycle Facilities

Bicycle facilities are typically classified as follows:

- **Class I – Bike Path or Bike Trail**: Class I facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.

- **Class II – Bike Lane**: Class II Bike Lanes can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a Bike Lane adjacent to a parking lane can be four feet in width. Bike Lanes are designated for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.
- **Class III – Bike Routes**: This is a street for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage – both by the side of the street and stenciled on the roadway surface – alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.
- **Class IV – Separated Bikeway**: Class IV bicycle facilities, sometimes called cycle tracks or separated bikeways, provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g. grade separation, flexible posts, inflexible physical barriers, on-street parking).

3.2.1 Existing Bicycle Facilities

Class II Buffered Bike Lanes are located on Van Buren Street in the Project vicinity. Avenue 50 and Avenue 48 have existing Class II Bike Lanes, and portions of Avenue 52 (east of Van Buren Street). Otherwise, all other roadways within the Project vicinity have either no bicycle facilities or have a narrow striped shoulder. There are no Class I, Class III, or Class IV facilities located in the Project vicinity.

3.2.2 Planned Bicycle Facilities

The City of Coachella updated their Active Transportation Plan in 2020, which proposes the following planned bicycle facilities near the study area:

- Class II Bike Lane along Dillon Road
- Class II Bike Lane on Calhoun Street between 50th Avenue and city limits

3.3 Pedestrian Facilities

The Project site is in an area with some developed pedestrian network to the north. All local roads in the Project that act as borders do not have sidewalks. Some study intersections provide marked crosswalks, along Avenue 50 and Avenue 48.

3.4 Transit Facilities

Bus Transit

Local transit service in the Project vicinity is provided with SunLine Transit system, which provides a fixed route and microtransit service. Routes 6, 8, and 11 provide stops near study intersection. The nearest bus stop is one mile from the Project site, which serves Route 8 and runs Monday to Friday (approximately 1 hour frequency).

3.5 Existing Year (2025) Traffic Volumes

3.5.1 Data Collection

Traffic counts were collected in May 2025 during morning peak period (7:00 to 9:00 AM) and evening peak period (4:00 PM to 6:00 PM) at the study intersections. Counts were collected during fair weather, while school was in session, and during a typical (non-holiday) weekday.

A Big Data source, Streetlight, was reviewed to compare May travel patterns against Spring travel patterns in the City to verify that peak season travel was accurately accounted for. Streetlight data indicated that March 2025 traffic volumes were approximately 15% higher than those observed in May 2025. Streetlight traffic volumes data were collected within the immediate Census Block Groups to the project site – extending about 5 miles in all directions. A cumulative average of all block groups showed a 15% decline between March and May. Traffic counts were thus adjusted to scale collected May 2025 traffic counts to the peak seasonal volumes of March by a factor of 15%.

The existing conditions peak hour turning movement counts are provided in **Appendix C**. Existing (2025) peak hour traffic volumes with the 15% adjustment[3] are provided in **Figure 3.1** along with existing lane configurations and traffic control.

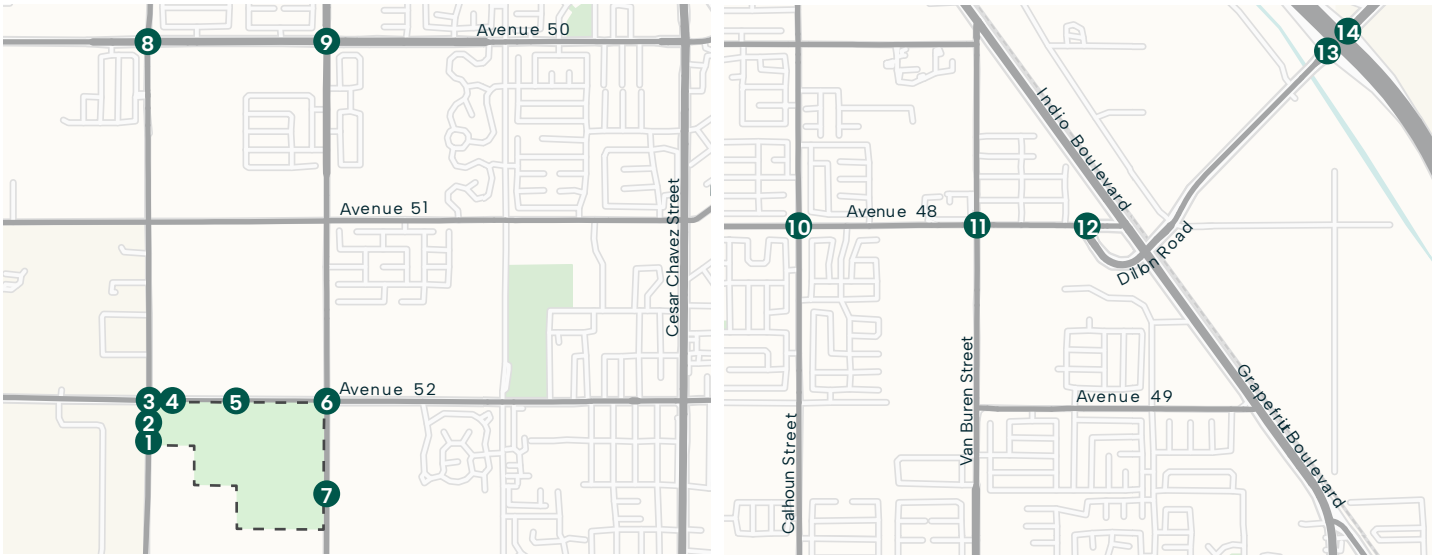
Fehr & Peers collected the following information during a field visit to the study area on May 5, 2025:

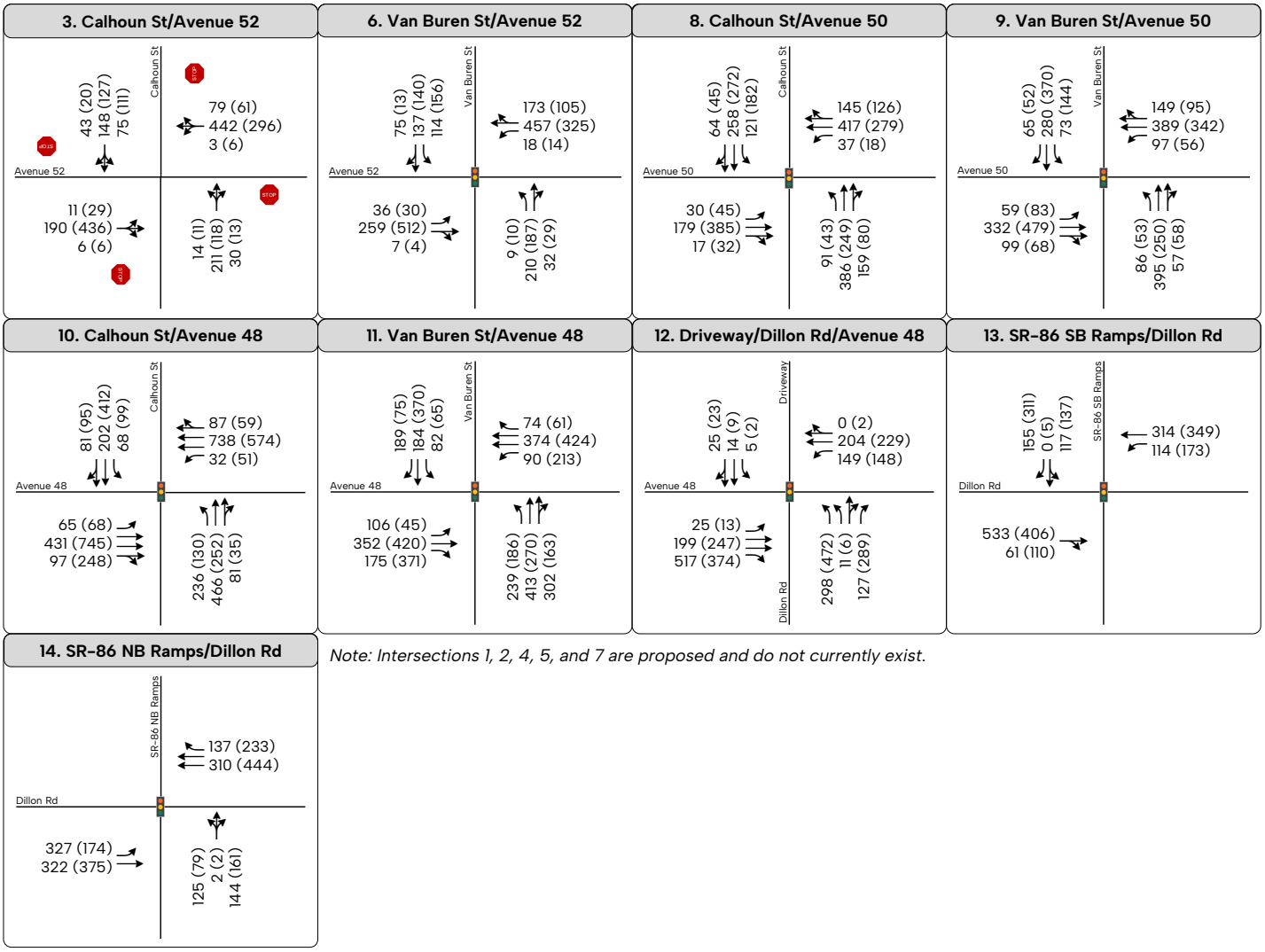
- Lane configurations
- Signal phasing
- Land uses in the study area
- Existing pedestrian and bicycle facilities
- On-street parking conditions
- Transit service

Fehr & Peers requested and reviewed the following information from the City of Coachella, surrounding jurisdictions, and Caltrans:

- Traffic signal timing information at all signalized intersections
- All pending and approved development projects within a five-mile radius of the Project (see **Appendix B**).

[3] Traffic counts were increased with approval (May 5, 2025 – 123-13.55 PC #1) and as outline in the Project Scoping Agreement, p. 6





Note: Intersections 1, 2, 4, 5, and 7 are proposed and do not currently exist.

FIGURE 3.1

Peak Hour Traffic Volumes and Lane Configurations – Existing (2025)

3.6 Existing Year (2025) Intersections Operations

Existing lane configurations, signal timing, and traffic volumes were used to evaluate operations at the study intersections under peak hour conditions. The LOS results are summarized in **Table 3.1** and detailed LOS worksheets are provided in **Appendix C**. All intersections operate at LOS D or better under Existing Year (2025) conditions except Calhoun Street and 52nd Avenue.

Table 3.1 Existing Year (2025) Intersection Levels of Service

ID	Intersection	Control[1]	Peak Hour	LOS/Delay
1	West Driveway 1 and Calhoun Street[1]	SSSC[2]	AM	-
			PM	-
2	West Driveway 2 and Calhoun Street[1]	SSSC[2]	AM	-
			PM	-
3	Calhoun Street and 52nd Avenue	AWSC[3]	AM	**E / 43**
			PM	**F / 71**
4	North Driveway 1 and Avenue 52[1]	SSSC[2]	AM	-
			PM	-
5	North Driveway 2 and Avenue 52[1]	SSSC[2]	AM	-
			PM	-
6	Van Buren Street and 52nd Avenue	Signal	AM	D / 36
			PM	C / 16
7	East Driveway and Van Buren Street[1]	SSSC[2]	AM	-
			PM	-
8	Calhoun Street and Avenue 50	Signal	AM	C / 28
			PM	C / 23
9	Van Buren Street and Avenue 50	Signal	AM	C / 34
			PM	D / 36
10	Calhoun Street and Avenue 48	Signal	AM	D / 37
			PM	C / 32
11	Van Buren Street and Avenue 48	Signal	AM	C / 33
			PM	D / 40
12	Dillon Road and Avenue 48	Signal	AM	C / 24
			PM	C / 23
13	SR-86 SB Ramps and Dillon Road	Signal	AM	B / 15
			PM	B / 16
14	SR-86 NB Ramps and Dillon Road	Signal	AM	B / 18
			PM	B / 15

Notes:

1. Project driveway does not currently exist.
2. SSSC: Side-Street Stop Control
3. AWSC: All-Way Stop-Control

Source: Fehr & Peers, 2025.

4. Project Characteristics

This chapter provides an overview of the Project components and the Project's trip generation, distribution, and assignment characteristics for evaluation of the Project's effect on the surrounding roadway network. Traffic associated with the Project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the project site was estimated.
2. **Trip Distribution** – The *direction* trips would use to approach and depart the site was projected.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

4.1 Project Trip Generation

Trip generation refers to the process of estimating the amount of vehicle traffic that would enter and exit a project. Estimates for the proposed Project were calculated for the weekday peak (one-hour) periods during the morning (AM) and evening (PM) commute when traffic volumes on the adjacent streets are typically the highest. Fehr & Peers used the *Trip Generation Manual, 12th Edition* (Institute of Transportation Engineers [ITE], 2025) to obtain trip rates for calculating the number of trips that the Project would generate on a typical weekday operations; weekend rates are for information purposes. The unique characteristics of the Project were taken into account to accurately represent the private and public sector components' travel behavior.

4.1.1 Private Sector Land Use Codes

Trip generation estimates for the private sector components were sourced from the ITE 12th edition land use codes. The intended land use characteristics (ownership and use) were considered to apply the ITE land use code with the most representative overlap. The estate lots, zero lot line lots, bungalow lots, VIP suites and the condo hotel units will be a majority (>75%) fractional ownership second homes that will be used for short-term and long-term rental, ITE code 260 "Recreational Homes" was applied. The condo hotel units may be sold as individual, one-bedroom units or up to four-bedroom; and area expected to operate like recreational home ITE characterized units. Overall, these ITE code selections are further supported by the seasonality of the proposed site discussed in the Project Description.

4.1.2 Public Sector Land Use Codes

Trip generations for the public sector (beach club and restaurant) used the most comparable ITE land use code that represented the best matched time of day distribution for the planned components; calculations were based on seats to match the developer's weekday and weekend peak person capacity assumptions. The event tent was calculated using assumptions, which similarly derived from the peak capacity – detailed below.

- ITE code 445 "Movie Theatre" was applied to the beach club. The beach club will not open sooner than 11:00 AM, similar to a movie theatre, with a majority of the trips arriving in close duration to each other. Both the movie theatre and the beach club are entertainment uses open all day and night, where people come and stay for a few hours, and arrival and departure times are spread out throughout the day with multiple rounds of event/movie turn over.
- ITE Code 931 "Fine Dining Restaurant" was applied to the restaurant to match the time-of-day distribution, guest stay duration, and turnover assumption (lunch service and dinner service).
- The event tent will operate with a 200-person and 300-person peak capacity assumption for the weekday and weekend, respectively. ITE code 445 was applied for the daily, AM and PM trip rate to be conservatively high. AM trips are nominal and characteristics of employee / maintenance / delivery trips, since the event barn would not open sooner than 11:00 AM for guests. The PM trips were factored to match comparable event trip generation counts for a concert "event arrival peak – 7:00 PM to 8:00 PM" (77% in and 23% out) from data collected at the Acrisure Arena in Palm Desert in 2023[4] (included as **Appendix H**).

4.1.3 Internal Capture

The Project is positioned to achieve significant internal capture (33%) of trips between the onsite uses with the expectation that a majority of onsite guests will stay on the property once they arrive. Many of guest daily needs would be accommodated by the resort lodging, recreation, dining, and entertainment options without leaving the property. A significant share of the public facing restaurant, beach club and event space are anticipated to be used by onsite guests. The same amount of internal trips from the private area to the public area for the weekday scenario was applied to the weekend scenario.

4.1.4 Trip Generation Estimates

Table 4.1 identifies the trip generation rates for the Project and **Table 4.2** shows the associated daily and peak hour project trip generation.

[4] Classic Club Specific Plan Arena Trip Generation Memorandum, Fehr & Peers, 2023.

Table 4.1 Trip Generation Rates – Weekday

Land Use	ITE Land Code	Quantity	Unit	Daily Rate	AM Peak Hour			PM Peak Hour		
					In	Out	Rate	In	Out	Rate
Private										
Single Family Residential	260	165	DU	3.68	38%	62%	0.28	56%	44%	0.31
Condo Hotel	260	244	DU	3.68	38%	62%	0.28	56%	44%	0.31
Public										
Beach Club	445	100	seats	1.76	72%	28%	0.09	37%	63%	0.08
Restaurant	931	200	seats	2.60	69%	31%	0.15	59%	41%	0.37
Event Tent	custom	200	attendee	1.76	72%	28%	0.09	77%	23%	0.28

Source: Trip Generation Manual 12th Edition (Institute of Transportation Engineers, 2025).

Table 4.2 Project Trip Generation – Weekday

ITE Code	Land Use	Quantity	Units	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Private										
Single Family Residential	260	165	DU	607	17	29	46	29	22	51
Condo Hotel	260	244	DU	898	26	42	68	43	33	76
Private Subtotal				***1,505***	***43***	***71***	***114***	***72***	***55***	***127***
Public										
Beach Club	445	100	seats	176	6	3	9	3	5	8
Beach Club with Internalization[1]				116	4	2	116	4	2	6
Restaurant	931	200	seats	520	21	9	30	44	30	74
Restaurant with Internalization[1]				343	14	6	343	14	6	20
Event Tent	N/A	200	attendees	352	13	5	18	43	13	56
Event Tent with Internalization[1]				232	9	3	232	9	3	12
Public Subtotal				***692***	***27***	***11***	***38***	***59***	***32***	***91***
Weekday Total				**2,197**	**70**	**82**	**152**	**131**	**87**	**218**

Note:
1. Internalization of 33% was applied.

Source: Trip Generation Manual 12th Edition (Institute of Transportation Engineers, 2025).

Table 4.3 and **Table 4.4** display trip rates and trip generation for weekend operations, which are provided for informational purposes.

Table 4.3 Trip Generation Rates – Weekend

Land Use	ITE Land Code	Quantity	Unit	Daily Rate	AM Peak Hour			PM Peak Hour		
					In	Out	Rate	In	Out	Rate
Private										
Single Family Residential	260	165	DU	4.06	38%	62%	0.28	47%	53%	0.40
Condo	260	244	DU	4.06	38%	62%	0.28	47%	53%	0.40
Public										
Beach Club	445	1,000	seats	2.24	72%	28%	0.09	51%	49%	0.28
Restaurant	931	200	seats	2.57	69%	31%	0.15	59%	41%	0.36
Event Tent	custom	300	attendees	2.24	72%	28%	0.09	77%	23%	0.28

Source: Trip Generation Manual 12th Edition (Institute of Transportation Engineers, 2025).

Table 4.4 Project Trip Generation – Weekday

ITE Code	Land Use	Quantity	Units	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Private										
Single Family Residential	260	165	DU	670	17	29	46	31	35	66
Condo Hotel	260	244	DU	991	26	42	68	46	52	98
Private Subtotal				***1,661***	***43***	***71***	***114***	***77***	***87***	***164***
Public										
Beach Club	445	1,000	seats	2,240	65	25	90	143	137	280
Beach Club with Internalization[1]				2,180	63	24	2,180	63	24	87
Restaurant	931	200	seats	514	21	9	30	42	30	72
Restaurant with Internalization[1]				337	14	6	337	14	6	20
Event Tent	custom	300	attendees	672	19	8	27	65	19	84
Event Tent with Internalization[1]				552	15	6	552	15	6	21
Public Subtotal				***3,070***	***92***	***36***	***128***	***219***	***170***	***389***
Weekday Total				**4,731**	**135**	**107**	**242**	**296**	**257**	**553**

Note:
1. Internalization of 33% was applied.

Source: Trip Generation Manual 12th Edition (Institute of Transportation Engineers, 2025).

4.2 Project Trip Distribution

The Project trip distribution reflects the likely approach and departure routes to the Project site. Trip geographic distribution would be as follows: 60% north, 5% south, 10% east, and 25% west. Access to the Project site will be provided exclusively from Calhoun Street, Avenue 52, and Van Buren Street. Project trips would utilize Van Buren Street or Calhoun Street to access the Project, with most trips

travelling to/from I-10 via Dillon Road. There are five total Project driveways: two along Calhoun Street (one full access and one right in right out only), one full access driveway along Avenue 52, and one full access driveway along Van Burent Street. Calhoun Street would represent 40%, Avenue 52 30% and Van Burent Street 30% of entry/exit trip percentages for the Project. The Project trip distribution (**Figure 4.1**) was approved by the City on 5/52025.

4.3 Project Trip Assignment

Project trip assignment refers to the specific route and roadway segments vehicles would take to access and leave the Project. Using the trip distribution percentages, Project trips were assigned to the roadway network as presented in **Figure 4.2**.

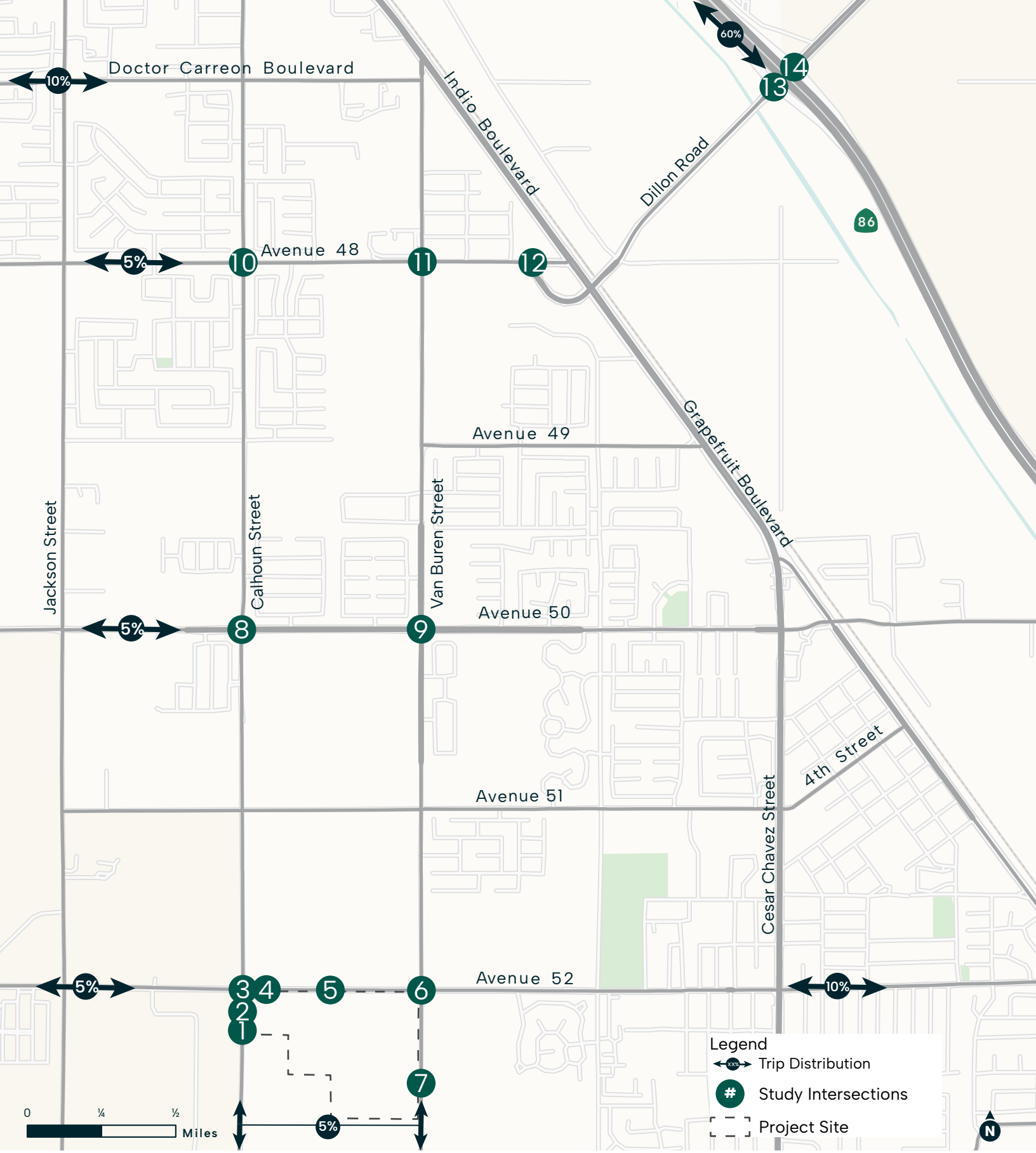
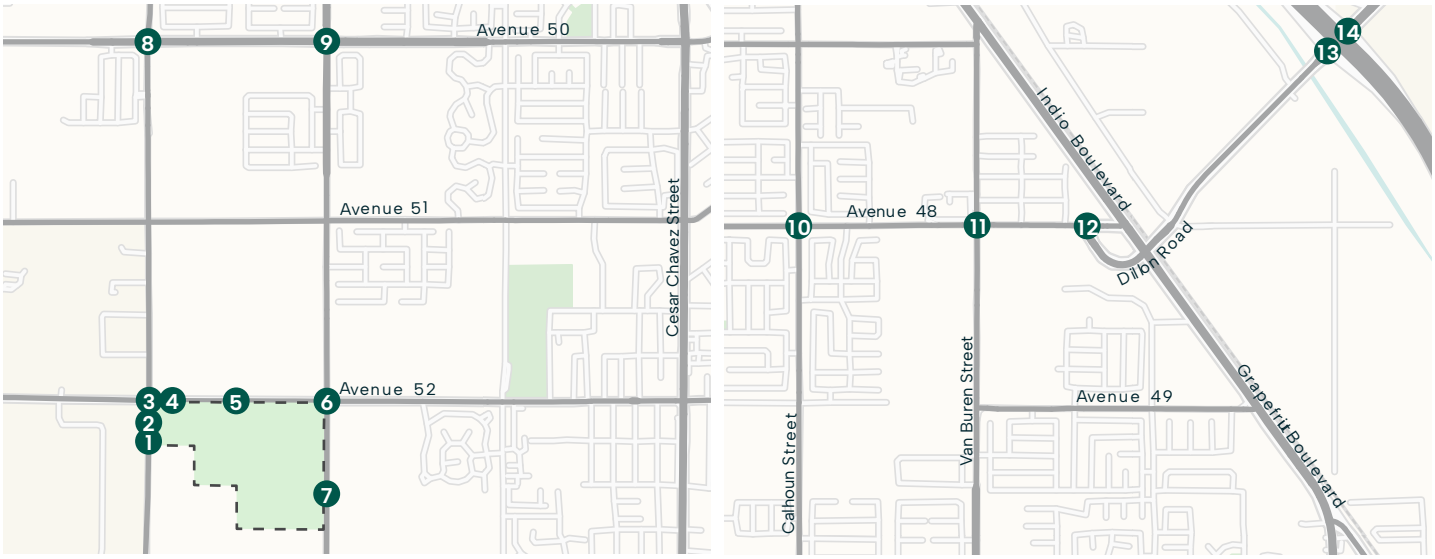


FIGURE 4.1

Trip Distribution

Fehr & Peers



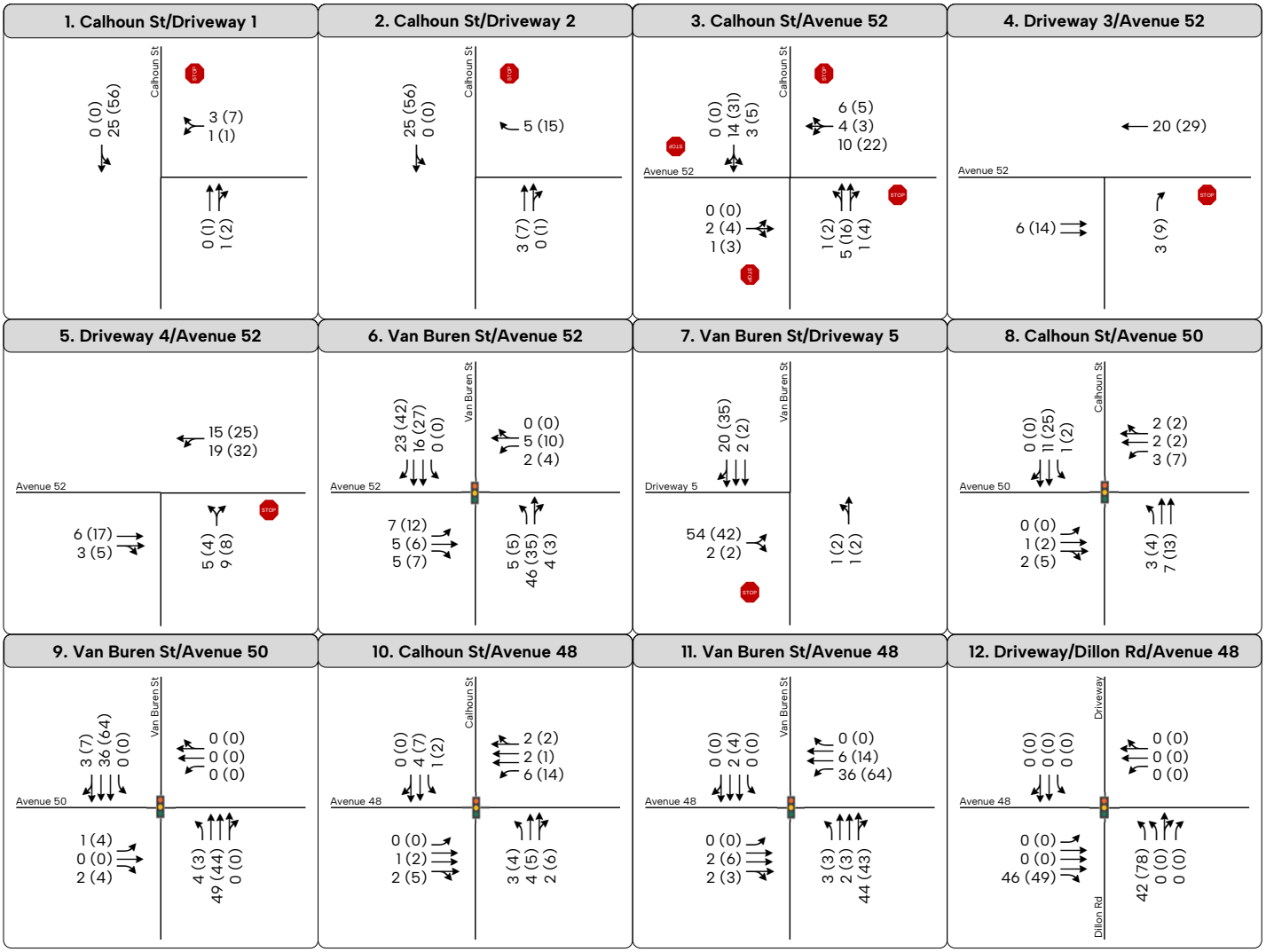
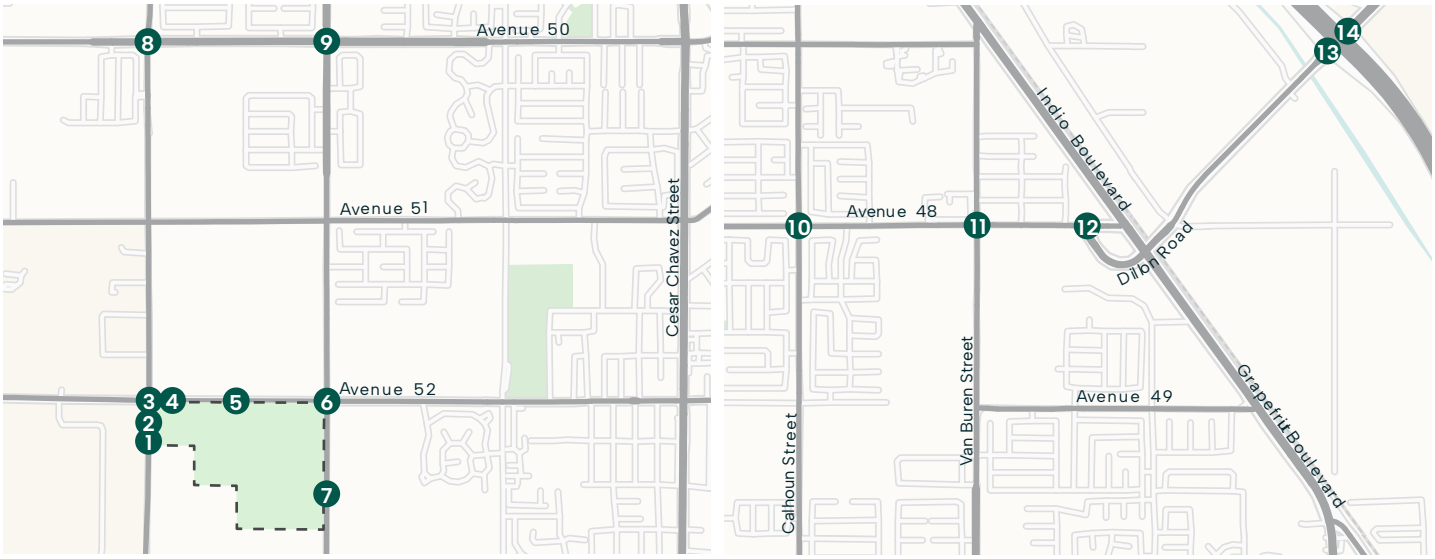
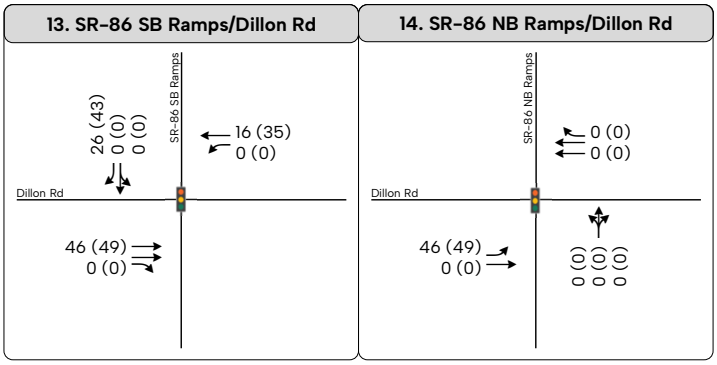


FIGURE 4.2

Project-Only Turning Movement Volumes





AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized

Study Intersections

FIGURE 4.2

Project-Only Turning Movement Volumes

5. CEQA Transportation Study

Based on the definitions and determining factors outlined in the CEQA Appendix G Environmental Checklist Form, the Project would have a significant impact on the environment if the Project would:

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit roadway, bicycle, and pedestrian facilities.

B. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

D. Result in inadequate emergency access.

5.1 Program, Plan, Ordinance, and Policy Review

The *City of Coachella General Plan* (2015) includes policies related to circulation; an impact is considered significant if the project conflicts with an adopted policy within the Mobility Element (ME) of the General Plan. Policies applicable to the Project include:

- **ME-1.5** Require that the City consider improvements to add roadway capacity only after considering improvements to other modes of travel.
    - The improvements identified in Chapter 6 do not include roadway widenings that would increase capacity. Instead, signal timing adjustments are recommended to improve traffic flow and intersection operations.
- **ME-2.3** Periodically review and update designated truck routes to ensure efficiency and limit negative impacts on residential areas and other sensitive land uses.
    - The Project is not expected to generate heavy vehicle trips to or from the site.
- **ME-3.4** Require that all development or redevelopment projects provide pedestrian connections to the external pedestrian network.
    - The Project includes construction of new sidewalks along the project frontage on Calhoun Street, Avenue 53, and 52nd Avenue, improving pedestrian connectivity.
- **ME-4.1** Require that the City provide additional bicycle facilities along all roadways in the City which are built or reconstructed in the City except in those instances in which there is insufficient right-of-way or other physical limitations.
    - The Project proposes construction of bicycle facilities along the project frontage on Calhoun Street, Avenue 53, and 52nd Avenue.
- **ME-5.4** Encourage new large residential or commercial developments to locate on existing and planned transit routes.

- The Project site is currently not served or planned to be served by any public transit services. The City will continue to monitor development patterns and transit demand and will adjust service as needed to support travel options.

- **ME-6.1** Require that new development pay for its fair share of construction costs for new and/or upgraded transportation infrastructure needed to accommodate this development.
  - Chapter 6 outlines required intersection improvements and the Project's fair share contribution. The Project will also widen its adjacent roadway frontage consistent with the City's General Plan buildout.
- **ME-8.3** Prioritize connections between the City's bicycle and pedestrian network to regional facilities such as the CV Link and other regional trail facilities.
  - The Project includes construction of bicycle facilities that enhance connectivity and contribute to the City's overall regional bicycle and pedestrian network.

Based on the above assessment, the Project's impact on existing programs, plans, ordinances, and policies is **less-than-significant.**

5.2 Vehicle Miles Traveled Assessment

CEQA Guidelines Section §15064.3 requires Vehicle Miles of Travel (VMT) analysis for land use projects. The analysis is consistent with the *County of Riverside's Transportation Analysis Guidelines for Level of Service & Vehicle Miles Traveled* (December 2020)[5].

5.2.1 Screening Criteria

The County's Guidelines identify screening criteria which land use projects can apply when evaluating transportation impacts. VMT impacts for a project will be presumed less than significant if any one of the screening criteria outlined in **Table 5.1** are met. The proposed Project does not satisfy any of the screening criteria. Therefore, a full VMT modeling and forecasting assessment was completed to determine if the Project would result in a significant transportation impact related to VMT.

[5] County of Riverside TIA Guidelines (2020)

Table 5.1 VMT Screening Criteria Assessment

Screening Criterion	Description	Satisfied by Project
Transit Priority Area (TPA) screening	Presumed less than significant VMT impact for projects located in TPAs (1/2 mile of a rapid transit station or high-frequency bus route).	No
Low VMT area screening	Presumed less than significant VMT impact for projects located in low VMT generated model traffic analysis zones (TAZs). These TAZs generate total daily VMT/SP that is less than the City baseline level.	No
Project type screening	Local serving retail projects (per OPR's Technical Advisory less than 50,000 square feet), local essential services (i.e. day care, Police, Medical), small projects (i.e. DU <110 units, general office less than 165 TSF, parks), and affordable housing projects are presumed to have a less than significant VMT impact.	No

Source: County of Riverside – CEQA Assessment and VMT Analysis, 2020.

5.2.2 Traffic Modeling Socio-Economic Data

Due to the seasonal nature of tourist activity in the Coachella region, along with the heavier weekend programming at the public facing elements of the Project, an average daily service population (SP) was derived to represent in the typical weekday model. This represents a midpoint between minimum and maximum employment and guest population that is reflective of the annualized demand.

Table 5.2 represents the Project SP, which was derived by annualizing weekday and weekend daily averages derived from the approved Project trip generation and regionally sensitive inputs. Inputs included an average annual demand rate (65.2%) for the Coachella region (based on Project market research validated with Streetlight data), total public and private area employee facility square footage and respective ratios for square foot per employee to calculate the total operating employee counts, private area total hotel condo room count and respective employee per room ratios to total the operating employee count for the sub-area, and a public area turnover rate for guests.

Model trip generation was reviewed to verify that the retail, arts and entertainment and other services employment categories would accurately represent the project. The model generates trips by approximately 50% more than the Project's trip generation forecast, generally underestimating the internal capture anticipated by the project. No adjustments were applied to the model forecasts in order to provide a conservative assessment.

Table 5.2 Project Service Population

Program Area	Visitor Type	Annualized Average	
		Population	Employment
Private	Resident Guests	950	-
	Employees	-	210
Public	Employees	-	120
	Guests	1,100	-
	Project Total	**2,050**	**330**

Source: Fehr & Peers, 2025.

5.2.3 VMT Analysis

Analysis Scenarios

VMT estimates were prepared under the Cumulative (2045) No Project Conditions and under the Cumulative (2045) Plus Project Conditions. The No Project Condition model runs were used to determine the project-generated threshold of significance and the county-wide boundary VMT without the Project and the city-wide boundary VMT without the Project. The Plus Project Conditions model runs were used to determine VMT associated with the Project.

VMT Results

Project VMT findings compared to the county-wide thresholds are presented in **Table 5.3**. Under the Cumulative (2045) Plus Project scenarios, the Project VMT per service population (SP), the Project Boundary VMT, the Boundary VMT per SP, and the total net regional change would be below the County average.

Table 5.3 County-wide and Project VMT Estimates

Scenario	Project	County-wide Cumulative No Project (Threshold)	Delta	Threshold Exceeded
OD VMT per Employee	22.64	28.41	(5.78)	No
Boundary VMT	80,751,251	80,760,223	(8,972)	No
Boundary VMT / SP	17.78	17.79	(0.01)	No
Total Net Regional VMT Change[1]			(1,906)	No

Source: RIVCOM, 2025.

Project VMT findings compared to the city-wide thresholds are presented in **Table 5.4**. Under the Cumulative (2045) Plus Project scenarios, the Project VMT per service population (SP), the Project

Boundary VMT, the Boundary VMT per SP, and the total net regional change would be below the City average.

Table 5.4 City-wide and Project VMT Estimates

Scenario	Project	City-wide Cumulative No Project (Threshold)	Delta	Threshold Exceeded
OD VMT per Employee	22.64	29.12	(6.48)	No
Boundary VMT	1,753,964	1,754,359	(395)	No
Boundary VMT / SP	11.07	11.10	(0.03)	No
Total Net Regional VMT Change[1]			(2,139)	No

Source: RIVCOM, 2025.

Since the Project-level VMT estimates for the Project would be below the established significance thresholds (county-wide cumulative no project and city-wide cumulative no project), the Project would result in **less-than-significant** transportation impact related to VMT.

5.3 Geometric Design Features

Vehicular access to the private sector of the site will be provided by an entry/exit driveway on Avenue 52 and the driveway on Van Buren Street. On-site vehicle circulation is provided by a network of internal roadways. The public sector of the project has access points that are aligned perpendicular to Calhoun Street and Avenue 52. There are no obstructions that would limit sight distance from the Project access point. The roadways internal to the Project site would be constructed per City standards.

The Project does not propose any substandard design features, therefore the Project's impact to geometric design hazards would be **less-than-significant**.

5.4 Emergency Access

Factors such as the number of access points, roadway width, and proximity to fire stations determine whether a project provides enough emergency access. The fire station most likely to serve the site is Riverside County Fire Department – Coachella fire Station 79, located at 1377 6th Street approximately 1.5 miles from the project site. Emergency vehicles could utilize any of the three Project access points at Avenue 52 or Van Buren Street or the emergency access point from the west side of the project site via Calhoun Street. If one entrance is blocked, emergency personnel could access the site from the other entrance point. Internal roadways are designed to accommodate emergency vehicles.

The Project will make roadway improvements that will reduce intersection delay during peak hours even with increased traffic volumes and is not expected to increase emergency response times for adjacent neighborhoods.

The Project's impact on emergency access would be **less-than-significant**.

6. Local Transportation Study

This section presents the transportation operations analysis consistent with the County's Guidelines. The operational analysis is intended to assess the potential effect of the Project on the surrounding roadway network. For the study, maintaining LOS D or better as a standard for intersection operations.

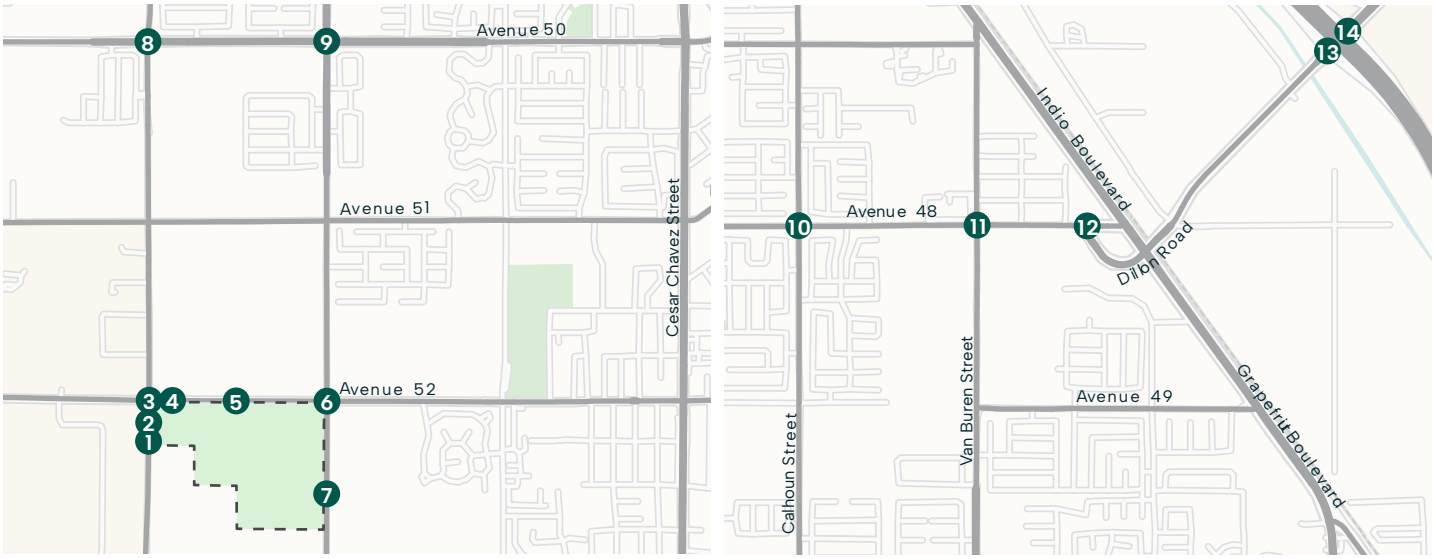
6.1 Opening Year (2030) Conditions

This section presents intersection operations under Opening Year (2030) Plus Project and Plus Project and Cumulative Project conditions. Improvements are identified for deficient intersections.

6.1.1 Traffic Volume Development

Consistent with the County's Guidelines, an annual ambient growth rate was applied to existing traffic counts to forecast 2030 traffic volumes. An annual ambient growth rate of 2% was agreed upon in the scoping form (**Appendix A**). Pending and approved development (cumulative) projects within a five-mile radius of the Project site that could influence travel in the study area were collected and assessed. Fehr & Peers coordinated with the City of Coachella to obtain a list of development projects for use in the TIA. The list is documented in **Appendix B**. All relevant projects provided were assumed to be in operation by 2030. *Trip Generation, 12th Edition* rates were applied to each project that was anticipated to affect peak hour intersection operations. The trip generation estimates for these projects are provided in **Appendix B**. The trips were assigned to the study area based on professional judgement and knowledge of the land uses and their typical peak hour travel patterns.

Project trips from **Figure 4.2** were added to Opening Year forecast to develop Opening Year (2030) Plus Project. Intersection turning movement forecasts for Opening Year (2030) Plus Project are presented in **Figure 6.1**. Cumulative project trips were then added to develop Opening Year (2030) Plus Project and Cumulative Projects intersection turning movement forecasts, as presented in **Figure 6.2**.



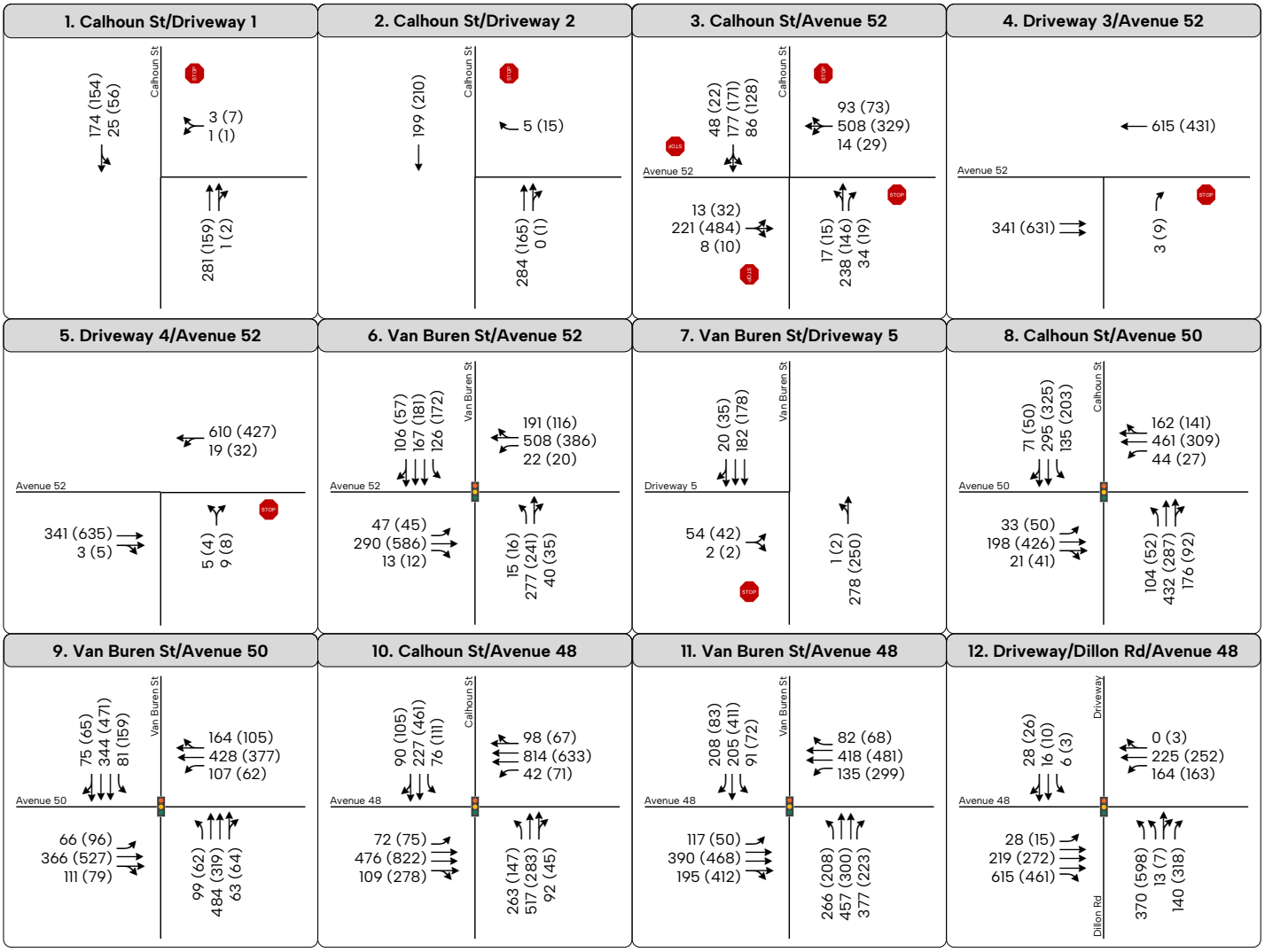
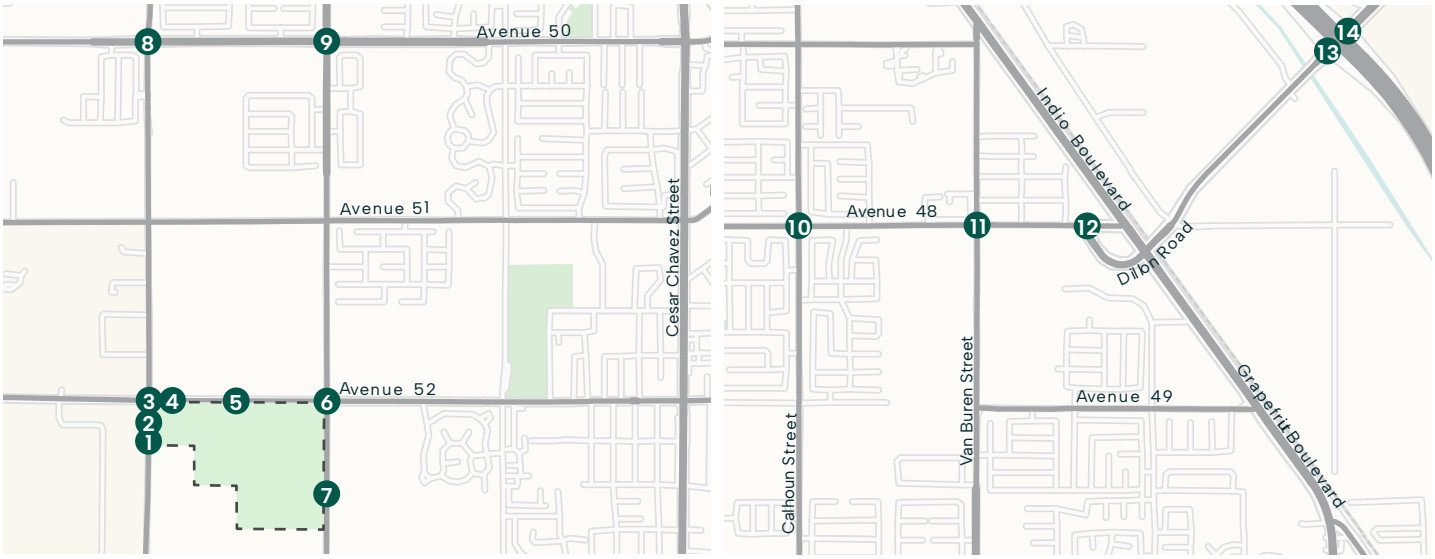
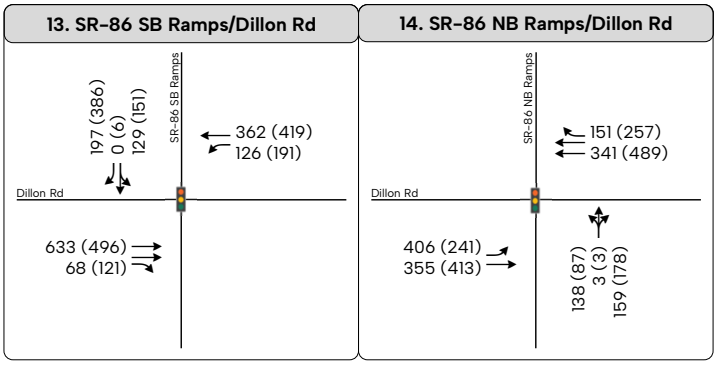


FIGURE 6.1

Peak Hour Traffic Volumes and Lane Configurations Opening Year Plus Project (2030)





AM (PM) Peak Hour Traffic Volume

Lane Configuration

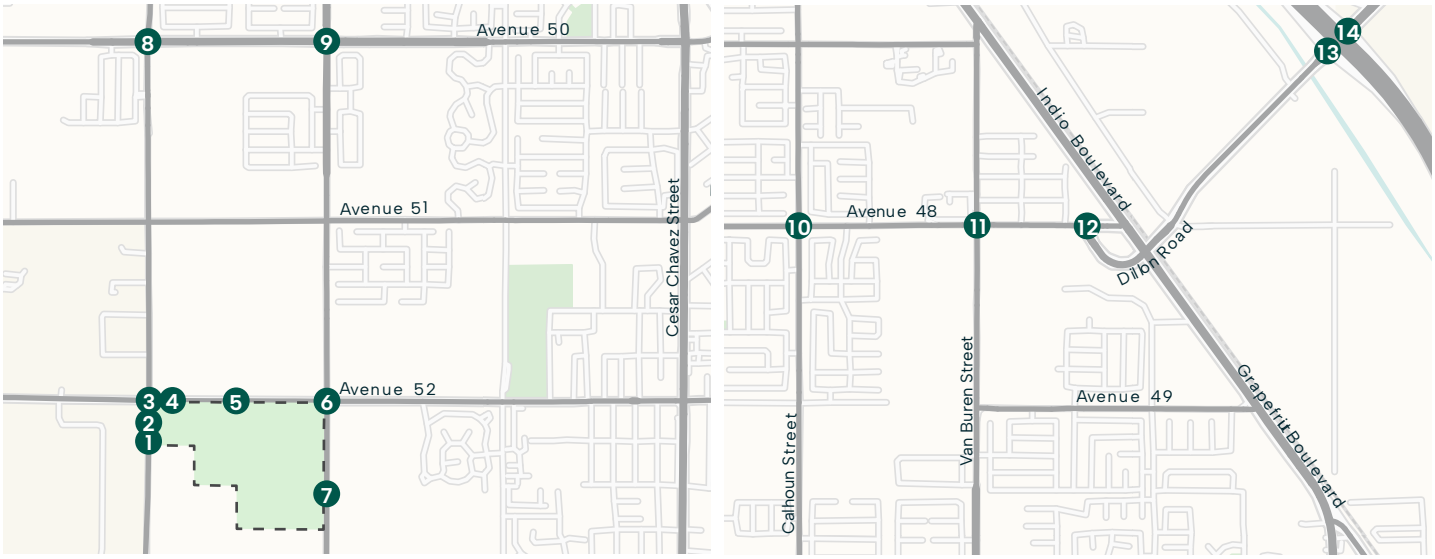
Stop Sign

Signalized

Study Intersections

FIGURE 6.1

Peak Hour Traffic Volumes and Lane Configurations Opening Year Plus Project (2030)



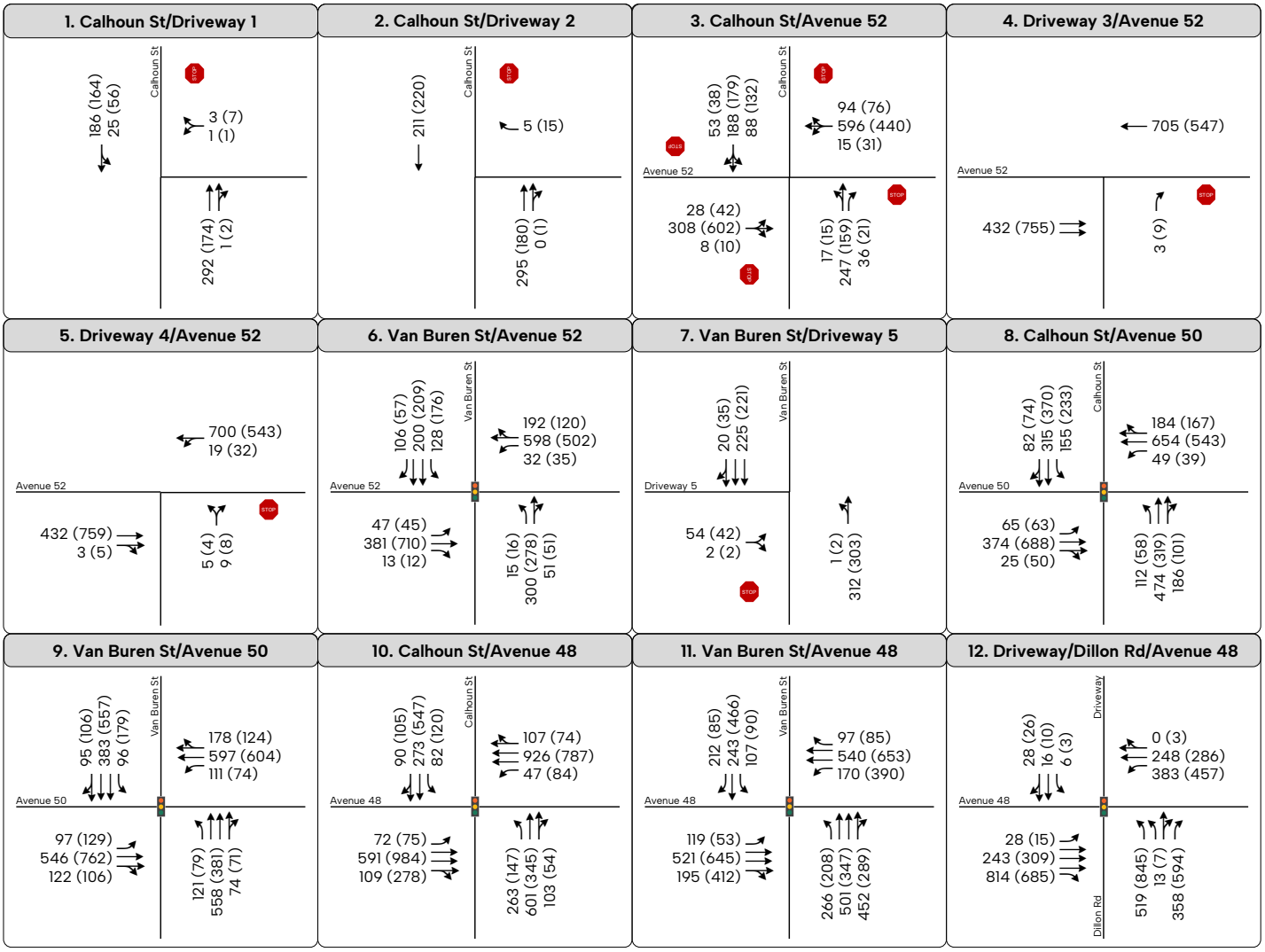
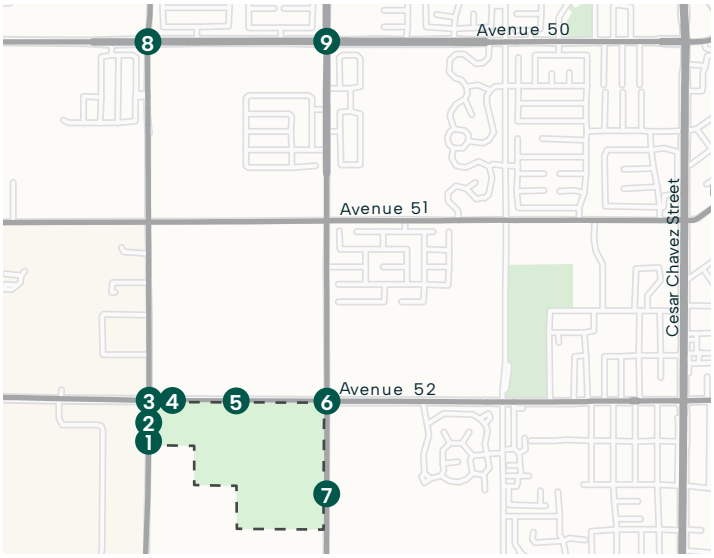
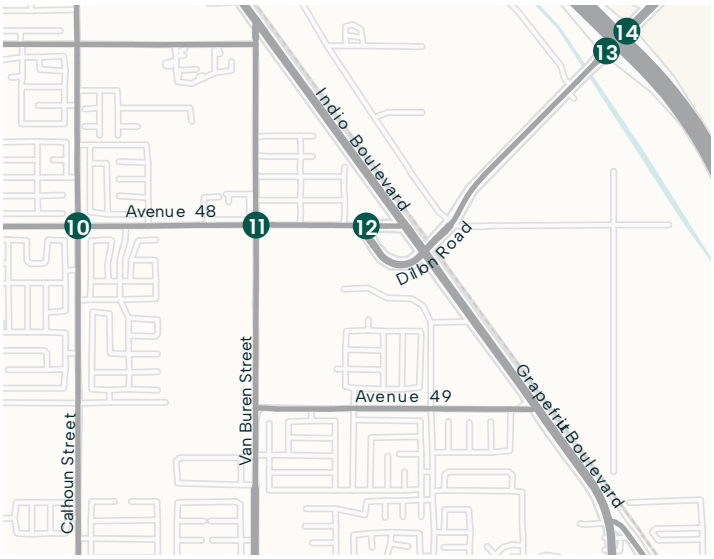
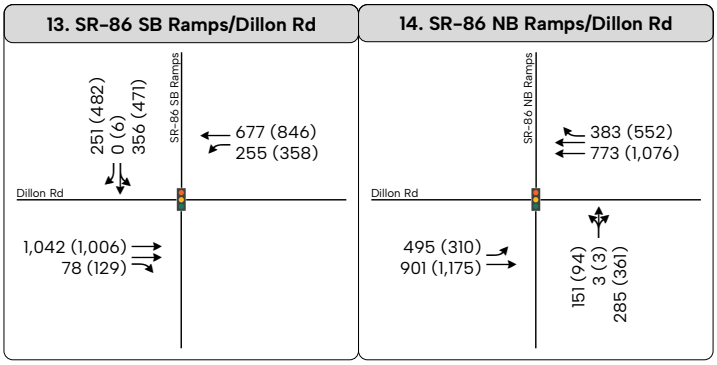


FIGURE 6.2

Peak Hour Traffic Volumes and Lane Configurations – Opening Year Plus Project and Cumulative Projects (2030)







AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized

Study Intersections

FIGURE 6.2

Peak Hour Traffic Volumes and Lane Configurations – Opening Year Plus Project and Cumulative Projects (2030)

6.1.2 Opening Year (2030) Intersection Operations

Opening Year (2030) intersection operations were evaluated using the HCM methodology detailed in Section 2.1. Opening year lane configurations and intersection control types changed as documented in **Appendix D** and as summarized below:

- The Project will implement an additional lane in the direction adjacent to the Project on the north and west side
- The Project will implement two lanes in the direction adjacent to the project on the east side of the project
- Additional lanes were added based off Southern California Association of Governments' (SCAG) Regional Transportation Plan (RTP).

Traffic signal timings, peak hour factors and heavy vehicle percentages were left unchanged from existing conditions.

Intersection operations under Opening Year (2030) Plus Project and Plus Project and Cumulative Projects conditions are presented in **Table 6.1**. Intersection LOS calculation worksheets are provided in **Appendix E**.

Under the Plus Project scenario, the following intersections are forecasted to operate deficiently (below LOS D):

- Intersection 3: Calhoun Street and Avenue 52
- Intersection 6: Van Buren Street and Avenue 52

Under the Plus Projects and Cumulative Projects scenario the following intersections are forecasted to operate deficiently (below LOS D):

- Intersection 3: Calhoun Street and Avenue 52
- Intersection 6: Van Buren Street and Avenue 52
- Intersection 11: Van Buren Street and Avenue 48
- Intersection 12: Dillon Road and Avenue 48
- Intersection 13: SR-86 SB Ramps and Dillon Road PM Peak Hour

All other study intersections would operate at acceptable service levels of LOS D or better.

Table 6.1. Opening Year (2030) Intersection Levels of Service

ID	Intersection	Control[1]	Peak Hour	Opening Year with Project		Opening Year with Project and Cumulative Projects	
				LOS/Delay	Side Street Stop Worst Movement	LOS/Delay	Side Street Stop Worst Movement
1	West Driveway 1 and Calhoun St*	SSSC[1]	AM	A / 1	Westbound	A / 1	Westbound
			PM	A / 1	Westbound	A / 1	Westbound
2	West Driveway 2 and Calhoun St*	SSSC[1]	AM	A / 1	Westbound	A / 1	Westbound
			PM	A / 1	Westbound	A / 1	Westbound
3	Calhoun St and Ave 52	AWSC[2]	AM	**F / 95**		**F / 187**	
			PM	**F / 156**		**F / >250**[4]	
4	North Driveway 1 and Ave 52*	SSSC[1]	AM	A / 1	Northbound	A / 1	Northbound
			PM	A / 1	Northbound	A / 1	Northbound
5	North Driveway 2 and Ave 52*	SSSC[1]	AM	A / 1	Northbound	A / 1	Northbound
			PM	A / 1	Northbound	A / 1	Northbound
6	Van Buren St and Ave 52	Signal	AM	**E / 56**		**F / 87**	
			PM	C / 34		D / 55	
7	East Driveway and Van Buren St.*	SSSC[1]	AM	A / 1	Eastbound	A / 1	Eastbound
			PM	A / 1	Eastbound	A / 1	Eastbound
8	Calhoun St and Ave 50	Signal	AM	C / 29		D / 36	
			PM	C / 25		C / 33	
9	Van Buren St and Ave 50	Signal	AM	C / 34		D / 36	
			PM	C / 35		D / 38	
10	Calhoun St and Ave 48	Signal	AM	D / 42		D / 45	
			PM	C / 34		D / 37	
11	Van Buren St and Ave 48	Signal	AM	C / 29		C / 34	
			PM	C / 44		**E / 68**	
12	Dillon Rd and Ave 48	Signal	AM	C / 25		**E / 61**	
			PM	D / 24		**F / 86**	
13	SR-86 SB Ramps and Dillon Rd	Signal	AM	B / 12		C / 35	
			PM	B / 14		**E / 65**	
14	SR-86 NB Ramps and Dillon Rd	Signal	AM	C / 22		C / 24	
			PM	B / 16		C / 39	

Note:
1. SSSC: Side-Street Stop Control
2. AWSC: All-Way Stop Control
3. Deficient intersection operations are noted in bold text (below LOS D).
4. Delay estimates are above 250 seconds are out of the bounds of the Syncro software

Source: Fehr & Peers, 2025.

6.1.2.1 Freeway Off-Ramp Queueing Assessment

Storage capacity for all SR-86 northbound and southbound off-ramps in the study area were evaluated using HCM 7th Edition methodologies. Existing storage capacities were compared against 95th percentile queue estimates prepared using the Synchro 12 software.

The following two intersections were included in the off-ramp queuing analysis for the Opening (2030) scenarios:

- 13. SR-86 SB Ramps and Dillion Road
- 14. SR-86 NB Ramps and Dillion Road

No movements are forecasted to exceed existing storage capacity under Opening Year (2030) Plus Project and Cumulative Projects. The queuing analysis summary in **Table 6.2** presents results for one scenario Opening Year with Project and Cumulative Projects only. This scenario has higher traffic volumes than Opening Year with Project which queues are not reported since lower traffic volumes typically result in shorter queues. Detailed queuing worksheets are provided in **Appendix F**.

Table 6.2 SR-86 Off-Ramp 95th Percentile Queues

Intersection		Movement	Storage Length (ft)	Peak Hour	Opening Year (2030) Plus Project and Cumulative Projects
13	SR-86 SB Ramps and Dillion Road	SBT	1,325	AM	325
				PM	450
		SBR	1,325	AM	100
				PM	375
14	SR-86 NB Ramps and Dillion Road	NBLTR	1,475	AM	325
				PM	425

Notes:
1. Queue results are reported in feet per lane and rounded up to the nearest 25-feet interval.

Source: Fehr & Peers, 2025.

6.1.3 Opening Year (2030) Improvements

Feasible measures were identified to improve intersection operations at deficient intersections to an acceptable LOS (LOS D or better).

- **Calhoun Street and Avenue 52 (Intersection 3) –** This intersection is expected to operate at LOS E and F during AM and PM peak hour under Opening Year (2030) Plus Project and Cumulative Projects. A traffic signal is warranted and recommended at Calhoun and Avenue 52 to improve operations. Signal warrant analyses for project driveways (Intersections 1 and 2, 4 and 5, and 7) indicate that signals are not warranted. Detailed signal warrant analysis are provided in **Appendix G**.

- **Van Buren Street and Avenue 52 (Intersection 6) –** This intersection is expected to operate at LOS E and F during AM and PM peak hour under Opening Year (2030) Plus Project and Cumulative Projects. To improve intersection operations, optimizing splits and increasing cycle lengths would improve to acceptable conditions. Communication with Coachella Valley Sync is not needed because intersection 6 is uncoordinated.
- **Van Buren Street and Avenue 48 (Intersection 11) –** This intersection is expected to operate at LOS E during PM peak hour under Opening Year (2030) Plus Project and Cumulative Projects. To improve intersection operations, convert southbound right lane to a shared southbound right through.
- **Dillon Road and Avenue 48 (Intersection 12) –** This intersection is expected to operate at LOS E and F during AM and PM peak hour under Opening Year (2030) Plus Project and Cumulative Projects. To improve intersection operations, optimizing the traffic signal timing would improve to acceptable conditions.
- **SR-86 and Southbound Ramps and Dillion Road (Intersection 13)** – This intersection is expected to operate at LOS E during PM peak hour in Opening Year (2030) Plus Project and Cumulative Projects. To improve intersection operations, optimizing the traffic signal timing would improve to acceptable conditions.

Table 6.3 compares intersection operations without and with improvements under improvements.

Table 6.3 Opening Year (2030) with Improvements Levels of Service

Intersection	Peak Hour	Opening Year (2030) Plus Project		Opening Year (2030) Plus Project and Cumulative Projects		Opening Year (2030) Plus Project w/ Improvement		Opening Year (2030) Plus Project and Cumulative w/ Improvement		Fair Share %
		LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	
3. Calhoun St and Avenue 52	AM	**F**	**95**	**F**	**187**	B	14	C	34	18.6%
	PM	**F**	**156**	**F**	**>250**	C	21	C	28	
6. Van Buren St and Ave 52	AM	**E**	**56**	**F**	**87**	D	43	D	55	23.1%
	PM	C	34	D	55	C	32	D	45	
11. Van Buren St and Ave 48	AM	C	29	C	34	C	29	C	34	13.2%
	PM	C	44	**E**	**68**	D	35	D	52	
12. Dillon Road and Avenue 48	AM	C	25	E	61	C	30	D	53	8.9%
	PM	C	24	**F**	**86**	C	28	D	50	
13. SR-86 and Southbound Ramps	AM	B	12	**C**	**35**	B	12	C	34	7.0%
	PM	B	14	**E**	**65**	B	15	D	53	

Notes:
1. Percent of fair share at the intersection is calculated using PM peak hour volumes.
2. Potentially deficient intersection operations are noted in **bold text**

Source: Fehr & Peers, 2025

Project Improvement Fair Share

The calculated Project fair share contribution towards these improvements is based on the formula outlined in the County's Guidelines:

$$\text{Project Fair Share (P)} = [T(p) \div (T(t) - T(e))]*100$$

Independent variables and associated values for this calculation are shown in **Table 6.4**, formula is assumed to be traffic volumes at individual intersections. Total traffic volumes are from Opening Year plus Project and Existing Traffic are from collected counts.

Table 6.4 Opening Year (2030) Project Fair Share Calculations

Variable	Description	Intersection 3 Values	Intersection 6 Values	Intersection 11 Values	Intersection 12 Values	Intersection 13 Values
T(p)	Project Traffic	95	151	140	127	127
T(t)	Total Traffic[1]	1,745	2,178	3,723	3,240	3,298
T(e)	Existing Traffic	1,234	1,525	2,663	1,814	1,491

Note: Traffic values are the sum of all turning movements.
1. Total Traffic Volumes are forecast volumes for the Opening Year Plus Project Plus Cumulative Projects (2030) Peak PM scenario.
Source: Fehr & Peers, 2025.

Appendix A: Approved Scoping Agreement

5.5.25

123-13.55 PC #1 accepted as redlined

SCOPING AGREEMENT FOR TRANSPORTATION LOS ANALYSIS

This letter acknowledges the Riverside County Transportation Department requirements for transportation level of service analysis of the following project. The analysis must follow the Riverside County Transportation Department Transportation Analysis Guidelines, December 2020.

Case No.	Pre-App (23-06)
Related Cases	N/A
Project Name:	The Ranch at Coachella
Project Address:	Bound by Avenue 52, Van Buren St Avenue 53, and Calhoun St; City of Coachella
Project Description:	See Attachment 01A

	Traffic Consultant	Applicant/Developer
Name:	Fehr & Peers	Mr. Grant King, Managing Partner
Address:	3750 University Avenue, Suite 225,	6417 Selma Avenue 2nd Floor
	Riverside, CA 92501	Hollywood CA, 90028
Telephone:	949-308-6318	323-466-1400
E-mail:	P.Herrmann@fehrandpeers.com	grant@relevantgroup.com

Current GP Land Use	Regional Retail District	Proposed Land Use	Regional Retail District
Current Zoning	Regional Commercial (R-C)	Proposed Zoning	Planned Unit Development

A. Trip Generation Source: Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition.

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	See	Attach. 02		See	Attach. 02	
PM Trips						

Internal Trip Allowance ☑ Yes ☐ No (See Attached 03 % Trip Discount)

Pass-By Trip Allowance ☐ Yes ☑ No (N/A % Trip Discount)

A pass-by trip discount of 25% is allowed for appropriate land uses. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: N 60 % S 5 % E 10 % W 25 %

(See Attachment 4)

C. Background Traffic

Project Build-out Year:	2030	Annual Ambient Growth Rate:	2 %
Phase Year(s)	N/A		
Other projects to be analyzed:	N/A		
Model/Forecast methodology	RIVCOM		

D. Study intersections: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1. See Attachment 04
2.
3.
4.
5.
6.
7.
8.
9.
10.

E. Study Roadway Segments: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1. N/A
2.
3.
4.
5.
6.
7.
8.
9.
10.

F. Other Jurisdictional

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? ☑ Yes ☐ No

If yes, name of jurisdiction(s): City of Indio, California

G. Site Plan (please attach reduced copy) - A conceptual land use plan has been provided in **Attachment 01B**

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)

(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

~~N/A~~ Provide Fair Share Analysis As Applicable.
Perform TS Warrants for I/S 1, 2, 3, 4, 5

I. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts New traffic counts will be collected May 2025, justification in Attch. 03

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with this form.**

Recommended by:

rrmann, TE
Fehr & Peers — 04/23/2025
Traffic Consultant — Date

Approved Scoping Agreement

City of Coachella - Traffic — Date

Scoping Agreement Submitted on _____
Revised on _____

THE RANCH AT COACHELLA

Attachment 02

Project Description

The project site is located within the City of Coachella, bound by Avenue 52 in the north, Van Buren Street in the east, Avenue 53 in the south, and Calhoun Street in the west. The site is directly accessible via all but Avenue 53, which is located in the Unincorporated area of the County of Riverside.

There are two distinct sectors of the 85-acre site plan – a private sector and a public sector. Circulation access can be made to the public sector off Calhoun Street; private sector access can be made via Avenue 52 and Van Buren Street, as well as through the Calhoun Street public sector access point.

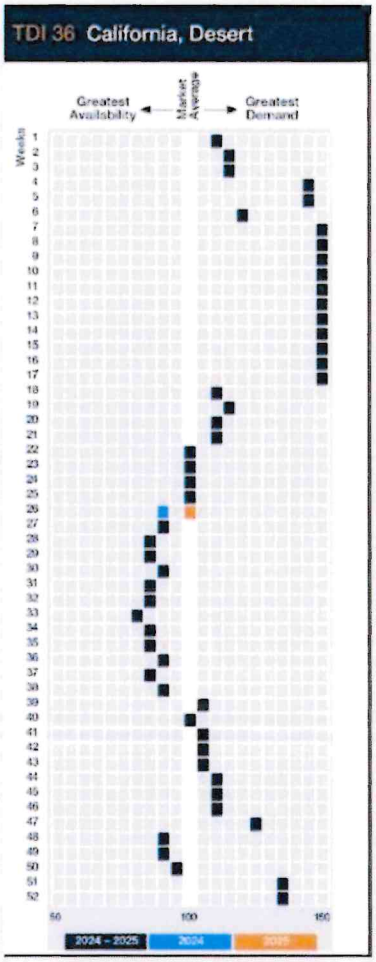
The **private sector** includes single family residential units comprised of estate lots, zero lot line lots, bungalow lots, and VIP suites, as well as condo hotel units (which will operate like the single family lots), and resort amenities that can be used by guests/owners of this sector. The estate lots, zero lot line lots, bungalow lots, VIP suites, and condo hotels will operate with a majority of fractional ownership and a minority of full ownership. These residential components and the condo hotel units will be used as second homes, timeshare, short term rental, and long-term rental properties, all of which are affected by the seasonality of the desert community. Time of year use distribution will be concentrated between mid-February through May, with the lowest demand generally occurring mid-July through the end of September, and the first half of December (***Figure 1*** below).

The **public sector** is comprised of three primary components, which affect trip generation – a beach club, an event tent, and a restaurant. These components would operate with an assumed typical weekday capacity of 500 persons [100 persons – beach club, 200 persons – restaurant, and 200 persons – event tent] and an assumed weekend capacity of 1,500 [1,000 persons – beach club, 200 persons – restaurant, and 300 persons – event tent]; other special events with higher capacity would be rare and would require additional traffic control. The public sector components will generally be operational between 11:00 AM and 2:00 AM, with expected event arrival peaks to be between 7:00 PM and 8:00 PM.

The resort characteristics of the proposed site plan results in most guest/owners arriving on site and staying on site for an extended duration, where they will have access to on-site amenities, including the public sector area. It is anticipated that a large portion of guests at the public facilities would be on-site guests, resulting in approximately 33% internal capture between the public and private uses (weekday). For example, the event barn (public sector) could host corporate events, where guests would stay on-site in the private sector. The same weekday trip internal capture totals were applied to the weekend trip generation to ensure an appropriate internalization discount relative to the total private area units. Thus, the same amount of internal trips from the private area to the public area for the weekday scenario was applied to the weekend scenario.

Figure 1 – California Desert Travel Demand – The Ranch at Coachella, Market Area Analysis

FIGURE 3-7 CALIFORNIA DESERT TRAVEL DEMAND



WATER FEATURE
50,796 SF

LAKE 01
20,890 SF

LAGOON
410,682 SF

LAKE 02
111,307 SF

HOTEL COTTAGES

CONDO HOTEL

EVENT LAWN

BOH

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- RIGHT-OF-WAY BUFFER
- 20' LANDSCAPE EASEMENT
- 10' SETBACK
- PEDESTRIAN TRAIL

PREFERRED MASTER PLAN

VITA
PLANNING | LANDSCAPE ARCHITECTURE | ARCHITECTURE

The Ranch
COACHELLA, CA

April 18, 2025

1" = 60'-0"

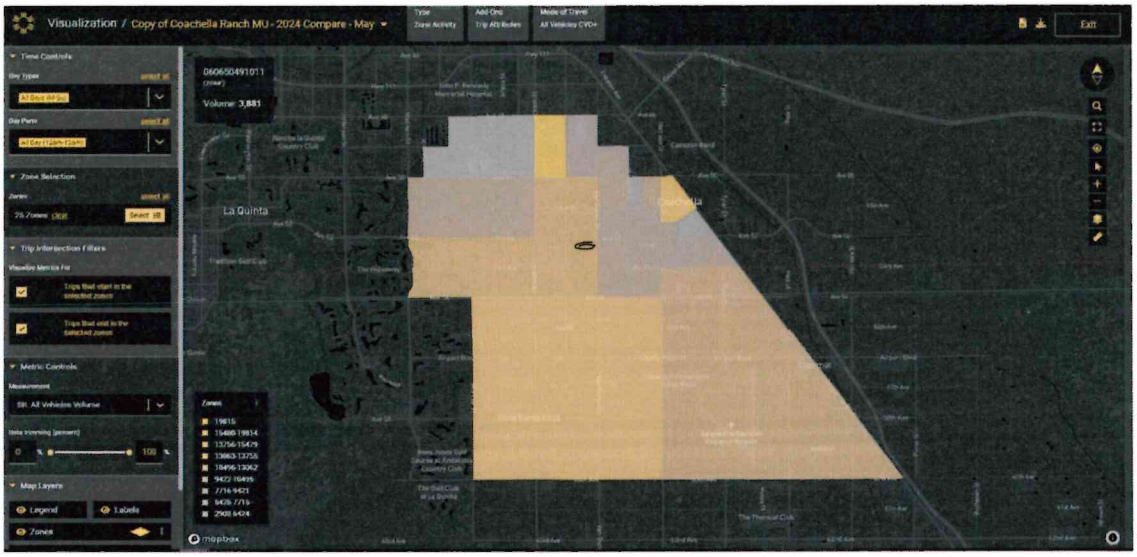
THE RANCH AT COACHELLA

Study Intersection Count Collection

For study intersections where trip distributions justify the intersection to be studied, traffic counts will be collected in May of 2025. Based on the seasonality of the desert community that the project site is within, counts would ideally be collected by the end of March. Should counts be collected in May, a comparison of historical ADT data from March 2024 and May 2024 (Big Data sources as noted below) will be used as a factor to scale collected May traffic counts to the appropriate peak levels (March).

Preliminary data were collected within the immediate Census Block Groups to the project site – extending about 5 miles in all directions (***Figure 2***). An average March Block Group to May Block Group comparison showed a 13% decline in volumes between the study months. A cumulative average of all block groups showed a 15% decline between March and May. Traffic counts can be appropriately factored to scale May counts to the normalized peak volumes of March by roughly ~15%.

Figure 2 – Big Data (Streetlight) Block Group Study Area



March Total	May Total
239,959	204,867
	15%

March showed cumulative proximal area volume that is 15% higher

March 2024 compared to May 2024 showed an average block group difference of 13%

Attachment 02A: Trip Generation - The Ranch at Coachella Fully Occupied Weekday

	Assumptions	Land Use	Comparable Time of Day ITE Land Use	ITE Code	Quantity	Units	Trip Generation Rates							Estimated Trip Generation							
							Daily	AM			PM			Trip Rate		AM Peak Hour Trips			PM Peak Hour Trips		
								% In	% Out	Rate	% In	% Out	Rate	Unit	Daily Trips	In	Out	Total	In	Out	Total
Private	Mixture of use/operation - second home, fractional ownership, short term rental, long term rental/ownership	Single Family Residential (Estate Lots, Zero Lots, Bungalow Lots)	Recreational Homes	260	165	DU	3.55	55%	45%	0.22	46%	54%	0.29	per DU	586	20	16	36	22	26	48
Private	Mixture of use/operation - second home, fractional ownership, short term rental, long term rental/ownership	Condo Hotel Units	Recreational Homes	260	244	DU	3.55	55%	45%	0.22	46%	54%	0.29	per DU	866	30	24	54	33	38	71
														Private Sector Subtotal	**1,452**	**50**	**40**	**90**	**55**	**64**	**119**
Public	100 Person Assumed Max Occupancy, open to the public 11am to 2am	Beach Club	Movie Theater	445	100	seats	1.76	72%	28%	0.09	51%	49%	0.29	per seat	176	6	3	9	15	14	29
														*Subtotal Trips (Beach Club) - Internalization Applied**	116	4	2	6	10	9	19
Public	200 Person Assumed Max Occupancy, open to the public 11am to 2am	Restaurant	Fine Dining Restaurant	931	200	seats	2.60	69%	31%	0.15	67%	33%	0.28	per seat	520	21	9	30	38	18	56
														*Subtotal Trips (Restaurant) - Internalization Applied**	343	14	6	20	25	12	37
Public	200 Person Assumed Max Occupancy, open to the public 11am to 2am	Event Tent	Custom	N/A	200	attendee	1.76	72%	28%	0.09	77%	23%	0.29	per attendee	352	13	5	18	45	13	58
														*Subtotal Trips (Event Barn) - Internalization Applied**	232	9	3	12	29	9	38
														Public Sector Subtotal	**692**	**27**	**11**	**38**	**64**	**30**	**94**
														WEEKDAY TOTAL	**2,144**	**77**	**51**	**128**	**119**	**94**	**213**

**Internal capture of 33% from private sector*

Attachment 02B: Trip Generation - The Ranch at Coachella Fully Occupied Weekend

	Assumptions	Land Use	Comparable Time of Day ITE Land Use	ITE Code	Quantity	Units	Trip Generation Rates								Estimated Trip Generation							
							Daily	AM			PM			Trip Rate		AM Peak Hour Trips			PM Peak Hour Trips		
								% In	% Out	Rate	% In	% Out	Rate	Unit	Daily Trips	In	Out	Total	In	Out	Total
Private	Mixture of use/operation - second home, fractional ownership, short term rental, long term rental/ownership	Single Family Residential (Estate Lots, Zero Lots, Bungalow Lots)	Recreational Homes	260	165	DU	3.34	46%	54%	0.30	48%	52%	0.39	per DU	551	23	27	50	31	33	64
Private	Mixture of use/operation - second home, fractional ownership, short term rental, long term rental/ownership	Condo Hotel Units	Recreational Homes	260	244	DU	3.34	46%	54%	0.30	48%	52%	0.39	per DU	815	34	39	73	46	49	95
														Private Sector Subtotal	**1,366**	**57**	**66**	**123**	**77**	**82**	**159**
Public	1,000 Person Assumed Max Occupancy, open to the public 11am to 2am	Beach Club	Movie Theater	445	1000	seats	2.24	72%	28%	0.09	52%	48%	0.31	per seat	2,240	65	25	90	161	149	310
							*Subtotal Trips (Beach Club) - Internalization Applied**								2,180	63	24	87	156	144	300
Public	200 Person Assumed Max Occupancy, open to the public 11am to 2am	Restaurant	Fine Dining Restaurant	931	200	seats	2.57	69%	31%	0.15	59%	41%	0.33	per seat	514	21	9	30	39	27	66
							*Subtotal Trips (Restaurant) - Internalization Applied**								337	14	6	20	26	21	47
Public	300 Person Assumed Max Occupancy, open to the public 11am to 2am	Event Tent	Custom	N/A	300	attendee	2.24	72%	28%	0.09	77%	23%	0.31	per attendee	672	19	8	27	72	21	93
							*Subtotal Trips (Event Barn) - Internalization Applied**								552	15	6	21	56	17	73
														Public Sector Subtotal	**3,070**	**92**	**36**	**128**	**238**	**182**	**420**
														WEEKEND TOTAL	**4,436**	**149**	**102**	**251**	**315**	**264**	**579**

**Internal capture from the weekday total trips were applied/subtracted from weekend trips*

THE RANCH AT COACHELLA

Attachment 04

Trip Generation Methodology

Trip generation estimates for the **private sector** components were sourced from the ITE 11th edition land use codes[1]. The intended land use characteristics (ownership and use) were considered to apply the ITE land use code with the most representative overlap. The estate lots, zero lot line lots, bungalow lots, VIP suites and the condo hotel units will be a majority (>75%) fractional ownership second homes that will be used for short-term and long-term rental, ITE code 260 "Recreational Homes" was applied. The condo hotel units may be sold as individual, one-bedroom units or up to four-bedroom; and area expected to operate like recreational home ITE characterized units. Overall, these ITE code selections are further supported by the seasonality of the proposed site, as described in **Attachment 01 – *Figure 1***.

Trip generations for the **public sector** (beach club and restaurant) used the most comparable ITE land use code that represented the best matched time of day distribution for the planned components; calculations were based on seats to match the developer's weekday and weekend peak person capacity assumptions. The event tent was calculated using assumptions, which similarly derived from the peak capacity – detailed below.

ITE code 445 "Movie Theatre" was applied to the beach club. The beach club will not open sooner than 11:00 AM, similar to a movie theatre, with a majority of the trips arriving in close duration to each other. Both the movie theatre and the beach club are entertainment uses open all day and night, where people come and stay for a few hours, and arrival and departure times are spread out throughout the day with multiple rounds of event/movie turn over.

ITE Code 931 "Fine Dining Restaurant" was applied to the restaurant to match the time-of-day distribution, guest stay duration, and turnover assumption (lunch service and dinner service).

The event tent will operate with a 200-person and 300-person peak capacity assumption for the weekday and weekend, respectively. ITE code 445 was applied for the daily, AM and PM trip rate to be conservatively high. AM trips are nominal and characteristics of employee / maintenance / delivery trips, since the event barn would not open sooner than 11:00 AM for guests. The PM trips were factored to match comparable event trip generation counts for a concert "event arrival peak – 7:00 PM to 8:00 PM" (77% in and 23% out)[2].

As detailed in **Attachment 01**, it is anticipated that a portion of the guests in the public facilities will stay on-site and an internal capture reduction was applied to the public uses. The same amount of internal trips from the private area to the public area for the weekday scenario was applied to the weekend scenario.

ITE Land Use code cover page description used in trip generation calculations are attached below.

trip gen

[1] Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition

[2] Classic Club Specific Plan – counts collected April 6th, 2023; Fehr & Peers 2023.

Include as reference w/ TIA Submittal

Land Use: 931
Fine Dining Restaurant

Description

A fine dining restaurant is a full-service eating establishment with a typical duration of stay of at least 1 hour. A fine dining restaurant generally does not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires a reservation and is generally not part of a chain. A patron commonly waits to be seated, is served by wait staff, orders from a menu and pays after the meal. Some of the study sites have lounge or bar facilities (serving alcoholic beverages), but meal service is the primary draw to the restaurant. Fast casual restaurant (Land Use 930) and high-turnover (sit-down) restaurant (Land Use 932) are related uses.

Additional Data

If the fine dining restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, New Jersey, and Utah.

Source Numbers

126, 260, 291, 301, 338, 339, 368, 437, 440, 976, 1053

Land Use: 260
Recreational Homes

Description

A recreational home is either (1) a second home used by its owner periodically for recreation or (2) rented on a seasonal basis. Some sites in the database are located within a resort that contains local services and complete recreational facilities. Timeshare (Land Use 265) is a related land use.

Additional Data

A large number of internal trips are made for recreational purposes in resort communities containing recreational homes.

The sites were surveyed in the 1980s, the 2000s, and the 2010s in California, New York, and Oregon.

Source Numbers

187, 901, 968, 1046

Land Use: 445
Movie Theater

Description

A movie theater is a place where movies are screened for public entertainment. A theater includes a lobby, refreshment area, and audience seating for each movie screen. Amenities such as reclining seats, tiered stadium seating, and assigned seating are sometimes offered. A theater can be stand-alone or part of a larger retail complex.

Additional Data

Caution should be used when applying these data, as the peaking characteristics for this land use can have a significant impact on trip generation rates. Peaking at movie theaters typically occur in time periods shorter than an hour. The start and end times for a movie theater may be staggered to reduce peak surging impacts.

For 25 sites with data for both number of movie screens and number of seats, the average number of seats per movie screen was 236 (with values ranging between 150 and 336). The database includes two exceptions, both theaters with three movie screens and with an average of 740 seats per movie screen.

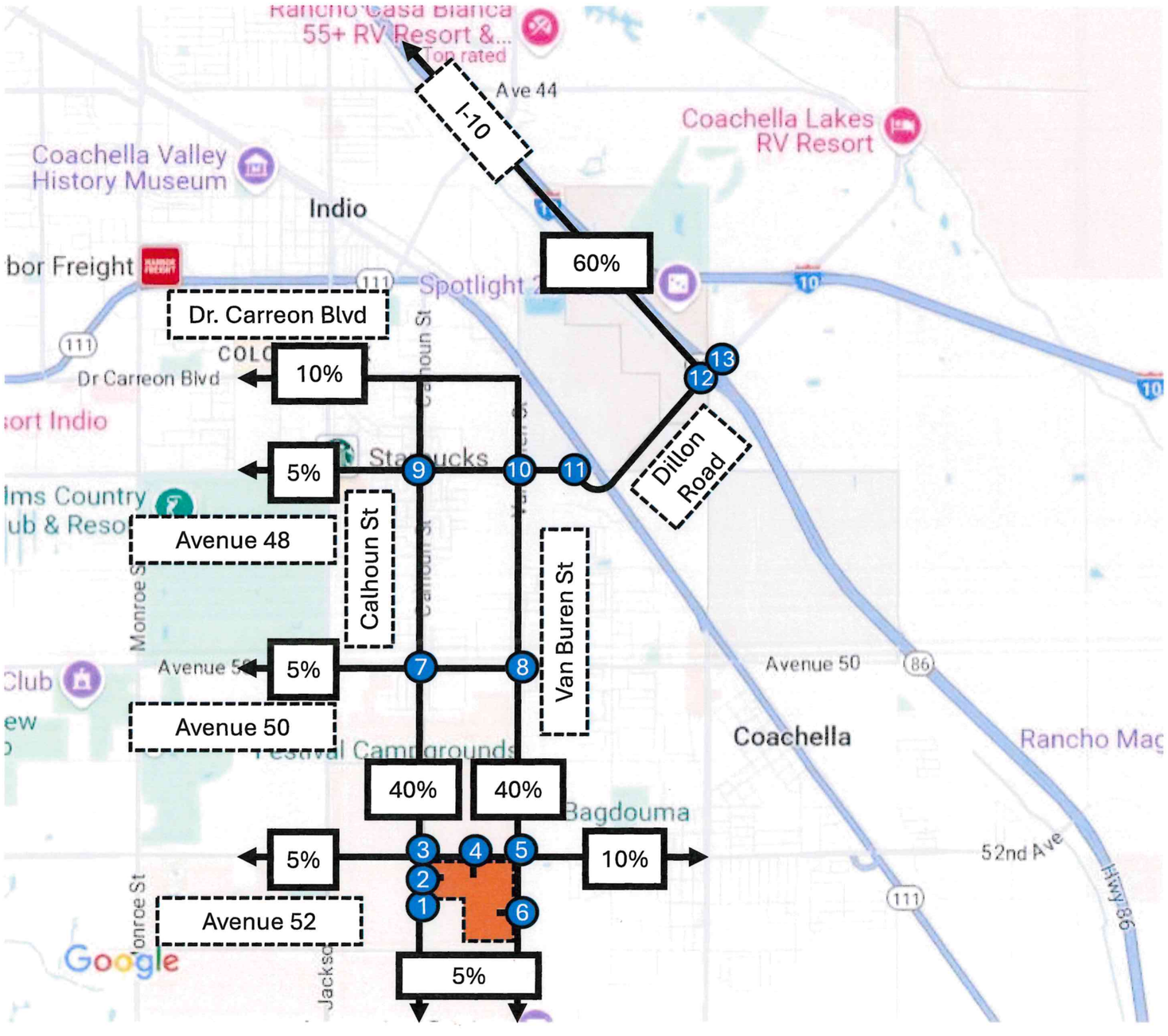
The peak hour of the generator for movie theaters occurred on Friday and Saturday evenings between 6:00 p.m. and 10:00 p.m.

The sites were surveyed in the 1980s, 1990s, the 2000s, and the 2010s in California, Connecticut, Georgia, Hawaii, Maryland, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Virginia, and Wisconsin.

Source Numbers

213, 215, 241, 283, 387, 397, 418, 433, 440, 443, 450, 451, 452, 453, 455, 456, 457, 458, 459, 513, 544, 618, 959

Figure 4: Project Trip Distribution



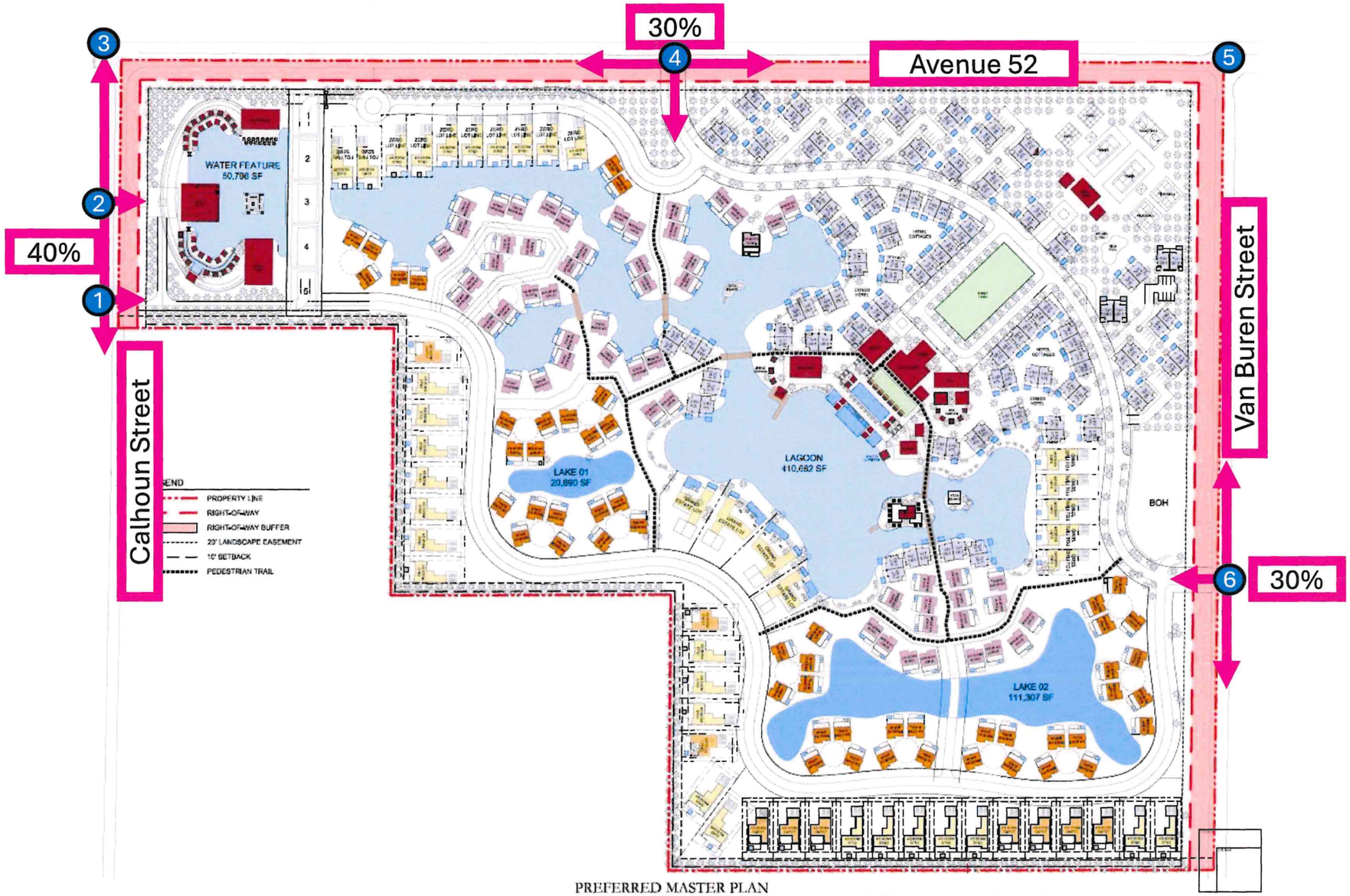
Study Intersections

1. West Driveway 1 and Calhoun Street
2. West Driveway 2 and Calhoun Street
3. Calhoun Street and Avenue 52
4. North Driveway and Avenue 52
5. Van Buren Street and Avenue 52
6. East Driveway and Van Buren Street
7. Calhoun Street and Avenue 50
8. Van Buren Street and Avenue 50
9. Calhoun Street and Avenue 48
10. Van Buren Street and Avenue 48
11. Dillon Road and Avenue 48
12. SR-86 SB Ramps and Dillon Road
13. SR-86 NB Ramps and Dillon Road

(#) = Study Intersection [%] = Trip Distribution

= Project Site [ ] = Street Name

The Project site features four entry/exit driveways. The West Driveways will provide public access to the Beach Club. Given this knowledge, 40% of trips are anticipated to use the West Driveways and the remaining 60% would evenly use the North and East Driveways.



PREFERRED MASTER PLAN

VITA

The Ranch
COACHELLA, CA

April 18, 2025

Appendix B: Pending and Approved Development Projects

Project ID	Name of Project	CASE ID	Type	Jurisdiction	Address	Description	Approved?	Status / Opening Year	Additional Comments	Include In Analysis?
1	**Bellissima by Pulte**	Architectural Review No. 21-15	Single-family residential	Coachella	East of Frederick Street between Avenue 53 and 54; Tentative Tract Map 31978	111 single-family residences ranging in size from 1,342 sq. ft. to 2,467 sq. ft. and included 1 and 2 story residences	Admin Approval on 4/5/22	Under Construction		Yes
2	**Mariposa Pointe – D.R. Horton**	Architectural Review No. 21-09	Single-family residential	Coachella	SEC of Calhoun Street and 50th Avenue; Tract 32074	1 and 2-story single family residences with attached garages on the 155 vacant lots within Tract 32074 with Spanish, Tuscan and Italianate architectural design. Plan 1 - 1,898 sq. ft. (4 bed, 3 bath and 2-bay garage) Plan 2 – 2,239 sq. ft. (4 bed, 3 bath and 2-bay garage) 2-story Plan 3 - 2,435 sq. ft. (4 bedr, 3.5 bath and 2-bay garage) 2-story	Admin Approval 1/5/22	Under Construction		Yes
3	**Pyramid Ranch**		Single-family residential	Coachella	West of Van Buren Street, South of Avenue 50, North of Avenue 51 (APN #'s 779-280-002 and 779-320-001)	204 Single-Family residential lots; 39 Acres	City Council Approved 10/30/23	Under Construction	Pyramid Ranch	Coachella, California Homes	Pulte	Yes
4	**Tripoli Mixed-Use Project**	Change of Zone (CZ) 22-01 Conditional Use Permit (CUP) 351 Architectural Review (AR) 22-04	Mixed-Use (multi-family & retail)	Coachella	Northeast Corner of Cesar Chavez Street and Bagdad Avenue	108 Apartment units and 2 retail units with Building A 3-stories and Building B 4-stories; 2.83 acres	Planning Commission approved 4/20/22, City Council Approved 5/11/22	Under Construction		Yes
5	**Villa Verde Apartments**	AR No. 19-06, CZ 19-01	Multi-family residential	Coachella	84-824 Calle Verde	152-unit Apartment Community with one to three bedroom dwellings (27 freestanding buildings) at 84-824 Calle Verde. The developments consist of 1, 2 and 3-bedroom apartment units, including: Property management and resident service office, Community room, Laundry facilities, Common open spaces spread over five patio areas; 9.4 acres	Approved Administrative Review 2/20/20	Will begin construction by: 12/2025 Completion slated for: Fall 2027		Yes
6	**Vista Del Agua**	TTM 38145 (related cases - SP 14-01, GPA 14-01, CZ 14-01, EA14-04, TPM 36872) SCH No. 2015031003	Single-family residential w/ commercial, neighborhood center & park	Coachella	East of Tyler Street, north of Avenue 48, and west of Polk Street, on the south side of the I-10 Freeway and Vista Del Sur. APN 603-150-005, -007, -009, -010 & -011	TTM38145 is to subdivide 42.92 acres into 204 single family lots TTM 38146 is to divide 46.92 acres into 254 single-family lots (APN: 603-150-009, 010 & -011) The "Vista Del Agua" project is a proposed master-planned community to be developed on 275.38 acres of vacant land located east of Tyler Street, north of Avenue 48, and west of Polk Street, on the south side of the I-10 Freeway and Vista Del Sur. The project will include a variety of residential neighborhoods with up to 1,640 total dwelling units, plus 17.57 acres of General Commercial use, 8.27 acres of Neighborhood Center with Residential Overlay, and a 13.82 park site. The proposed roadway network includes a new public street to connect Vista Del Sur to Avenue 48, and Polk Street to Avenue 47.	Planning Commission approved 5/13/20	Under review		Yes
7	**Coachella Gateway**	CUP 254 (Modification), AR 24-02 Coachella Gateway	Commercial Project (multi-tenant) w/ drive-thru restaurant	Coachella	48151 Grapefruit Blvd. Southwest corner of Grapefruit Boulevard and Avenue 48	A 4,605 SF multi-tenant commercial building that will include a drive-thru restaurant and two other tenants; 4.85 acres	Planning Commission Approved 7/7/24	Under review		Yes
8	**Coachella Vineyards/Hotel Ozara**	AR No. 16-03 (Modification), CUP 266, TTM 37040, EA 16-01	Commercial Project (RV Subdivision/Resort)	Coachella	Northeast Corner of Vista Del Norte and Tyler Street	The project is for a RV Subdivision/Resort that includes 188 lots for Recreational Vehicles, 100 unit two bedroom townhomes, and an 11-story 200-room hotel and associated facilities. The project includes an 8-story parking structure and a retail plaza that includes 4 retail buildings; 48 acres	Original Approval – 9/26/2018 Modification Planning Commission Approved – 2/29/24	Under Construction- Phase 1 Operational as of 9/2024	ITEM-Attachment-001-3f3afa5d9def4eacab00e679c3450e75.pdf	Yes
9	**Fountainhead Plaza**	CUP 346, 347, AR 21-12 (related to CUP 321, 322, AR 20-03 and TPM 37940)	Commercial Project (Retail Center/ Shopping Center)	Coachella	Northeast corner of 1st Street and Cesar Chavez Street	New 20,422 sq. ft. Aldi supermarket, 2,600 sq. ft. Panda Express and 2,050 sq. ft. Starbucks on 8.25 acres at the NEC of 1st Street and Cesar Chavez Street	City Council Approved 1/26/2022	Under Construction		Yes
10	**HOTN/Sinsemilla Dispensary & Pub Project**	CUP 299, CUP 300, CZ 18-03	Commercial Project (Cannabis)	Coachella	1694 6th Street	1,839 sq. ft. retail cannabis dispensary and 1,432 sq. ft. bar/pub; .11 ares	Planning Commission Approved 3/20/19 CC Approved 5/8/19	Under Construction		Yes
11	**JJWR Industrial Development**	TPM 38218, AR 21-07, CUP 354	Commercial Project (Industrial warehouses and offices w/ RV storage)	Coachella	53-457 and 53-459 Enterprise Way	Construction of two 25,750 sq. ft. industrial building to create up to 32 warehouse condos and 8 office condos of which some will accommodate RV storage; 3.29 acres	PC Approved 5/18/22, CC Approved 6/8/22	Under review		Yes
12	**Roots Café**	CUP No. 374, AR No. 23-16	Commercial Project (Cannabis)	Coachella	45800 Dillon Road	Construction of a 1,750 sq. ft. retail cannabis business within an existing building located in the R-C (Regional Commercial) zone; 1.27 acres	Planning Commission Approved 7/3/2024	Under review		Yes
13	**Sun Community Credit Union**	AR 24-07, CUP 381	Commercial Project (Bank)	Coachella	NEC of Cesar Chavez St and Valley Rd	4,130 sq. ft. commercial bank; 1.97 acres	Planning Commission Approved 7/3/24	Under Construction Completion slated for: Early 2026		Yes
14	**Pueblo Cannabis**	CUP 336, CZ 20-08	Commercial Project (Cannabis)	Coachella	85-591 Grapefruit Blvd	A 1500 sq. ft. retail cannabis dispensary in an existing building on .30 acres of land in the CG-RC zone	Planning Commission Approved 5/26/21, City Council Approved 6/9/21 – CZ Time Extension for CUP Approved by PC 6/15/22	Under Construction Completion slated for: Spring 2026		Yes
15	**West Coast Self Storage**		Commercial	Indio	NEC OF DR CARREON BLVD AND CALHOUN ST, INDIO, CA 92201; A. P. N. 612-130-008	The proposed project is for the construction of a self-storage facility within an approximate 62,000 squarefoot building along with 72 parking stalls.	Approved	Under review		Yes
16	**Riverside County Office of Education**	SCH No. 2024010419	Commercial (Zone M)	Indio	South of Dr. Carreon Blvd., east of Calhoun St., and north of Quail Ave	The proposed project, Riverside County Office of Education Facilities Expansion, is proposing the development of a 33,000-square-foot Riverside County of Education Facilities Expansion Project for a new conference center, offices, warehouse storage, and parking lot.	Approved	Under Construction		Yes
17	**JFM Villas**	SCH No. 2025051381	Residential (High)	Indio	SWC of Dr. Carreon Blvd. and Van Buren Street	Tentative Parcel Map No. 38805 to subdivide 34.43-acres into two new parcels measuring 2.58 acres and 5.52 acres and a 25.87-acre remainder. The purpose of the map is to support the development of an additional 150 residential units, including 100 multi-family units and 50 senior housing units, within the density limits established in the Specific Plan.	Approved	Expected to begin construction by Spring 2025	Proposed zoning change to Fred Young SP	Yes
18	**Sierra Blanca**		Single-family residential	La Quinta	South of Avenue 54 and north of Mountain View Lane, between Monroe St and Ardennas Dr.	34 single family home units	Approved	Under Construction	Sierra Blanca Development	Yes

19	**Bravo Estates**	Site development permit 2024-0001? Resolution No. 2025-002	Single-family residential	La Quinta	Northwest corner of Madison Street and Avenue 52; APN: 777-470-001 through -014	A proposal to develop 14 one-story single-family homes. The site is 8.4 acres and zoned Very Low Density Residential, which allows up to 2 units per acre. The project includes a development agreement to allow for year-round short-term vacation rentals. Access to the project is off Madison Street.	Approved 1/21/25	Under review		Yes
20	**East of Monroe Residential**	TR36902, TR36902E01	Single-family residential	Riverside County	South of Avenue 55, east of Monroe St.	SCHEDULE A SUBDIVISION TO DIVIDE 40 GROSS ACRES INTO 80 SINGLE FAMILY RESIDENTIAL LOTS WITH LOT SIZES RANGING FROM APPROXIMATELY 10,000 SQ. FT. TO 39,700 SQ. FT. INCLUDING PRIVATE STREETS ALONG WITH OPEN SPACE RETENTION BASIN AND PERIMETER BUFFERS. 1ST EOT FOR TR36902 EXTENDING THE EXPIRATION DATE 3 YEARS TO 6/9/2026.	Approved 5/23/2023	Under review		Yes
21	**Quick-Crete Products Facility**	PPT250012	Commercial	Riverside County	South of Avenue 54, west of Shady Ln.	PLOT PLAN FOR A QUICK-CRETE PRODUCTS FACILITY (RELOCATING FROM A FACILITY IN NORCO, CALIFORNIA) FOR THE CREATION OF CONCRETE BENCHES, CONTAINERS, AND TABLES WITHIN A 100,000 SQ. FT. BUILDING. WITH 3 BUILDINGS (TOTALING 2,800 SQ. FT. FOR SECURITY/CARETAKER, CUSTOMER EXPERIENCE & ADMINISTRATION), A CONCRETE BATCH PLANT, A 55,000 SQ. FT. PRODUCT & SCULPTURE GARDEN, A 75,000 SQ. FT. OUTDOOR STORAGE AREA FOR FINISHED PRODUCT, A 70,000 SQ. FT. AREA FOR MOLD STORAGE, A 190,000 SQ. FT. AREA FOR WATER DETENTION/FUTURE EXPANSION, AND 135 PARKING SPACES. (CVE: 24001)	Approved 2/21/2025	Under review		Yes
22	**Townhomes**	PPT240006	Multi-Family Residential	Riverside County	South of Avenue 54, east of Jackson st.	THE PROPOSED PROJECT INCLUDES DEVELOPMENT OF 158 NEW TOWNHOUSE (MULTI-FAMILY) UNITS ON APPROXIMATELY 18.22 DEVELOPABLE ACRES.	Approved 5/15/2024	Under review		Yes

Appendix C: Intersection Turning Movement Counts

INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: Calhoun St
EAST & WEST: 52nd Ave

PROJECT #: SC5374
LOCATION #: 1
CONTROL: STOP ALL

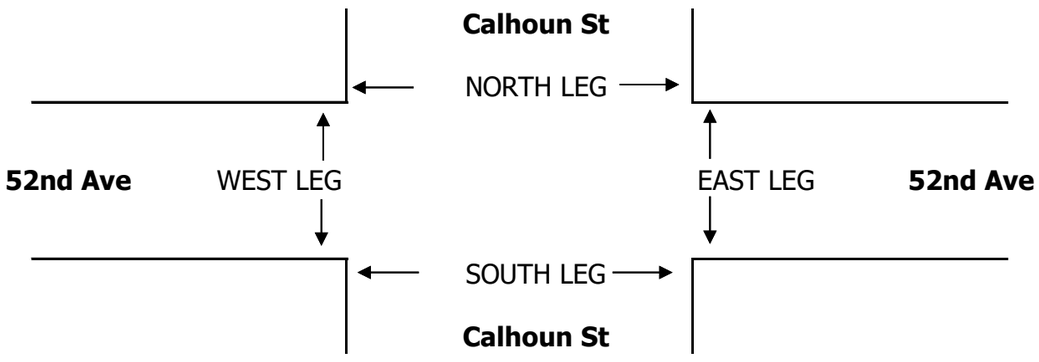
NOTES:

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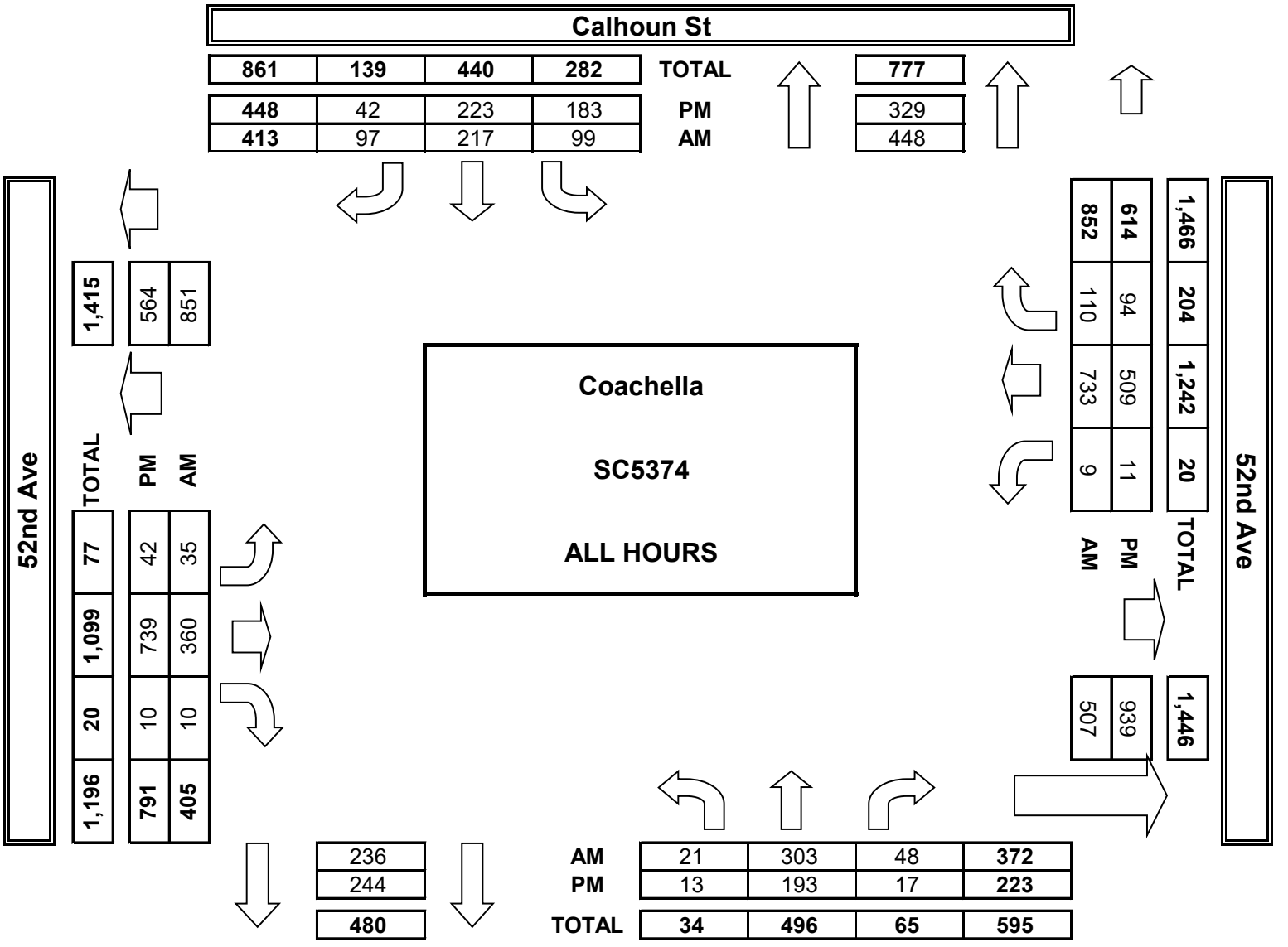
		NORTHBOUND Calhoun St			SOUTHBOUND Calhoun St			EASTBOUND 52nd Ave			WESTBOUND 52nd Ave			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	7:00 AM	4	66	19	10	46	3	2	21	0	3	55	10	239
	7:15 AM	6	75	16	12	27	10	2	37	1	1	84	22	293
	7:30 AM	2	39	1	17	33	8	4	33	2	0	102	15	256
	7:45 AM	1	42	4	21	36	14	1	51	1	1	94	11	277
	8:00 AM	3	27	5	15	32	5	2	44	1	0	104	20	258
	8:15 AM	1	27	2	11	20	6	6	49	2	2	109	14	249
	8:30 AM	3	15	1	5	8	26	7	57	3	1	95	8	229
	8:45 AM	1	12	0	8	15	25	11	68	0	1	90	10	241
	VOLUMES	21	303	48	99	217	97	35	360	10	9	733	110	2,042
	APPROACH %	6%	81%	13%	24%	53%	23%	9%	89%	2%	1%	86%	13%	
	APP/DEPART	372	/	448	413	/	236	405	/	507	852	/	851	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	12	183	26	65	128	37	9	165	5	2	384	68	1,084
	APPROACH %	5%	83%	12%	28%	56%	16%	5%	92%	3%	0%	85%	15%	
	PEAK HR FACTOR		0.570			0.810			0.844			0.915		0.925
	APP/DEPART	221	/	260	230	/	135	179	/	256	454	/	433	0
PM	4:00 PM	4	37	3	18	29	6	10	119	1	2	86	15	330
	4:15 PM	2	32	2	21	25	1	6	87	2	1	46	8	233
	4:30 PM	1	12	3	33	27	6	5	85	0	1	64	12	249
	4:45 PM	2	21	3	24	29	4	4	88	2	1	61	18	257
	5:00 PM	1	25	1	19	26	8	3	92	2	0	77	7	261
	5:15 PM	0	22	2	22	29	9	6	104	2	2	55	11	264
	5:30 PM	1	19	1	25	30	6	4	91	1	2	57	8	245
	5:45 PM	2	25	2	21	28	2	4	73	0	2	63	15	237
	VOLUMES	13	193	17	183	223	42	42	739	10	11	509	94	2,076
	APPROACH %	6%	87%	8%	41%	50%	9%	5%	93%	1%	2%	83%	15%	
	APP/DEPART	223	/	329	448	/	244	791	/	939	614	/	564	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	9	102	11	96	110	17	25	379	5	5	257	53	1,069
	APPROACH %	7%	84%	9%	43%	49%	8%	6%	93%	1%	2%	82%	17%	
	PEAK HR FACTOR		0.693			0.845			0.787			0.765		0.810
	APP/DEPART	122	/	180	223	/	120	409	/	486	315	/	283	0

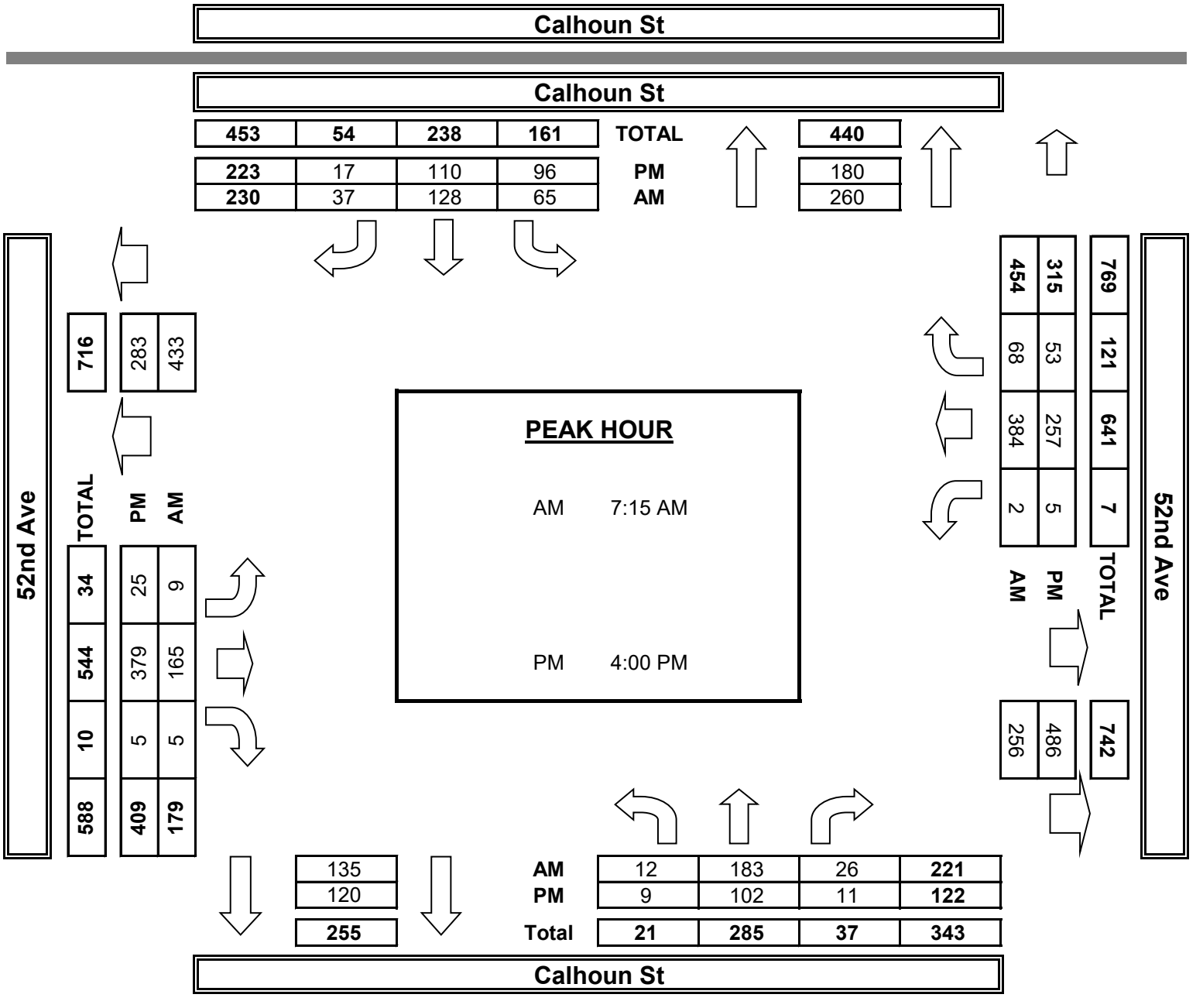
U-TURNS				
NB	SB	EB	WB	TTL
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0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

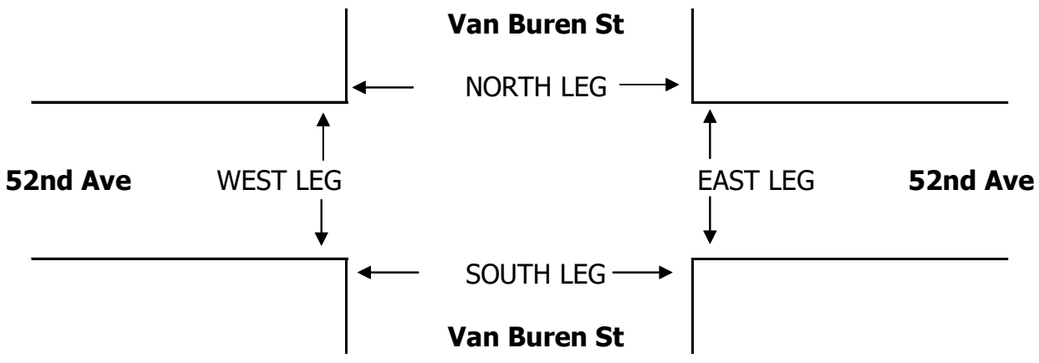
DATE:				
Tue, May 6, 25	LOCATION:	Coachella	PROJECT #:	SC5374
	NORTH & SOUTH:	Van Buren St	LOCATION #:	2
	EAST & WEST:	52nd Ave	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

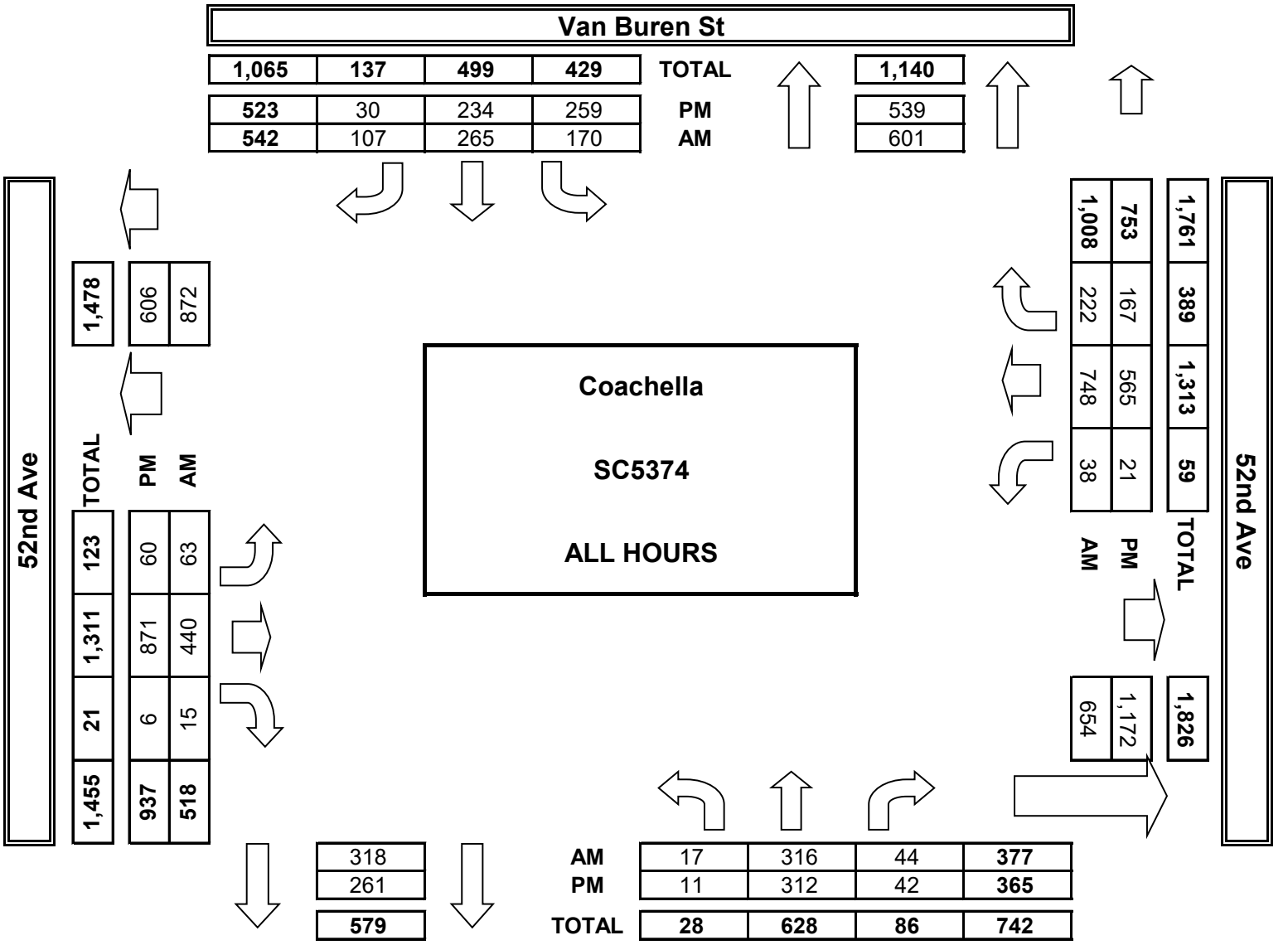
▲ N ◄ W E ► S ▼

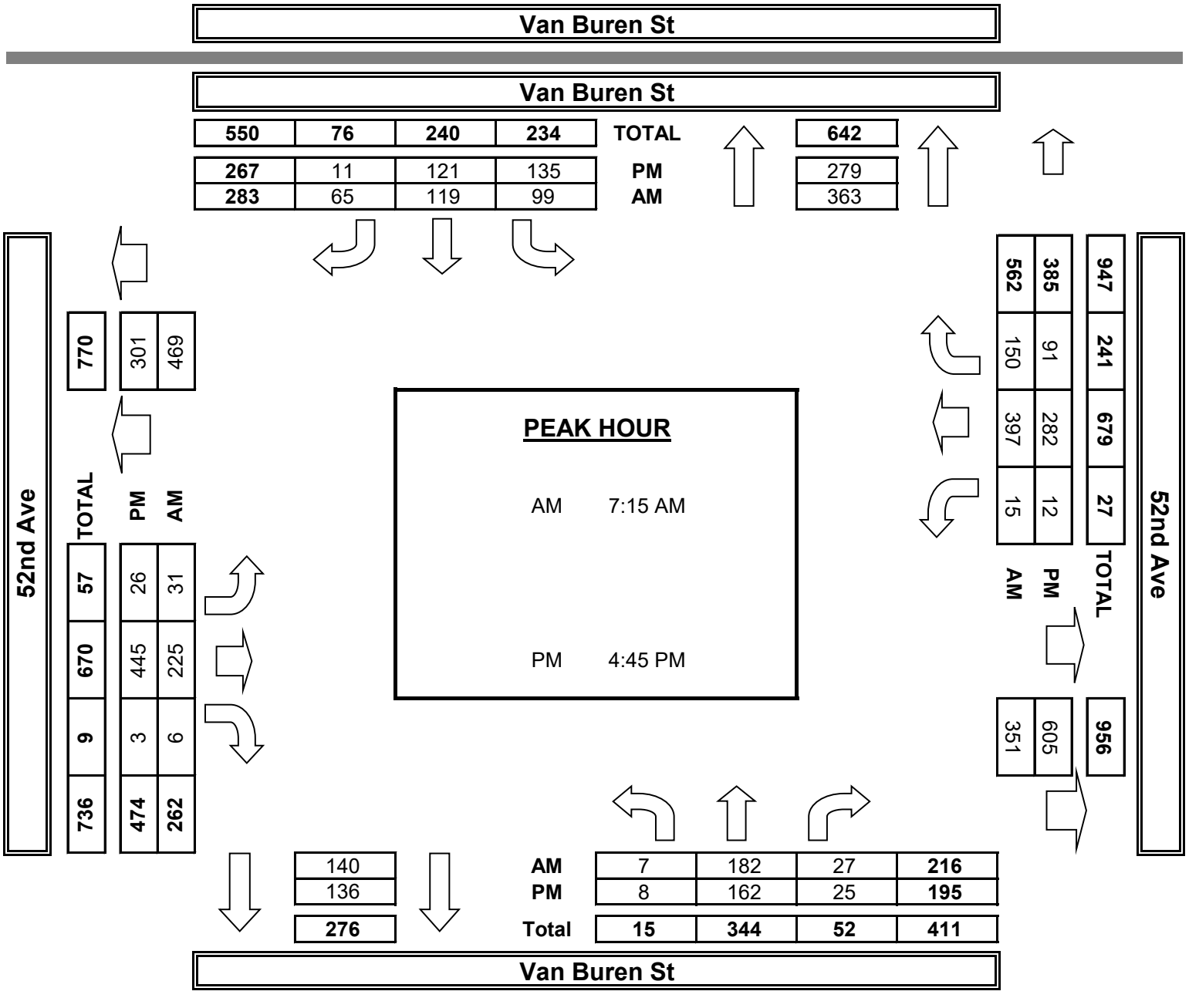
	NORTHBOUND Van Buren St			SOUTHBOUND Van Buren St			EASTBOUND 52nd Ave			WESTBOUND 52nd Ave				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	1	0	1	1	0	1	1	0	1	1	0		0	0	0	0	
AM 7:00 AM	5	55	9	5	69	6	8	49	0	14	68	15	303	0	0	0	0	0
7:15 AM	1	57	11	7	36	6	11	57	0	7	102	21	316	0	0	0	0	0
7:30 AM	2	46	7	17	33	11	4	45	0	1	107	33	306	0	0	0	0	0
7:45 AM	3	42	2	34	27	22	10	60	3	3	83	48	337	0	0	0	0	0
8:00 AM	1	37	7	41	23	26	6	63	3	4	105	48	364	0	0	0	0	0
8:15 AM	2	23	2	45	33	17	5	49	4	3	96	28	307	0	0	0	0	0
8:30 AM	2	27	4	11	21	10	7	54	3	1	97	13	250	0	0	0	0	0
8:45 AM	1	29	2	10	23	9	12	63	2	5	90	16	262	0	0	0	0	0
VOLUMES	17	316	44	170	265	107	63	440	15	38	748	222	2,445	0	0	0	0	0
APPROACH %	5%	84%	12%	31%	49%	20%	12%	85%	3%	4%	74%	22%						
APP/DEPART	377	/	601	542	/	318	518	/	654	1,008	/	872	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	7	182	27	99	119	65	31	225	6	15	397	150	1,323	0	0	0	0	
APPROACH %	3%	84%	13%	35%	42%	23%	12%	86%	2%	3%	71%	27%						
PEAK HR FACTOR		0.783			0.786			0.897			0.895		0.909					
APP/DEPART	216	/	363	283	/	140	262	/	351	562	/	469	0					
PM 4:00 PM	2	45	7	18	28	7	16	123	2	4	83	12	347	0	0	0	0	0
4:15 PM	0	38	3	43	26	6	5	114	0	0	50	20	305	0	0	0	0	0
4:30 PM	0	45	5	30	31	4	8	107	0	4	74	23	331	0	0	0	0	0
4:45 PM	2	32	6	28	29	1	6	110	2	4	79	12	311	0	0	0	0	0
5:00 PM	4	57	8	28	34	2	7	100	0	3	77	20	340	0	0	0	0	0
5:15 PM	0	40	3	31	29	1	8	117	0	5	63	27	324	0	0	0	0	0
5:30 PM	2	33	8	48	29	7	5	118	1	0	63	32	346	0	0	0	0	0
5:45 PM	1	22	2	33	28	2	5	82	1	1	76	21	274	0	0	0	0	0
VOLUMES	11	312	42	259	234	30	60	871	6	21	565	167	2,578	0	0	0	0	0
APPROACH %	3%	85%	12%	50%	45%	6%	6%	93%	1%	3%	75%	22%						
APP/DEPART	365	/	539	523	/	261	937	/	1,172	753	/	606	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	8	162	25	135	121	11	26	445	3	12	282	91	1,321	0	0	0	0	
APPROACH %	4%	83%	13%	51%	45%	4%	5%	94%	1%	3%	73%	24%						
PEAK HR FACTOR		0.707			0.795			0.948			0.963		0.954					
APP/DEPART	195	/	279	267	/	136	474	/	605	385	/	301	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

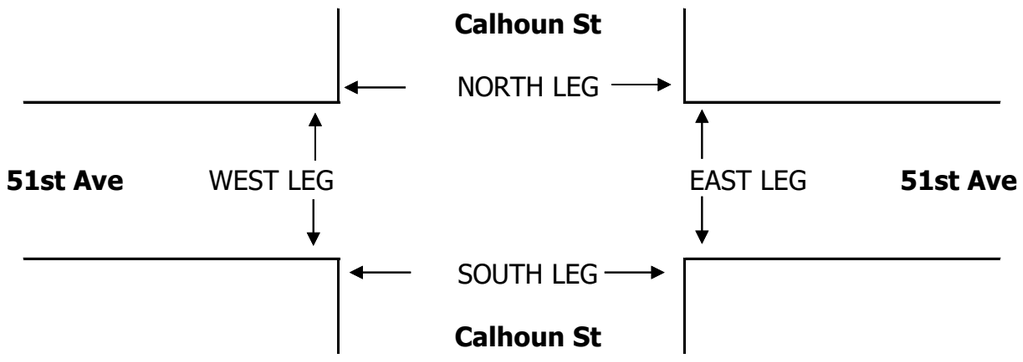
LOCATION: Coachella
NORTH & SOUTH: Calhoun St
EAST & WEST: 51st Ave

PROJECT #: SC5374
LOCATION #: 3
CONTROL: STOP ALL

NOTES: Minor Construction AM; Queue NB PM

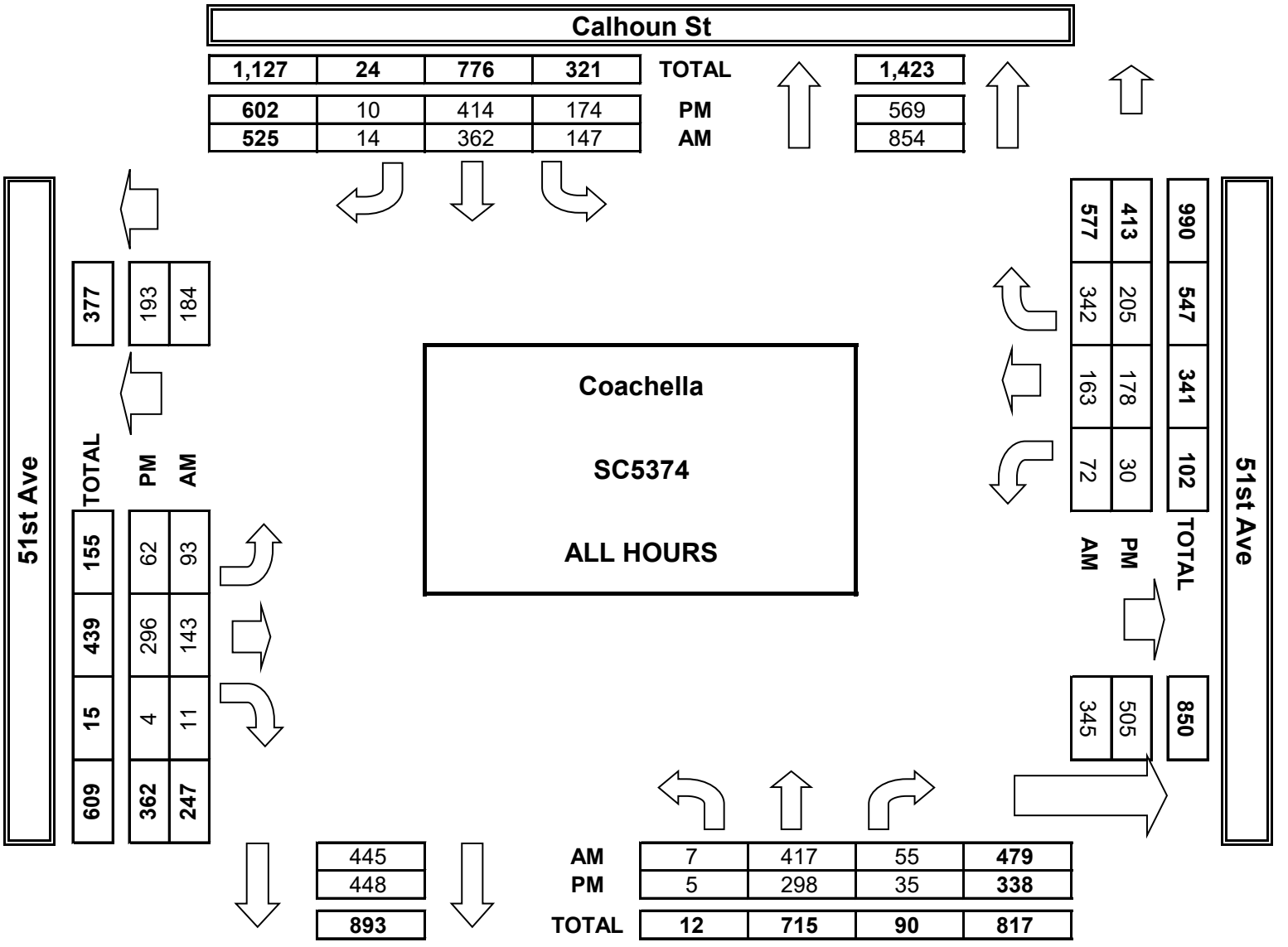
AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

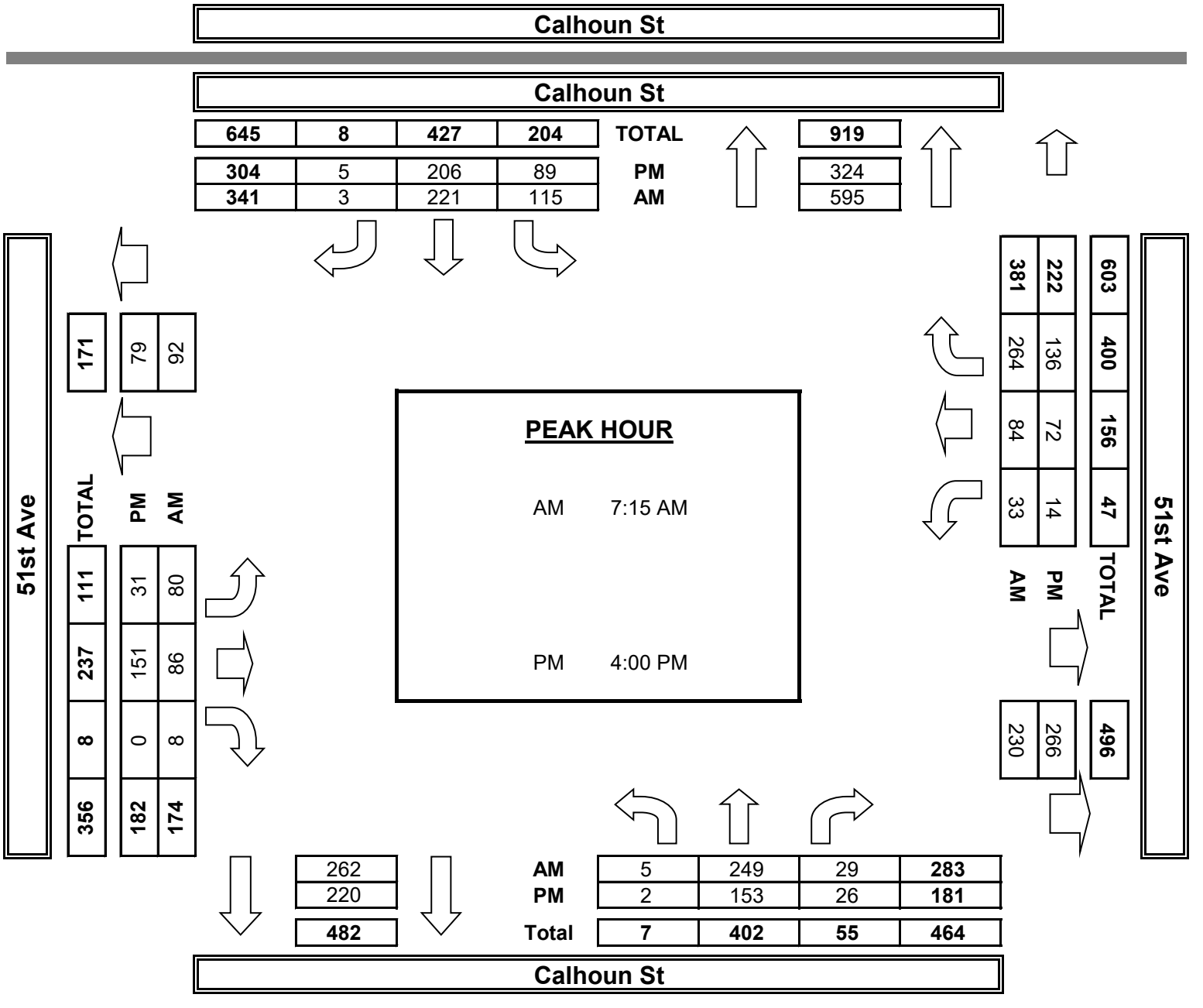
		NORTHBOUND Calhoun St			SOUTHBOUND Calhoun St			EASTBOUND 51st Ave			WESTBOUND 51st Ave				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	71	15	2	58	2	8	8	1	3	14	29	211	0	0	0	0	0
	7:15 AM	2	85	17	19	49	0	13	14	3	4	23	27	256	0	1	0	0	1
	7:30 AM	1	62	3	30	58	1	23	21	3	9	18	91	320	0	0	0	0	0
	7:45 AM	1	55	5	34	70	1	34	37	1	7	18	91	354	0	1	0	0	1
	8:00 AM	1	47	4	32	44	1	10	14	1	13	25	55	247	0	0	0	0	0
	8:15 AM	1	44	3	12	29	3	2	8	1	5	20	25	153	0	0	0	0	0
	8:30 AM	0	25	4	7	20	2	0	21	0	15	22	13	129	0	0	0	0	0
	8:45 AM	1	28	4	11	34	4	3	20	1	16	23	11	156	0	0	0	0	0
	VOLUMES	7	417	55	147	362	14	93	143	11	72	163	342	1,828	0	2	0	0	2
	APPROACH %	1%	87%	11%	28%	69%	3%	38%	58%	4%	12%	28%	59%						
	APP/DEPART	479	/	854	525	/	445	247	/	345	577	/	184	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	5	249	29	115	221	3	80	86	8	33	84	264	1,179	0	2	0	0	
	APPROACH %	2%	88%	10%	34%	65%	1%	46%	49%	5%	9%	22%	69%						
	PEAK HR FACTOR		0.680			0.804			0.604			0.807		0.830					
	APP/DEPART	283	/	595	341	/	262	174	/	230	381	/	92	0					
PM	4:00 PM	0	50	8	24	50	2	10	48	0	4	14	15	225	0	0	0	0	0
	4:15 PM	2	35	9	23	51	0	4	41	0	2	24	32	223	0	1	0	0	1
	4:30 PM	0	23	6	19	54	1	5	36	0	3	20	62	229	0	2	0	0	2
	4:45 PM	0	45	3	23	51	2	12	26	0	5	14	27	208	0	1	0	0	1
	5:00 PM	1	35	2	13	52	4	13	30	0	1	18	23	192	0	0	0	0	0
	5:15 PM	1	35	3	26	59	1	8	36	4	5	23	13	214	0	0	0	0	0
	5:30 PM	0	32	3	30	56	0	7	54	0	6	32	18	238	0	0	0	0	0
	5:45 PM	1	43	1	16	41	0	3	25	0	4	33	15	182	0	0	0	0	0
	VOLUMES	5	298	35	174	414	10	62	296	4	30	178	205	1,715	0	4	0	0	4
	APPROACH %	1%	88%	10%	29%	69%	2%	17%	82%	1%	7%	43%	50%						
	APP/DEPART	338	/	569	602	/	448	362	/	505	413	/	193	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	2	153	26	89	206	5	31	151	0	14	72	136	889	0	4	0	0	
	APPROACH %	1%	85%	14%	29%	68%	2%	17%	83%	0%	6%	32%	61%						
	PEAK HR FACTOR		0.780			0.987			0.784			0.653		0.962					
	APP/DEPART	181	/	324	304	/	220	182	/	266	222	/	79	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: Van Buren St
EAST & WEST: 51st Ave

PROJECT #: SC5374
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

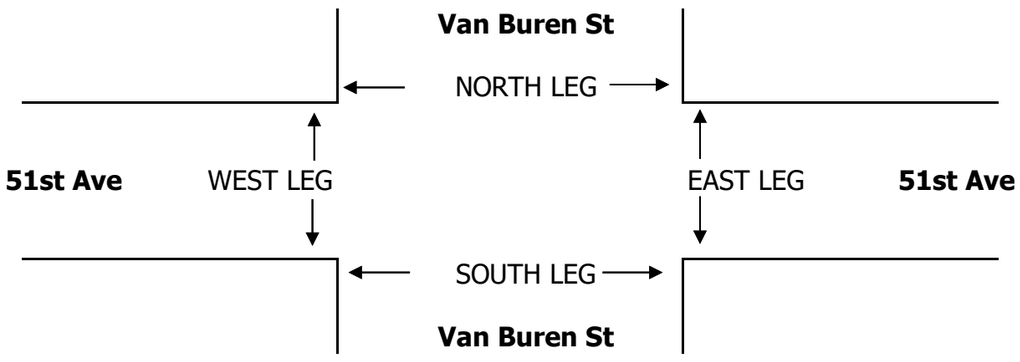
AM / PM / MD / OTHER / OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Van Buren St			SOUTHBOUND Van Buren St			EASTBOUND 51st Ave			WESTBOUND 51st Ave			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	5	43	2	17	68	5	2	22	3	23	38	27	255
	7:15 AM	13	36	5	21	67	11	6	36	3	16	34	15	263
	7:30 AM	45	73	11	21	70	24	13	24	2	20	59	34	396
	7:45 AM	38	91	6	30	81	18	28	28	3	34	63	50	470
	8:00 AM	13	72	21	35	80	10	17	33	0	19	52	58	410
	8:15 AM	3	52	12	34	80	8	10	15	0	14	37	13	278
	8:30 AM	3	33	12	11	40	8	4	25	3	18	41	8	206
	8:45 AM	2	32	8	6	53	3	2	30	2	15	44	6	203
	VOLUMES	122	432	77	175	539	87	82	213	16	159	368	211	2,481
	APPROACH %	19%	68%	12%	22%	67%	11%	26%	68%	5%	22%	50%	29%	
	APP/DEPART	631	/	725	801	/	714	311	/	465	738	/	577	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	99	288	50	120	311	60	68	100	5	87	211	155	1,554
	APPROACH %	23%	66%	11%	24%	63%	12%	39%	58%	3%	19%	47%	34%	
	PEAK HR FACTOR		0.809			0.952			0.733			0.770		0.827
	APP/DEPART	437	/	511	491	/	403	173	/	270	453	/	370	0
PM	4:00 PM	7	65	20	14	68	7	10	64	2	15	31	7	310
	4:15 PM	12	70	24	10	49	10	6	55	1	19	38	8	302
	4:30 PM	10	71	18	19	64	12	3	50	2	14	33	8	304
	4:45 PM	13	60	18	11	41	5	6	40	1	18	31	10	254
	5:00 PM	6	64	17	15	57	2	8	42	1	17	32	7	268
	5:15 PM	2	77	17	11	51	4	26	37	1	19	34	12	291
	5:30 PM	4	64	18	34	75	11	9	74	0	17	46	20	372
	5:45 PM	2	63	27	11	63	4	9	39	1	20	44	4	287
	VOLUMES	56	534	159	125	468	55	77	401	9	139	289	76	2,388
	APPROACH %	7%	71%	21%	19%	72%	8%	16%	82%	2%	28%	57%	15%	
	APP/DEPART	749	/	687	648	/	616	487	/	685	504	/	400	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	14	268	79	71	246	21	52	192	3	73	156	43	1,218
	APPROACH %	4%	74%	22%	21%	73%	6%	21%	78%	1%	27%	57%	16%	
	PEAK HR FACTOR		0.940			0.704			0.744			0.819		0.819
	APP/DEPART	361	/	363	338	/	322	247	/	342	272	/	191	0

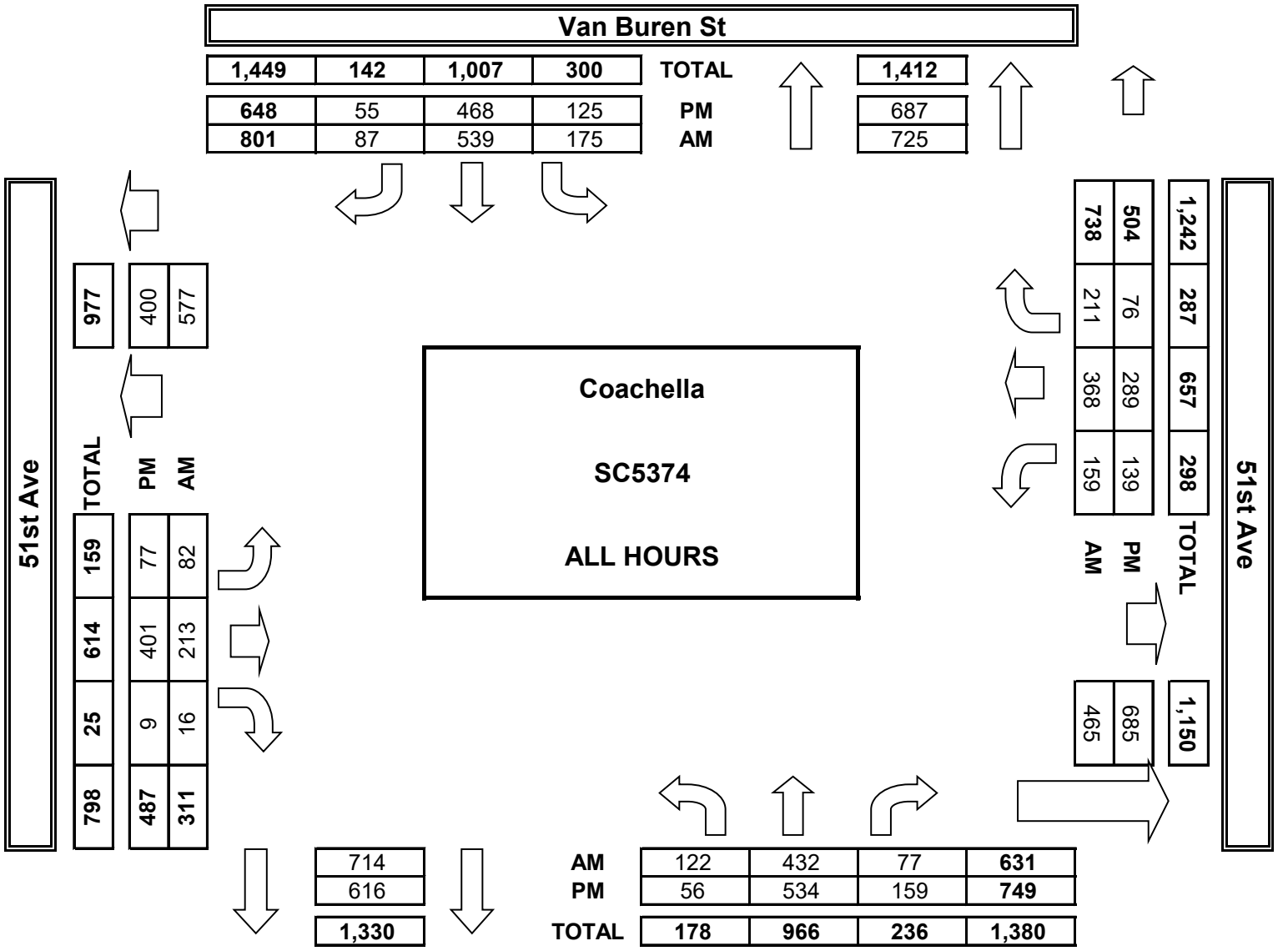
U-TURNS

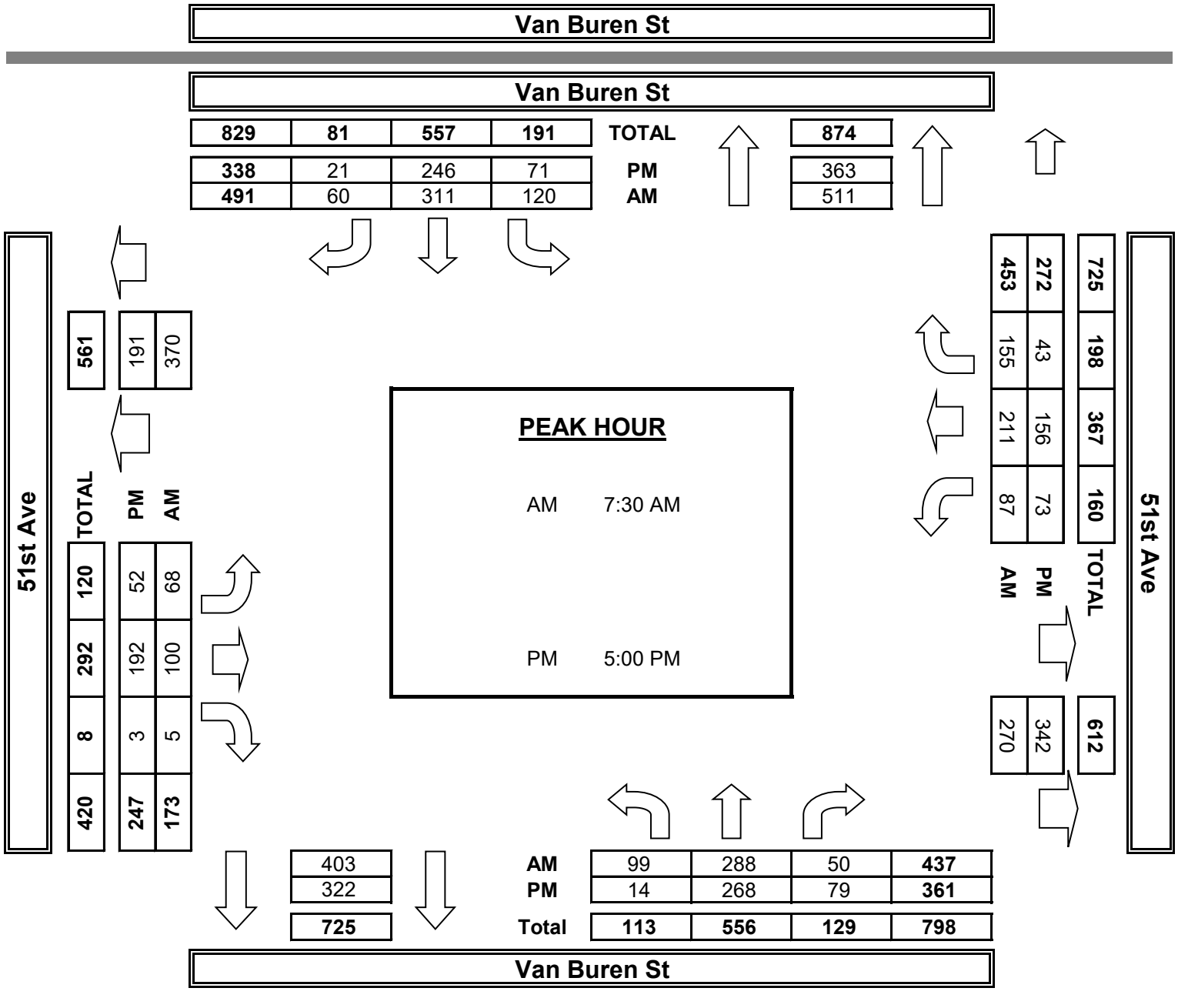
NB	SB	EB	WB	TTL
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE:				
Tue, May 6, 25	LOCATION:	Coachella	PROJECT #:	SC5374
	NORTH & SOUTH:	Calhoun St	LOCATION #:	5
	EAST & WEST:	Ave 50	CONTROL:	SIGNAL

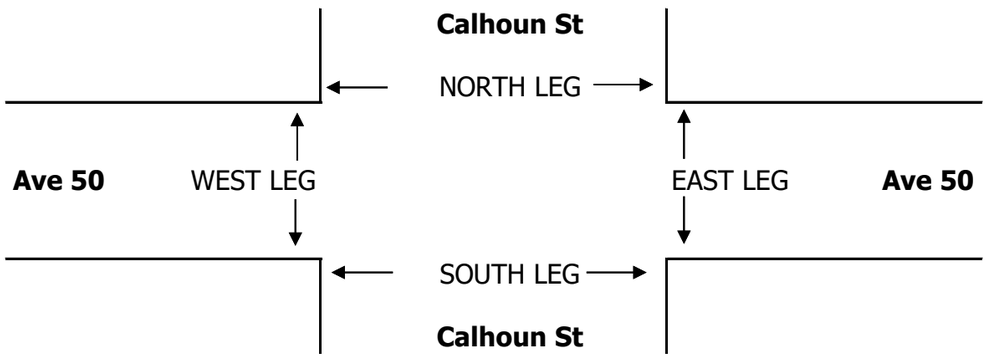
NOTES:

Minor Constraction

AM / PM / MD / OTHER / OTHER

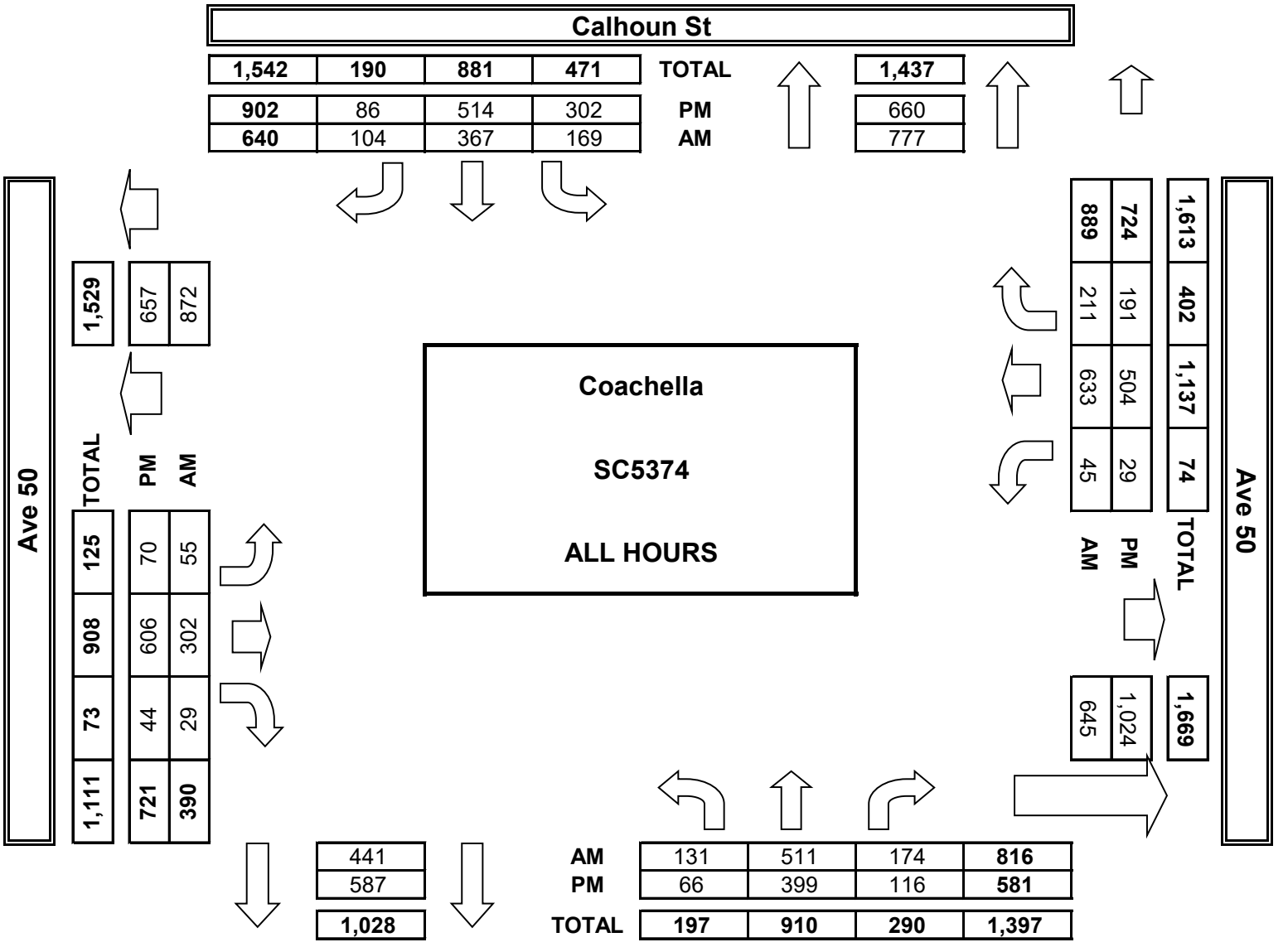
▲ N ▼ S ◄ W E ►

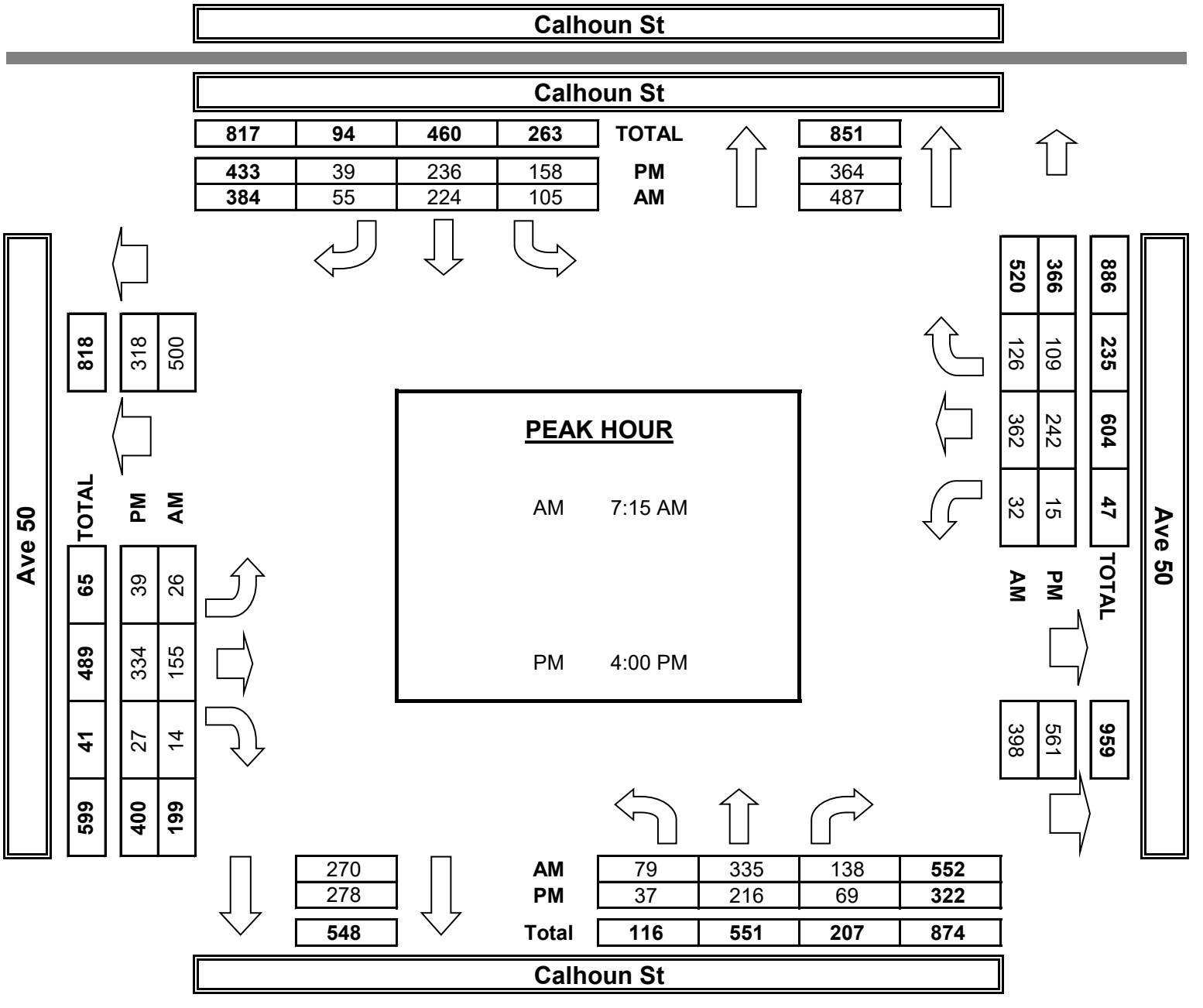
	NORTHBOUND Calhoun St			SOUTHBOUND Calhoun St			EASTBOUND Ave 50			WESTBOUND Ave 50				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	1	0	1	1.5	0.5	1	1	1	2	0.5	0.5		0	0	0	0	
AM 7:00 AM	19	78	14	14	47	8	5	26	3	4	53	22	293	0	0	0	0	0
7:15 AM	16	90	13	19	59	15	4	33	3	5	96	30	383	0	0	1	0	1
7:30 AM	19	80	45	30	54	12	7	52	3	5	91	26	424	0	0	1	0	1
7:45 AM	24	89	59	34	65	20	6	43	3	14	89	36	482	0	0	1	0	1
8:00 AM	20	76	21	22	46	8	9	27	5	8	86	34	362	0	0	1	0	1
8:15 AM	16	48	13	16	34	9	6	47	5	2	67	30	293	0	0	0	0	0
8:30 AM	9	22	6	15	21	13	7	42	3	3	84	19	244	0	0	0	0	0
8:45 AM	8	28	3	19	41	19	11	32	4	4	67	14	250	0	0	0	0	0
VOLUMES	131	511	174	169	367	104	55	302	29	45	633	211	2,735	0	0	4	0	4
APPROACH %	16%	63%	21%	26%	57%	16%	14%	77%	7%	5%	71%	24%						
APP/DEPART	816	/	777	640	/	441	390	/	645	889	/	872	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	79	335	138	105	224	55	26	155	14	32	362	126	1,655	0	0	4	0	
APPROACH %	14%	61%	25%	27%	58%	14%	13%	78%	7%	6%	70%	24%						
PEAK HR FACTOR		0.802			0.807			0.790			0.935		0.857					
APP/DEPART	552	/	487	384	/	270	199	/	398	520	/	500	0					
PM 4:00 PM	11	59	15	45	68	13	21	100	6	0	71	18	427	0	0	0	0	0
4:15 PM	10	39	14	35	71	11	5	75	12	5	54	25	356	0	0	0	0	0
4:30 PM	9	56	21	46	40	6	7	79	4	5	69	36	378	0	0	0	0	0
4:45 PM	7	62	19	32	57	9	6	80	5	5	48	30	360	0	0	0	0	0
5:00 PM	8	44	16	40	64	9	8	69	2	3	59	20	342	0	0	0	0	0
5:15 PM	7	46	14	23	69	11	7	81	5	4	71	17	355	0	0	1	0	1
5:30 PM	5	44	4	44	87	14	4	58	7	4	70	28	369	0	0	0	0	0
5:45 PM	9	49	13	37	58	13	12	64	3	3	62	17	340	0	0	0	0	0
VOLUMES	66	399	116	302	514	86	70	606	44	29	504	191	2,928	0	0	1	0	1
APPROACH %	11%	69%	20%	33%	57%	10%	10%	84%	6%	4%	70%	26%						
APP/DEPART	581	/	660	902	/	587	721	/	1,024	724	/	657	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	37	216	69	158	236	39	39	334	27	15	242	109	1,521	0	0	0	0	
APPROACH %	11%	67%	21%	36%	55%	9%	10%	84%	7%	4%	66%	30%						
PEAK HR FACTOR		0.915			0.859			0.787			0.832		0.891					
APP/DEPART	322	/	364	433	/	278	400	/	561	366	/	318	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: Van Buren St
EAST & WEST: Ave 50

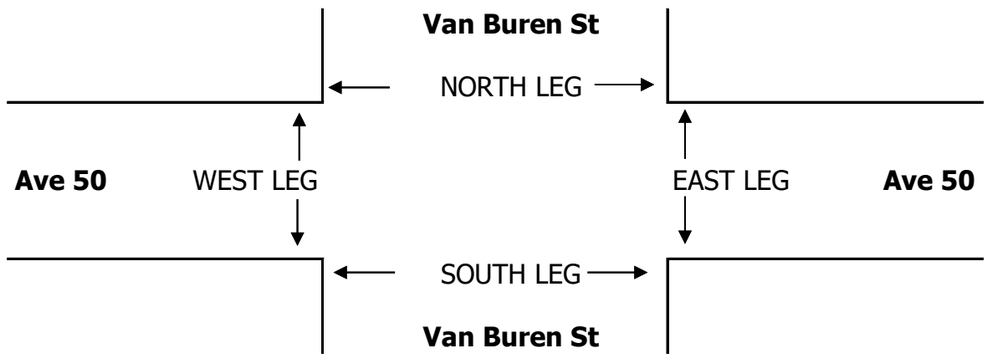
PROJECT #: SC5374
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

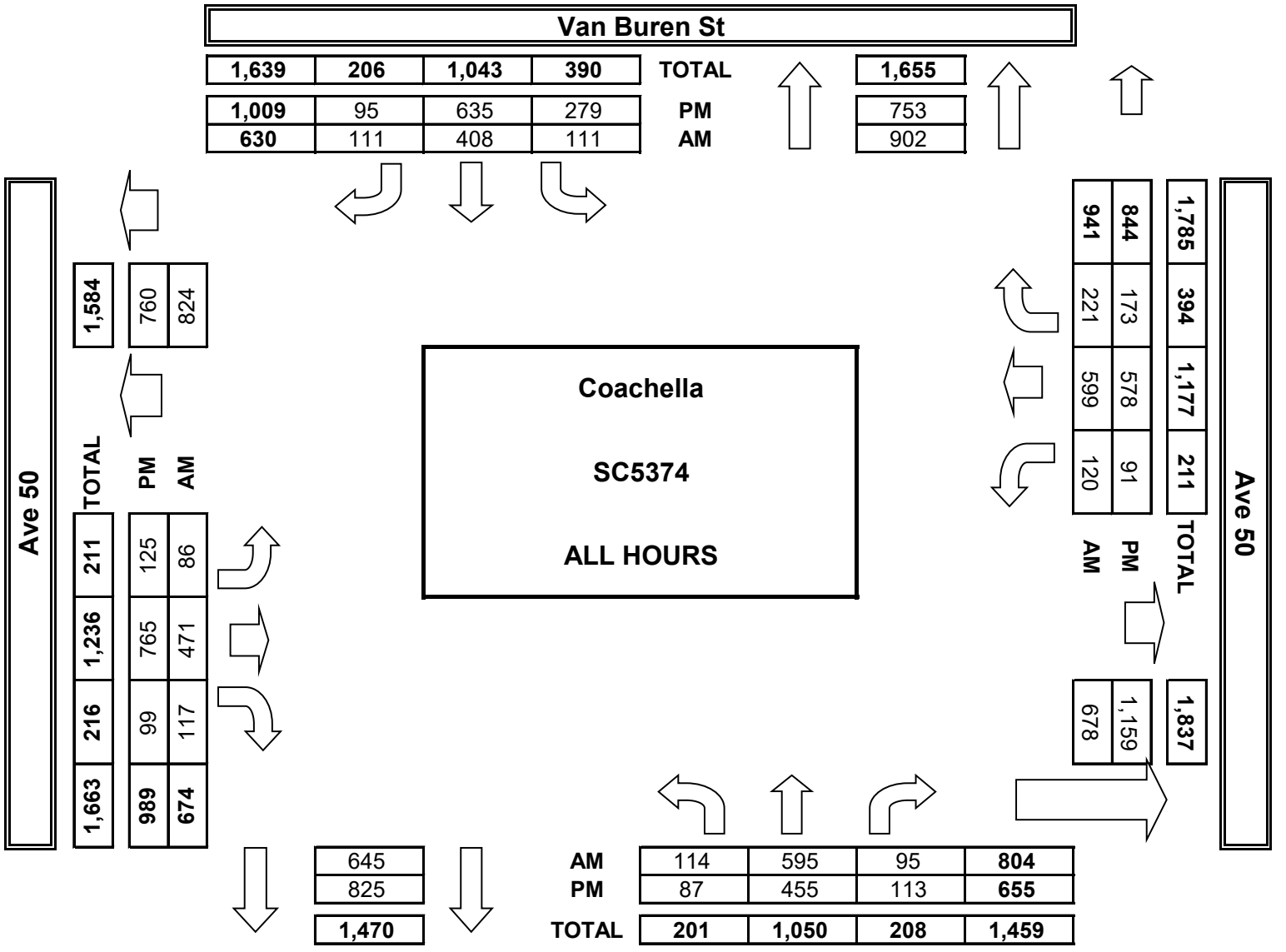
N
W
E
S

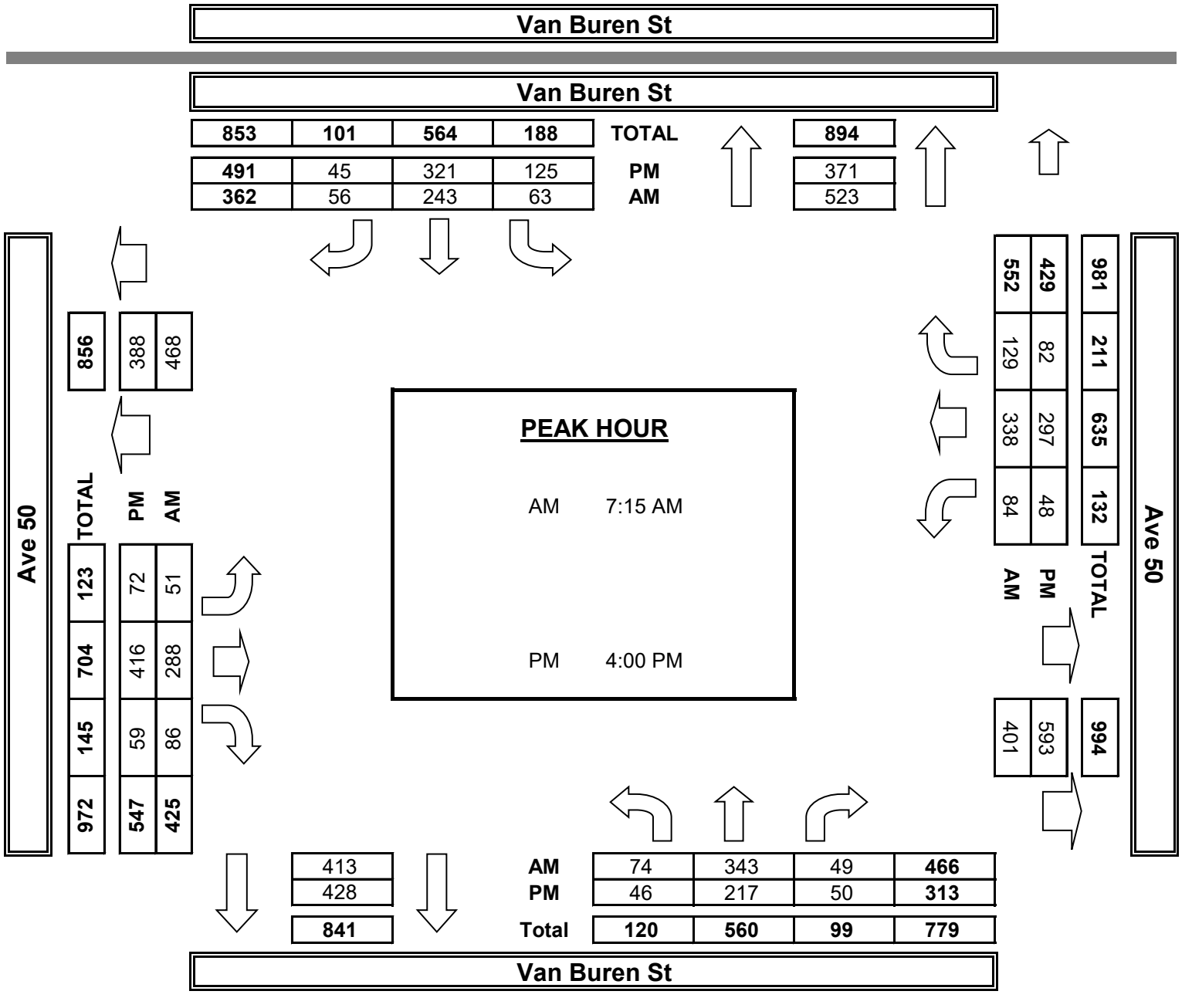
		NORTHBOUND Van Buren St			SOUTHBOUND Van Buren St			EASTBOUND Ave 50			WESTBOUND Ave 50				U-TURNS				
	LANES:	NL 1	NT 1.5	NR 0.5	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	9	70	10	11	37	13	13	40	9	16	48	32	308	0	0	0	0	0
	7:15 AM	19	81	14	15	45	17	8	45	7	7	74	27	359	0	0	0	0	0
	7:30 AM	14	90	8	14	65	14	14	91	29	37	86	37	499	0	0	0	0	0
	7:45 AM	19	93	15	17	82	14	13	102	40	26	89	34	544	0	0	0	0	0
	8:00 AM	22	79	12	17	51	11	16	50	10	14	89	31	402	0	0	0	1	1
	8:15 AM	11	70	15	7	50	14	6	53	14	6	81	26	353	0	0	0	0	0
	8:30 AM	6	56	9	17	40	15	8	48	4	11	80	12	306	0	0	0	0	0
	8:45 AM	14	56	12	13	38	13	8	42	4	3	52	22	277	0	0	0	0	0
	VOLUMES	114	595	95	111	408	111	86	471	117	120	599	221	3,049	0	0	0	1	1
	APPROACH %	14%	74%	12%	18%	65%	18%	13%	70%	17%	13%	64%	23%						
	APP/DEPART	804	/	902	630	/	645	674	/	678	941	/	824	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	74	343	49	63	243	56	51	288	86	84	338	129	1,805	0	0	0	1	
	APPROACH %	16%	74%	11%	17%	67%	15%	12%	68%	20%	15%	61%	23%						
	PEAK HR FACTOR		0.917			0.801			0.685			0.863		0.830					
	APP/DEPART	466	/	523	362	/	413	425	/	401	552	/	468	0					
PM	4:00 PM	10	63	13	42	77	13	16	116	14	9	70	28	471	0	0	0	1	1
	4:15 PM	14	51	14	34	94	8	27	90	16	13	76	16	453	0	0	0	1	1
	4:30 PM	12	56	13	25	76	14	17	109	15	13	88	24	462	0	0	0	0	0
	4:45 PM	10	47	10	24	74	10	12	101	14	13	63	14	392	0	0	0	0	0
	5:00 PM	9	54	14	45	75	12	20	96	10	8	68	23	434	0	0	0	0	0
	5:15 PM	6	66	10	44	91	14	10	87	13	8	66	20	435	0	0	0	0	0
	5:30 PM	13	62	19	28	73	7	11	80	11	19	88	28	439	0	0	0	0	0
	5:45 PM	13	56	20	37	75	17	12	86	6	8	59	20	409	0	0	0	0	0
	VOLUMES	87	455	113	279	635	95	125	765	99	91	578	173	3,497	0	0	0	2	2
	APPROACH %	13%	69%	17%	28%	63%	9%	13%	77%	10%	11%	68%	20%						
	APP/DEPART	655	/	753	1,009	/	825	989	/	1,159	844	/	760	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	46	217	50	125	321	45	72	416	59	48	297	82	1,780	0	0	0	2	
	APPROACH %	15%	69%	16%	25%	65%	9%	13%	76%	11%	11%	69%	19%						
	PEAK HR FACTOR		0.910			0.903			0.937			0.858		0.943					
	APP/DEPART	313	/	371	491	/	428	547	/	593	429	/	388	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE:				
Tue, May 6, 25	LOCATION:	Coachella	PROJECT #:	SC5374
	NORTH & SOUTH:	Van Buren St	LOCATION #:	7
	EAST & WEST:	Ave 48	CONTROL:	SIGNAL

NOTES:

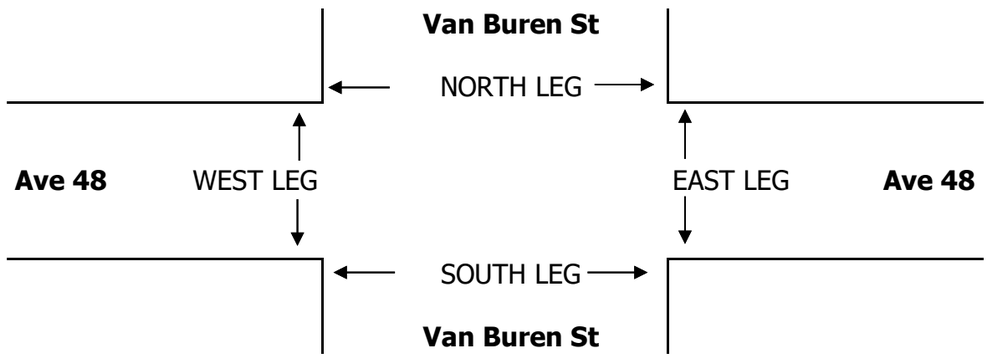
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Van Buren St			SOUTHBOUND Van Buren St			EASTBOUND Ave 48			WESTBOUND Ave 48			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 1	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	28	75	55	3	24	6	12	64	16	13	60	9	365
	7:15 AM	40	83	70	6	31	13	20	70	30	10	51	12	436
	7:30 AM	51	95	82	22	40	48	23	65	32	17	95	21	591
	7:45 AM	54	87	61	16	45	52	31	93	43	30	84	17	613
	8:00 AM	62	94	49	27	44	51	18	78	47	21	95	14	600
	8:15 AM	64	74	46	6	32	23	9	61	29	16	57	14	431
	8:30 AM	33	60	32	6	35	21	10	63	38	13	86	9	406
	8:45 AM	44	58	33	8	26	8	5	61	27	17	73	11	371
	VOLUMES	376	626	428	94	277	222	128	555	262	137	601	107	3,817
	APPROACH %	26%	44%	30%	16%	47%	37%	14%	59%	28%	16%	71%	13%	
	APP/DEPART	1,430	/	863	595	/	676	945	/	1,079	847	/	1,199	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	207	359	262	71	160	164	92	306	152	78	325	64	2,243
	APPROACH %	25%	43%	32%	18%	40%	41%	17%	56%	28%	17%	69%	14%	
	PEAK HR FACTOR		0.908			0.807			0.823			0.880		0.913
	APP/DEPART	828	/	517	397	/	390	550	/	640	468	/	696	0
PM	4:00 PM	42	54	25	19	79	26	18	88	74	51	107	12	595
	4:15 PM	51	65	23	16	83	19	8	99	79	50	92	13	598
	4:30 PM	49	53	30	14	74	14	13	102	64	39	88	10	550
	4:45 PM	41	43	23	16	61	8	13	87	59	37	90	19	497
	5:00 PM	41	45	32	15	82	11	5	88	69	42	102	10	542
	5:15 PM	44	58	35	12	74	17	8	90	97	57	96	18	606
	5:30 PM	34	63	39	15	83	19	16	91	78	38	85	14	575
	5:45 PM	42	68	35	14	82	18	10	96	78	48	85	11	587
	VOLUMES	344	449	242	121	618	132	91	741	598	362	745	107	4,552
	APPROACH %	33%	43%	23%	14%	71%	15%	6%	52%	42%	30%	61%	9%	
	APP/DEPART	1,035	/	647	871	/	1,578	1,432	/	1,104	1,214	/	1,223	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	161	234	141	56	321	65	39	365	322	185	368	53	2,312
	APPROACH %	30%	44%	26%	13%	73%	15%	5%	50%	44%	31%	61%	9%	
	PEAK HR FACTOR		0.924			0.944			0.933			0.886		0.954
	APP/DEPART	536	/	326	442	/	828	728	/	562	606	/	596	0

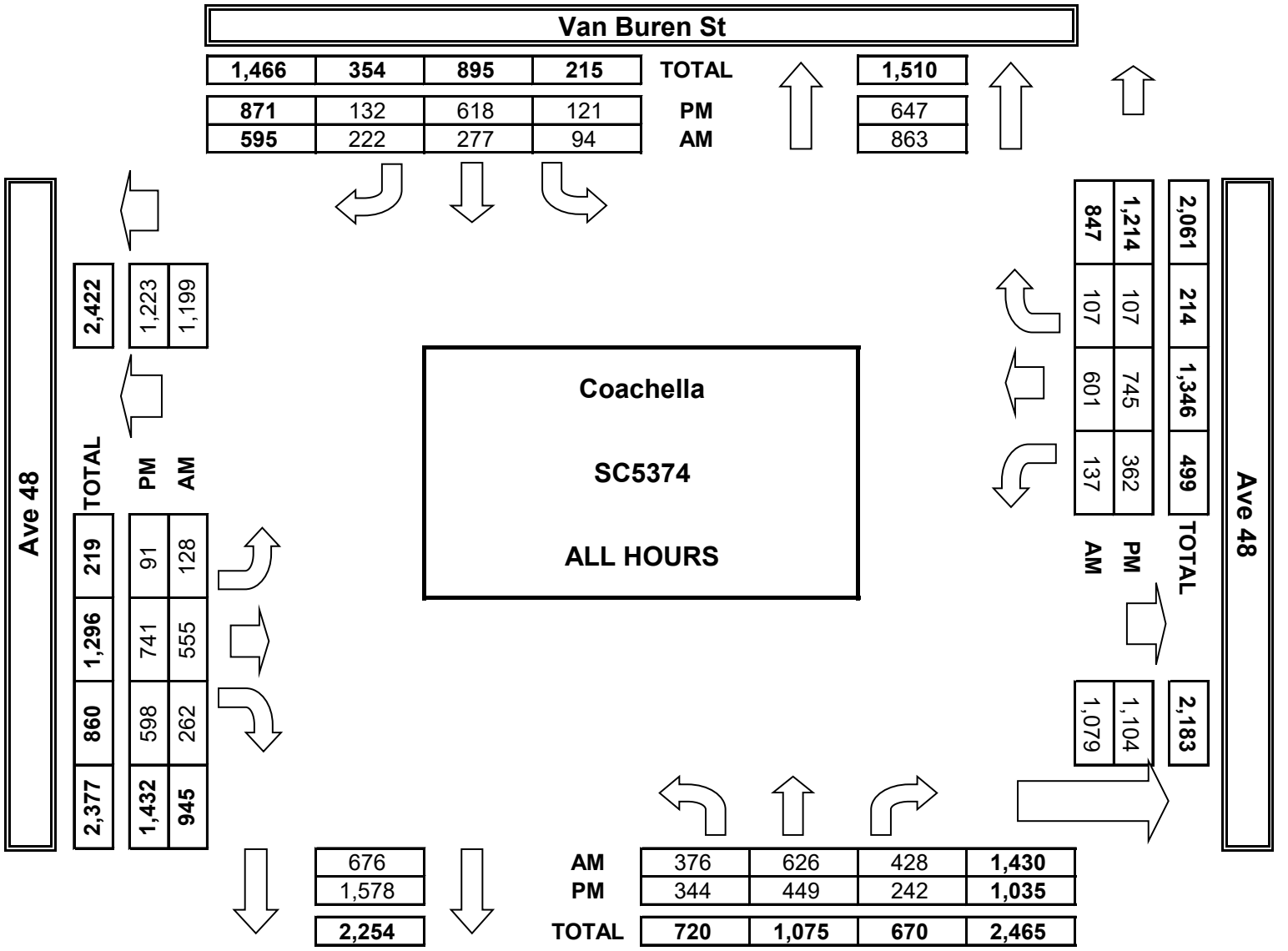
U-TURNS

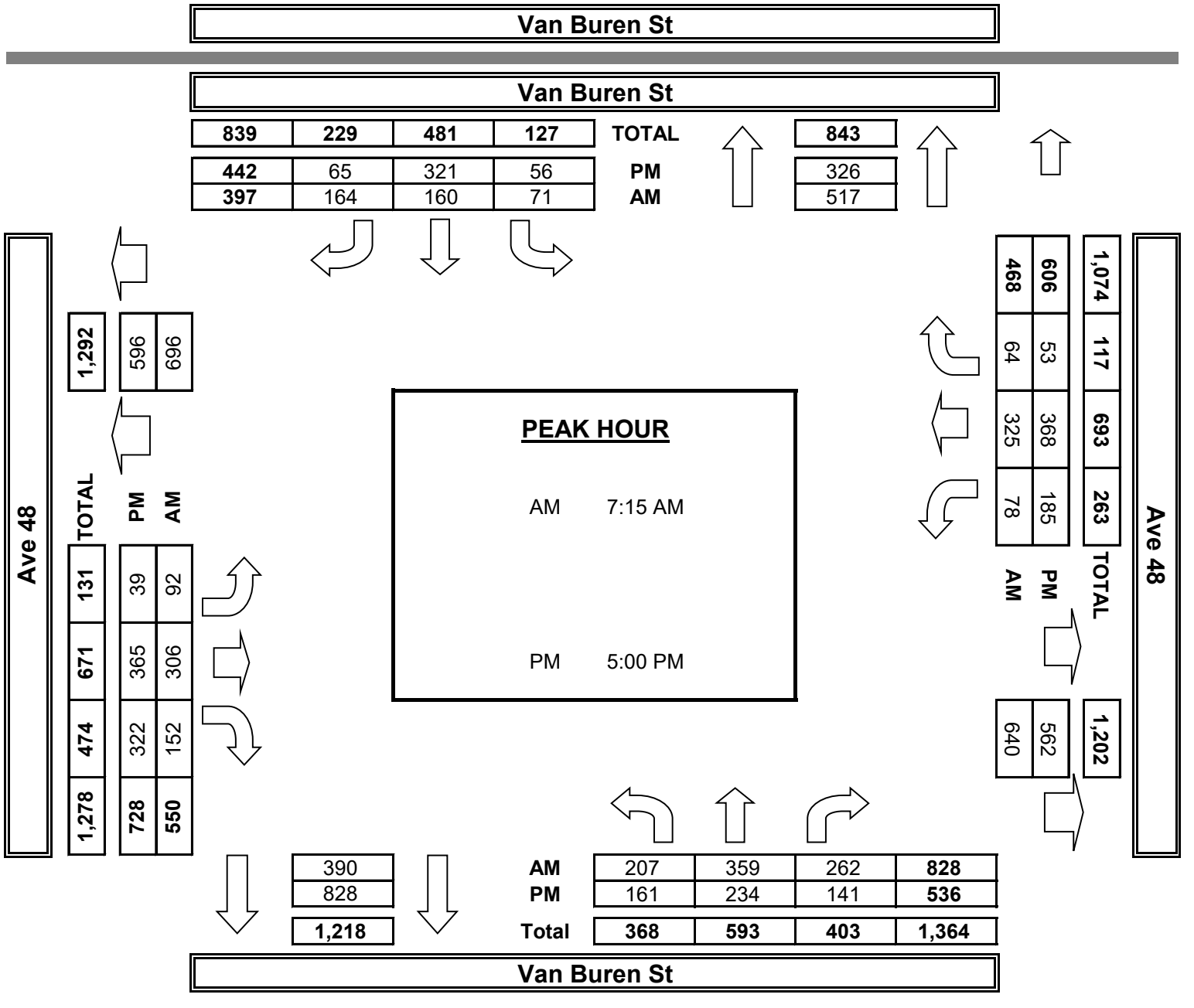
NB	SB	EB	WB	TTL
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0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	1	1
0	1	0	0	1
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	2	0	2	4
0	2	0	1	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	0	2	0	2
0	0	2	0	



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: Calhoun St
EAST & WEST: Ave 48

PROJECT #: SC5374
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND Calhoun St			SOUTHBOUND Calhoun St			EASTBOUND Ave 48			WESTBOUND Ave 48			
	LANES:	NL 1	NT 1.5	NR 0.5	SL 1	ST 2	SR 0	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
AM	7:00 AM	52	81	10	13	31	16	13	65	20	6	77	11	395
	7:15 AM	46	97	11	12	48	14	13	89	21	5	106	13	475
	7:30 AM	67	109	25	11	42	18	13	66	19	2	164	22	558
	7:45 AM	52	101	22	18	49	24	11	111	25	11	185	21	630
	8:00 AM	40	98	12	18	36	14	19	108	19	9	186	19	578
	8:15 AM	48	59	7	9	33	21	18	76	26	3	141	8	449
	8:30 AM	38	53	7	6	38	10	14	97	13	10	116	9	411
	8:45 AM	30	46	9	10	34	18	14	69	28	9	127	4	398
	VOLUMES	373	644	103	97	311	135	115	681	171	55	1,102	107	3,894
	APPROACH %	33%	58%	9%	18%	57%	25%	12%	70%	18%	4%	87%	8%	
	APP/DEPART	1,120	/	866	543	/	537	967	/	881	1,264	/	1,610	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	205	405	70	59	175	70	56	374	84	27	641	75	2,241
	APPROACH %	30%	60%	10%	19%	58%	23%	11%	73%	16%	4%	86%	10%	
	PEAK HR FACTOR		0.846			0.835			0.874			0.856		0.889
	APP/DEPART	680	/	536	304	/	286	514	/	503	743	/	916	0
PM	4:00 PM	42	68	12	30	77	22	19	164	74	7	156	21	692
	4:15 PM	26	47	9	21	74	24	14	168	63	15	118	17	596
	4:30 PM	33	49	6	22	62	20	15	142	52	6	108	11	526
	4:45 PM	43	50	9	8	70	10	19	146	51	10	114	17	547
	5:00 PM	29	59	4	25	89	24	11	166	50	8	124	17	606
	5:15 PM	27	40	8	25	94	20	23	143	42	13	124	14	573
	5:30 PM	28	55	10	19	91	22	13	178	64	10	125	8	623
	5:45 PM	29	65	8	17	84	16	12	160	59	13	126	12	601
	VOLUMES	257	433	66	167	641	158	126	1,267	455	82	995	117	4,765
	APPROACH %	34%	57%	9%	17%	66%	16%	7%	69%	25%	7%	83%	10%	
	APP/DEPART	756	/	676	966	/	1,178	1,848	/	1,501	1,195	/	1,410	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	113	219	30	86	358	82	59	647	215	44	499	51	2,403
	APPROACH %	31%	60%	8%	16%	68%	16%	6%	70%	23%	7%	84%	9%	
	PEAK HR FACTOR		0.887			0.946			0.903			0.983		0.964
	APP/DEPART	362	/	329	526	/	617	921	/	763	594	/	694	0

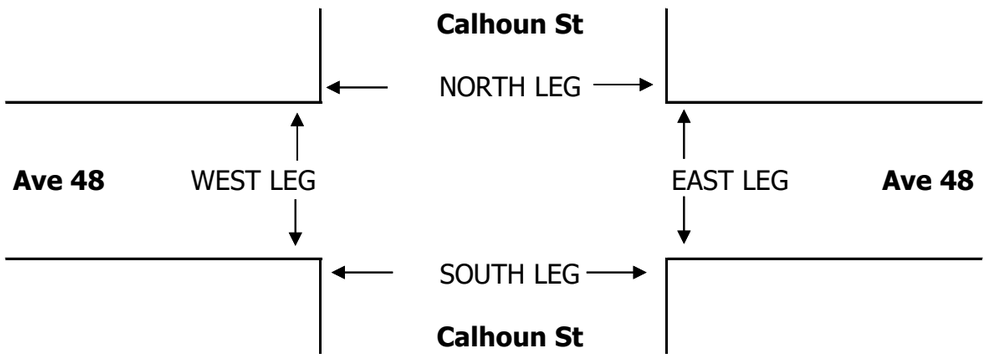
U-TURNS

NB	SB	EB	WB	TTL
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

NB	SB	EB	WB
0	0	0	0

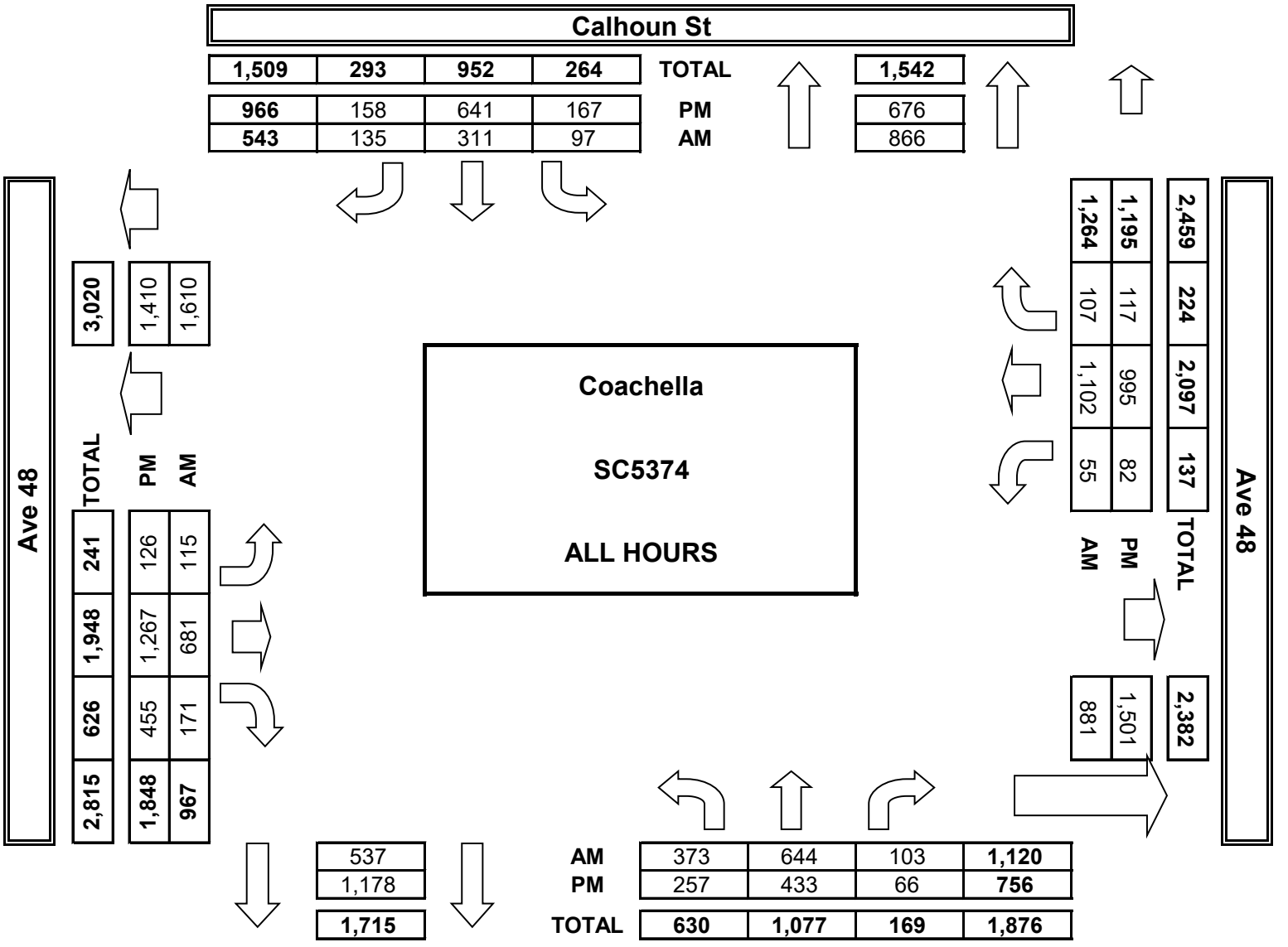
NB	SB	EB	WB	TTL
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0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1

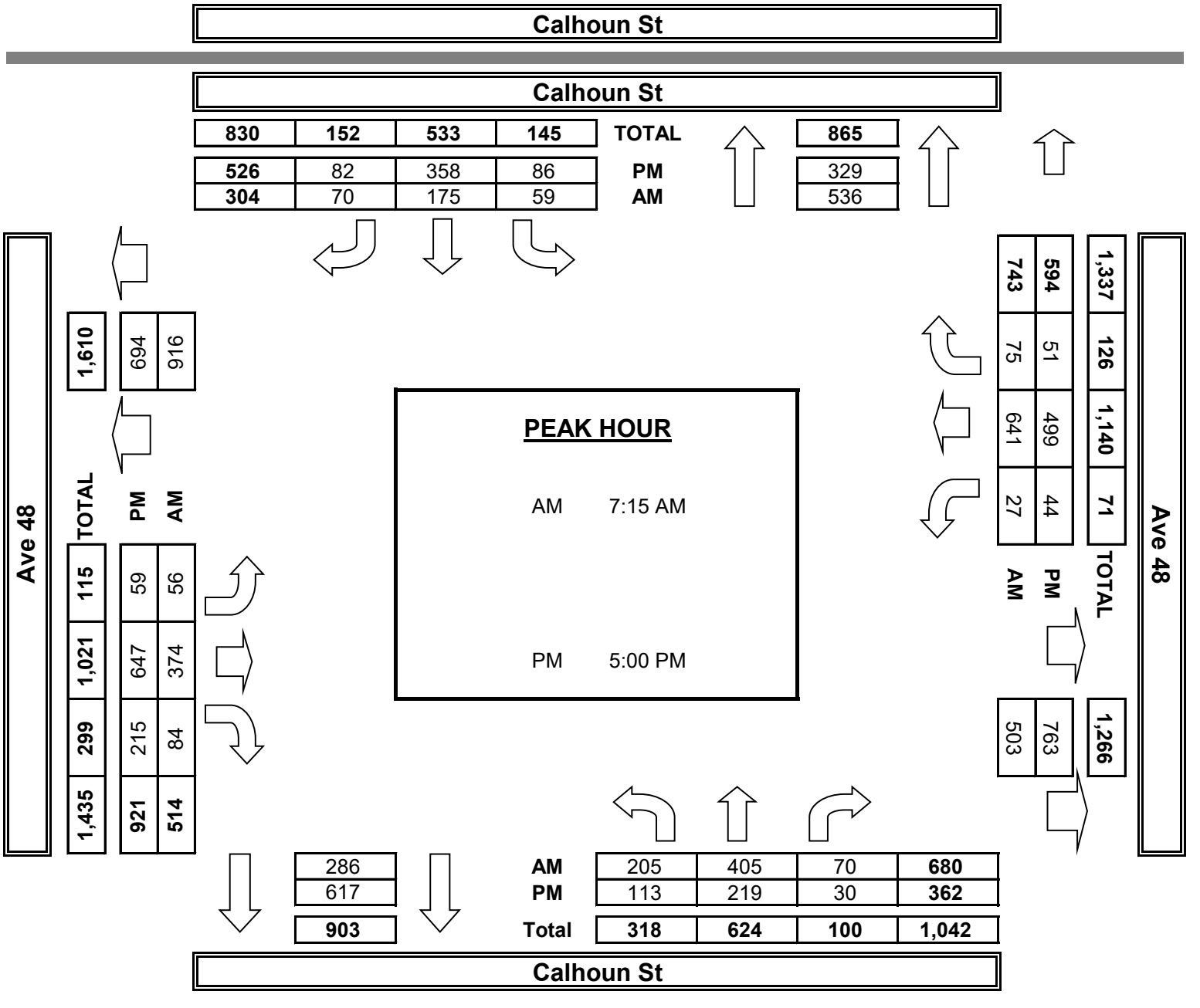
NB	SB	EB	WB
0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: Dillon Rd
EAST & WEST: Ave 48

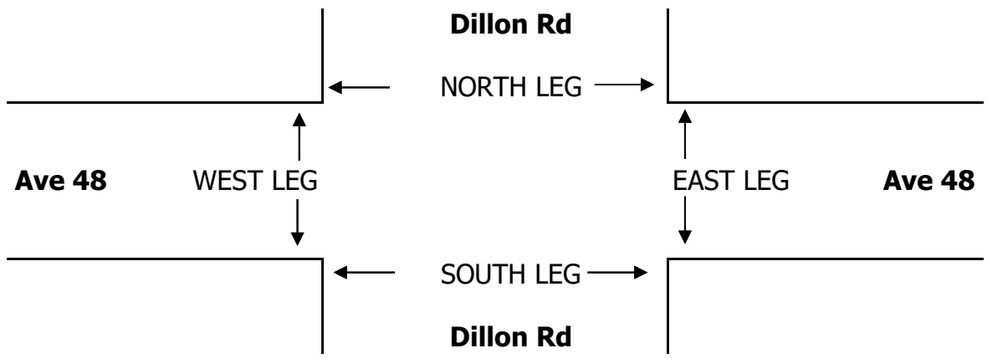
PROJECT #: SC5374
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

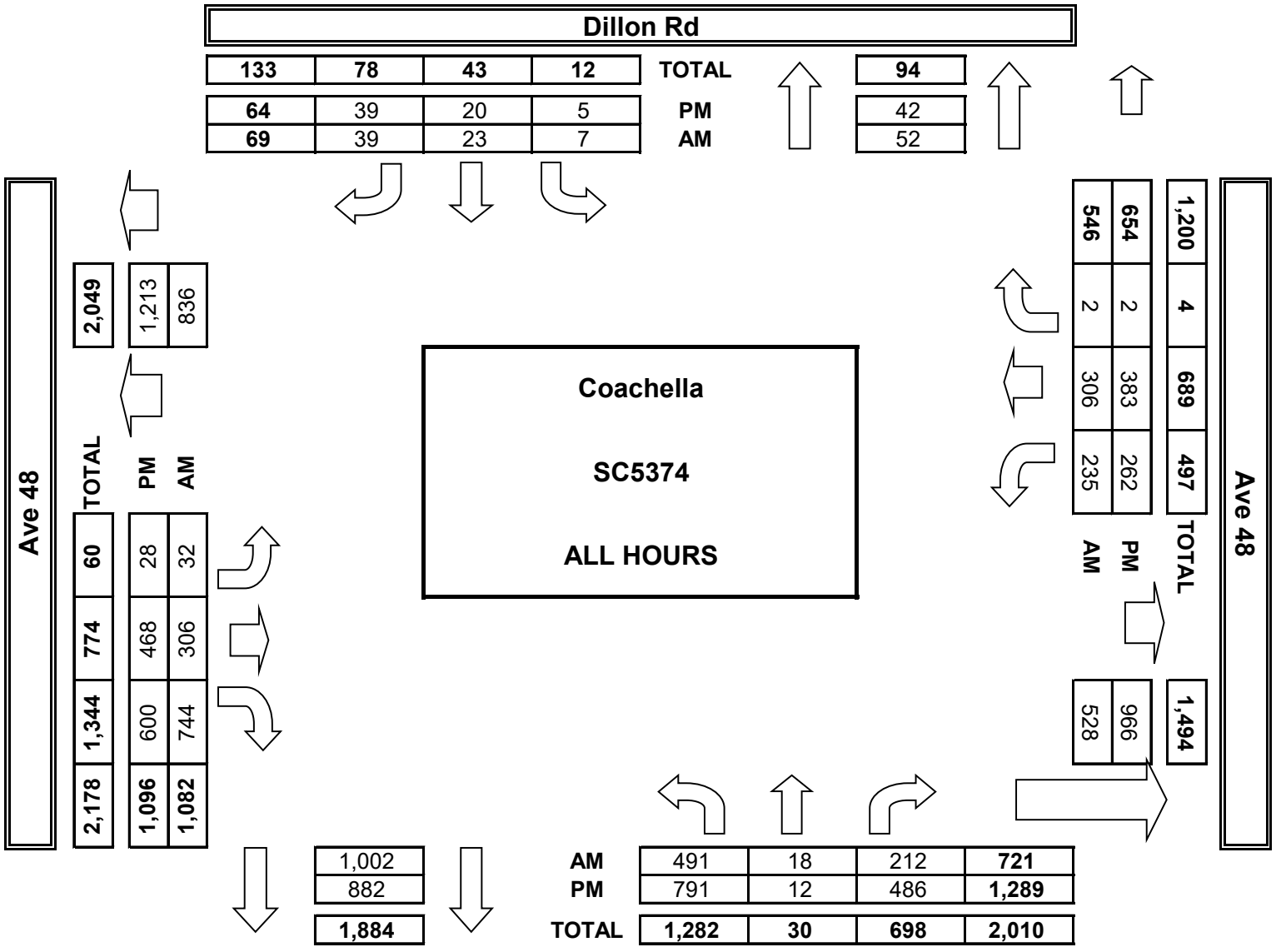
N ▲ / ◄ W / E ► / S ▼

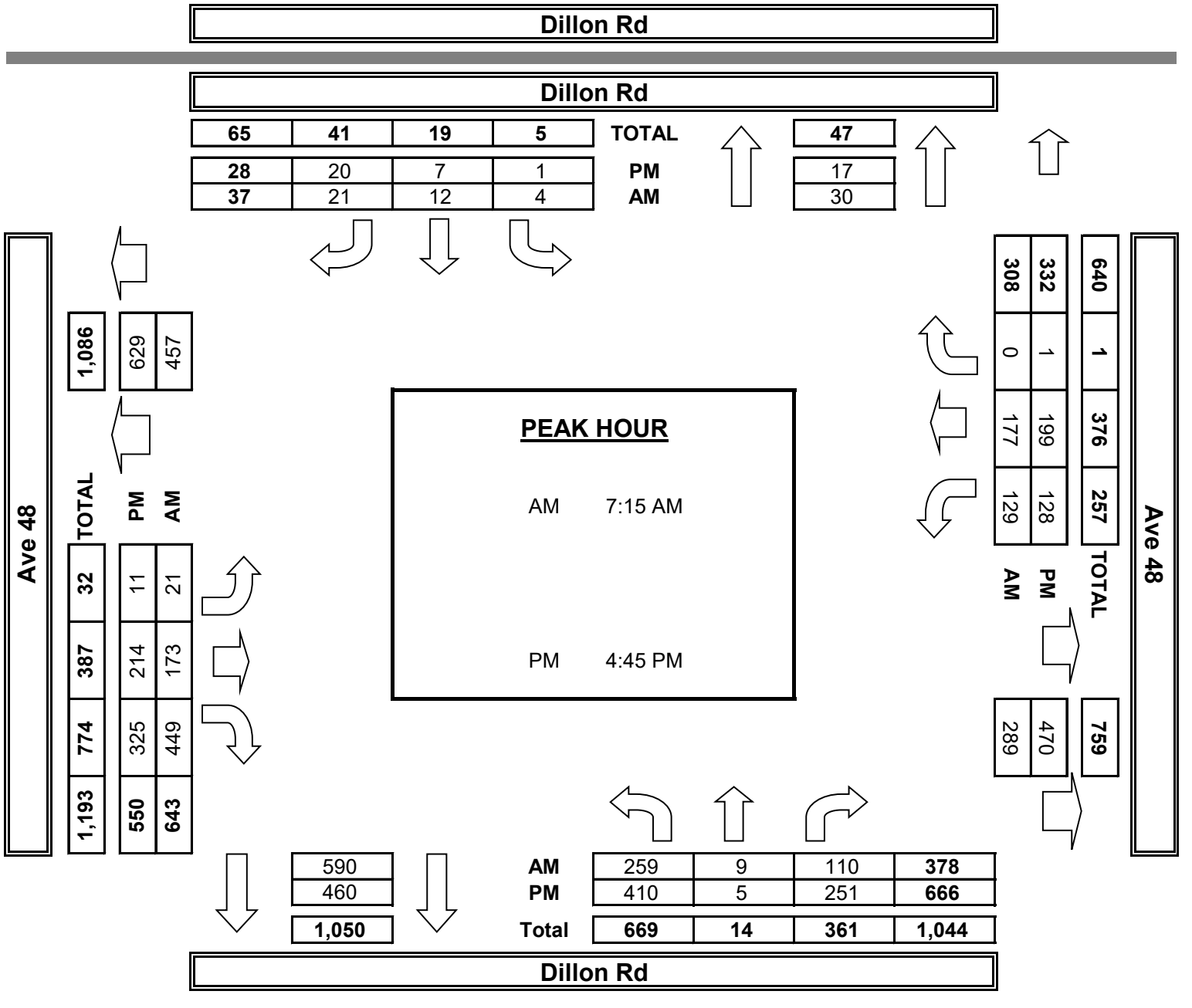
	NORTHBOUND Dillon Rd			SOUTHBOUND Dillon Rd			EASTBOUND Ave 48			WESTBOUND Ave 48				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	2	0.5	1.5	1	1.5	0.5	1	2	0	1	2	0		0	0	0	0	
AM 7:00 AM	51	3	23	1	2	5	1	27	90	24	28	0	255	0	0	0	0	0
7:15 AM	46	2	23	3	2	4	6	35	107	25	30	0	283	0	0	0	0	0
7:30 AM	76	2	30	0	6	6	7	32	127	32	54	0	372	0	0	0	0	0
7:45 AM	81	3	32	0	3	5	7	53	119	38	44	0	385	0	0	0	0	0
8:00 AM	56	2	25	1	1	6	1	53	96	34	49	0	324	0	0	0	2	2
8:15 AM	60	3	29	0	5	3	5	31	76	28	28	0	268	0	0	0	0	0
8:30 AM	73	1	24	1	1	3	3	37	63	24	36	0	266	0	0	0	0	0
8:45 AM	48	2	26	1	3	7	2	38	66	30	37	2	262	0	0	0	1	1
VOLUMES	491	18	212	7	23	39	32	306	744	235	306	2	2,418	0	0	0	3	3
APPROACH %	68%	2%	29%	10%	33%	57%	3%	28%	69%	43%	56%	0%						
APP/DEPART	721	/	52	69	/	1,002	1,082	/	528	546	/	836	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	259	9	110	4	12	21	21	173	449	129	177	0	1,366	0	0	0	2	
APPROACH %	69%	2%	29%	11%	32%	57%	3%	27%	70%	42%	57%	0%						
PEAK HR FACTOR		0.815			0.771			0.898			0.895		0.887					
APP/DEPART	378	/	30	37	/	590	643	/	289	308	/	457	0					
PM 4:00 PM	125	1	58	1	1	8	2	63	65	39	52	0	415	0	0	0	1	1
4:15 PM	94	1	64	1	4	4	7	66	59	25	38	0	363	0	0	0	2	2
4:30 PM	78	3	56	1	5	5	6	62	76	35	51	0	378	0	0	0	0	0
4:45 PM	100	2	67	0	2	5	4	56	68	42	54	0	400	0	0	0	1	1
5:00 PM	100	1	58	1	0	5	2	52	83	36	49	0	387	0	0	0	1	1
5:15 PM	113	0	67	0	1	5	4	55	86	27	44	0	402	0	0	0	2	2
5:30 PM	97	2	59	0	4	5	1	51	88	23	52	1	383	0	0	0	0	0
5:45 PM	84	2	57	1	3	2	2	63	75	35	43	1	368	0	0	0	0	0
VOLUMES	791	12	486	5	20	39	28	468	600	262	383	2	3,103	0	0	0	7	7
APPROACH %	61%	1%	38%	8%	31%	61%	3%	43%	55%	40%	59%	0%						
APP/DEPART	1,289	/	42	64	/	882	1,096	/	966	654	/	1,213	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	410	5	251	1	7	20	11	214	325	128	199	1	1,576	0	0	0	4	
APPROACH %	62%	1%	38%	4%	25%	71%	2%	39%	59%	39%	60%	0%						
PEAK HR FACTOR		0.925			0.778			0.948			0.856		0.975					
APP/DEPART	666	/	17	28	/	460	550	/	470	332	/	629	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: SR-86 SB Ramps
EAST & WEST: Dillon Rd

PROJECT #: SC5374
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

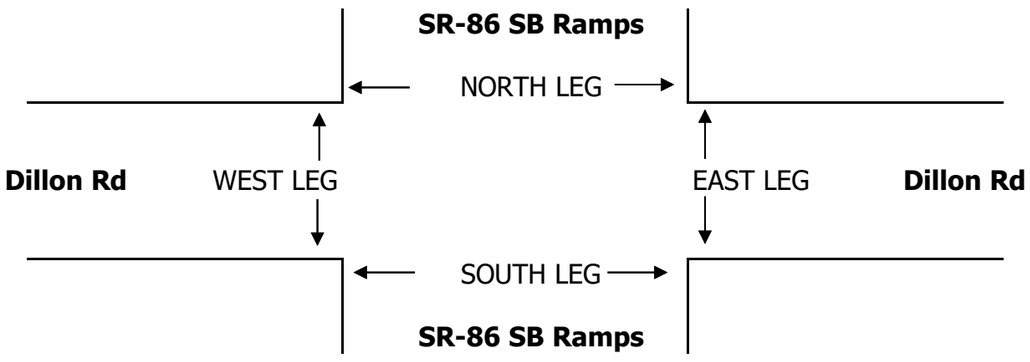
AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

	NORTHBOUND SR-86 SB Ramps			SOUTHBOUND SR-86 SB Ramps			EASTBOUND Dillon Rd			WESTBOUND Dillon Rd			
LANES:	NL X	NT X	NR X	SL 0.5	ST 0.5	SR 1	EL X	ET 1	ER 0	WL 1	WT 1	WR X	TOTAL
7:00 AM	0	0	0	12	0	26	0	86	13	29	63	0	229
7:15 AM	0	0	0	15	1	22	0	90	11	26	55	0	220
7:30 AM	0	0	0	18	0	36	0	145	11	27	78	0	315
7:45 AM	0	0	0	30	0	48	0	128	18	19	64	0	307
8:00 AM	0	0	0	30	0	25	0	102	16	31	63	0	267
8:15 AM	0	0	0	23	0	25	0	88	8	22	68	0	234
8:30 AM	0	0	0	20	0	21	0	66	15	21	57	0	200
8:45 AM	0	0	0	22	1	19	0	70	10	13	57	0	192
AM VOLUMES	0	0	0	170	2	222	0	775	102	188	505	0	1,964
AM APPROACH %	0%	0%	0%	43%	1%	56%	0%	88%	12%	27%	73%	0%	
AM APP/DEPART	0	/	0	394	/	292	877	/	945	693	/	727	0
AM BEGIN PEAK HR		7:30 AM											
AM VOLUMES	0	0	0	101	0	134	0	463	53	99	273	0	1,123
AM APPROACH %	0%	0%	0%	43%	0%	57%	0%	90%	10%	27%	73%	0%	
AM PEAK HR FACTOR		0.000			0.753			0.827			0.886		0.891
AM APP/DEPART	0	/	0	235	/	152	516	/	564	372	/	407	0
4:00 PM	0	0	0	31	0	62	0	82	21	49	89	0	334
4:15 PM	0	0	0	29	0	49	0	71	14	30	86	0	279
4:30 PM	0	0	0	36	0	46	0	73	20	42	52	0	269
4:45 PM	0	0	0	31	0	72	0	77	24	31	79	0	314
5:00 PM	0	0	0	29	2	50	0	99	22	44	89	0	335
5:15 PM	0	0	0	30	1	70	0	91	22	50	78	0	342
5:30 PM	0	0	0	29	1	78	0	86	27	25	57	0	303
5:45 PM	0	0	0	30	0	58	0	83	29	31	76	0	307
PM VOLUMES	0	0	0	245	4	485	0	662	179	302	606	0	2,483
PM APPROACH %	0%	0%	0%	33%	1%	66%	0%	79%	21%	33%	67%	0%	
PM APP/DEPART	0	/	0	734	/	485	841	/	907	908	/	1,091	0
PM BEGIN PEAK HR		4:45 PM											
PM VOLUMES	0	0	0	119	4	270	0	353	95	150	303	0	1,294
PM APPROACH %	0%	0%	0%	30%	1%	69%	0%	79%	21%	33%	67%	0%	
PM PEAK HR FACTOR		0.000			0.910			0.926			0.852		0.946
PM APP/DEPART	0	/	0	393	/	249	448	/	472	453	/	573	0

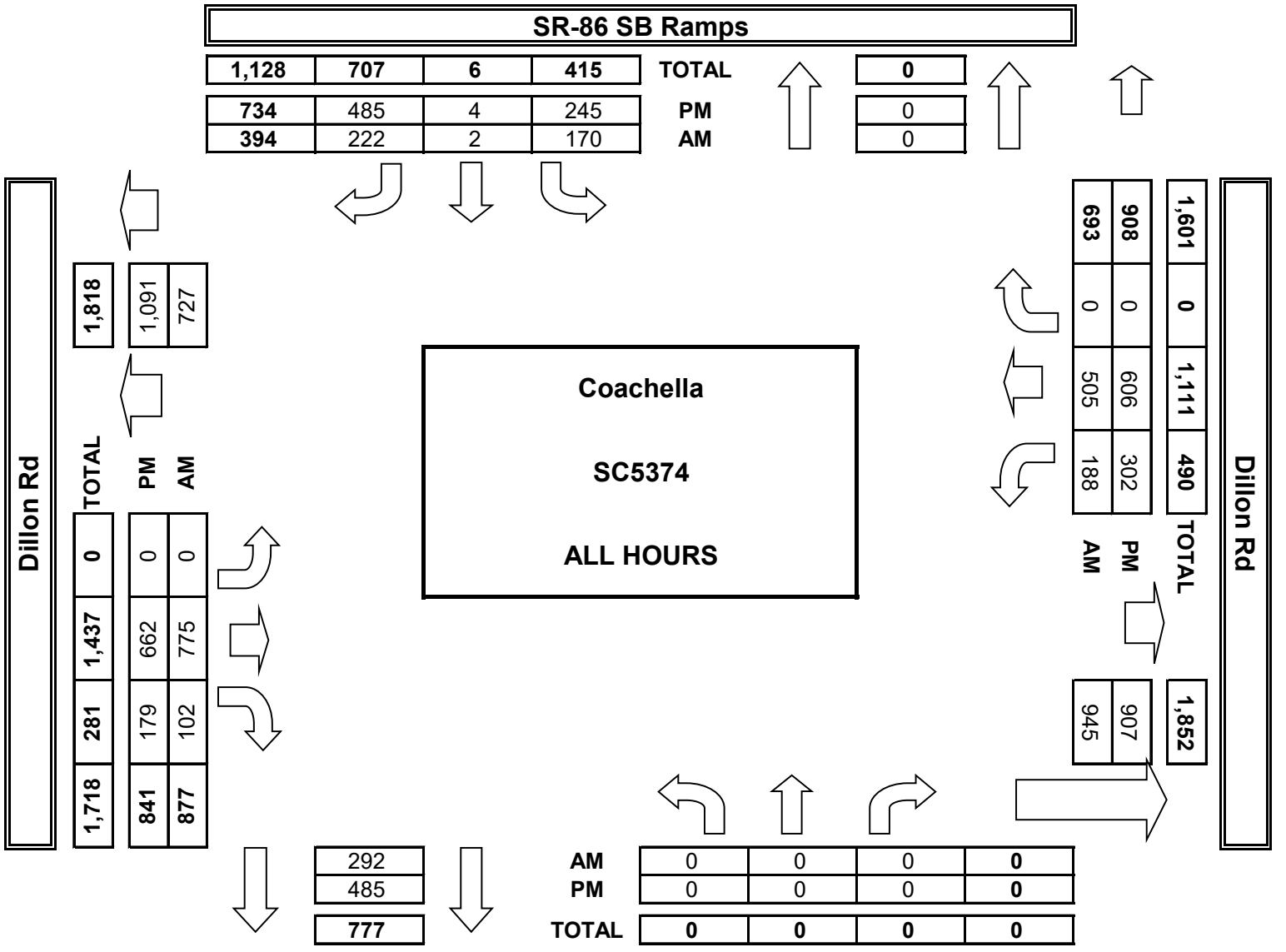
U-TURNS

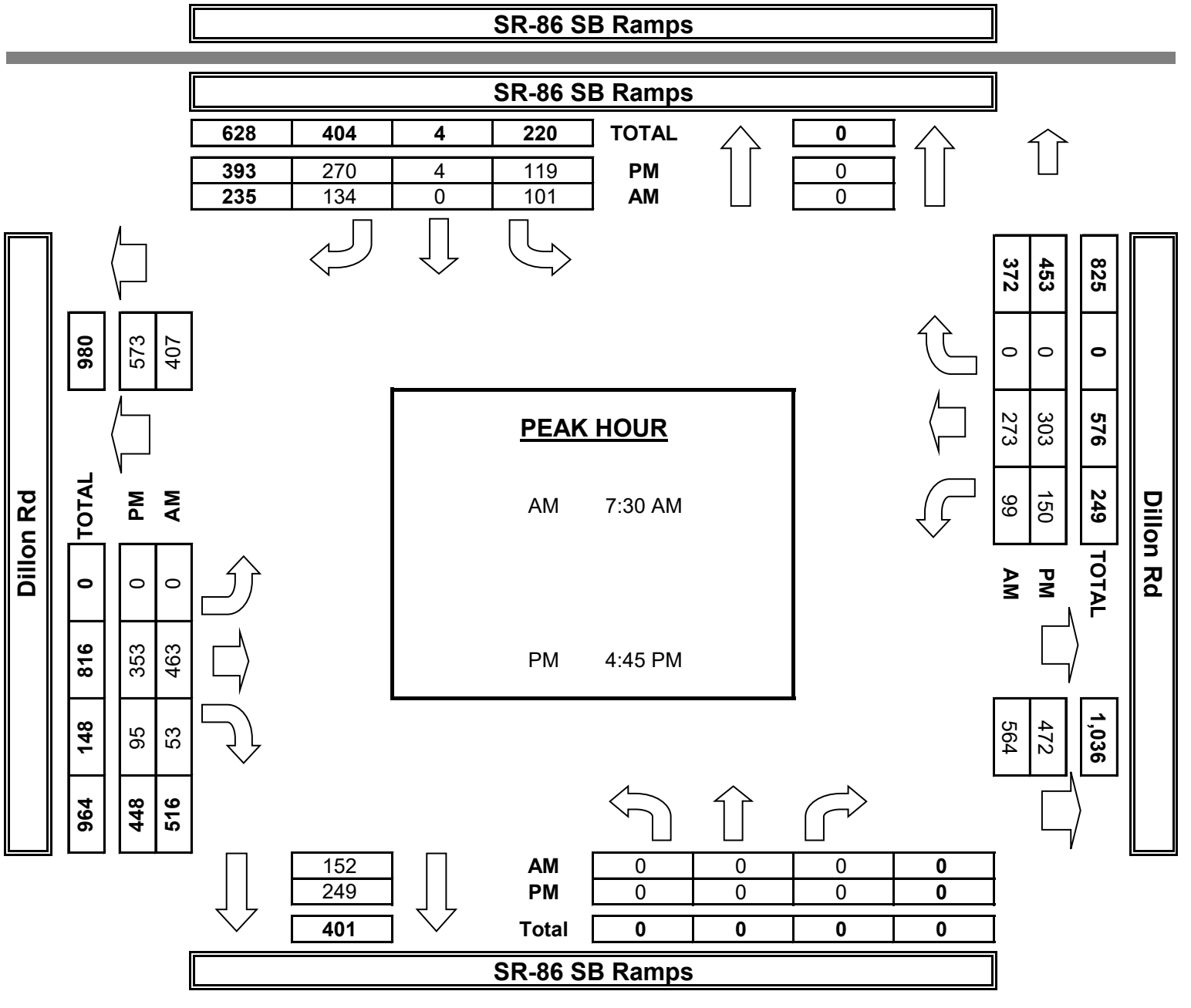
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0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: SR-86 NB Ramps
EAST & WEST: Dillon Rd

PROJECT #: SC5374
LOCATION #: 11
CONTROL: SIGNAL

NOTES:

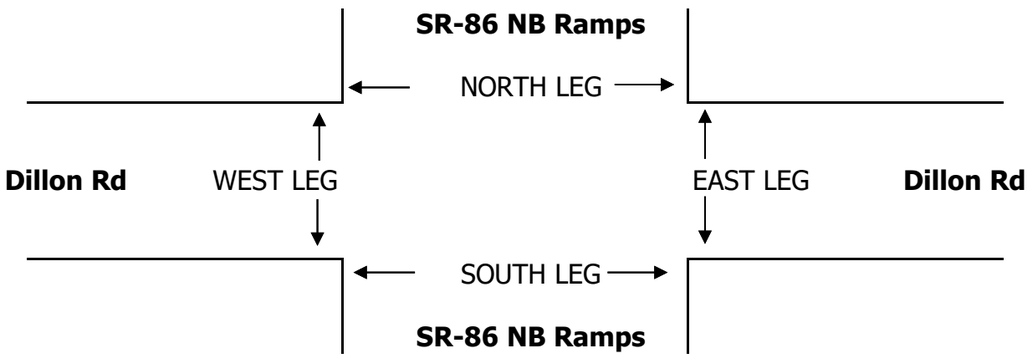
AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND SR-86 NB Ramps			SOUTHBOUND SR-86 NB Ramps			EASTBOUND Dillon Rd			WESTBOUND Dillon Rd			
	LANES:	NL 0	NT 1	NR 0	SL X	ST X	SR X	EL 1	ET 1	ER X	WL X	WT 2	WR 1	TOTAL
AM	7:00 AM	23	0	44	0	0	0	43	54	0	0	68	34	266
	7:15 AM	24	1	19	0	0	0	62	40	0	0	57	31	234
	7:30 AM	34	0	29	0	0	0	86	77	0	0	71	26	323
	7:45 AM	28	0	29	0	0	0	88	70	0	0	60	32	307
	8:00 AM	27	1	37	0	0	0	55	77	0	0	67	28	292
	8:15 AM	19	0	30	0	0	0	55	56	0	0	71	33	264
	8:30 AM	26	0	43	0	0	0	35	51	0	0	52	24	231
	8:45 AM	18	0	36	0	0	0	40	52	0	0	52	29	227
	VOLUMES	199	2	267	0	0	0	464	477	0	0	498	237	2,145
	APPROACH %	43%	0%	57%	0%	0%	0%	49%	51%	0%	0%	68%	32%	
	APP/DEPART	468	/	703	0	/	0	942	/	744	735	/	698	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	108	1	125	0	0	0	284	280	0	0	269	119	1,186
	APPROACH %	46%	0%	53%	0%	0%	0%	50%	50%	0%	0%	69%	31%	
	PEAK HR FACTOR		0.900			0.000			0.865			0.933		0.918
	APP/DEPART	234	/	404	0	/	0	564	/	405	388	/	377	0
PM	4:00 PM	12	0	30	0	0	0	24	89	0	0	126	41	322
	4:15 PM	21	0	39	0	0	0	30	70	0	0	95	49	304
	4:30 PM	5	0	29	0	0	0	29	80	0	0	89	45	277
	4:45 PM	24	1	42	0	0	0	32	74	0	0	86	40	299
	5:00 PM	19	1	35	0	0	0	32	96	0	0	114	49	346
	5:15 PM	20	0	31	0	0	0	41	80	0	0	108	58	338
	5:30 PM	16	0	42	0	0	0	31	84	0	0	66	46	285
	5:45 PM	13	0	32	0	0	0	47	66	0	0	98	49	305
	VOLUMES	130	2	280	0	0	0	266	639	0	0	782	377	2,476
	APPROACH %	32%	0%	68%	0%	0%	0%	29%	71%	0%	0%	67%	33%	
	APP/DEPART	412	/	645	0	/	0	905	/	919	1,159	/	912	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	68	1	140	0	0	0	151	326	0	0	386	202	1,274
	APPROACH %	33%	0%	67%	0%	0%	0%	32%	68%	0%	0%	66%	34%	
	PEAK HR FACTOR		0.901			0.000			0.932			0.886		0.921
	APP/DEPART	209	/	354	0	/	0	477	/	466	588	/	454	0

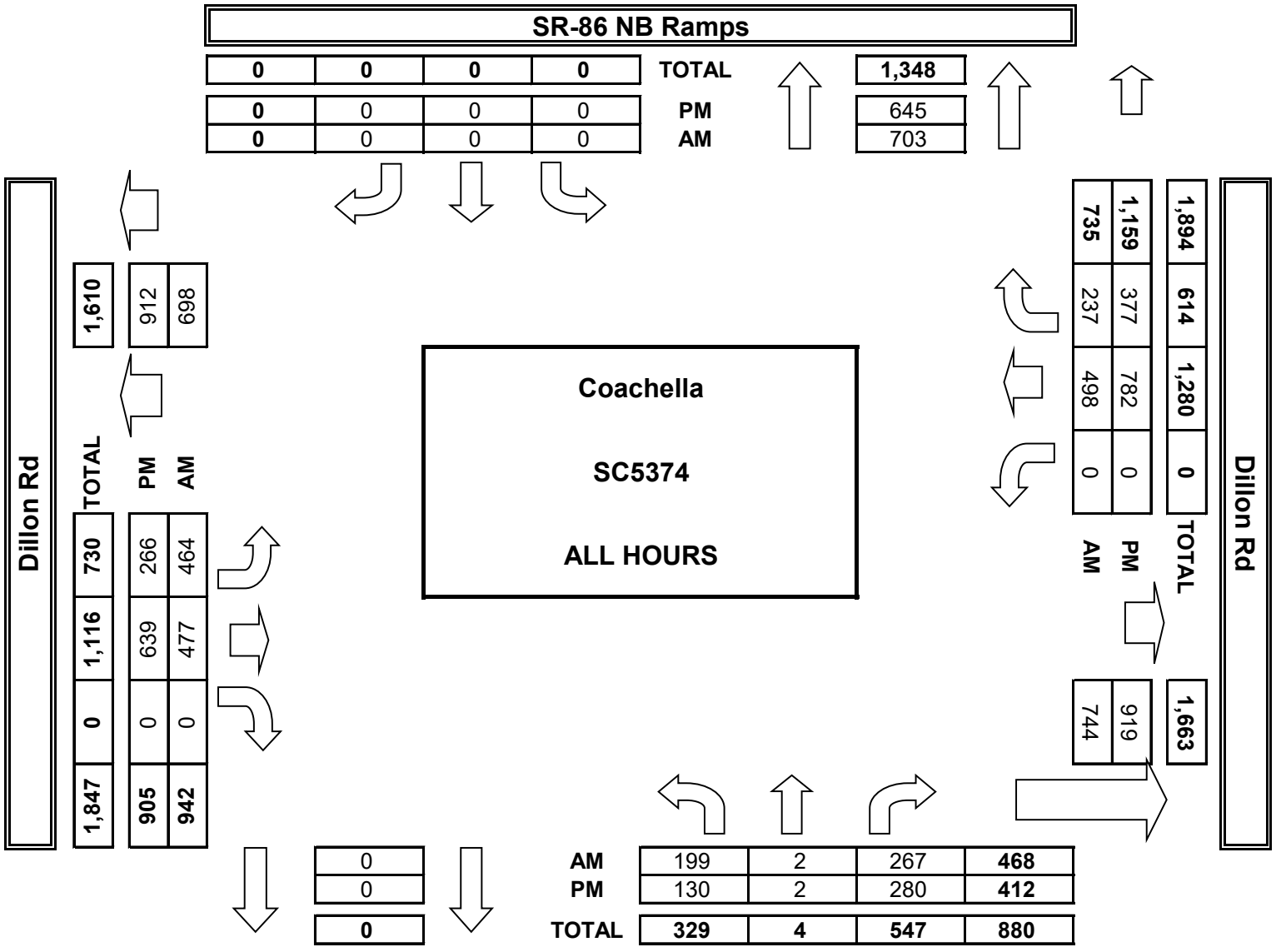
U-TURNS

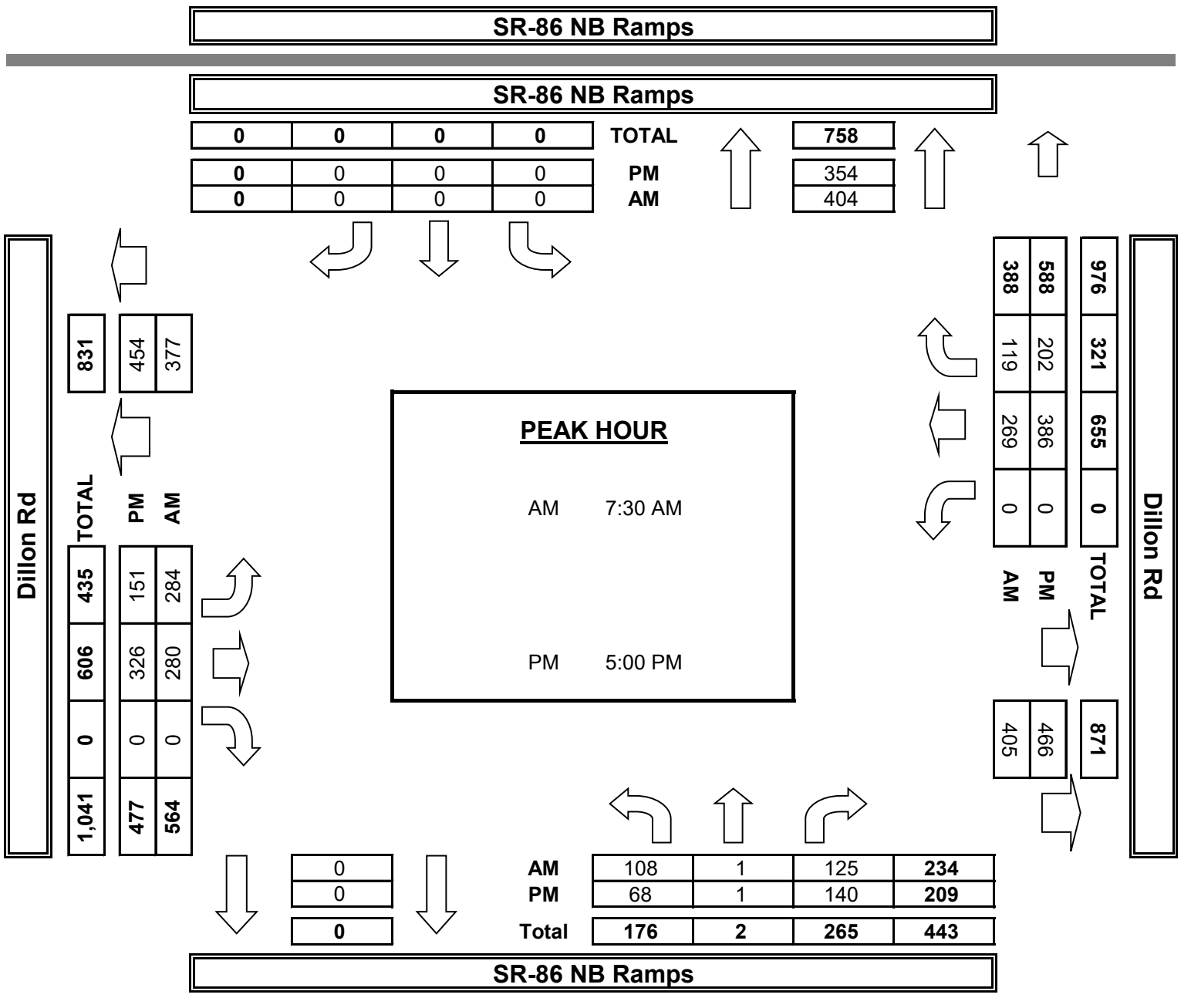
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	



AimTD LLC

TURNING MOVEMENT COUNTS





T112224

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Coachella	PROJECT #:	SC5374
Tue, May 6, 25	NORTH & SOUTH:	Cabazon Rd	LOCATION #:	12
	EAST & WEST:	Dillon Rd	CONTROL:	SIGNAL

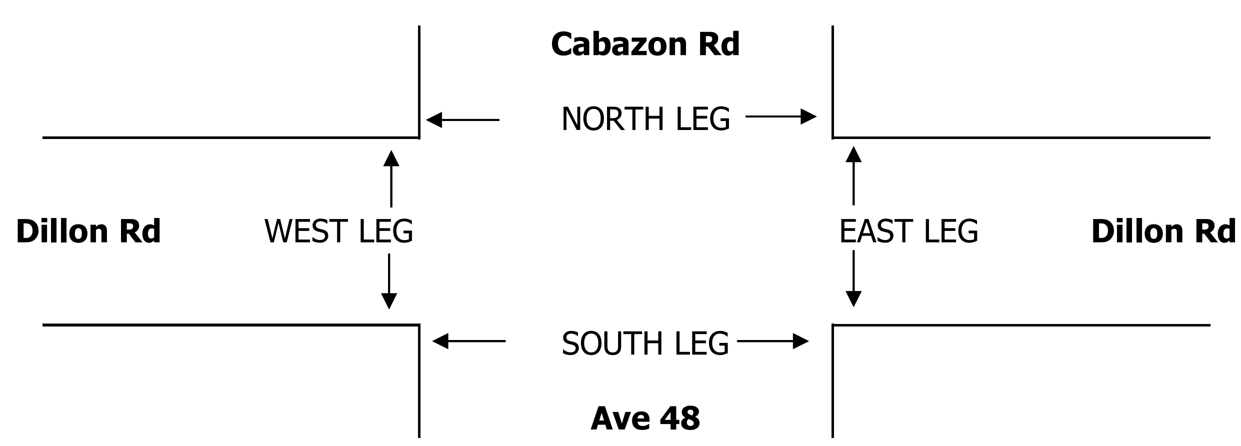
NOTES:

AM PM MD OTHER OTHER — ▲ N / ◄ W / E ► / S ▼

	NORTHBOUND Ave 48			SOUTHBOUND Cabazon Rd			EASTBOUND Dillon Rd			WESTBOUND Dillon Rd			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	2	0	
AM													
7:00 AM	1	0	0	2	0	9	20	97	2	7	69	13	220
7:15 AM	1	1	0	1	0	5	19	109	2	2	68	7	215
7:30 AM	2	0	4	6	1	12	14	146	7	4	96	14	306
7:45 AM	0	1	1	9	0	4	24	136	4	3	97	12	291
8:00 AM	2	2	2	10	1	10	20	106	5	3	77	8	246
8:15 AM	2	4	5	3	2	14	15	88	9	1	79	5	227
8:30 AM	9	1	4	5	3	18	10	72	10	6	67	5	210
8:45 AM	3	0	2	3	2	13	19	75	5	5	60	11	198
VOLUMES	20	9	18	39	9	85	141	829	44	31	613	75	1,913
APPROACH %	43%	19%	38%	29%	7%	64%	14%	82%	4%	4%	85%	10%	
APP/DEPART	47	/	225	133	/	84	1,014	/	886	719	/	718	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	6	7	12	28	4	40	73	476	25	11	349	39	1,070
APPROACH %	24%	28%	48%	39%	6%	56%	13%	83%	4%	3%	87%	10%	
PEAK HR FACTOR		0.568			0.857			0.859			0.875		0.874
APP/DEPART	25	/	119	72	/	40	574	/	516	399	/	395	0
PM													
4:00 PM	16	2	9	9	1	25	17	90	4	5	140	6	324
4:15 PM	7	2	6	10	1	26	11	69	7	3	126	6	274
4:30 PM	10	0	1	4	1	25	11	88	8	0	94	4	246
4:45 PM	7	0	1	8	0	23	7	92	1	2	141	8	290
5:00 PM	14	0	5	6	0	22	8	110	6	2	126	4	303
5:15 PM	7	1	5	4	4	22	6	104	1	2	145	1	302
5:30 PM	8	2	7	7	0	20	9	99	7	4	131	0	294
5:45 PM	9	0	4	2	1	14	7	106	3	3	127	4	280
VOLUMES	78	7	38	50	8	177	76	758	37	21	1,030	33	2,313
APPROACH %	63%	6%	31%	21%	3%	75%	9%	87%	4%	2%	95%	3%	
APP/DEPART	123	/	116	235	/	66	871	/	846	1,084	/	1,285	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	36	3	18	25	4	87	30	405	15	10	543	13	1,189
APPROACH %	63%	5%	32%	22%	3%	75%	7%	90%	3%	2%	96%	2%	
PEAK HR FACTOR		0.750			0.935			0.907			0.937		0.981
APP/DEPART	57	/	46	116	/	29	450	/	448	566	/	666	0

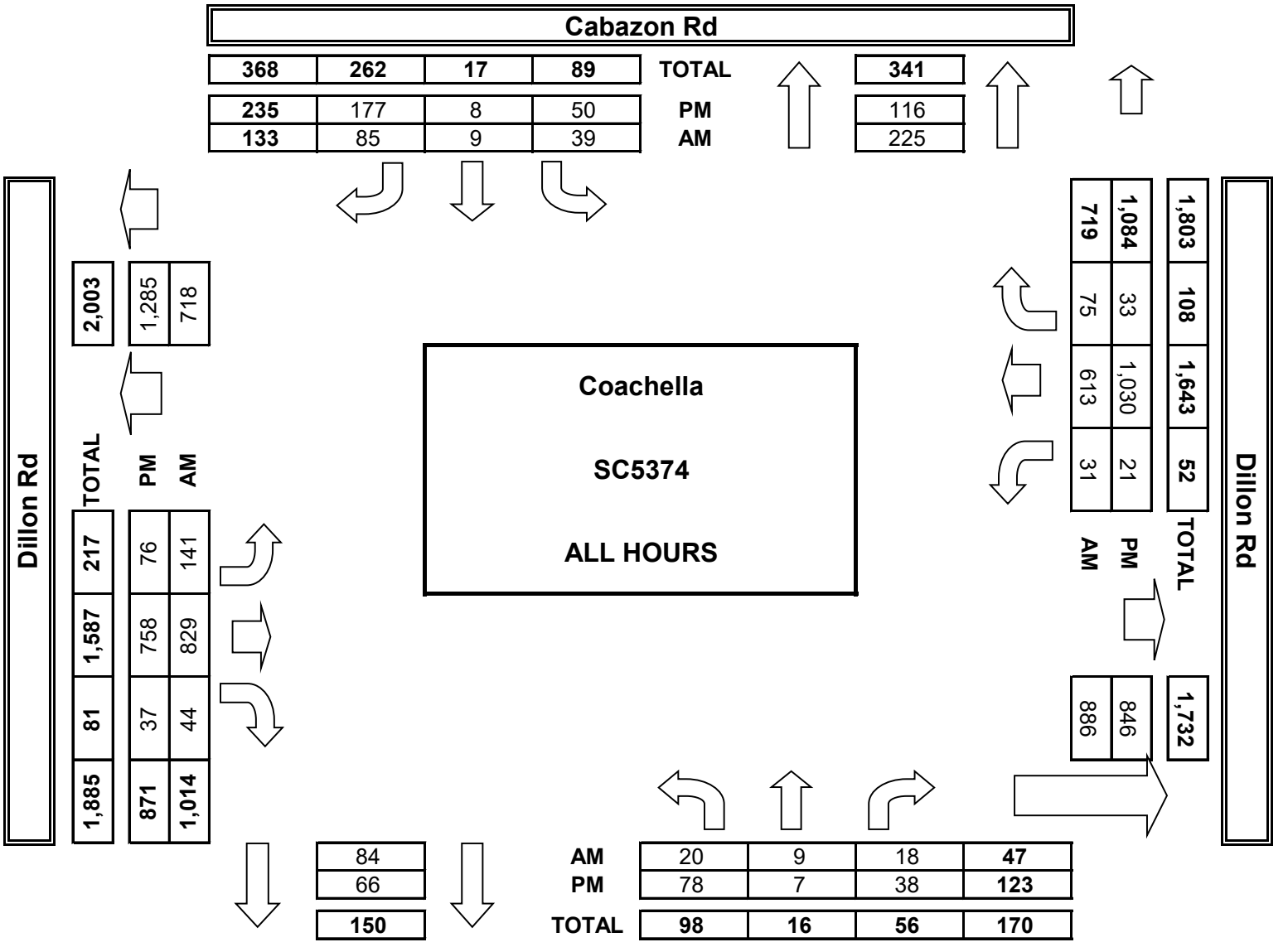
U-TURNS

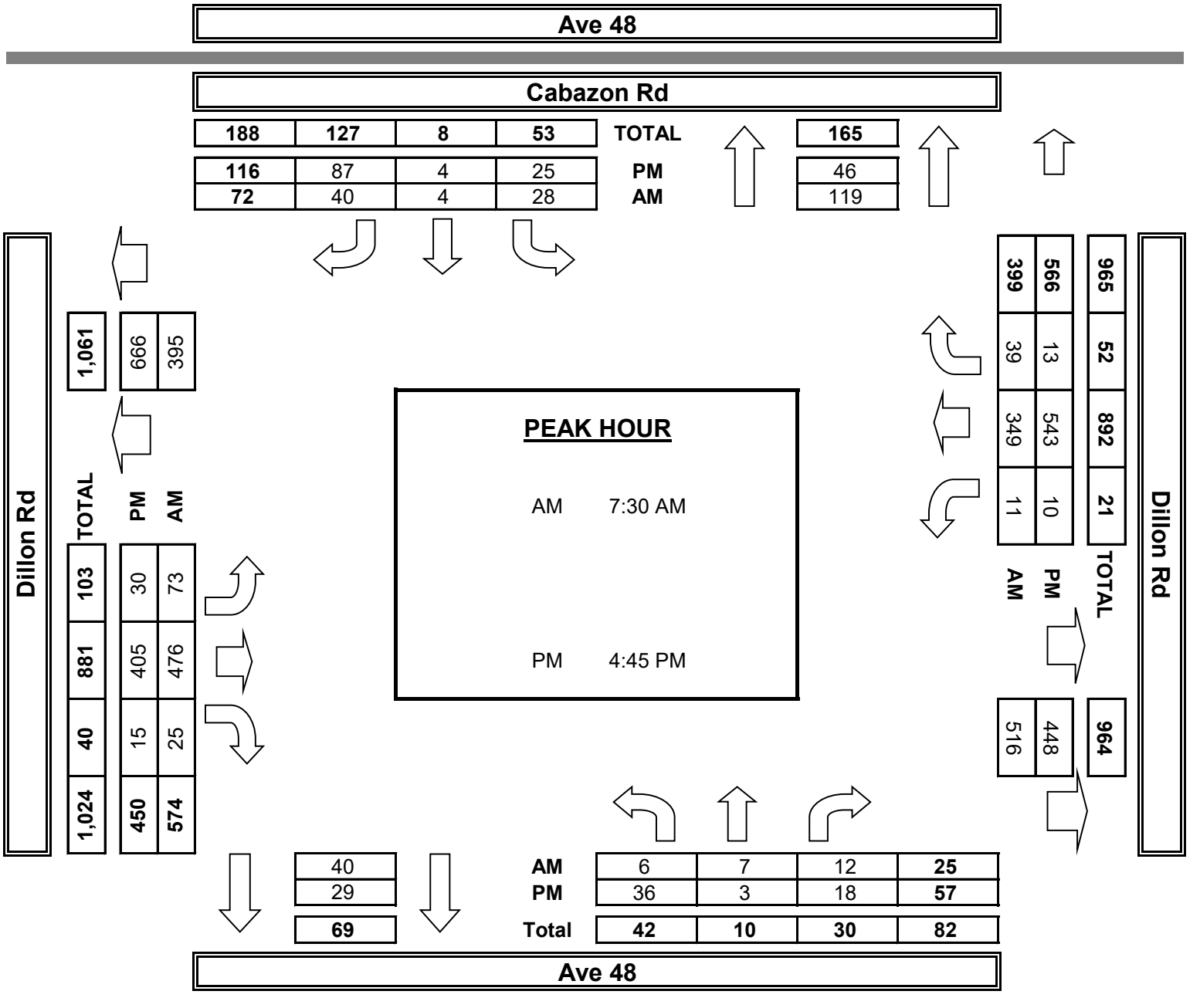
	NB	SB	EB	WB	TTL
LANES	0	0	0	0	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
PEAK HR VOLUMES	0	0	0	0	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0
PEAK HR VOLUMES	0	0	0	0	



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T112224

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

DATE: Tue, May 6, 25

LOCATION: Coachella
NORTH & SOUTH: Van Buren St
EAST & WEST: Ave 53

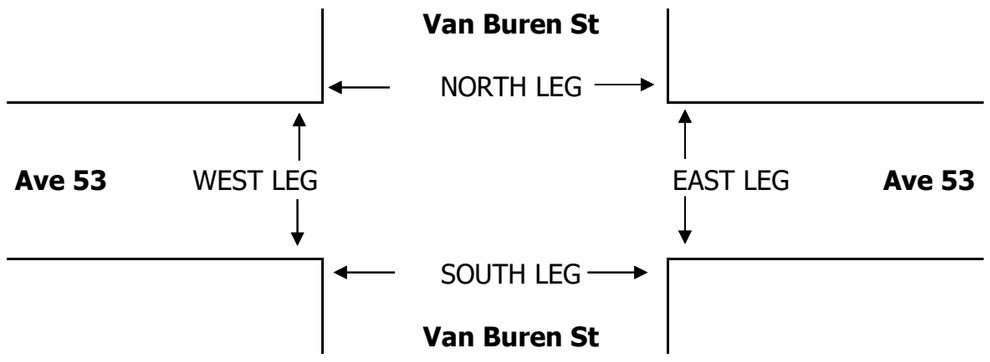
PROJECT #: SC5374
LOCATION #: 14
CONTROL: STOP E

NOTES:

AM
PM
MD
OTHER
OTHER

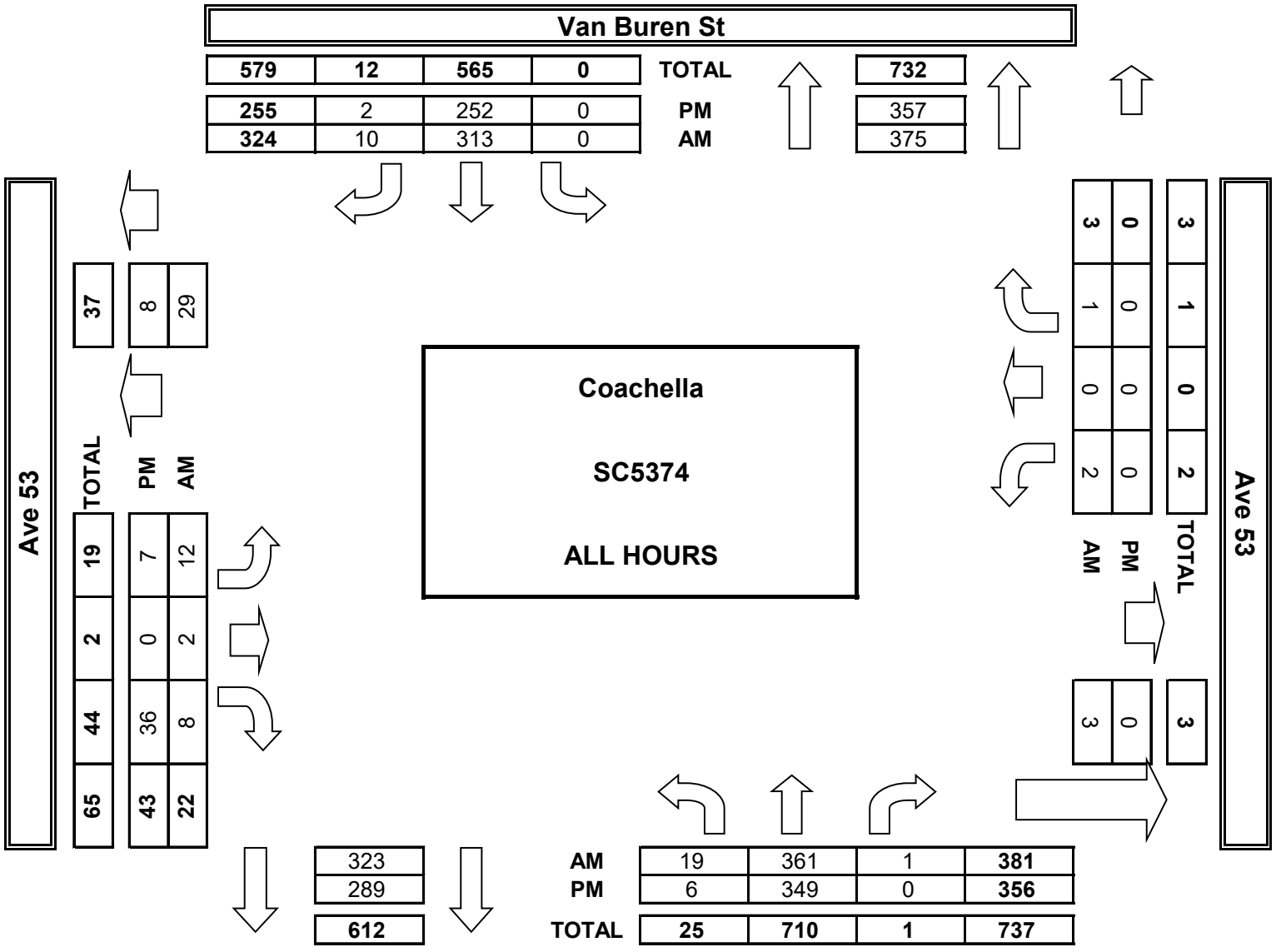
N
W
E
S

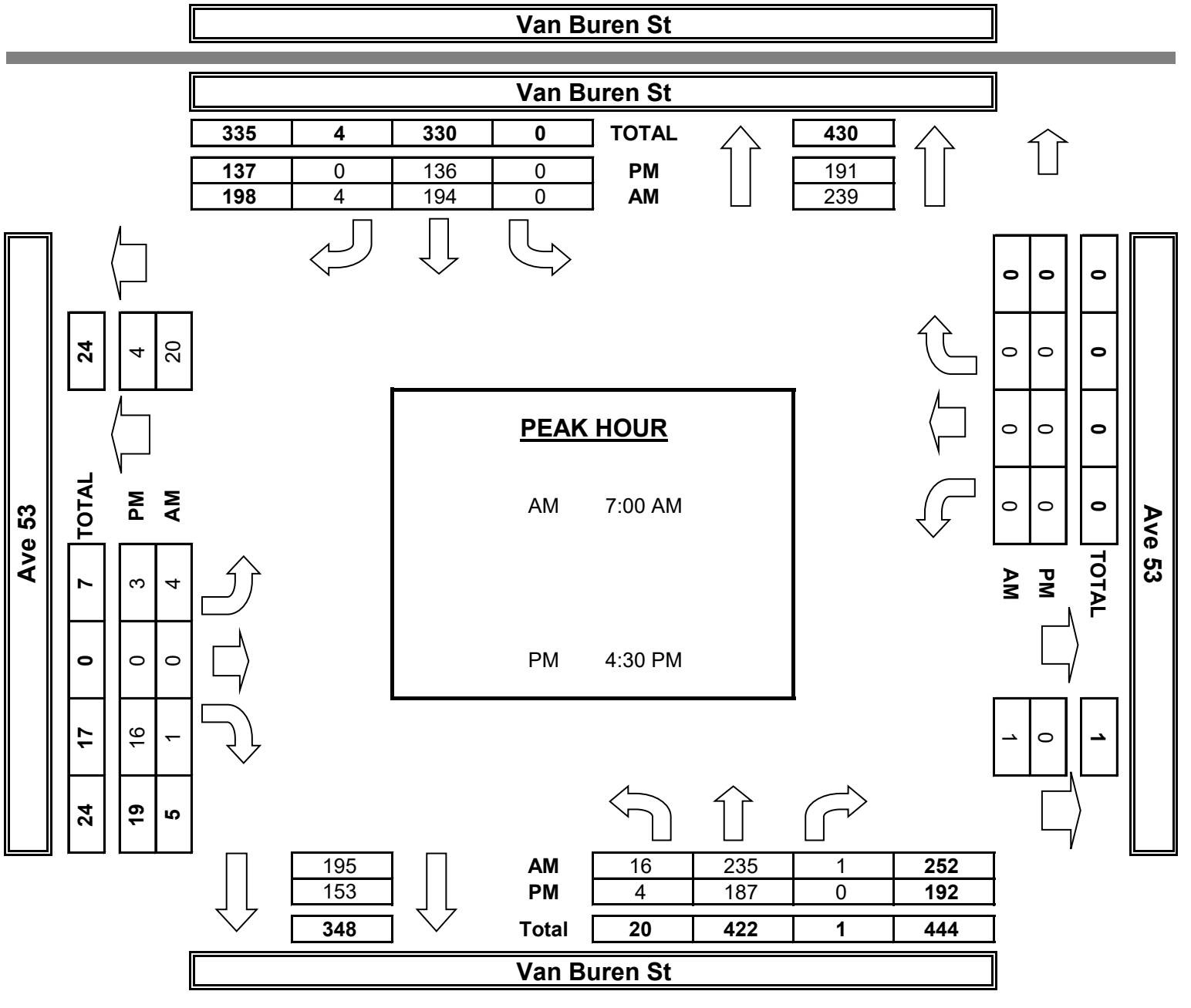
		NORTHBOUND Van Buren St			SOUTHBOUND Van Buren St			EASTBOUND Ave 53			WESTBOUND Ave 53				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	4	70	0	0	78	2	2	0	0	0	0	0	156	0	0	0	0	0
	7:15 AM	1	70	0	0	52	0	0	0	1	0	0	0	124	0	0	0	0	0
	7:30 AM	5	49	0	0	34	1	2	0	0	0	0	0	91	0	0	0	0	0
	7:45 AM	6	46	1	0	30	1	0	0	0	0	0	0	84	0	0	0	0	0
	8:00 AM	1	40	0	0	31	0	5	0	3	0	0	0	80	0	0	0	0	0
	8:15 AM	0	20	0	0	36	2	3	0	1	2	0	0	64	0	1	0	0	1
	8:30 AM	1	34	0	0	26	3	0	1	2	0	0	1	68	0	0	0	0	0
	8:45 AM	1	32	0	0	26	1	0	1	1	0	0	0	62	0	0	0	0	0
	VOLUMES	19	361	1	0	313	10	12	2	8	2	0	1	730	0	1	0	0	1
	APPROACH %	5%	95%	0%	0%	97%	3%	55%	9%	36%	67%	0%	33%						
	APP/DEPART	381	/	375	324	/	323	22	/	3	3	/	29	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	16	235	1	0	194	4	4	0	1	0	0	0	455	0	0	0	0	
	APPROACH %	6%	93%	0%	0%	98%	2%	80%	0%	20%	0%	0%	0%						
	PEAK HR FACTOR		0.851			0.619			0.625			0.000		0.729					
	APP/DEPART	252	/	239	198	/	195	5	/	1	0	/	20	0					
PM	4:00 PM	0	47	0	0	30	0	1	0	7	0	0	0	85	0	0	0	0	0
	4:15 PM	0	50	0	0	28	1	0	0	3	0	0	0	82	0	0	0	0	0
	4:30 PM	0	37	0	0	33	0	1	0	9	0	0	0	80	1	1	0	0	2
	4:45 PM	2	40	0	0	33	0	1	0	2	0	0	0	78	0	0	0	0	0
	5:00 PM	1	66	0	0	36	0	1	0	2	0	0	0	106	0	0	0	0	0
	5:15 PM	1	44	0	0	34	0	0	0	3	0	0	0	82	0	0	0	0	0
	5:30 PM	2	41	0	0	32	1	3	0	2	0	0	0	81	0	0	0	0	0
	5:45 PM	0	24	0	0	26	0	0	0	8	0	0	0	58	0	0	0	0	0
	VOLUMES	6	349	0	0	252	2	7	0	36	0	0	0	654	1	1	0	0	2
	APPROACH %	2%	98%	0%	0%	99%	1%	16%	0%	84%	0%	0%	0%						
	APP/DEPART	356	/	357	255	/	289	43	/	0	0	/	8	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	4	187	0	0	136	0	3	0	16	0	0	0	348	1	1	0	0	
	APPROACH %	2%	97%	0%	0%	99%	0%	16%	0%	84%	0%	0%	0%						
	PEAK HR FACTOR		0.716			0.951			0.475			0.000		0.821					
	APP/DEPART	192	/	191	137	/	153	19	/	0	0	/	4	0					



AimTD LLC

TURNING MOVEMENT COUNTS





Appendix D: Roadway and Access Assumptions

COVA Roadway and Intersection / Driveway Access Assumptions

Roadway Assumptions

The below roadway assumptions are based on the SCAG RTP/SCS and associated Financially Constrained Projects[1] approved in 2024. The most current roadway buildout designations (SCAG RTP/SCS 2024) are listed as the assumption for the Project analysis. This ensures the Project is consistent with the City's current roadway project funding schedule, which is consistent with SCAG's financially constrained project roadway funding schedule.

Roadways that are immediately adjacent to the Project include Avenue 52, Van Buren Street, and Calhoun Street. It is assumed that half of the roadway's full right-of-way (ROW) that is adjacent to the Project will be built out to the ultimate ROW width by the Project (listed below as "Immediately Adjacent Project Roadways"). The widening of the other half of the road is assumed to not occur in the Project analysis. *Note: Opening Year Plus Project and Cumulative Projects roadway assumptions remain the same as Opening Year Plus Project.*

Immediately Adjacent Project Roadways

- Van Buren Street (52nd Avenue to South City Limit)
    - Existing two-lane undivided with buffered bike lane
    - RTP planned road widening from 2 to 4 lanes (3A01CV087, 2030); project feature will be assumed in assessments
    - Opening Year with Project (2030) – half width widening built as project feature.
        - Three travel lanes on west side (SB), raised median lane, bike lane, and sidewalk
        - One travel lane on east side (NB)
- Calhoun Street (Avenue 52 to Southmost City line)
    - Existing two-lane undivided w/out bike lane
    - No RTP coverage on this segment
    - Opening Year with Project (2030) – half width widening built as a project feature
        - Two travel lanes on east side (NB), center median lane, bike lane, and sidewalk
        - One travel lane on west side (SB)
- Avenue 52 (Calhoun Street to Van Buren Street)
    - Existing two-lane undivided w/out bike lane
    - RTP planned road widening from 2 to 6 lanes (3A01CV014, 2035); RTP buildout (2035) is beyond Opening Year 2030, **thus project feature will only be assumed in assessments**
    - Opening Year with Project (2030) – half width widening built to as a project feature:
        - Two travel lanes on the south side (EB), raised center median, bike lane, and sidewalk
        - One travel lane on north side (WB)

[1] SCAG RTP/SCS 2024 Fiscally Constrained Projects, City of Coachella, P. 275, Table 2.

Peripheral Project Study Roadways

- Van Burent Street (Avenue 52 to North City Limit)
    - Existing two-lane undivided with a bike lane on the east side
    - **RTP planned road widening from 2 to 6 lanes (3A07036 and 3A07037, 2030); RTP buildout assumed in assessments**
    - Opening Year with Project – built to RTP full ROW, not developer obligated
- Avenue 52 (Van Buren Street to Fredrick Street)
    - Existing one and two lanes in each direction undivided with bike lanes
    - RTP planned road widening from 2 to 6 lanes (3A01CV014, 2035); RTP buildout year (2035) is beyond Opening Year (2030), **thus no changes will be assumed in assessments**
- Avenue 52 (Fredrick Street to Harrison Street)
    - Existing four-lanes undivided with bike lanes
    - RTP planned road widening from 4 to 6 lanes (3A01CV015A, 2035); RTP buildout year (2035) is beyond Opening Year (2030), **thus no changes will be assumed in assessments**
- Avenue 52 (Harrison Street to Hwy 111)
    - Existing one lane in each direction with bike sharrows; and two lanes in each direction divided
    - RTP planned road widening from 2 to 6 lanes (3A01CV015B, 2035); RTP buildout year (2035) is beyond Opening Year (2030), **thus no changes will be assumed in assessments**
- Dillon Road
    - Existing two-lane undivided w/out bike lane
    - **RTP planned road widening from 2 to 6 lanes from Cabezon Road to SR-86 interchange (3160028, 2027); RTP buildout assumed in assessments for segment mentions.**
    - Opening Year with Project – built to RTP full ROW, not developer obligated
- Avenue 50
    - Existing four-lane divided with bike lanes
    - **RTP planned road widening from Van Buren St to Harrison St to 6 lanes (3A01CV005, 2024); RTP buildout will not be assumed in assessments for segment mentions because not enough right of away. Recent re-pavement maintained 4 lanes with bike lanes.**
    - Opening Year with Project – will assume existing conditions
- Avenue 48
    - Existing four- to six-lane undivided with bike lanes
    - Planned Major Arterial (4 lanes, divided) with enhanced bike facilities
    - **RTP Planned road widening from 2 to 5 lanes from Van Buren St to W of Highway 111 (3A07108, 2024); RTP buildout assumed in assessments for segment mention**
    - Opening Year with Project – will assumed 2 lanes westbound and 3 lanes eastbound, not developer obligated

Intersection and Driveway Access Assumptions

Intersection / driveway access characteristics are related to the Project site plan shown in **Figure 1**, and input received from the Client.

Public Access Driveways / Intersections

Public guests may utilize the listed intersections / driveways to access the public sector of the Project, but may not access the private sector from these access points.

- Intersection / Driveway #1
  - Full movement, side street stop control.
- Intersection / Driveway #2
  - Typical Right-In / Right-Out operation.
- Intersection / Driveway #7
  - Typical Right-Out, exit only operation.

Private Access Driveways / Intersections

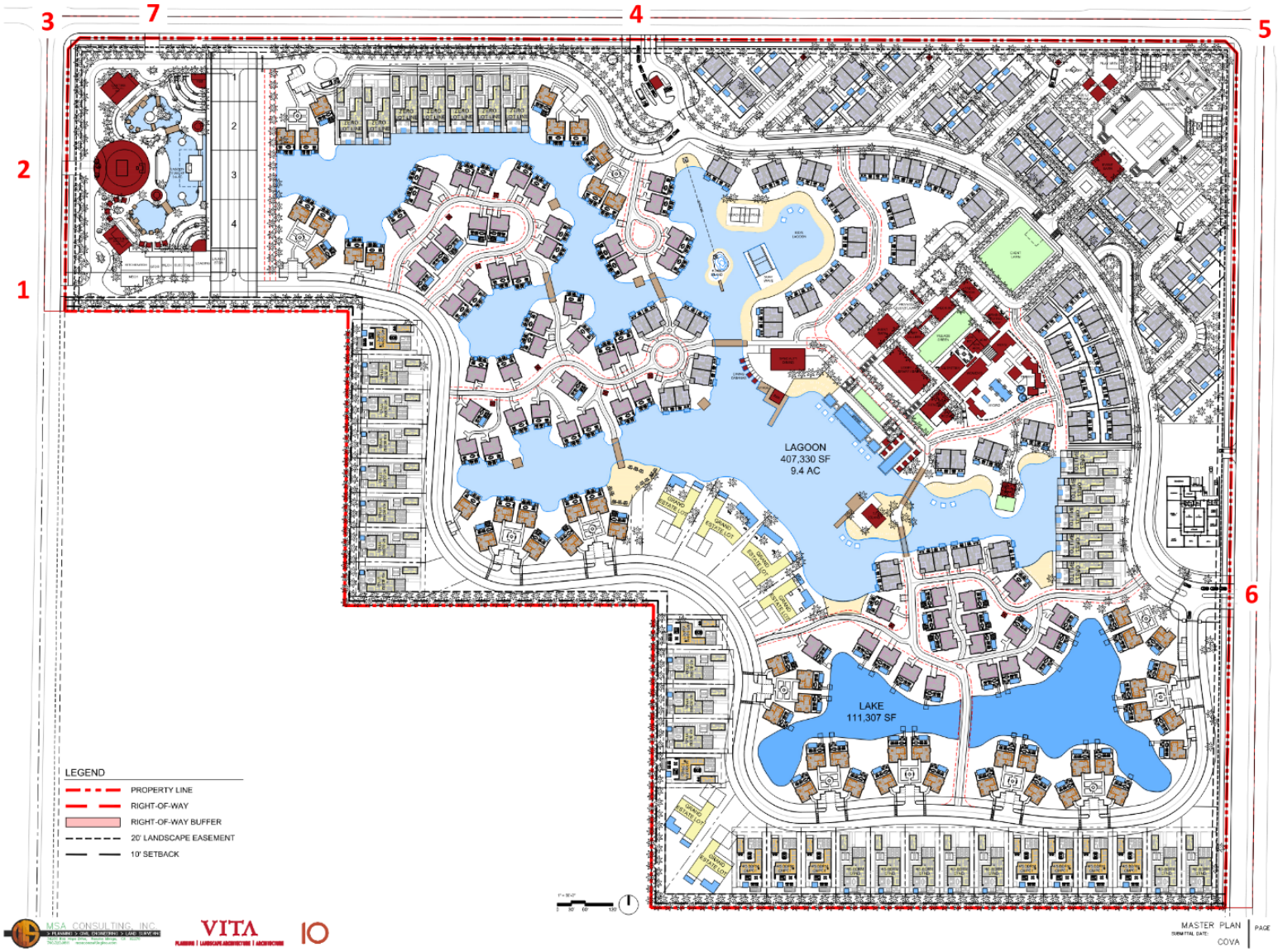
Private guests will use intersections / driveways #4 and #6 to enter the property. The private guests will have access to the parking garage at the Public Beach Club through the streets that pass through that garage, but it will be key card access. No Public Access will be allowable to the resort property through these roads.

- Intersection / Driveway #4
  - Full movement, side street stop control.
- Intersection / Driveway #6
  - Full movement, side street stop control.

Adjacent Intersections Only (Not Driveways)

- Intersection #3
  - Existing All-Way Stop Controlled.
  - Assumed Opening Year with Project and Opening Year with Project and Cumulative Projects will be the same as existing conditions.
- Intersection #5
  - Existing signalized intersection.
  - Assumed Opening Year with Project and Opening Year with Project and Cumulative Projects will be the same as existing conditions.

Figure 1: New Site Plan – Intersection / Driveway Access



Appendix E: LOS Worksheets

Intersection	
Intersection Delay, s/veh	42.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	190	6	3	442	79	14	211	30	75	148	43
Future Vol, veh/h	11	190	6	3	442	79	14	211	30	75	148	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	204	6	3	475	85	15	227	32	81	159	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	17.1	74.8	20.1	20.9
HCM LOS	C	F	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	1%	28%
Vol Thru, %	83%	92%	84%	56%
Vol Right, %	12%	3%	15%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	255	207	524	266
LT Vol	14	11	3	75
Through Vol	211	190	442	148
RT Vol	30	6	79	43
Lane Flow Rate	274	223	563	286
Geometry Grp	1	1	1	1
Degree of Util (X)	0.566	0.462	1.039	0.588
Departure Headway (Hd)	7.629	7.68	6.64	7.606
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	477	472	552	478
Service Time	5.629	5.68	4.64	5.606
HCM Lane V/C Ratio	0.574	0.472	1.02	0.598
HCM Control Delay, s/veh	20.1	17.1	74.8	20.9
HCM Lane LOS	C	C	F	C
HCM 95th-tile Q	3.4	2.4	15.9	3.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	259	7	18	457	173	9	210	32	114	137	75
Future Volume (veh/h)	36	259	7	18	457	173	9	210	32	114	137	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	285	8	20	502	181	10	231	32	125	151	70
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	788	22	47	532	192	26	305	42	158	319	148
Arrive On Green	0.04	0.44	0.44	0.03	0.41	0.41	0.01	0.19	0.19	0.09	0.26	0.26
Sat Flow, veh/h	1781	1810	51	1781	1312	473	1781	1608	223	1781	1209	560
Grp Volume(v), veh/h	40	0	293	20	0	683	10	0	263	125	0	221
Grp Sat Flow(s),veh/h/ln	1781	0	1861	1781	0	1785	1781	0	1830	1781	0	1769
Q Serve(g_s), s	1.8	0.0	8.9	0.9	0.0	31.0	0.5	0.0	11.4	5.8	0.0	8.8
Cycle Q Clear(g_c), s	1.8	0.0	8.9	0.9	0.0	31.0	0.5	0.0	11.4	5.8	0.0	8.8
Prop In Lane	1.00		0.03	1.00		0.27	1.00		0.12	1.00		0.32
Lane Grp Cap(c), veh/h	77	0	811	47	0	724	26	0	348	158	0	467
V/C Ratio(X)	0.52	0.00	0.36	0.42	0.00	0.94	0.38	0.00	0.76	0.79	0.00	0.47
Avail Cap(c_a), veh/h	424	0	811	424	0	743	424	0	762	424	0	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	15.9	40.3	0.0	24.1	41.0	0.0	32.2	37.6	0.0	26.0
Incr Delay (d2), s/veh	2.0	0.0	0.5	2.2	0.0	20.5	3.3	0.0	7.0	3.3	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	3.4	0.4	0.0	15.3	0.2	0.0	5.4	2.5	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.4	0.0	16.4	42.5	0.0	44.6	44.3	0.0	39.2	40.9	0.0	27.6
LnGrp LOS	D		B	D		D	D		D	D		C
Approach Vol, veh/h		333			703			273			346	
Approach Delay, s/veh		19.4			44.5			39.4			32.4	
Approach LOS		B			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	21.8	7.3	42.8	6.0	28.0	9.8	40.3
Change Period (Y+Rc), s	4.7	5.8	5.1	6.2	4.7	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	7.8	13.4	2.9	10.9	2.5	10.8	3.8	33.0
Green Ext Time (p_c), s	0.1	2.5	0.0	2.5	0.0	2.2	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	36.1
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	179	17	37	417	145	91	386	159	121	258	64
Future Volume (veh/h)	30	179	17	37	417	145	91	386	159	121	258	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	208	15	43	485	143	106	449	152	141	300	60
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	959	69	124	750	220	184	679	228	195	788	155
Arrive On Green	0.06	0.29	0.29	0.07	0.28	0.28	0.10	0.26	0.26	0.11	0.27	0.27
Sat Flow, veh/h	1781	3362	241	1781	2707	793	1781	2608	875	1781	2955	583
Grp Volume(v), veh/h	35	109	114	43	317	311	106	305	296	141	179	181
Grp Sat Flow(s),veh/h/ln	1781	1777	1826	1781	1777	1723	1781	1777	1707	1781	1777	1762
Q Serve(g_s), s	1.5	3.7	3.7	1.8	12.3	12.5	4.5	12.0	12.2	6.0	6.4	6.6
Cycle Q Clear(g_c), s	1.5	3.7	3.7	1.8	12.3	12.5	4.5	12.0	12.2	6.0	6.4	6.6
Prop In Lane	1.00		0.13	1.00		0.46	1.00		0.51	1.00		0.33
Lane Grp Cap(c), veh/h	109	507	521	124	492	477	184	463	445	195	474	470
V/C Ratio(X)	0.32	0.22	0.22	0.35	0.64	0.65	0.58	0.66	0.67	0.72	0.38	0.39
Avail Cap(c_a), veh/h	454	792	814	454	792	768	454	792	761	454	792	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	21.4	21.4	34.8	25.0	25.0	33.5	25.9	26.0	33.8	23.5	23.5
Incr Delay (d2), s/veh	0.6	0.4	0.4	0.6	2.4	2.6	1.1	2.7	2.9	1.9	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	1.5	0.8	5.0	5.0	1.9	5.0	4.9	2.5	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.9	21.7	21.7	35.4	27.4	27.6	34.6	28.6	28.9	35.7	24.3	24.4
LnGrp LOS	D	C	C	D	C	C	C	C	C	D	C	C
Approach Vol, veh/h		258			671			707			501	
Approach Delay, s/veh		23.7			28.0			29.6			27.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	26.6	10.2	28.4	12.8	27.1	10.8	27.7
Change Period (Y+Rc), s	4.7	6.2	4.7	6.0	4.7	6.2	6.0	* 6
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	8.6	14.2	3.8	5.7	6.5	8.6	3.5	14.5
Green Ext Time (p_c), s	0.1	5.5	0.0	2.0	0.1	3.3	0.0	5.7

Intersection Summary	
HCM 7th Control Delay, s/veh	27.9
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	332	99	97	389	149	86	395	57	73	280	65
Future Volume (veh/h)	59	332	99	97	389	149	86	395	57	73	280	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	400	114	117	469	153	104	476	35	88	337	64
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1031	291	171	1068	346	168	756	55	163	415	350
Arrive On Green	0.07	0.38	0.38	0.10	0.40	0.40	0.09	0.23	0.23	0.09	0.22	0.22
Sat Flow, veh/h	1781	2732	770	1781	2639	855	1781	3357	246	1781	1870	1574
Grp Volume(v), veh/h	71	259	255	117	315	307	104	251	260	88	337	64
Grp Sat Flow(s),veh/h/ln	1781	1777	1726	1781	1777	1717	1781	1777	1826	1781	1870	1574
Q Serve(g_s), s	3.9	10.6	10.8	6.4	12.8	13.0	5.6	12.8	12.8	4.7	17.1	3.3
Cycle Q Clear(g_c), s	3.9	10.6	10.8	6.4	12.8	13.0	5.6	12.8	12.8	4.7	17.1	3.3
Prop In Lane	1.00		0.45	1.00		0.50	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	123	671	651	171	719	695	168	400	411	163	415	350
V/C Ratio(X)	0.58	0.39	0.39	0.68	0.44	0.44	0.62	0.63	0.63	0.54	0.81	0.18
Avail Cap(c_a), veh/h	164	671	651	182	719	695	182	521	535	182	548	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	22.7	22.8	43.7	21.5	21.6	43.5	35.0	35.0	43.4	36.9	31.5
Incr Delay (d2), s/veh	1.5	1.6	1.7	7.4	1.9	2.0	3.6	3.4	3.4	1.0	9.8	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.4	4.4	3.1	5.4	5.3	2.6	5.6	5.8	2.1	8.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.7	24.3	24.4	51.2	23.5	23.6	47.2	38.4	38.4	44.5	46.7	32.1
LnGrp LOS	D	C	C	D	C	C	D	D	D	D	D	C
Approach Vol, veh/h		585			739			615			489	
Approach Delay, s/veh		27.1			27.9			39.9			44.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	28.3	14.3	43.5	14.1	28.0	11.6	46.3
Change Period (Y+Rc), s	4.7	5.8	4.7	5.8	4.7	5.8	4.7	5.8
Max Green Setting (Gmax), s	10.2	29.3	10.2	29.3	10.2	29.3	9.2	30.3
Max Q Clear Time (g_c+I1), s	6.7	14.8	8.4	12.8	7.6	19.1	5.9	15.0
Green Ext Time (p_c), s	0.0	4.2	0.0	3.6	0.0	2.6	0.0	4.4

Intersection Summary	
HCM 7th Control Delay, s/veh	34.1
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	431	97	32	738	87	236	466	81	68	202	81
Future Volume (veh/h)	65	431	97	32	738	87	236	466	81	68	202	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	484	89	36	829	90	265	524	80	76	227	51
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	2315	416	52	2380	257	282	673	102	97	329	72
Arrive On Green	0.05	0.53	0.53	0.03	0.51	0.51	0.16	0.22	0.22	0.05	0.11	0.11
Sat Flow, veh/h	1781	4349	782	1781	4677	505	1781	3089	470	1781	2892	637
Grp Volume(v), veh/h	73	376	197	36	602	317	265	301	303	76	138	140
Grp Sat Flow(s),veh/h/ln	1781	1702	1727	1781	1702	1778	1781	1777	1782	1781	1777	1752
Q Serve(g_s), s	4.9	7.0	7.2	2.4	12.7	12.8	17.7	19.1	19.3	5.1	8.9	9.3
Cycle Q Clear(g_c), s	4.9	7.0	7.2	2.4	12.7	12.8	17.7	19.1	19.3	5.1	8.9	9.3
Prop In Lane	1.00		0.45	1.00		0.28	1.00		0.26	1.00		0.36
Lane Grp Cap(c), veh/h	93	1812	919	52	1733	905	282	387	388	97	202	199
V/C Ratio(X)	0.78	0.21	0.21	0.69	0.35	0.35	0.94	0.78	0.78	0.79	0.68	0.70
Avail Cap(c_a), veh/h	282	1812	919	282	1733	905	282	459	460	282	459	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	14.8	14.8	57.7	17.6	17.6	49.9	44.2	44.2	56.1	51.1	51.2
Incr Delay (d2), s/veh	5.3	0.3	0.5	6.0	0.6	1.1	37.2	5.6	5.9	5.2	1.5	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.6	2.8	1.1	4.7	5.1	10.5	8.7	8.9	2.4	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	15.0	15.3	63.8	18.1	18.7	87.2	49.8	50.1	61.3	52.6	52.9
LnGrp LOS	E	B	B	E	B	B	F	D	D	E	D	D
Approach Vol, veh/h		646			955			869			354	
Approach Delay, s/veh		20.4			20.0			61.3			54.6	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	68.9	24.0	18.6	11.3	66.1	11.5	31.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	19.0	31.0	19.0	31.0	19.0	31.0	19.0	31.0
Max Q Clear Time (g_c+I1), s	14.4	9.2	19.7	11.3	6.9	14.8	7.1	21.3
Green Ext Time (p_c), s	0.0	0.5	0.0	0.2	0.0	0.8	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	37.1
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	352	175	90	374	74	239	413	302	82	184	189
Future Volume (veh/h)	106	352	175	90	374	74	239	413	302	82	184	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	387	56	99	411	22	263	454	258	90	202	43
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	494	414	194	924	408	313	568	320	189	358	299
Arrive On Green	0.11	0.26	0.26	0.11	0.26	0.26	0.18	0.26	0.26	0.11	0.19	0.19
Sat Flow, veh/h	1781	1870	1567	1781	3554	1567	1781	2180	1229	1781	1870	1560
Grp Volume(v), veh/h	116	387	56	99	411	22	263	369	343	90	202	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1567	1781	1777	1567	1781	1777	1632	1781	1870	1560
Q Serve(g_s), s	5.1	15.7	2.2	4.3	7.9	0.9	11.7	15.9	16.1	3.9	8.0	1.9
Cycle Q Clear(g_c), s	5.1	15.7	2.2	4.3	7.9	0.9	11.7	15.9	16.1	3.9	8.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	202	494	414	194	924	408	313	463	425	189	358	299
V/C Ratio(X)	0.58	0.78	0.14	0.51	0.44	0.05	0.84	0.80	0.81	0.48	0.56	0.14
Avail Cap(c_a), veh/h	434	912	764	434	1733	764	869	542	498	869	570	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	28.0	23.0	34.5	25.4	22.8	32.7	28.3	28.4	34.5	30.1	27.6
Incr Delay (d2), s/veh	2.6	2.8	0.1	2.1	0.3	0.1	6.1	7.1	8.2	1.8	1.4	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	6.7	0.8	1.8	3.1	0.3	5.2	7.1	6.7	1.7	3.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.1	30.8	23.2	36.5	25.7	22.8	38.8	35.4	36.5	36.3	31.5	27.8
LnGrp LOS	D	C	C	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		559			532			975			335	
Approach Delay, s/veh		31.3			27.6			36.7			32.3	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	27.7	19.4	21.0	14.3	27.3	13.7	26.7
Change Period (Y+Rc), s	5.0	6.0	5.0	5.3	5.0	6.0	5.0	5.3
Max Green Setting (Gmax), s	20.0	40.0	40.0	25.0	20.0	40.0	40.0	25.0
Max Q Clear Time (g_c+I1), s	16.3	17.7	13.7	10.0	7.1	9.9	5.9	18.1
Green Ext Time (p_c), s	0.2	2.2	0.7	0.9	0.2	2.5	0.2	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	32.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	199	517	149	204	0	298	11	127	5	14	25
Future Volume (veh/h)	25	199	517	149	204	0	298	11	127	5	14	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	224	228	167	229	0	335	41	31	6	16	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	563	442	208	914	0	439	654	554	8	569	232
Arrive On Green	0.02	0.16	0.16	0.12	0.26	0.00	0.12	0.35	0.35	0.00	0.23	0.23
Sat Flow, veh/h	1781	3554	1555	1781	3647	0	3563	1870	1585	1781	2461	1005
Grp Volume(v), veh/h	28	224	228	167	229	0	335	41	31	6	11	12
Grp Sat Flow(s),veh/h/ln	1781	1777	1555	1781	1777	0	1781	1870	1585	1781	1777	1689
Q Serve(g_s), s	1.0	3.6	7.8	5.7	3.2	0.0	5.7	0.9	0.8	0.2	0.3	0.3
Cycle Q Clear(g_c), s	1.0	3.6	7.8	5.7	3.2	0.0	5.7	0.9	0.8	0.2	0.3	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	33	563	442	208	914	0	439	654	554	8	410	390
V/C Ratio(X)	0.85	0.40	0.52	0.80	0.25	0.00	0.76	0.06	0.06	0.71	0.03	0.03
Avail Cap(c_a), veh/h	906	2879	1455	906	2879	0	1415	654	554	425	410	390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	23.8	19.0	27.1	18.6	0.0	26.7	13.6	13.6	31.3	18.7	18.7
Incr Delay (d2), s/veh	19.5	0.2	0.3	2.7	0.1	0.0	1.0	0.2	0.2	72.3	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.4	2.6	2.4	1.2	0.0	2.4	0.4	0.3	0.3	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.3	24.0	19.4	29.8	18.6	0.0	27.7	13.8	13.8	103.6	18.9	18.9
LnGrp LOS	D	C	B	C	B		C	B	B	F	B	B
Approach Vol, veh/h		480			396			407			29	
Approach Delay, s/veh		23.3			23.3			25.3			36.4	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	16.4	13.0	20.6	6.8	22.6	5.5	28.1
Change Period (Y+Rc), s	5.6	6.4	5.2	6.1	5.6	6.4	5.2	6.1
Max Green Setting (Gmax), s	32.0	51.0	25.0	12.0	32.0	51.0	15.0	22.0
Max Q Clear Time (g_c+I1), s	7.7	9.8	7.7	2.3	3.0	5.2	2.2	2.9
Green Ext Time (p_c), s	0.0	0.2	0.1	0.0	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	24.2
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	533	61	114	314	0	0	0	0	117	0	155
Future Volume (veh/h)	0	533	61	114	314	0	0	0	0	117	0	155
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	599	65	128	353	0				131	0	25
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	919	100	165	1344	0				178	0	158
Arrive On Green	0.00	0.55	0.55	0.09	0.72	0.00				0.10	0.00	0.10
Sat Flow, veh/h	0	1658	180	1781	1870	0				1781	0	1585
Grp Volume(v), veh/h	0	0	664	128	353	0				131	0	25
Grp Sat Flow(s),veh/h/ln	0	0	1838	1781	1870	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	16.4	4.6	4.3	0.0				4.6	0.0	0.9
Cycle Q Clear(g_c), s	0.0	0.0	16.4	4.6	4.3	0.0				4.6	0.0	0.9
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	1018	165	1344	0				178	0	158
V/C Ratio(X)	0.00	0.00	0.65	0.78	0.26	0.00				0.74	0.00	0.16
Avail Cap(c_a), veh/h	0	0	1018	493	1344	0				384	0	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	10.1	28.8	3.2	0.0				28.4	0.0	26.8
Incr Delay (d2), s/veh	0.0	0.0	3.2	2.9	0.5	0.0				2.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.1	1.8	0.6	0.0				2.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	13.4	31.7	3.6	0.0				30.7	0.0	26.9
LnGrp LOS			B	C	A					C		C
Approach Vol, veh/h		664			481						156	
Approach Delay, s/veh		13.4			11.1						30.1	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.7	42.0		12.3		52.7
Change Period (Y+Rc), s	4.7	6.0		5.8		6.0
Max Green Setting (Gmax), s	18.3	16.2		14.0		39.2
Max Q Clear Time (g_c+I1), s	6.6	18.4		6.6		6.3
Green Ext Time (p_c), s	0.1	0.0		0.2		1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	14.5
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	322	0	0	310	137	125	2	144	0	0	0
Future Volume (veh/h)	327	322	0	0	310	137	125	2	144	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	355	350	0	0	337	50	136	2	87			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	559	1226	0	0	886	395	168	2	107			
Arrive On Green	0.31	0.66	0.00	0.00	0.25	0.25	0.16	0.16	0.16			
Sat Flow, veh/h	1781	1870	0	0	3647	1585	1028	15	658			
Grp Volume(v), veh/h	355	350	0	0	337	50	225	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1777	1585	1701	0	0			
Q Serve(g_s), s	11.1	5.2	0.0	0.0	5.1	1.6	8.3	0.0	0.0			
Cycle Q Clear(g_c), s	11.1	5.2	0.0	0.0	5.1	1.6	8.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.60		0.39			
Lane Grp Cap(c), veh/h	559	1226	0	0	886	395	277	0	0			
V/C Ratio(X)	0.63	0.29	0.00	0.00	0.38	0.13	0.81	0.00	0.00			
Avail Cap(c_a), veh/h	559	1226	0	0	886	395	471	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.61	0.61	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	19.1	4.7	0.0	0.0	20.2	18.9	26.2	0.0	0.0			
Incr Delay (d2), s/veh	1.1	0.4	0.0	0.0	1.2	0.7	2.2	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.9	1.1	0.0	0.0	1.9	0.6	3.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.2	5.1	0.0	0.0	21.5	19.6	28.4	0.0	0.0			
LnGrp LOS	C	A			C	B	C					
Approach Vol, veh/h		705			387			225				
Approach Delay, s/veh		12.7			21.2			28.4				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		48.6			26.4	22.2		16.4				
Change Period (Y+Rc), s		6.0			6.0	* 6		5.8				
Max Green Setting (Gmax), s		35.2			14.0	* 16		18.0				
Max Q Clear Time (g_c+I1), s		7.2			13.1	7.1		10.3				
Green Ext Time (p_c), s		1.0			0.1	0.9		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.9
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↱
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	0	0	1084
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Ctrl Dly (s/v)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	0	1022	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1622	-	-	-	1022	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Intersection Delay, s/veh	71.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	436	6	6	296	61	11	118	13	111	127	20
Future Vol, veh/h	29	436	6	6	296	61	11	118	13	111	127	20
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	538	7	7	365	75	14	146	16	137	157	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	127.9	48	18.6	28.9
HCM LOS	F	E	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	6%	2%	43%
Vol Thru, %	83%	93%	82%	49%
Vol Right, %	9%	1%	17%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	142	471	363	258
LT Vol	11	29	6	111
Through Vol	118	436	296	127
RT Vol	13	6	61	20
Lane Flow Rate	175	581	448	319
Geometry Grp	1	1	1	1
Degree of Util (X)	0.418	1.187	0.897	0.698
Departure Headway (Hd)	9.171	7.348	7.718	8.48
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	394	500	475	430
Service Time	7.171	5.36	5.718	6.48
HCM Lane V/C Ratio	0.444	1.162	0.943	0.742
HCM Control Delay, s/veh	18.6	127.9	48	28.9
HCM Lane LOS	C	F	E	D
HCM 95th-tile Q	2	21.5	9.9	5.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	512	4	14	325	105	10	187	29	156	140	13
Future Volume (veh/h)	30	512	4	14	325	105	10	187	29	156	140	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	539	4	15	342	104	11	197	27	164	147	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	665	5	39	432	131	30	286	39	207	473	39
Arrive On Green	0.05	0.36	0.36	0.02	0.31	0.31	0.02	0.18	0.18	0.12	0.28	0.28
Sat Flow, veh/h	1781	1854	14	1781	1376	419	1781	1610	221	1781	1706	139
Grp Volume(v), veh/h	32	0	543	15	0	446	11	0	224	164	0	159
Grp Sat Flow(s),veh/h/ln	1781	0	1868	1781	0	1795	1781	0	1831	1781	0	1845
Q Serve(g_s), s	1.2	0.0	17.6	0.6	0.0	15.2	0.4	0.0	7.7	6.0	0.0	4.6
Cycle Q Clear(g_c), s	1.2	0.0	17.6	0.6	0.0	15.2	0.4	0.0	7.7	6.0	0.0	4.6
Prop In Lane	1.00		0.01	1.00		0.23	1.00		0.12	1.00		0.08
Lane Grp Cap(c), veh/h	90	0	670	39	0	563	30	0	326	207	0	512
V/C Ratio(X)	0.36	0.00	0.81	0.39	0.00	0.79	0.37	0.00	0.69	0.79	0.00	0.31
Avail Cap(c_a), veh/h	532	0	977	532	0	939	532	0	957	532	0	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.7	0.0	19.4	32.3	0.0	21.0	32.6	0.0	25.8	28.8	0.0	19.1
Incr Delay (d2), s/veh	0.9	0.0	4.8	2.3	0.0	4.3	2.9	0.0	5.4	2.6	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	7.1	0.2	0.0	6.0	0.2	0.0	3.5	2.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.6	0.0	24.2	34.6	0.0	25.3	35.4	0.0	31.2	31.4	0.0	19.9
LnGrp LOS	C		C	C		C	D		C	C		B
Approach Vol, veh/h		575			461			235			323	
Approach Delay, s/veh		24.6			25.6			31.4			25.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	17.7	6.6	30.2	5.8	24.4	9.6	27.2
Change Period (Y+Rc), s	4.7	5.8	5.1	6.2	4.7	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	8.0	9.7	2.6	19.6	2.4	6.6	3.2	17.2
Green Ext Time (p_c), s	0.2	2.2	0.0	4.4	0.0	1.5	0.0	3.8

Intersection Summary	
HCM 7th Control Delay, s/veh	26.1
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	385	32	18	279	126	43	249	80	182	272	45
Future Volume (veh/h)	45	385	32	18	279	126	43	249	80	182	272	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	433	33	21	313	100	48	280	66	204	306	42
Peak Hour Factor	0.89	0.89	0.89	0.86	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	960	73	78	603	189	144	548	127	252	793	108
Arrive On Green	0.08	0.29	0.29	0.04	0.23	0.23	0.08	0.19	0.19	0.14	0.25	0.25
Sat Flow, veh/h	1781	3346	254	1781	2657	833	1781	2859	662	1781	3141	427
Grp Volume(v), veh/h	51	229	237	21	207	206	48	172	174	204	172	176
Grp Sat Flow(s),veh/h/ln	1781	1777	1823	1781	1777	1714	1781	1777	1745	1781	1777	1791
Q Serve(g_s), s	1.7	6.8	6.8	0.7	6.6	6.8	1.6	5.6	5.7	7.1	5.1	5.2
Cycle Q Clear(g_c), s	1.7	6.8	6.8	0.7	6.6	6.8	1.6	5.6	5.7	7.1	5.1	5.2
Prop In Lane	1.00		0.14	1.00		0.49	1.00		0.38	1.00		0.24
Lane Grp Cap(c), veh/h	149	510	523	78	403	389	144	341	335	252	449	452
V/C Ratio(X)	0.34	0.45	0.45	0.27	0.51	0.53	0.33	0.51	0.52	0.81	0.38	0.39
Avail Cap(c_a), veh/h	554	968	993	554	968	933	554	968	950	554	968	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	18.8	18.8	29.7	21.7	21.8	27.9	23.2	23.3	26.8	19.9	19.9
Incr Delay (d2), s/veh	0.5	1.1	1.0	0.7	1.7	1.9	0.5	2.0	2.1	2.4	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.6	2.7	0.3	2.6	2.6	0.7	2.3	2.3	2.9	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.3	19.8	19.8	30.4	23.5	23.7	28.4	25.2	25.5	29.1	20.8	20.9
LnGrp LOS	C	B	B	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		517			434			394			552	
Approach Delay, s/veh		20.7			23.9			25.7			23.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	18.5	7.5	24.5	9.9	22.4	11.4	20.6
Change Period (Y+Rc), s	4.7	6.2	4.7	6.0	4.7	6.2	6.0	* 6
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	9.1	7.7	2.7	8.8	3.6	7.2	3.7	8.8
Green Ext Time (p_c), s	0.2	3.2	0.0	4.5	0.0	3.2	0.0	3.9

Intersection Summary	
HCM 7th Control Delay, s/veh	23.4
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	479	68	56	342	95	53	250	58	144	370	52
Future Volume (veh/h)	83	479	68	56	342	95	53	250	58	144	370	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	510	62	60	364	79	56	266	42	153	394	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1224	148	144	1140	245	141	687	107	182	460	388
Arrive On Green	0.07	0.38	0.38	0.08	0.39	0.39	0.08	0.22	0.22	0.10	0.25	0.25
Sat Flow, veh/h	1781	3188	386	1781	2910	625	1781	3080	480	1781	1870	1575
Grp Volume(v), veh/h	88	283	289	60	221	222	56	152	156	153	394	16
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1781	1777	1758	1781	1777	1784	1781	1870	1575
Q Serve(g_s), s	4.8	11.7	11.8	3.2	8.6	8.8	3.0	7.3	7.4	8.4	20.1	0.8
Cycle Q Clear(g_c), s	4.8	11.7	11.8	3.2	8.6	8.8	3.0	7.3	7.4	8.4	20.1	0.8
Prop In Lane	1.00		0.21	1.00		0.36	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	130	682	690	144	696	689	141	396	398	182	460	388
V/C Ratio(X)	0.68	0.42	0.42	0.42	0.32	0.32	0.40	0.38	0.39	0.84	0.86	0.04
Avail Cap(c_a), veh/h	164	682	690	182	696	689	182	521	523	182	548	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	22.6	22.6	43.7	21.1	21.2	43.8	33.0	33.1	44.1	36.0	28.7
Incr Delay (d2), s/veh	3.6	1.6	1.6	0.7	1.2	1.2	0.7	1.3	1.3	27.1	13.4	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	4.9	5.0	1.4	3.6	3.7	1.3	3.1	3.2	4.9	10.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.8	24.2	24.2	44.4	22.3	22.4	44.5	34.3	34.4	71.2	49.4	28.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	D	C
Approach Vol, veh/h		660			503			364			563	
Approach Delay, s/veh		27.5			25.0			35.9			54.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	28.1	12.8	44.2	12.6	30.4	12.0	45.0
Change Period (Y+Rc), s	4.7	5.8	4.7	5.8	4.7	5.8	4.7	5.8
Max Green Setting (Gmax), s	10.2	29.3	10.2	29.3	10.2	29.3	9.2	30.3
Max Q Clear Time (g_c+I1), s	10.4	9.4	5.2	13.8	5.0	22.1	6.8	10.8
Green Ext Time (p_c), s	0.0	2.8	0.0	3.9	0.0	2.2	0.0	3.3

Intersection Summary	
HCM 7th Control Delay, s/veh	35.7
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	745	248	51	574	59	130	252	35	99	412	95
Future Volume (veh/h)	68	745	248	51	574	59	130	252	35	99	412	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	776	225	53	598	55	135	262	27	103	429	81
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	2101	603	68	2481	226	161	618	63	127	510	96
Arrive On Green	0.05	0.53	0.53	0.04	0.52	0.52	0.09	0.19	0.19	0.07	0.17	0.17
Sat Flow, veh/h	1781	3937	1131	1781	4761	434	1781	3252	332	1781	2985	559
Grp Volume(v), veh/h	71	670	331	53	426	227	135	142	147	103	254	256
Grp Sat Flow(s),veh/h/ln	1781	1702	1663	1781	1702	1791	1781	1777	1807	1781	1777	1767
Q Serve(g_s), s	4.7	13.7	13.9	3.5	8.2	8.3	9.0	8.4	8.6	6.8	16.6	16.8
Cycle Q Clear(g_c), s	4.7	13.7	13.9	3.5	8.2	8.3	9.0	8.4	8.6	6.8	16.6	16.8
Prop In Lane	1.00		0.68	1.00		0.24	1.00		0.18	1.00		0.32
Lane Grp Cap(c), veh/h	91	1816	887	68	1774	933	161	337	343	127	304	302
V/C Ratio(X)	0.78	0.37	0.37	0.77	0.24	0.24	0.84	0.42	0.43	0.81	0.84	0.85
Avail Cap(c_a), veh/h	282	1816	887	282	1774	933	282	459	467	282	459	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	16.2	16.3	57.2	15.7	15.8	53.7	42.8	42.9	54.9	48.1	48.2
Incr Delay (d2), s/veh	5.4	0.6	1.2	6.8	0.3	0.6	4.4	0.3	0.3	4.6	5.1	5.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.0	5.2	1.7	3.0	3.3	4.1	3.7	3.8	3.2	7.6	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.6	16.8	17.5	64.0	16.1	16.4	58.1	43.1	43.2	59.5	53.2	54.1
LnGrp LOS	E	B	B	E	B	B	E	D	D	E	D	D
Approach Vol, veh/h		1072			706			424			613	
Approach Delay, s/veh		20.0			19.8			47.9			54.6	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	69.0	15.8	25.5	11.1	67.5	13.6	27.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	19.6	31.0	19.0	31.0	19.0	31.0	19.0	31.0
Max Q Clear Time (g_c+I1), s	5.5	15.9	11.0	18.8	6.7	10.3	8.8	10.6
Green Ext Time (p_c), s	0.0	0.9	0.0	0.3	0.0	0.5	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	31.7
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	420	371	213	424	61	186	270	163	65	370	75
Future Volume (veh/h)	45	420	371	213	424	61	186	270	163	65	370	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	442	155	224	446	24	196	284	121	68	389	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	524	439	259	1253	554	235	682	283	150	434	363
Arrive On Green	0.07	0.28	0.28	0.15	0.35	0.35	0.13	0.28	0.28	0.08	0.23	0.23
Sat Flow, veh/h	1781	1870	1568	1781	3554	1572	1781	2440	1012	1781	1870	1565
Grp Volume(v), veh/h	47	442	155	224	446	24	196	205	200	68	389	19
Grp Sat Flow(s),veh/h/ln	1781	1870	1568	1781	1777	1572	1781	1777	1675	1781	1870	1565
Q Serve(g_s), s	2.5	22.5	8.0	12.4	9.4	1.0	10.8	9.5	9.9	3.7	20.4	1.0
Cycle Q Clear(g_c), s	2.5	22.5	8.0	12.4	9.4	1.0	10.8	9.5	9.9	3.7	20.4	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	129	524	439	259	1253	554	235	497	468	150	434	363
V/C Ratio(X)	0.36	0.84	0.35	0.87	0.36	0.04	0.84	0.41	0.43	0.45	0.90	0.05
Avail Cap(c_a), veh/h	353	741	621	353	1408	623	706	497	468	706	463	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	34.3	29.1	42.2	24.2	21.5	42.8	29.6	29.8	44.0	37.6	30.1
Incr Delay (d2), s/veh	1.7	6.3	0.5	15.3	0.2	0.0	7.6	0.5	0.6	2.1	19.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	10.4	2.9	6.3	3.7	0.4	5.1	3.9	3.9	1.7	11.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.3	40.6	29.5	57.5	24.4	21.5	50.4	30.2	30.4	46.1	56.6	30.2
LnGrp LOS	D	D	C	E	C	C	D	C	C	D	E	C
Approach Vol, veh/h		644			694			601			476	
Approach Delay, s/veh		38.3			35.0			36.8			54.0	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	34.3	18.3	28.7	12.3	41.6	13.5	33.5
Change Period (Y+Rc), s	5.0	6.0	5.0	5.3	5.0	6.0	5.0	5.3
Max Green Setting (Gmax), s	20.0	40.0	40.0	25.0	20.0	40.0	40.0	25.0
Max Q Clear Time (g_c+I1), s	14.4	24.5	12.8	22.4	4.5	11.4	5.7	11.9
Green Ext Time (p_c), s	0.3	2.6	0.5	0.6	0.1	2.7	0.2	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	40.1
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	247	374	148	229	2	472	6	289	2	9	23
Future Volume (veh/h)	13	247	374	148	229	2	472	6	289	2	9	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	252	149	151	234	2	482	0	116	2	9	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	408	441	191	767	7	592	0	1195	3	454	272
Arrive On Green	0.01	0.11	0.11	0.11	0.21	0.21	0.17	0.00	0.38	0.00	0.21	0.21
Sat Flow, veh/h	1781	3554	1551	1781	3610	31	3563	0	3170	1781	2135	1282
Grp Volume(v), veh/h	13	252	149	151	115	121	482	0	116	2	7	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1777	1864	1781	0	1585	1781	1777	1640
Q Serve(g_s), s	0.4	3.9	4.5	4.8	3.2	3.2	7.6	0.0	1.4	0.1	0.2	0.2
Cycle Q Clear(g_c), s	0.4	3.9	4.5	4.8	3.2	3.2	7.6	0.0	1.4	0.1	0.2	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	17	408	441	191	378	396	592	0	1195	3	378	348
V/C Ratio(X)	0.75	0.62	0.34	0.79	0.30	0.31	0.81	0.00	0.10	0.66	0.02	0.02
Avail Cap(c_a), veh/h	977	3105	1618	977	1553	1629	1526	0	1195	458	378	348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	24.6	16.7	25.4	19.4	19.4	23.5	0.0	11.8	29.1	18.2	18.2
Incr Delay (d2), s/veh	20.7	0.6	0.2	2.7	0.2	0.2	1.1	0.0	0.2	131.2	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	1.5	2.0	1.2	1.2	3.0	0.0	0.5	0.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.5	25.2	16.9	28.2	19.5	19.5	24.5	0.0	11.9	160.4	18.3	18.3
LnGrp LOS	D	C	B	C	B	B	C		B	F	B	B
Approach Vol, veh/h		414			387			598			17	
Approach Delay, s/veh		22.9			22.9			22.1			35.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	13.1	14.9	18.5	6.2	18.8	5.3	28.1
Change Period (Y+Rc), s	5.6	6.4	5.2	6.1	5.6	6.4	5.2	6.1
Max Green Setting (Gmax), s	32.0	51.0	25.0	12.0	32.0	51.0	15.0	22.0
Max Q Clear Time (g_c+I1), s	6.3	6.5	9.6	2.2	2.4	5.2	2.1	3.4
Green Ext Time (p_c), s	0.0	0.2	0.1	0.0	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	22.7
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	406	110	173	349	0	0	0	0	137	5	311
Future Volume (veh/h)	0	406	110	173	349	0	0	0	0	137	5	311
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	427	104	182	367	0				144	5	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	735	179	226	1319	0				195	7	179
Arrive On Green	0.00	0.51	0.51	0.13	0.71	0.00				0.11	0.11	0.11
Sat Flow, veh/h	0	1453	354	1781	1870	0				1724	60	1585
Grp Volume(v), veh/h	0	0	531	182	367	0				149	0	49
Grp Sat Flow(s),veh/h/ln	0	0	1807	1781	1870	0				1784	0	1585
Q Serve(g_s), s	0.0	0.0	13.4	6.5	4.7	0.0				5.3	0.0	1.8
Cycle Q Clear(g_c), s	0.0	0.0	13.4	6.5	4.7	0.0				5.3	0.0	1.8
Prop In Lane	0.00		0.20	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	0	914	226	1319	0				202	0	179
V/C Ratio(X)	0.00	0.00	0.58	0.80	0.28	0.00				0.74	0.00	0.27
Avail Cap(c_a), veh/h	0	0	914	438	1319	0				384	0	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	11.2	27.6	3.5	0.0				27.9	0.0	26.4
Incr Delay (d2), s/veh	0.0	0.0	2.7	2.4	0.5	0.0				2.0	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.4	2.5	0.8	0.0				2.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	13.9	30.0	4.0	0.0				29.9	0.0	26.7
LnGrp LOS			B	C	A					C		C
Approach Vol, veh/h		531			549						198	
Approach Delay, s/veh		13.9			12.6						29.1	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	13.0	38.9		13.1		51.9
Change Period (Y+Rc), s	4.7	6.0		5.8		6.0
Max Green Setting (Gmax), s	16.3	18.2		14.0		39.2
Max Q Clear Time (g_c+I1), s	8.5	15.4		7.3		6.7
Green Ext Time (p_c), s	0.1	0.6		0.3		1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	15.7
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	375	0	0	444	233	79	2	161	0	0	0
Future Volume (veh/h)	174	375	0	0	444	233	79	2	161	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	189	408	0	0	483	104	86	2	55			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	494	1330	0	0	1214	541	110	3	70			
Arrive On Green	0.28	0.71	0.00	0.00	0.34	0.34	0.11	0.11	0.11			
Sat Flow, veh/h	1781	1870	0	0	3647	1585	1023	24	654			
Grp Volume(v), veh/h	189	408	0	0	483	104	143	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1777	1585	1701	0	0			
Q Serve(g_s), s	5.6	5.2	0.0	0.0	6.7	3.0	5.3	0.0	0.0			
Cycle Q Clear(g_c), s	5.6	5.2	0.0	0.0	6.7	3.0	5.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.60		0.38			
Lane Grp Cap(c), veh/h	494	1330	0	0	1214	541	183	0	0			
V/C Ratio(X)	0.38	0.31	0.00	0.00	0.40	0.19	0.78	0.00	0.00			
Avail Cap(c_a), veh/h	494	1330	0	0	1214	541	366	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.66	0.66	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	19.0	3.5	0.0	0.0	16.3	15.1	28.3	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	1.0	0.8	2.8	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.9	0.8	0.0	0.0	2.4	1.0	2.2	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.1	3.9	0.0	0.0	17.3	15.9	31.0	0.0	0.0			
LnGrp LOS	B	A			B	B	C					
Approach Vol, veh/h		597			587			143				
Approach Delay, s/veh		8.7			17.0			31.0				
Approach LOS		A			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		52.2			24.0	28.2		12.8				
Change Period (Y+Rc), s		6.0			6.0	* 6		5.8				
Max Green Setting (Gmax), s		39.2			12.0	* 22		14.0				
Max Q Clear Time (g_c+I1), s		7.2			7.6	8.7		7.3				
Green Ext Time (p_c), s		1.2			0.1	1.6		0.2				

Intersection Summary	
HCM 7th Control Delay, s/veh	14.8
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↱
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	0	0	1084
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Ctrl Dly (s/v)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	0	1022	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1622	-	-	-	1022	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	281	1	25	174
Future Vol, veh/h	1	3	281	1	25	174
Conflicting Peds, #/hr	0	3	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	3	305	1	27	189

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	552	159	0	0	310	0
Stage 1	309	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	479	858	-	-	1249	-
Stage 1	719	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	466	853	-	-	1246	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.13	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	706	226	-
HCM Lane V/C Ratio	-	-	0.006	0.022	-
HCM Ctrl Dly (s/v)	-	-	10.1	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	284	0	0	199
Future Vol, veh/h	0	5	284	0	0	199
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	309	0	0	216

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	154	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	865	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	865	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.19	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	865	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Ctrl Dly (s/v)	-	-	9.2	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Intersection Delay, s/veh	95
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	221	8	14	508	93	17	238	34	86	177	48
Future Vol, veh/h	13	221	8	14	508	93	17	238	34	86	177	48
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	238	9	15	546	100	18	256	37	92	190	52
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	23.5	187.5	25.3	32.5
HCM LOS	C	F	D	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	0%	5%	2%	28%
Vol Thru, %	93%	0%	91%	83%	57%
Vol Right, %	0%	100%	3%	15%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	255	34	242	615	311
LT Vol	17	0	13	14	86
Through Vol	238	0	221	508	177
RT Vol	0	34	8	93	48
Lane Flow Rate	274	37	260	661	334
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.638	0.078	0.581	1.338	0.732
Departure Headway (Hd)	9.333	8.568	8.896	7.286	8.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	389	421	409	496	411
Service Time	7.033	6.268	6.896	5.357	6.864
HCM Lane V/C Ratio	0.704	0.088	0.636	1.333	0.813
HCM Control Delay, s/veh	27.1	12	23.5	187.5	32.5
HCM Lane LOS	D	B	C	F	D
HCM 95th-tile Q	4.3	0.3	3.6	29.1	5.8

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	341	0	0	615	0	3
Future Vol, veh/h	341	0	0	615	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	371	0	0	668	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	185
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	0	0	-	0	826
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	826
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	9.38
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	826	-	-
HCM Lane V/C Ratio	0.004	-	-
HCM Ctrl Dly (s/v)	9.4	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

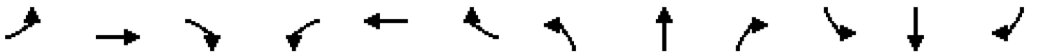
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	341	3	19	610	5	9
Future Vol, veh/h	341	3	19	610	5	9
Conflicting Peds, #/hr	0	3	3	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	371	3	21	663	5	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	377	0	1080	193
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	704	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1180	-	227	817
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1176	-	220	812
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	476	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.25	14.03
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	414	-	-	54	-
HCM Lane V/C Ratio	0.037	-	-	0.018	-
HCM Ctrl Dly (s/v)	14	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	290	13	22	508	191	15	277	40	126	167	106
Future Volume (veh/h)	47	290	13	22	508	191	15	277	40	126	167	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	319	13	24	558	183	16	304	41	138	184	47
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	760	644	53	508	167	39	376	51	171	1261	304
Arrive On Green	0.05	0.41	0.41	0.03	0.38	0.38	0.02	0.23	0.23	0.10	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1349	442	1781	1614	218	1781	4106	990
Grp Volume(v), veh/h	52	319	13	24	0	741	16	0	345	138	151	80
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1791	1781	0	1831	1781	1702	1692
Q Serve(g_s), s	2.7	11.3	0.5	1.2	0.0	35.0	0.8	0.0	16.5	7.1	3.0	3.2
Cycle Q Clear(g_c), s	2.7	11.3	0.5	1.2	0.0	35.0	0.8	0.0	16.5	7.1	3.0	3.2
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.12	1.00		0.59
Lane Grp Cap(c), veh/h	85	760	644	53	0	675	39	0	427	171	1045	520
V/C Ratio(X)	0.61	0.42	0.02	0.45	0.00	1.10	0.41	0.00	0.81	0.81	0.14	0.15
Avail Cap(c_a), veh/h	384	760	644	384	0	675	384	0	690	384	1283	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	19.7	16.5	44.3	0.0	28.9	44.8	0.0	33.7	41.1	23.3	23.4
Incr Delay (d2), s/veh	2.6	0.6	0.0	2.2	0.0	64.5	2.6	0.0	7.6	3.4	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.6	0.2	0.5	0.0	25.4	0.4	0.0	7.8	3.1	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.0	20.3	16.5	46.5	0.0	93.5	47.4	0.0	41.2	44.6	23.5	23.7
LnGrp LOS	D	C	B	D		F	D		D	D	C	C
Approach Vol, veh/h		384			765			361			369	
Approach Delay, s/veh		23.7			92.0			41.5			31.4	
Approach LOS		C			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	27.4	7.9	44.0	6.7	34.3	10.6	41.2
Change Period (Y+Rc), s	4.7	5.8	5.1	6.2	4.7	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	9.1	18.5	3.2	13.3	2.8	5.2	4.7	37.0
Green Ext Time (p_c), s	0.1	3.1	0.0	2.8	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	56.4
HCM 7th LOS	E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	54	2	1	278	182	20
Future Vol, veh/h	54	2	1	278	182	20
Conflicting Peds, #/hr	0	3	0	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	2	1	302	198	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	516	116	223	0	-	0
Stage 1	212	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Critical Hdwy	6.08	7.13	5.33	-	-	-
Critical Hdwy Stg 1	6.63	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.669	3.919	3.119	-	-	-
Pot Cap-1 Maneuver	528	777	913	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	524	773	910	-	-	-
Mov Cap-2 Maneuver	524	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.67	0.03	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	6	-	530	-	-
HCM Lane V/C Ratio	0.001	-	0.115	-	-
HCM Ctrl Dly (s/v)	9	0	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	198	21	44	461	162	104	432	176	135	295	71
Future Volume (veh/h)	33	198	21	44	461	162	104	432	176	135	295	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	230	15	51	536	51	121	502	174	157	343	69
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	889	58	136	847	80	187	728	251	195	843	168
Arrive On Green	0.06	0.26	0.26	0.08	0.26	0.26	0.10	0.28	0.28	0.11	0.29	0.29
Sat Flow, veh/h	1781	3387	219	1781	3278	311	1781	2589	892	1781	2951	587
Grp Volume(v), veh/h	38	120	125	51	290	297	121	344	332	157	205	207
Grp Sat Flow(s),veh/h/ln	1781	1777	1829	1781	1777	1812	1781	1777	1704	1781	1777	1761
Q Serve(g_s), s	1.6	4.3	4.3	2.2	11.5	11.6	5.2	13.8	13.9	6.9	7.4	7.6
Cycle Q Clear(g_c), s	1.6	4.3	4.3	2.2	11.5	11.6	5.2	13.8	13.9	6.9	7.4	7.6
Prop In Lane	1.00		0.12	1.00		0.17	1.00		0.52	1.00		0.33
Lane Grp Cap(c), veh/h	114	466	480	136	459	468	187	500	479	195	508	503
V/C Ratio(X)	0.33	0.26	0.26	0.38	0.63	0.63	0.65	0.69	0.69	0.81	0.40	0.41
Avail Cap(c_a), veh/h	446	779	802	446	779	794	446	779	747	446	779	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	23.3	23.3	35.1	26.2	26.3	34.3	25.6	25.6	34.7	23.0	23.1
Incr Delay (d2), s/veh	0.6	0.5	0.5	0.6	2.5	2.4	1.4	2.9	3.1	3.0	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.7	1.8	0.9	4.8	4.9	2.2	5.7	5.5	3.0	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.4	23.8	23.8	35.7	28.7	28.7	35.7	28.4	28.7	37.7	23.9	24.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		283			638			797			569	
Approach Delay, s/veh		25.5			29.3			29.7			27.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	28.7	10.8	27.0	13.1	29.0	11.1	26.6
Change Period (Y+Rc), s	4.7	6.2	4.7	6.0	4.7	6.2	6.0	* 6
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	8.9	15.9	4.2	6.3	7.2	9.6	3.6	13.6
Green Ext Time (p_c), s	0.1	6.0	0.0	2.2	0.1	3.8	0.0	5.3

Intersection Summary	
HCM 7th Control Delay, s/veh	28.6
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	366	111	107	428	164	99	484	63	81	344	75
Future Volume (veh/h)	66	366	111	107	428	164	99	484	63	81	344	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	441	48	129	516	78	119	583	59	98	414	54
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	1312	142	173	1337	201	172	912	91	166	872	111
Arrive On Green	0.07	0.41	0.41	0.10	0.43	0.43	0.10	0.19	0.19	0.09	0.19	0.19
Sat Flow, veh/h	1781	3232	350	1781	3097	466	1781	4717	472	1781	4579	585
Grp Volume(v), veh/h	80	241	248	129	295	299	119	419	223	98	306	162
Grp Sat Flow(s),veh/h/ln	1781	1777	1806	1781	1777	1786	1781	1702	1785	1781	1702	1760
Q Serve(g_s), s	4.4	9.3	9.4	7.0	11.3	11.4	6.5	11.3	11.5	5.3	8.0	8.2
Cycle Q Clear(g_c), s	4.4	9.3	9.4	7.0	11.3	11.4	6.5	11.3	11.5	5.3	8.0	8.2
Prop In Lane	1.00		0.19	1.00		0.26	1.00		0.26	1.00		0.33
Lane Grp Cap(c), veh/h	127	721	733	173	767	771	172	658	345	166	649	335
V/C Ratio(X)	0.63	0.33	0.34	0.74	0.38	0.39	0.69	0.64	0.65	0.59	0.47	0.48
Avail Cap(c_a), veh/h	164	721	733	182	767	771	182	997	523	182	997	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	20.4	20.4	43.9	19.4	19.4	43.8	37.1	37.2	43.5	36.0	36.1
Incr Delay (d2), s/veh	1.8	1.2	1.1	12.7	1.5	1.5	8.2	2.2	4.3	2.3	1.1	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.9	3.9	3.6	4.7	4.8	3.1	4.7	5.2	2.4	3.3	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.9	21.6	21.6	56.7	20.8	20.9	51.9	39.3	41.4	45.8	37.1	38.4
LnGrp LOS	D	C	C	E	C	C	D	D	D	D	D	D
Approach Vol, veh/h		569			723			761			566	
Approach Delay, s/veh		25.1			27.2			41.9			39.0	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	25.1	14.4	46.4	14.3	24.9	11.8	49.0
Change Period (Y+Rc), s	4.7	5.8	4.7	5.8	4.7	5.8	4.7	5.8
Max Green Setting (Gmax), s	10.3	29.3	10.2	29.3	10.2	29.3	9.2	30.3
Max Q Clear Time (g_c+I1), s	7.3	13.5	9.0	11.4	8.5	10.2	6.4	13.4
Green Ext Time (p_c), s	0.0	5.8	0.0	3.4	0.0	4.6	0.0	4.3

Intersection Summary	
HCM 7th Control Delay, s/veh	33.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	476	109	42	814	98	263	517	92	76	227	90
Future Volume (veh/h)	72	476	109	42	814	98	263	517	92	76	227	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	81	535	101	47	915	101	296	581	92	85	255	61
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	2240	414	61	2305	254	282	681	107	107	352	83
Arrive On Green	0.06	0.52	0.52	0.03	0.49	0.49	0.16	0.22	0.22	0.06	0.12	0.12
Sat Flow, veh/h	1781	4327	801	1781	4667	513	1781	3071	485	1781	2853	670
Grp Volume(v), veh/h	81	419	217	47	667	349	296	335	338	85	157	159
Grp Sat Flow(s),veh/h/ln	1781	1702	1723	1781	1702	1776	1781	1777	1779	1781	1777	1746
Q Serve(g_s), s	5.4	8.1	8.4	3.1	14.8	14.9	19.0	21.7	21.9	5.7	10.2	10.5
Cycle Q Clear(g_c), s	5.4	8.1	8.4	3.1	14.8	14.9	19.0	21.7	21.9	5.7	10.2	10.5
Prop In Lane	1.00		0.46	1.00		0.29	1.00		0.27	1.00		0.38
Lane Grp Cap(c), veh/h	103	1762	892	61	1681	877	282	394	394	107	219	215
V/C Ratio(X)	0.79	0.24	0.24	0.78	0.40	0.40	1.05	0.85	0.86	0.79	0.72	0.74
Avail Cap(c_a), veh/h	282	1762	892	282	1681	877	282	459	460	282	459	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	15.9	16.0	57.5	19.1	19.1	50.5	44.8	44.9	55.7	50.6	50.7
Incr Delay (d2), s/veh	5.0	0.3	0.6	7.6	0.7	1.4	67.2	11.4	11.7	4.9	1.6	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.0	3.2	1.5	5.6	6.0	13.5	10.5	10.6	2.6	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.8	16.2	16.6	65.2	19.8	20.5	117.7	56.2	56.6	60.6	52.2	52.6
LnGrp LOS	E	B	B	E	B	C	F	E	E	E	D	D
Approach Vol, veh/h		717			1063			969			401	
Approach Delay, s/veh		21.4			22.0			75.1			54.1	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	67.1	24.0	19.8	11.9	64.3	12.2	31.6
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	19.6	31.0	19.0	31.0	19.0	31.0	19.0	31.0
Max Q Clear Time (g_c+I1), s	5.1	10.4	21.0	12.5	7.4	16.9	7.7	23.9
Green Ext Time (p_c), s	0.0	0.5	0.0	0.2	0.0	0.9	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	42.3
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	390	195	135	418	82	266	457	377	91	205	208
Future Volume (veh/h)	117	390	195	135	418	82	266	457	377	91	205	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	429	81	148	459	26	292	502	326	100	225	107
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	899	165	225	749	330	347	957	422	206	356	297
Arrive On Green	0.12	0.21	0.21	0.13	0.21	0.21	0.19	0.27	0.27	0.12	0.19	0.19
Sat Flow, veh/h	1781	4324	794	1781	3554	1563	1781	3554	1567	1781	1870	1560
Grp Volume(v), veh/h	129	335	175	148	459	26	292	502	326	100	225	107
Grp Sat Flow(s),veh/h/ln	1781	1702	1714	1781	1777	1563	1781	1777	1567	1781	1870	1560
Q Serve(g_s), s	5.2	6.6	6.8	6.0	8.9	1.0	12.0	9.1	14.6	4.0	8.4	4.5
Cycle Q Clear(g_c), s	5.2	6.6	6.8	6.0	8.9	1.0	12.0	9.1	14.6	4.0	8.4	4.5
Prop In Lane	1.00		0.46	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	708	356	225	749	330	347	957	422	206	356	297
V/C Ratio(X)	0.59	0.47	0.49	0.66	0.61	0.08	0.84	0.52	0.77	0.48	0.63	0.36
Avail Cap(c_a), veh/h	470	1796	904	470	1875	824	940	1172	517	940	617	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	26.4	26.5	31.6	27.1	24.0	29.4	23.6	25.6	31.4	28.2	26.7
Incr Delay (d2), s/veh	2.5	0.5	1.0	3.3	0.8	0.1	5.6	0.4	5.8	1.8	1.9	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.4	2.6	2.6	3.5	0.4	5.2	3.5	5.5	1.7	3.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.9	26.9	27.5	34.9	27.9	24.1	35.0	24.0	31.3	33.2	30.1	27.4
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		639			633			1120			432	
Approach Delay, s/veh		28.5			29.4			29.0			30.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	21.8	19.8	19.7	14.3	22.0	13.8	25.7
Change Period (Y+Rc), s	5.0	6.0	5.0	5.3	5.0	6.0	5.0	5.3
Max Green Setting (Gmax), s	20.0	40.0	40.0	25.0	20.0	40.0	40.0	25.0
Max Q Clear Time (g_c+I1), s	8.0	8.8	14.0	10.4	7.2	10.9	6.0	16.6
Green Ext Time (p_c), s	0.3	3.0	0.8	1.2	0.2	2.8	0.2	2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	29.1
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	219	615	164	225	0	370	13	140	6	16	28
Future Volume (veh/h)	28	219	615	164	225	0	370	13	140	6	16	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	246	366	184	253	0	416	47	37	7	18	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	1153	578	225	1176	0	508	584	495	10	446	163
Arrive On Green	0.02	0.23	0.23	0.13	0.33	0.00	0.14	0.31	0.31	0.01	0.17	0.17
Sat Flow, veh/h	1781	5106	1558	1781	3647	0	3563	1870	1585	1781	2548	932
Grp Volume(v), veh/h	31	246	366	184	253	0	416	47	37	7	12	13
Grp Sat Flow(s),veh/h/ln	1781	1702	1558	1781	1777	0	1781	1870	1585	1781	1777	1703
Q Serve(g_s), s	1.2	2.8	13.7	7.1	3.6	0.0	8.0	1.2	1.2	0.3	0.4	0.4
Cycle Q Clear(g_c), s	1.2	2.8	13.7	7.1	3.6	0.0	8.0	1.2	1.2	0.3	0.4	0.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	37	1153	578	225	1176	0	508	584	495	10	311	298
V/C Ratio(X)	0.84	0.21	0.63	0.82	0.22	0.00	0.82	0.08	0.07	0.72	0.04	0.04
Avail Cap(c_a), veh/h	809	3694	1354	809	2571	0	1264	584	495	379	311	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	22.2	18.4	30.0	17.0	0.0	29.3	17.1	17.1	35.0	24.2	24.2
Incr Delay (d2), s/veh	16.2	0.0	0.4	2.8	0.0	0.0	1.3	0.3	0.3	67.3	0.2	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.0	4.6	3.0	1.3	0.0	3.4	0.6	0.4	0.3	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.6	22.2	18.8	32.8	17.0	0.0	30.6	17.4	17.4	102.3	24.4	24.4
LnGrp LOS	D	C	B	C	B		C	B	B	F	C	C
Approach Vol, veh/h		643			437			500			32	
Approach Delay, s/veh		21.6			23.7			28.4			41.5	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	22.3	15.3	18.4	7.1	29.7	5.6	28.1
Change Period (Y+Rc), s	5.6	6.4	5.2	6.1	5.6	6.4	5.2	6.1
Max Green Setting (Gmax), s	32.0	51.0	25.0	12.0	32.0	51.0	15.0	22.0
Max Q Clear Time (g_c+I1), s	9.1	15.7	10.0	2.4	3.2	5.6	2.3	3.2
Green Ext Time (p_c), s	0.0	0.2	0.1	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	24.7
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	633	68	126	362	0	0	0	0	129	0	197
Future Volume (veh/h)	0	633	68	126	362	0	0	0	0	129	0	197
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	711	63	142	407	0				145	0	33
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1901	848	181	1326	0				195	0	173
Arrive On Green	0.00	0.53	0.53	0.10	0.71	0.00				0.11	0.00	0.11
Sat Flow, veh/h	0	3647	1585	1781	1870	0				1781	0	1585
Grp Volume(v), veh/h	0	711	63	142	407	0				145	0	33
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1870	0				1781	0	1585
Q Serve(g_s), s	0.0	7.6	1.3	5.1	5.3	0.0				5.1	0.0	1.2
Cycle Q Clear(g_c), s	0.0	7.6	1.3	5.1	5.3	0.0				5.1	0.0	1.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1901	848	181	1326	0				195	0	173
V/C Ratio(X)	0.00	0.37	0.07	0.78	0.31	0.00				0.74	0.00	0.19
Avail Cap(c_a), veh/h	0	1901	848	493	1326	0				384	0	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.8	7.3	28.5	3.5	0.0				28.1	0.0	26.3
Incr Delay (d2), s/veh	0.0	0.6	0.2	2.7	0.6	0.0				2.1	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	0.3	2.0	0.9	0.0				2.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	9.3	7.5	31.1	4.1	0.0				30.2	0.0	26.5
LnGrp LOS		A	A	C	A					C		C
Approach Vol, veh/h		774			549						178	
Approach Delay, s/veh		9.2			11.1						29.5	
Approach LOS		A			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.3	40.8		12.9		52.1
Change Period (Y+Rc), s	4.7	6.0		5.8		6.0
Max Green Setting (Gmax), s	18.6	16.2		14.0		39.2
Max Q Clear Time (g_c+I1), s	7.1	9.6		7.1		7.3
Green Ext Time (p_c), s	0.1	1.7		0.3		1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	12.3
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	406	355	0	0	341	151	138	3	159	0	0	0
Future Volume (veh/h)	406	355	0	0	341	151	138	3	159	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	441	386	0	0	371	52	150	3	105			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	523	1188	0	0	886	395	181	4	127			
Arrive On Green	0.29	0.64	0.00	0.00	0.25	0.25	0.18	0.18	0.18			
Sat Flow, veh/h	1781	1870	0	0	3647	1585	986	20	691			
Grp Volume(v), veh/h	441	386	0	0	371	52	258	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1777	1585	1697	0	0			
Q Serve(g_s), s	15.1	6.2	0.0	0.0	5.7	1.7	9.5	0.0	0.0			
Cycle Q Clear(g_c), s	15.1	6.2	0.0	0.0	5.7	1.7	9.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.58		0.41			
Lane Grp Cap(c), veh/h	523	1188	0	0	886	395	311	0	0			
V/C Ratio(X)	0.84	0.32	0.00	0.00	0.42	0.13	0.83	0.00	0.00			
Avail Cap(c_a), veh/h	523	1188	0	0	886	395	470	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	21.6	5.5	0.0	0.0	20.5	18.9	25.6	0.0	0.0			
Incr Delay (d2), s/veh	10.5	0.7	0.0	0.0	1.5	0.7	4.5	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.6	1.5	0.0	0.0	2.2	0.6	3.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.0	6.1	0.0	0.0	21.9	19.6	30.1	0.0	0.0			
LnGrp LOS	C	A			C	B	C					
Approach Vol, veh/h		827			423			258				
Approach Delay, s/veh		19.9			21.6			30.1				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		47.3			25.1	22.2		17.7				
Change Period (Y+Rc), s		6.0			6.0	* 6		5.8				
Max Green Setting (Gmax), s		35.2			14.0	* 16		18.0				
Max Q Clear Time (g_c+I1), s		8.2			17.1	7.7		11.5				
Green Ext Time (p_c), s		1.2			0.0	0.9		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	22.1
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑			↱
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	1083
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Ctrl Dly (s/v)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	1620	-	-	0	980	1083
Stage 1	-	-	-	0	980	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1620	-	-	-	980	1083
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1620	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	159	2	56	154
Future Vol, veh/h	1	7	159	2	56	154
Conflicting Peds, #/hr	0	3	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	8	173	2	61	167

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	466	93	0	0	178	0
Stage 1	177	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	540	946	-	-	1397	-
Stage 1	837	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	940	-	-	1393	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	723	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.27	0	2.05
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	851	480	-
HCM Lane V/C Ratio	-	-	0.01	0.044	-
HCM Ctrl Dly (s/v)	-	-	9.3	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	165	1	0	210
Future Vol, veh/h	0	15	165	1	0	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	179	1	0	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	90	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	950	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	950	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.85	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	950	-
HCM Lane V/C Ratio	-	-	0.017	-
HCM Ctrl Dly (s/v)	-	-	8.9	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	156.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	484	10	29	329	73	15	146	19	128	171	22
Future Vol, veh/h	32	484	10	29	329	73	15	146	19	128	171	22
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	598	12	36	406	90	19	180	23	158	211	27
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	262.4	148.5	25	66.7
HCM LOS	F	F	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	6%	7%	40%
Vol Thru, %	91%	0%	92%	76%	53%
Vol Right, %	0%	100%	2%	17%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	161	19	526	431	321
LT Vol	15	0	32	29	128
Through Vol	146	0	484	329	171
RT Vol	0	19	10	73	22
Lane Flow Rate	199	23	649	532	396
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.533	0.058	1.503	1.218	0.938
Departure Headway (Hd)	11.333	10.545	8.942	9.421	10.299
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	320	342	409	388	357
Service Time	9.033	8.245	6.942	7.421	8.299
HCM Lane V/C Ratio	0.622	0.067	1.587	1.371	1.109
HCM Control Delay, s/veh	26.3	13.9	262.4	148.5	66.7
HCM Lane LOS	D	B	F	F	F
HCM 95th-tile Q	3	0.2	32.3	19.4	9.8

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	631	0	0	431	0	9
Future Vol, veh/h	631	0	0	431	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	686	0	0	468	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	343
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	0	0	-	0	654
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	654
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.59
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	654	-	-
HCM Lane V/C Ratio	0.015	-	-
HCM Ctrl Dly (s/v)	10.6	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	635	5	32	427	4	8
Future Vol, veh/h	635	5	32	427	4	8
Conflicting Peds, #/hr	0	3	3	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	690	5	35	464	4	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	699	0	1230	354
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	534	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	896	-	183	643
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	893	-	173	640
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	456	-
Stage 2	-	-	-	-	556	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.64	16.14
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	336	-	-	125	-
HCM Lane V/C Ratio	0.039	-	-	0.039	-
HCM Ctrl Dly (s/v)	16.1	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	586	12	20	386	116	16	241	35	172	181	57
Future Volume (veh/h)	45	586	12	20	386	116	16	241	35	172	181	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	617	13	21	406	101	17	254	34	181	191	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	699	593	50	476	119	42	334	45	220	1091	487
Arrive On Green	0.06	0.37	0.37	0.03	0.33	0.33	0.02	0.21	0.21	0.12	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1446	360	1781	1615	216	1781	3554	1585
Grp Volume(v), veh/h	47	617	13	21	0	507	17	0	288	181	191	25
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1806	1781	0	1831	1781	1777	1585
Q Serve(g_s), s	2.1	25.1	0.4	0.9	0.0	21.3	0.8	0.0	12.1	8.1	3.2	0.6
Cycle Q Clear(g_c), s	2.1	25.1	0.4	0.9	0.0	21.3	0.8	0.0	12.1	8.1	3.2	0.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	105	699	593	50	0	595	42	0	379	220	1091	487
V/C Ratio(X)	0.45	0.88	0.02	0.42	0.00	0.85	0.41	0.00	0.76	0.82	0.18	0.05
Avail Cap(c_a), veh/h	437	804	681	437	0	776	437	0	787	437	1527	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	23.8	16.1	38.9	0.0	25.5	39.2	0.0	30.4	34.8	20.7	9.8
Incr Delay (d2), s/veh	1.1	11.2	0.0	2.1	0.0	8.7	2.3	0.0	6.5	2.9	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	11.7	0.1	0.4	0.0	9.5	0.3	0.0	5.6	3.5	1.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.2	35.1	16.1	41.1	0.0	34.2	41.5	0.0	36.9	37.8	20.8	9.9
LnGrp LOS	D	D	B	D		C	D		D	D	C	A
Approach Vol, veh/h		677			528			305			397	
Approach Delay, s/veh		34.9			34.4			37.2			27.9	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	22.7	7.4	36.7	6.6	30.8	11.0	33.0
Change Period (Y+Rc), s	4.7	5.8	5.1	6.2	4.7	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	10.1	14.1	2.9	27.1	2.8	5.2	4.1	23.3
Green Ext Time (p_c), s	0.2	2.8	0.0	3.4	0.0	2.3	0.0	3.5

Intersection Summary	
HCM 7th Control Delay, s/veh	33.7
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

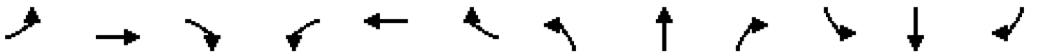
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	2	2	250	178	35
Future Vol, veh/h	42	2	2	250	178	35
Conflicting Peds, #/hr	0	3	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	2	2	272	193	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	492	122	235	0	-	0
Stage 1	216	-	-	-	-	-
Stage 2	276	-	-	-	-	-
Critical Hdwy	6.08	7.13	5.33	-	-	-
Critical Hdwy Stg 1	6.63	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.669	3.919	3.119	-	-	-
Pot Cap-1 Maneuver	544	771	901	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	539	766	899	-	-	-
Mov Cap-2 Maneuver	539	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	740	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.22	0.07	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	14	-	547	-	-
HCM Lane V/C Ratio	0.002	-	0.088	-	-
HCM Ctrl Dly (s/v)	9	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	426	41	27	309	141	52	287	92	203	325	50
Future Volume (veh/h)	50	426	41	27	309	141	52	287	92	203	325	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	479	37	31	347	36	58	322	78	228	365	47
Peak Hour Factor	0.89	0.89	0.89	0.86	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	856	66	105	678	70	158	590	141	276	867	111
Arrive On Green	0.09	0.26	0.26	0.06	0.21	0.21	0.09	0.21	0.21	0.15	0.27	0.27
Sat Flow, veh/h	1781	3342	257	1781	3249	335	1781	2841	678	1781	3167	405
Grp Volume(v), veh/h	56	254	262	31	189	194	58	200	200	228	204	208
Grp Sat Flow(s),veh/h/ln	1781	1777	1822	1781	1777	1807	1781	1777	1742	1781	1777	1795
Q Serve(g_s), s	2.0	8.3	8.4	1.1	6.3	6.4	2.1	6.7	6.9	8.3	6.3	6.4
Cycle Q Clear(g_c), s	2.0	8.3	8.4	1.1	6.3	6.4	2.1	6.7	6.9	8.3	6.3	6.4
Prop In Lane	1.00		0.14	1.00		0.19	1.00		0.39	1.00		0.23
Lane Grp Cap(c), veh/h	155	455	467	105	371	377	158	369	362	276	486	491
V/C Ratio(X)	0.36	0.56	0.56	0.30	0.51	0.52	0.37	0.54	0.55	0.83	0.42	0.42
Avail Cap(c_a), veh/h	532	928	952	532	928	944	532	928	911	532	928	938
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	21.6	21.6	30.2	23.5	23.5	28.7	23.7	23.8	27.4	20.0	20.0
Incr Delay (d2), s/veh	0.5	1.8	1.8	0.6	1.8	1.9	0.5	2.1	2.3	2.4	1.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.3	3.4	0.5	2.5	2.6	0.8	2.7	2.8	3.4	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.4	23.5	23.4	30.8	25.3	25.4	29.3	25.8	26.0	29.9	20.9	21.0
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		572			414			458			640	
Approach Delay, s/veh		24.0			25.7			26.3			24.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	20.1	8.6	23.2	10.6	24.5	11.8	20.0
Change Period (Y+Rc), s	4.7	6.2	4.7	6.0	4.7	6.2	6.0	* 6
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	10.3	8.9	3.1	10.4	4.1	8.4	4.0	8.4
Green Ext Time (p_c), s	0.2	3.7	0.0	5.0	0.0	3.8	0.0	3.5

Intersection Summary	
HCM 7th Control Delay, s/veh	24.9
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	527	79	62	377	105	62	319	64	159	471	65
Future Volume (veh/h)	96	527	79	62	377	105	62	319	64	159	471	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	561	34	66	401	45	66	339	35	169	501	51
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	1504	91	150	1453	162	150	763	77	182	848	85
Arrive On Green	0.08	0.44	0.44	0.08	0.45	0.45	0.08	0.16	0.16	0.10	0.18	0.18
Sat Flow, veh/h	1781	3403	206	1781	3223	360	1781	4711	477	1781	4711	473
Grp Volume(v), veh/h	102	292	303	66	220	226	66	243	131	169	360	192
Grp Sat Flow(s),veh/h/ln	1781	1777	1832	1781	1777	1806	1781	1702	1784	1781	1702	1780
Q Serve(g_s), s	5.6	11.0	11.0	3.5	7.8	7.9	3.5	6.4	6.6	9.4	9.7	9.9
Cycle Q Clear(g_c), s	5.6	11.0	11.0	3.5	7.8	7.9	3.5	6.4	6.6	9.4	9.7	9.9
Prop In Lane	1.00		0.11	1.00		0.20	1.00		0.27	1.00		0.27
Lane Grp Cap(c), veh/h	134	785	810	150	801	814	150	551	289	182	613	320
V/C Ratio(X)	0.76	0.37	0.37	0.44	0.27	0.28	0.44	0.44	0.45	0.93	0.59	0.60
Avail Cap(c_a), veh/h	164	785	810	182	801	814	182	997	523	182	997	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	18.6	18.6	43.6	17.2	17.2	43.6	37.8	37.9	44.5	37.6	37.7
Incr Delay (d2), s/veh	9.7	1.1	1.1	0.8	0.8	0.8	0.8	1.2	2.4	46.4	1.9	3.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.4	4.6	1.5	3.2	3.3	1.5	2.7	3.0	6.3	4.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.0	19.7	19.7	44.3	18.1	18.1	44.3	39.0	40.3	91.0	39.5	41.5
LnGrp LOS	E	B	B	D	B	B	D	D	D	F	D	D
Approach Vol, veh/h		697			512			440			721	
Approach Delay, s/veh		24.9			21.5			40.2			52.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	22.0	13.1	50.0	13.1	23.8	12.2	50.9
Change Period (Y+Rc), s	4.7	5.8	4.7	5.8	4.7	5.8	4.7	5.8
Max Green Setting (Gmax), s	10.2	29.3	10.2	29.3	10.2	29.3	9.2	30.3
Max Q Clear Time (g_c+I1), s	11.4	8.6	5.5	13.0	5.5	11.9	7.6	9.9
Green Ext Time (p_c), s	0.0	3.7	0.0	4.1	0.0	5.3	0.0	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	35.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	822	278	71	633	67	147	283	45	111	461	105
Future Volume (veh/h)	75	822	278	71	633	67	147	283	45	111	461	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	856	254	74	659	63	153	295	37	116	480	91
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	1929	569	94	2328	221	179	660	82	141	555	105
Arrive On Green	0.06	0.49	0.49	0.05	0.49	0.49	0.10	0.21	0.21	0.08	0.19	0.19
Sat Flow, veh/h	1781	3909	1153	1781	4742	450	1781	3178	395	1781	2982	562
Grp Volume(v), veh/h	78	745	365	74	472	250	153	164	168	116	285	286
Grp Sat Flow(s),veh/h/ln	1781	1702	1659	1781	1702	1788	1781	1777	1796	1781	1777	1767
Q Serve(g_s), s	5.2	17.0	17.2	4.9	9.8	10.0	10.1	9.6	9.8	7.7	18.7	18.9
Cycle Q Clear(g_c), s	5.2	17.0	17.2	4.9	9.8	10.0	10.1	9.6	9.8	7.7	18.7	18.9
Prop In Lane	1.00		0.70	1.00		0.25	1.00		0.22	1.00		0.32
Lane Grp Cap(c), veh/h	99	1680	818	94	1671	877	179	369	373	141	331	329
V/C Ratio(X)	0.79	0.44	0.45	0.78	0.28	0.29	0.85	0.44	0.45	0.82	0.86	0.87
Avail Cap(c_a), veh/h	282	1680	818	282	1671	877	282	459	464	282	459	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	19.7	19.7	56.1	18.1	18.1	53.1	41.5	41.6	54.4	47.3	47.4
Incr Delay (d2), s/veh	5.1	0.9	1.8	5.2	0.4	0.8	8.2	0.3	0.3	4.5	9.0	9.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	6.4	6.5	2.3	3.7	4.0	4.8	4.1	4.3	3.5	8.8	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.0	20.6	21.5	61.4	18.5	18.9	61.3	41.8	41.9	58.9	56.3	57.2
LnGrp LOS	E	C	C	E	B	B	E	D	D	E	E	E
Approach Vol, veh/h		1188			796			485			687	
Approach Delay, s/veh		23.5			22.6			48.0			57.1	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	64.2	17.1	27.3	11.7	63.9	14.5	29.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	19.0	31.0	19.0	31.0	19.0	31.0	19.0	31.0
Max Q Clear Time (g_c+I1), s	6.9	19.2	12.1	20.9	7.2	12.0	9.7	11.8
Green Ext Time (p_c), s	0.0	1.0	0.0	0.4	0.0	0.6	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	34.4
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	468	412	299	481	68	208	300	223	72	411	83
Future Volume (veh/h)	50	468	412	299	481	68	208	300	223	72	411	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	493	212	315	506	31	219	316	154	76	433	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	759	313	343	1180	522	258	1030	466	153	452	378
Arrive On Green	0.08	0.21	0.21	0.19	0.33	0.33	0.14	0.30	0.30	0.09	0.24	0.24
Sat Flow, veh/h	1781	3530	1458	1781	3554	1571	1781	3428	1549	1781	1870	1565
Grp Volume(v), veh/h	53	475	230	315	506	31	219	314	156	76	433	67
Grp Sat Flow(s),veh/h/ln	1781	1702	1584	1781	1777	1571	1781	1702	1573	1781	1870	1565
Q Serve(g_s), s	2.9	13.2	13.8	17.9	11.5	1.4	12.4	7.3	8.0	4.2	23.6	3.5
Cycle Q Clear(g_c), s	2.9	13.2	13.8	17.9	11.5	1.4	12.4	7.3	8.0	4.2	23.6	3.5
Prop In Lane	1.00		0.92	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	135	732	340	343	1180	522	258	1023	473	153	452	378
V/C Ratio(X)	0.39	0.65	0.68	0.92	0.43	0.06	0.85	0.31	0.33	0.50	0.96	0.18
Avail Cap(c_a), veh/h	344	1316	612	344	1374	607	689	1023	473	689	452	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	37.0	37.3	40.9	26.9	23.5	43.1	27.9	28.1	45.1	38.7	31.1
Incr Delay (d2), s/veh	1.9	1.0	2.3	28.5	0.2	0.0	7.7	0.2	0.4	2.5	31.7	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.3	5.3	10.1	4.6	0.5	5.8	2.9	2.9	1.9	14.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.4	38.0	39.6	69.4	27.1	23.6	50.8	28.0	28.5	47.6	70.3	31.3
LnGrp LOS	D	D	D	E	C	C	D	C	C	D	E	C
Approach Vol, veh/h		758			852			689			576	
Approach Delay, s/veh		39.2			42.6			35.4			62.8	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	28.2	20.0	30.3	12.8	40.4	13.9	36.4
Change Period (Y+Rc), s	5.0	6.0	5.0	5.3	5.0	6.0	5.0	5.3
Max Green Setting (Gmax), s	20.0	40.0	40.0	25.0	20.0	40.0	40.0	25.0
Max Q Clear Time (g_c+I1), s	19.9	15.8	14.4	25.6	4.9	13.5	6.2	10.0
Green Ext Time (p_c), s	0.0	4.2	0.6	0.0	0.1	3.1	0.2	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	44.0
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	272	461	163	252	3	598	7	318	3	10	26
Future Volume (veh/h)	15	272	461	163	252	3	598	7	318	3	10	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	278	204	166	257	3	610	0	142	3	10	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	20	696	526	207	869	10	707	0	1213	4	414	226
Arrive On Green	0.01	0.14	0.14	0.12	0.24	0.24	0.20	0.00	0.38	0.00	0.19	0.19
Sat Flow, veh/h	1781	5106	1553	1781	3596	42	3563	0	3170	1781	2218	1211
Grp Volume(v), veh/h	15	278	204	166	127	133	610	0	142	3	8	8
Grp Sat Flow(s),veh/h/ln	1781	1702	1553	1781	1777	1861	1781	0	1585	1781	1777	1652
Q Serve(g_s), s	0.5	3.2	6.5	5.8	3.7	3.8	10.6	0.0	1.9	0.1	0.2	0.3
Cycle Q Clear(g_c), s	0.5	3.2	6.5	5.8	3.7	3.8	10.6	0.0	1.9	0.1	0.2	0.3
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.73
Lane Grp Cap(c), veh/h	20	696	526	207	429	450	707	0	1213	4	332	308
V/C Ratio(X)	0.77	0.40	0.39	0.80	0.30	0.30	0.86	0.00	0.12	0.69	0.02	0.03
Avail Cap(c_a), veh/h	887	4051	1547	887	1410	1477	1386	0	1213	416	332	308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	25.4	16.4	27.7	19.9	19.9	24.9	0.0	12.8	32.0	21.4	21.4
Incr Delay (d2), s/veh	20.4	0.1	0.2	2.7	0.1	0.1	1.3	0.0	0.2	111.6	0.1	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	2.1	2.4	1.4	1.5	4.3	0.0	0.6	0.2	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.1	25.5	16.6	30.4	20.1	20.0	26.2	0.0	13.0	143.6	21.5	21.5
LnGrp LOS	D	C	B	C	C	C	C		B	F	C	C
Approach Vol, veh/h		497			426			752			19	
Approach Delay, s/veh		22.6			24.1			23.7			40.8	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	15.2	17.9	18.1	6.3	21.9	5.4	30.7
Change Period (Y+Rc), s	5.6	6.4	5.2	6.1	5.6	6.4	5.2	6.1
Max Green Setting (Gmax), s	32.0	51.0	25.0	12.0	32.0	51.0	15.0	22.0
Max Q Clear Time (g_c+I1), s	7.8	8.5	12.6	2.3	2.5	5.8	2.1	3.9
Green Ext Time (p_c), s	0.0	0.3	0.1	0.0	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	23.7
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	496	121	191	419	0	0	0	0	151	6	386
Future Volume (veh/h)	0	496	121	191	419	0	0	0	0	151	6	386
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	522	74	201	441	0				159	6	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1720	767	247	1300	0				212	8	196
Arrive On Green	0.00	0.48	0.48	0.14	0.70	0.00				0.12	0.12	0.12
Sat Flow, veh/h	0	3647	1585	1781	1870	0				1719	65	1585
Grp Volume(v), veh/h	0	522	74	201	441	0				165	0	66
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1870	0				1784	0	1585
Q Serve(g_s), s	0.0	5.8	1.6	7.1	6.1	0.0				5.8	0.0	2.5
Cycle Q Clear(g_c), s	0.0	5.8	1.6	7.1	6.1	0.0				5.8	0.0	2.5
Prop In Lane	0.00		1.00	1.00		0.00				0.96		1.00
Lane Grp Cap(c), veh/h	0	1720	767	247	1300	0				220	0	196
V/C Ratio(X)	0.00	0.30	0.10	0.81	0.34	0.00				0.75	0.00	0.34
Avail Cap(c_a), veh/h	0	1720	767	438	1300	0				384	0	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.1	9.1	27.2	4.0	0.0				27.5	0.0	26.1
Incr Delay (d2), s/veh	0.0	0.5	0.3	2.3	0.7	0.0				1.9	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	0.5	2.8	1.1	0.0				2.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	10.6	9.3	29.5	4.6	0.0				29.4	0.0	26.4
LnGrp LOS		B	A	C	A					C		C
Approach Vol, veh/h		596			642						231	
Approach Delay, s/veh		10.4			12.4						28.6	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	13.7	37.5		13.8		51.2
Change Period (Y+Rc), s	4.7	6.0		5.8		6.0
Max Green Setting (Gmax), s	16.0	18.2		14.0		39.2
Max Q Clear Time (g_c+I1), s	9.1	7.8		7.8		8.1
Green Ext Time (p_c), s	0.1	1.5		0.3		1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	14.2
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	413	0	0	489	257	87	3	178	0	0	0
Future Volume (veh/h)	241	413	0	0	489	257	87	3	178	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	262	449	0	0	532	112	95	3	77			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	454	1288	0	0	1214	541	119	4	96			
Arrive On Green	0.25	0.69	0.00	0.00	0.34	0.34	0.13	0.13	0.13			
Sat Flow, veh/h	1781	1870	0	0	3647	1585	918	29	744			
Grp Volume(v), veh/h	262	449	0	0	532	112	175	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1777	1585	1691	0	0			
Q Serve(g_s), s	8.4	6.4	0.0	0.0	7.5	3.3	6.5	0.0	0.0			
Cycle Q Clear(g_c), s	8.4	6.4	0.0	0.0	7.5	3.3	6.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.54		0.44			
Lane Grp Cap(c), veh/h	454	1288	0	0	1214	541	219	0	0			
V/C Ratio(X)	0.58	0.35	0.00	0.00	0.44	0.21	0.80	0.00	0.00			
Avail Cap(c_a), veh/h	454	1288	0	0	1214	541	364	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	21.1	4.1	0.0	0.0	16.6	15.2	27.5	0.0	0.0			
Incr Delay (d2), s/veh	1.1	0.7	0.0	0.0	1.2	0.9	2.5	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.0	1.2	0.0	0.0	2.7	1.1	2.6	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.3	4.8	0.0	0.0	17.7	16.0	30.0	0.0	0.0			
LnGrp LOS	C	A			B	B	C					
Approach Vol, veh/h		711			644			175				
Approach Delay, s/veh		11.3			17.4			30.0				
Approach LOS		B			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.8			22.6	28.2		14.2				
Change Period (Y+Rc), s		6.0			6.0	* 6		5.8				
Max Green Setting (Gmax), s		39.2			12.0	* 22		14.0				
Max Q Clear Time (g_c+I1), s		8.4			10.4	9.5		8.5				
Green Ext Time (p_c), s		1.4			0.1	1.8		0.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	16.0
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	1083
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Ctrl Dly (s/v)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	1620	-	-	0	980	1083
Stage 1	-	-	-	0	980	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1620	-	-	-	980	1083
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1620	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	292	1	25	186
Future Vol, veh/h	1	3	292	1	25	186
Conflicting Peds, #/hr	0	3	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	3	317	1	27	202

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	577	165	0	0	321	0
Stage 1	321	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	462	851	-	-	1237	-
Stage 1	709	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	846	-	-	1233	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	766	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.23	0	0.95
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	693	213	-
HCM Lane V/C Ratio	-	-	0.006	0.022	-
HCM Ctrl Dly (s/v)	-	-	10.2	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	295	0	0	211
Future Vol, veh/h	0	5	295	0	0	211
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	321	0	0	229

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	160	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	857	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	857	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.23	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	857	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Ctrl Dly (s/v)	-	-	9.2	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Intersection Delay, s/veh	186.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	308	8	15	596	94	17	247	36	88	188	53
Future Vol, veh/h	28	308	8	15	596	94	17	247	36	88	188	53
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	331	9	16	641	101	18	266	39	95	202	57
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	56.8	376	35.2	53.8
HCM LOS	F	F	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	0%	8%	2%	27%
Vol Thru, %	94%	0%	90%	85%	57%
Vol Right, %	0%	100%	2%	13%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	36	344	705	329
LT Vol	17	0	28	15	88
Through Vol	247	0	308	596	188
RT Vol	0	36	8	94	53
Lane Flow Rate	284	39	370	758	354
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.725	0.091	0.883	1.769	0.858
Departure Headway (Hd)	11.063	10.29	10.47	8.399	10.772
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	329	350	348	440	340
Service Time	8.763	7.99	8.47	6.468	8.772
HCM Lane V/C Ratio	0.863	0.111	1.063	1.723	1.041
HCM Control Delay, s/veh	38.1	14	56.8	376	53.8
HCM Lane LOS	E	B	F	F	F
HCM 95th-tile Q	5.4	0.3	8.4	46.9	7.8

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	432	0	0	705	0	3
Future Vol, veh/h	432	0	0	705	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	470	0	0	766	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	235
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	0	0	-	0	768
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	768
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	9.71
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	768	-	-
HCM Lane V/C Ratio	0.004	-	-
HCM Ctrl Dly (s/v)	9.7	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

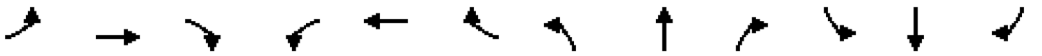
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	432	3	19	700	5	9
Future Vol, veh/h	432	3	19	700	5	9
Conflicting Peds, #/hr	0	3	3	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	470	3	21	761	5	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	476	0	1276	242
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	802	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1084	-	171	759
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1081	-	165	755
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	426	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.22	16.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	331	-	-	48	-
HCM Lane V/C Ratio	0.046	-	-	0.019	-
HCM Ctrl Dly (s/v)	16.4	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	381	13	32	598	192	15	300	51	128	200	106
Future Volume (veh/h)	47	381	13	32	598	192	15	300	51	128	200	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	419	14	35	657	190	16	330	45	141	220	39
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	725	614	68	512	148	39	400	55	173	1151	513
Arrive On Green	0.05	0.39	0.39	0.04	0.37	0.37	0.02	0.25	0.25	0.10	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1394	403	1781	1611	220	1781	3554	1585
Grp Volume(v), veh/h	52	419	14	35	0	847	16	0	375	141	220	39
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1798	1781	0	1831	1781	1777	1585
Q Serve(g_s), s	2.7	16.9	0.5	1.8	0.0	35.0	0.8	0.0	18.5	7.4	4.3	1.2
Cycle Q Clear(g_c), s	2.7	16.9	0.5	1.8	0.0	35.0	0.8	0.0	18.5	7.4	4.3	1.2
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	84	725	614	68	0	660	39	0	454	173	1151	513
V/C Ratio(X)	0.62	0.58	0.02	0.52	0.00	1.28	0.41	0.00	0.83	0.81	0.19	0.08
Avail Cap(c_a), veh/h	374	725	614	374	0	660	374	0	672	374	1305	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	23.0	18.0	45.0	0.0	30.2	46.0	0.0	33.9	42.2	23.2	12.4
Incr Delay (d2), s/veh	2.8	1.6	0.0	2.3	0.0	138.9	2.6	0.0	8.8	3.5	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	7.0	0.2	0.8	0.0	39.0	0.4	0.0	8.8	3.3	1.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.4	24.6	18.1	47.3	0.0	169.0	48.6	0.0	42.7	45.6	23.4	12.5
LnGrp LOS	D	C	B	D		F	D		D	D	C	B
Approach Vol, veh/h		485			882			391			400	
Approach Delay, s/veh		26.9			164.2			42.9			30.2	
Approach LOS		C			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	29.5	8.7	43.2	6.8	36.7	10.7	41.2
Change Period (Y+Rc), s	4.7	5.8	5.1	6.2	4.7	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	9.4	20.5	3.8	18.9	2.8	6.3	4.7	37.0
Green Ext Time (p_c), s	0.1	3.2	0.0	3.4	0.0	2.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	86.5
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

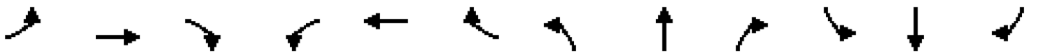
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	54	2	1	312	225	20
Future Vol, veh/h	54	2	1	312	225	20
Conflicting Peds, #/hr	0	3	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	2	1	339	245	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	600	139	269	0	-	0
Stage 1	258	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Critical Hdwy	6.08	7.13	5.33	-	-	-
Critical Hdwy Stg 1	6.63	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.669	3.919	3.119	-	-	-
Pot Cap-1 Maneuver	476	751	869	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	694	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	473	747	866	-	-	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.6	0.03	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	6	-	479	-	-
HCM Lane V/C Ratio	0.001	-	0.127	-	-
HCM Ctrl Dly (s/v)	9.2	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	374	25	49	654	184	112	474	186	155	315	82
Future Volume (veh/h)	65	374	25	49	654	184	112	474	186	155	315	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	435	23	57	760	64	130	551	186	180	366	79
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	1089	57	128	982	83	161	710	239	213	878	187
Arrive On Green	0.08	0.32	0.32	0.07	0.30	0.30	0.09	0.27	0.27	0.12	0.30	0.30
Sat Flow, veh/h	1781	3433	181	1781	3316	279	1781	2607	877	1781	2910	621
Grp Volume(v), veh/h	76	225	233	57	407	417	130	375	362	180	222	223
Grp Sat Flow(s),veh/h/ln	1781	1777	1837	1781	1777	1818	1781	1777	1707	1781	1777	1755
Q Serve(g_s), s	4.0	9.8	9.8	3.0	20.6	20.7	7.1	19.2	19.3	9.8	9.8	10.0
Cycle Q Clear(g_c), s	4.0	9.8	9.8	3.0	20.6	20.7	7.1	19.2	19.3	9.8	9.8	10.0
Prop In Lane	1.00		0.10	1.00		0.15	1.00		0.51	1.00		0.35
Lane Grp Cap(c), veh/h	142	564	583	128	526	539	161	484	465	213	536	529
V/C Ratio(X)	0.53	0.40	0.40	0.44	0.77	0.77	0.81	0.78	0.78	0.84	0.41	0.42
Avail Cap(c_a), veh/h	361	630	651	361	630	645	361	630	605	361	630	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	26.3	26.4	43.9	31.7	31.7	44.1	33.1	33.2	42.5	27.5	27.6
Incr Delay (d2), s/veh	1.2	0.8	0.8	0.9	6.1	6.0	3.6	5.9	6.4	3.5	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	4.1	4.2	1.3	9.2	9.4	3.2	8.6	8.4	4.3	4.1	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.8	27.1	27.1	44.8	37.8	37.7	47.7	39.1	39.5	46.0	28.4	28.5
LnGrp LOS	D	C	C	D	D	D	D	D	D	D	C	C
Approach Vol, veh/h		534			881			867			625	
Approach Delay, s/veh		29.6			38.2			40.6			33.5	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	33.1	11.8	37.3	13.6	36.0	13.9	35.2
Change Period (Y+Rc), s	4.7	6.2	4.7	6.0	4.7	6.2	6.0	* 6
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	11.8	21.3	5.0	11.8	9.1	12.0	6.0	22.7
Green Ext Time (p_c), s	0.1	5.5	0.0	4.2	0.1	4.0	0.1	5.7

Intersection Summary	
HCM 7th Control Delay, s/veh	36.3
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	546	122	111	597	178	121	558	74	96	383	95
Future Volume (veh/h)	97	546	122	111	597	178	121	558	74	96	383	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	658	51	134	719	75	146	672	72	116	461	69
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	1273	99	174	1290	134	176	1010	107	171	956	140
Arrive On Green	0.08	0.38	0.38	0.10	0.40	0.40	0.10	0.22	0.22	0.10	0.21	0.21
Sat Flow, veh/h	1781	3341	259	1781	3248	339	1781	4687	498	1781	4492	659
Grp Volume(v), veh/h	117	350	359	134	393	401	146	487	257	116	347	183
Grp Sat Flow(s),veh/h/ln	1781	1777	1823	1781	1777	1809	1781	1702	1781	1781	1702	1746
Q Serve(g_s), s	6.5	15.2	15.2	7.3	17.1	17.2	8.0	13.1	13.3	6.3	8.9	9.2
Cycle Q Clear(g_c), s	6.5	15.2	15.2	7.3	17.1	17.2	8.0	13.1	13.3	6.3	8.9	9.2
Prop In Lane	1.00		0.14	1.00		0.19	1.00		0.28	1.00		0.38
Lane Grp Cap(c), veh/h	145	677	694	174	706	719	176	733	384	171	724	372
V/C Ratio(X)	0.81	0.52	0.52	0.77	0.56	0.56	0.83	0.66	0.67	0.68	0.48	0.49
Avail Cap(c_a), veh/h	164	677	694	182	706	719	182	997	522	182	997	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	23.9	23.9	44.0	23.3	23.3	44.2	35.9	36.0	43.7	34.5	34.6
Incr Delay (d2), s/veh	17.6	2.4	2.4	15.6	3.2	3.1	24.2	2.2	4.3	7.1	1.1	2.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	6.4	6.6	3.9	7.4	7.5	4.6	5.4	5.9	3.0	3.6	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.8	26.3	26.2	59.7	26.5	26.5	68.5	38.1	40.3	50.8	35.6	36.8
LnGrp LOS	E	C	C	E	C	C	E	D	D	D	D	D
Approach Vol, veh/h		826			928			890			646	
Approach Delay, s/veh		31.4			31.3			43.7			38.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	27.3	14.5	43.9	14.6	27.1	12.8	45.5
Change Period (Y+Rc), s	4.7	5.8	4.7	5.8	4.7	5.8	4.7	5.8
Max Green Setting (Gmax), s	10.2	29.3	10.2	29.3	10.2	29.3	9.2	30.3
Max Q Clear Time (g_c+I1), s	8.3	15.3	9.3	17.2	10.0	11.2	8.5	19.2
Green Ext Time (p_c), s	0.0	6.3	0.0	4.3	0.0	5.2	0.0	4.7

Intersection Summary	
HCM 7th Control Delay, s/veh	36.1
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	591	109	47	926	107	263	601	103	82	273	90
Future Volume (veh/h)	72	591	109	47	926	107	263	601	103	82	273	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	81	664	106	53	1040	111	296	675	105	92	307	72
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	2194	346	68	2222	237	282	729	113	115	409	95
Arrive On Green	0.06	0.49	0.49	0.04	0.47	0.47	0.16	0.24	0.24	0.06	0.14	0.14
Sat Flow, veh/h	1781	4445	701	1781	4684	499	1781	3079	478	1781	2863	661
Grp Volume(v), veh/h	81	507	263	53	755	396	296	389	391	92	189	190
Grp Sat Flow(s),veh/h/ln	1781	1702	1742	1781	1702	1779	1781	1777	1781	1781	1777	1748
Q Serve(g_s), s	5.4	10.6	10.8	3.5	18.0	18.0	19.0	25.7	25.8	6.1	12.2	12.6
Cycle Q Clear(g_c), s	5.4	10.6	10.8	3.5	18.0	18.0	19.0	25.7	25.8	6.1	12.2	12.6
Prop In Lane	1.00		0.40	1.00		0.28	1.00		0.27	1.00		0.38
Lane Grp Cap(c), veh/h	103	1680	860	68	1615	844	282	421	422	115	254	250
V/C Ratio(X)	0.79	0.30	0.31	0.77	0.47	0.47	1.05	0.93	0.93	0.80	0.74	0.76
Avail Cap(c_a), veh/h	282	1680	860	282	1615	844	282	459	460	282	459	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	18.1	18.1	57.2	21.3	21.3	50.5	44.8	44.8	55.4	49.3	49.5
Incr Delay (d2), s/veh	5.0	0.5	0.9	6.8	1.0	1.9	67.2	22.8	23.1	4.8	1.6	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.0	4.3	1.7	6.9	7.4	13.5	13.6	13.6	2.8	5.4	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.8	18.5	19.0	64.0	22.3	23.2	117.7	67.5	67.8	60.1	50.9	51.3
LnGrp LOS	E	B	B	E	C	C	F	E	E	E	D	D
Approach Vol, veh/h		851			1204			1076			471	
Approach Delay, s/veh		22.7			24.4			81.4			52.9	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	64.2	24.0	22.2	11.9	61.9	12.7	33.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	19.6	31.0	19.0	31.0	19.0	31.0	19.0	31.0
Max Q Clear Time (g_c+I1), s	5.5	12.8	21.0	14.6	7.4	20.0	8.1	27.8
Green Ext Time (p_c), s	0.0	0.6	0.0	0.3	0.0	1.0	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	44.8
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	521	195	170	540	97	266	501	452	107	243	212
Future Volume (veh/h)	119	521	195	170	540	97	266	501	452	107	243	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	573	121	187	593	48	292	551	397	118	267	125
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	960	199	228	862	380	341	968	446	197	380	317
Arrive On Green	0.11	0.23	0.23	0.13	0.24	0.24	0.19	0.28	0.28	0.11	0.20	0.20
Sat Flow, veh/h	1781	4228	875	1781	3554	1565	1781	3404	1568	1781	1870	1562
Grp Volume(v), veh/h	131	459	235	187	593	48	292	551	397	118	267	125
Grp Sat Flow(s),veh/h/ln	1781	1702	1699	1781	1777	1565	1781	1702	1568	1781	1870	1562
Q Serve(g_s), s	6.0	10.2	10.6	8.7	12.9	2.0	13.5	11.8	20.6	5.4	11.3	5.9
Cycle Q Clear(g_c), s	6.0	10.2	10.6	8.7	12.9	2.0	13.5	11.8	20.6	5.4	11.3	5.9
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	773	386	228	862	380	341	968	446	197	380	317
V/C Ratio(X)	0.66	0.59	0.61	0.82	0.69	0.13	0.86	0.57	0.89	0.60	0.70	0.39
Avail Cap(c_a), veh/h	419	1601	799	419	1672	736	838	1001	461	838	550	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	29.4	29.5	36.1	29.3	25.2	33.3	26.0	29.2	36.0	31.5	29.3
Incr Delay (d2), s/veh	3.6	0.7	1.6	7.2	1.0	0.1	6.2	0.7	18.6	2.9	2.4	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.9	4.1	4.0	5.1	0.7	6.0	4.5	9.4	2.4	5.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.8	30.1	31.0	43.3	30.3	25.3	39.5	26.7	47.8	39.0	33.9	30.1
LnGrp LOS	D	C	C	D	C	C	D	C	D	D	C	C
Approach Vol, veh/h		825			828			1240			510	
Approach Delay, s/veh		31.9			32.9			36.5			34.1	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	25.3	21.3	22.6	14.5	26.6	14.4	29.5
Change Period (Y+Rc), s	5.0	6.0	5.0	5.3	5.0	6.0	5.0	5.3
Max Green Setting (Gmax), s	20.0	40.0	40.0	25.0	20.0	40.0	40.0	25.0
Max Q Clear Time (g_c+I1), s	10.7	12.6	15.5	13.3	8.0	14.9	7.4	22.6
Green Ext Time (p_c), s	0.3	4.2	0.8	1.4	0.2	3.8	0.3	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	34.1
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	243	814	383	248	0	519	13	358	6	16	28
Future Volume (veh/h)	28	243	814	383	248	0	519	13	358	6	16	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	273	733	430	279	0	583	0	155	7	18	5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	1817	832	398	1979	0	622	0	802	9	233	62
Arrive On Green	0.02	0.36	0.36	0.22	0.56	0.00	0.17	0.00	0.25	0.01	0.08	0.08
Sat Flow, veh/h	1781	5106	1561	1781	3647	0	3563	0	3170	1781	2777	738
Grp Volume(v), veh/h	31	273	733	430	279	0	583	0	155	7	11	12
Grp Sat Flow(s),veh/h/ln	1781	1702	1561	1781	1777	0	1781	0	1585	1781	1777	1738
Q Serve(g_s), s	2.5	5.2	51.0	32.0	5.4	0.0	23.1	0.0	5.5	0.6	0.8	0.9
Cycle Q Clear(g_c), s	2.5	5.2	51.0	32.0	5.4	0.0	23.1	0.0	5.5	0.6	0.8	0.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	40	1817	832	398	1979	0	622	0	802	9	149	146
V/C Ratio(X)	0.78	0.15	0.88	1.08	0.14	0.00	0.94	0.00	0.19	0.77	0.08	0.08
Avail Cap(c_a), veh/h	398	1817	832	398	1979	0	622	0	802	186	149	146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	31.4	29.8	55.6	15.3	0.0	58.4	0.0	42.0	71.2	60.5	60.6
Incr Delay (d2), s/veh	11.8	0.0	10.5	68.6	0.0	0.0	21.8	0.0	0.5	81.1	1.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.1	24.2	21.7	2.2	0.0	12.3	0.0	2.2	0.5	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.5	31.4	40.2	124.2	15.3	0.0	80.2	0.0	42.6	152.3	61.5	61.6
LnGrp LOS	F	C	D	F	B		F		D	F	E	E
Approach Vol, veh/h		1037			709			738			30	
Approach Delay, s/veh		39.2			81.3			72.3			82.7	
Approach LOS		D			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	57.4	30.2	18.1	8.8	86.2	5.9	42.4
Change Period (Y+Rc), s	5.6	6.4	5.2	6.1	5.6	6.4	5.2	6.1
Max Green Setting (Gmax), s	32.0	51.0	25.0	12.0	32.0	51.0	15.0	22.0
Max Q Clear Time (g_c+I1), s	34.0	53.0	25.1	2.9	4.5	7.4	2.6	7.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	61.3
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1042	78	255	677	0	0	0	0	356	0	251
Future Volume (veh/h)	0	1042	78	255	677	0	0	0	0	356	0	251
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1171	77	287	761	0				400	0	119
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1216	542	336	1128	0				384	0	341
Arrive On Green	0.00	0.34	0.34	0.19	0.60	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	3647	1585	1781	1870	0				1781	0	1585
Grp Volume(v), veh/h	0	1171	77	287	761	0				400	0	119
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1870	0				1781	0	1585
Q Serve(g_s), s	0.0	21.0	2.2	10.1	17.7	0.0				14.0	0.0	4.1
Cycle Q Clear(g_c), s	0.0	21.0	2.2	10.1	17.7	0.0				14.0	0.0	4.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1216	542	336	1128	0				384	0	341
V/C Ratio(X)	0.00	0.96	0.14	0.85	0.67	0.00				1.04	0.00	0.35
Avail Cap(c_a), veh/h	0	1216	542	493	1128	0				384	0	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.30	0.30	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.0	14.8	25.5	8.6	0.0				25.5	0.0	21.6
Incr Delay (d2), s/veh	0.0	18.4	0.5	2.1	1.0	0.0				57.5	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.0	0.7	3.8	4.4	0.0				11.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	39.4	15.3	27.6	9.6	0.0				83.0	0.0	21.9
LnGrp LOS		D	B	C	A					F		C
Approach Vol, veh/h		1248			1048						519	
Approach Delay, s/veh		37.9			14.5						69.0	
Approach LOS		D			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.0	28.2		19.8		45.2
Change Period (Y+Rc), s	4.7	6.0		5.8		6.0
Max Green Setting (Gmax), s	18.3	16.2		14.0		39.2
Max Q Clear Time (g_c+I1), s	12.1	23.0		16.0		19.7
Green Ext Time (p_c), s	0.2	0.0		0.0		2.7

Intersection Summary	
HCM 7th Control Delay, s/veh	34.9
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	901	0	0	773	383	151	3	285	0	0	0
Future Volume (veh/h)	495	901	0	0	773	383	151	3	285	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	538	979	0	0	840	109	164	3	237			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	757	1434	0	0	886	395	181	3	261			
Arrive On Green	0.42	0.77	0.00	0.00	0.25	0.25	0.27	0.27	0.27			
Sat Flow, veh/h	1781	1870	0	0	3647	1585	674	12	975			
Grp Volume(v), veh/h	538	979	0	0	840	109	404	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1777	1585	1661	0	0			
Q Serve(g_s), s	16.2	16.7	0.0	0.0	15.1	3.6	15.3	0.0	0.0			
Cycle Q Clear(g_c), s	16.2	16.7	0.0	0.0	15.1	3.6	15.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.41		0.59			
Lane Grp Cap(c), veh/h	757	1434	0	0	886	395	445	0	0			
V/C Ratio(X)	0.71	0.68	0.00	0.00	0.95	0.28	0.91	0.00	0.00			
Avail Cap(c_a), veh/h	757	1434	0	0	886	395	460	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	15.4	3.7	0.0	0.0	24.0	19.7	23.0	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	20.0	1.7	20.6	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.0	0.5	0.0	0.0	7.7	1.3	7.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.6	4.0	0.0	0.0	44.0	21.4	43.6	0.0	0.0			
LnGrp LOS	B	A			D	C	D					
Approach Vol, veh/h		1517			949			404				
Approach Delay, s/veh		8.1			41.4			43.6				
Approach LOS		A			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		56.2			34.0	22.2		23.2				
Change Period (Y+Rc), s		6.0			6.0	* 6		5.8				
Max Green Setting (Gmax), s		35.2			14.0	* 16		18.0				
Max Q Clear Time (g_c+I1), s		18.7			18.2	17.1		17.3				
Green Ext Time (p_c), s		3.8			0.0	0.0		0.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	24.1
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑			↱
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	1083
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Ctrl Dly (s/v)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	1620	-	-	0	980	1083
Stage 1	-	-	-	0	980	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1620	-	-	-	980	1083
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1620	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	174	2	56	164
Future Vol, veh/h	1	7	174	2	56	164
Conflicting Peds, #/hr	0	3	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	8	189	2	61	178

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	493	102	0	0	194	0
Stage 1	193	-	-	-	-	-
Stage 2	300	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	520	934	-	-	1377	-
Stage 1	821	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	493	929	-	-	1374	-
Mov Cap-2 Maneuver	493	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	714	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.35	0	1.97
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	836	458	-
HCM Lane V/C Ratio	-	-	0.01	0.044	-
HCM Ctrl Dly (s/v)	-	-	9.3	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	180	1	0	220
Future Vol, veh/h	0	15	180	1	0	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	196	1	0	239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	98	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	939	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	939	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	939	-
HCM Lane V/C Ratio	-	-	0.017	-
HCM Ctrl Dly (s/v)	-	-	8.9	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	286.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	602	10	31	440	76	15	159	21	132	179	38
Future Vol, veh/h	42	602	10	31	440	76	15	159	21	132	179	38
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	743	12	38	543	94	19	196	26	163	221	47
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	447	306.2	30.8	99
HCM LOS	F	F	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	6%	6%	38%
Vol Thru, %	91%	0%	92%	80%	51%
Vol Right, %	0%	100%	2%	14%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	21	654	547	349
LT Vol	15	0	42	31	132
Through Vol	159	0	602	440	179
RT Vol	0	21	10	76	38
Lane Flow Rate	215	26	807	675	431
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.583	0.065	1.919	1.591	1.037
Departure Headway (Hd)	13.115	12.325	10.181	10.814	12.093
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	277	292	363	344	306
Service Time	10.815	10.025	8.181	8.814	10.093
HCM Lane V/C Ratio	0.776	0.089	2.223	1.962	1.408
HCM Control Delay, s/veh	32.6	15.9	447	306.2	99
HCM Lane LOS	D	C	F	F	F
HCM 95th-tile Q	3.4	0.2	46.1	31	11.5

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	755	0	0	547	0	9
Future Vol, veh/h	755	0	0	547	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	821	0	0	595	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	410
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	0	0	-	0	591
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	591
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.19
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	591	-	-
HCM Lane V/C Ratio	0.017	-	-
HCM Ctrl Dly (s/v)	11.2	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-

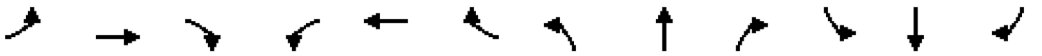
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	759	5	32	543	4	8
Future Vol, veh/h	759	5	32	543	4	8
Conflicting Peds, #/hr	0	3	3	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	825	5	35	590	4	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	833	0	1491	421
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	660	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	797	-	125	582
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	513	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	795	-	116	578
Mov Cap-2 Maneuver	-	-	-	-	116	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.54	20.26
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	249	-	-	100	-
HCM Lane V/C Ratio	0.052	-	-	0.044	-
HCM Ctrl Dly (s/v)	20.3	-	-	9.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	710	12	35	502	120	16	278	51	176	209	57
Future Volume (veh/h)	45	710	12	35	502	120	16	278	51	176	209	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	747	13	37	528	111	17	293	42	185	220	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	717	607	70	549	115	41	361	52	219	1159	517
Arrive On Green	0.04	0.38	0.38	0.04	0.37	0.37	0.02	0.23	0.23	0.12	0.33	0.33
Sat Flow, veh/h	1781	1870	1585	1781	1499	315	1781	1600	229	1781	3554	1585
Grp Volume(v), veh/h	47	747	13	37	0	639	17	0	335	185	220	22
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1814	1781	0	1829	1781	1777	1585
Q Serve(g_s), s	2.5	36.6	0.5	1.9	0.0	32.9	0.9	0.0	16.6	9.7	4.2	0.7
Cycle Q Clear(g_c), s	2.5	36.6	0.5	1.9	0.0	32.9	0.9	0.0	16.6	9.7	4.2	0.7
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	80	717	607	70	0	664	41	0	413	219	1159	517
V/C Ratio(X)	0.59	1.04	0.02	0.53	0.00	0.96	0.42	0.00	0.81	0.84	0.19	0.04
Avail Cap(c_a), veh/h	373	717	607	373	0	665	373	0	671	373	1303	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	29.4	18.3	45.0	0.0	29.6	46.0	0.0	35.0	40.9	23.1	12.3
Incr Delay (d2), s/veh	2.6	45.1	0.0	2.3	0.0	25.9	2.5	0.0	7.9	3.4	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	23.6	0.2	0.9	0.0	17.6	0.4	0.0	7.8	4.3	1.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.3	74.5	18.3	47.3	0.0	55.5	48.5	0.0	42.9	44.3	23.3	12.3
LnGrp LOS	D	F	B	D		E	D		D	D	C	B
Approach Vol, veh/h		807			676			352			427	
Approach Delay, s/veh		72.0			55.1			43.2			31.8	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	27.4	8.9	42.8	6.9	36.9	10.5	41.2
Change Period (Y+Rc), s	4.7	5.8	5.1	6.2	4.7	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	11.7	18.6	3.9	38.6	2.9	6.2	4.5	34.9
Green Ext Time (p_c), s	0.1	3.0	0.0	0.0	0.0	2.6	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	54.9
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

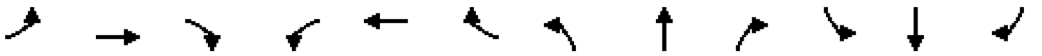
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	2	2	303	221	35
Future Vol, veh/h	42	2	2	303	221	35
Conflicting Peds, #/hr	0	3	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	2	2	329	240	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	596	145	281	0	-	0
Stage 1	262	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Critical Hdwy	6.08	7.13	5.33	-	-	-
Critical Hdwy Stg 1	6.63	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.669	3.919	3.119	-	-	-
Pot Cap-1 Maneuver	479	745	858	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	474	741	855	-	-	-
Mov Cap-2 Maneuver	474	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	698	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.29	0.06	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	12	-	482	-	-
HCM Lane V/C Ratio	0.003	-	0.099	-	-
HCM Ctrl Dly (s/v)	9.2	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	688	50	39	543	167	58	319	101	233	370	74
Future Volume (veh/h)	63	688	50	39	543	167	58	319	101	233	370	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	773	50	45	610	51	65	358	89	262	416	73
Peak Hour Factor	0.89	0.89	0.89	0.86	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	1061	69	122	898	75	146	568	139	300	869	151
Arrive On Green	0.10	0.31	0.31	0.07	0.27	0.27	0.08	0.20	0.20	0.17	0.29	0.29
Sat Flow, veh/h	1781	3387	219	1781	3318	277	1781	2823	693	1781	3023	526
Grp Volume(v), veh/h	71	405	418	45	326	335	65	224	223	262	243	246
Grp Sat Flow(s),veh/h/ln	1781	1777	1830	1781	1777	1819	1781	1777	1740	1781	1777	1772
Q Serve(g_s), s	3.3	17.6	17.7	2.1	14.3	14.3	3.0	10.0	10.2	12.5	9.8	10.0
Cycle Q Clear(g_c), s	3.3	17.6	17.7	2.1	14.3	14.3	3.0	10.0	10.2	12.5	9.8	10.0
Prop In Lane	1.00		0.12	1.00		0.15	1.00		0.40	1.00		0.30
Lane Grp Cap(c), veh/h	172	557	573	122	481	492	146	358	350	300	511	510
V/C Ratio(X)	0.41	0.73	0.73	0.37	0.68	0.68	0.45	0.63	0.64	0.87	0.48	0.48
Avail Cap(c_a), veh/h	410	716	737	410	716	732	410	716	701	410	716	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	26.5	26.6	38.7	28.3	28.3	38.0	31.7	31.8	35.2	25.6	25.6
Incr Delay (d2), s/veh	0.6	3.8	3.7	0.7	2.9	2.8	0.8	3.1	3.3	11.6	1.2	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	7.5	7.8	0.9	6.0	6.1	1.3	4.3	4.3	6.0	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.6	30.4	30.3	39.4	31.2	31.2	38.8	34.8	35.1	46.9	26.7	26.8
LnGrp LOS	D	C	C	D	C	C	D	C	D	D	C	C
Approach Vol, veh/h		894			706			512			751	
Approach Delay, s/veh		30.9			31.7			35.4			33.8	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	23.7	10.7	33.2	11.8	31.2	14.4	29.5
Change Period (Y+Rc), s	4.7	6.2	4.7	6.0	4.7	6.2	6.0	* 6
Max Green Setting (Gmax), s	20.0	35.0	20.0	35.0	20.0	35.0	20.0	* 35
Max Q Clear Time (g_c+I1), s	14.5	12.2	4.1	19.7	5.0	12.0	5.3	16.3
Green Ext Time (p_c), s	0.2	4.0	0.0	6.7	0.0	4.4	0.1	5.7

Intersection Summary	
HCM 7th Control Delay, s/veh	32.7
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	762	106	74	604	124	79	381	71	179	557	106
Future Volume (veh/h)	129	762	106	74	604	124	79	381	71	179	557	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	137	811	43	79	643	49	84	405	46	190	593	84
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1383	73	158	1338	102	161	915	102	182	940	131
Arrive On Green	0.09	0.40	0.40	0.09	0.40	0.40	0.09	0.20	0.20	0.10	0.21	0.21
Sat Flow, veh/h	1781	3432	182	1781	3347	255	1781	4661	520	1781	4523	632
Grp Volume(v), veh/h	137	420	434	79	341	351	84	294	157	190	444	233
Grp Sat Flow(s),veh/h/ln	1781	1777	1837	1781	1777	1825	1781	1702	1777	1781	1702	1751
Q Serve(g_s), s	7.6	18.5	18.5	4.2	14.3	14.3	4.5	7.6	7.8	10.2	11.9	12.1
Cycle Q Clear(g_c), s	7.6	18.5	18.5	4.2	14.3	14.3	4.5	7.6	7.8	10.2	11.9	12.1
Prop In Lane	1.00		0.10	1.00		0.14	1.00		0.29	1.00		0.36
Lane Grp Cap(c), veh/h	164	716	740	158	710	729	161	668	349	182	708	364
V/C Ratio(X)	0.84	0.59	0.59	0.50	0.48	0.48	0.52	0.44	0.45	1.05	0.63	0.64
Avail Cap(c_a), veh/h	164	716	740	182	710	729	182	997	521	182	997	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	23.3	23.3	43.4	22.3	22.3	43.4	35.4	35.4	44.9	36.1	36.2
Incr Delay (d2), s/veh	18.5	2.1	2.0	0.9	2.3	2.3	1.0	1.0	1.9	79.3	2.0	4.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	7.6	7.8	1.9	6.1	6.3	2.0	3.1	3.4	8.3	4.9	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.1	25.4	25.4	44.3	24.6	24.6	44.4	36.3	37.4	124.2	38.0	40.1
LnGrp LOS	E	C	C	D	C	C	D	D	D	F	D	D
Approach Vol, veh/h		991			771			535			867	
Approach Delay, s/veh		30.6			26.6			37.9			57.5	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	25.4	13.6	46.1	13.7	26.6	13.9	45.8
Change Period (Y+Rc), s	4.7	5.8	4.7	5.8	4.7	5.8	4.7	5.8
Max Green Setting (Gmax), s	10.2	29.3	10.2	29.3	10.2	29.3	9.2	30.3
Max Q Clear Time (g_c+I1), s	12.2	9.8	6.2	20.5	6.5	14.1	9.6	16.3
Green Ext Time (p_c), s	0.0	4.5	0.0	4.2	0.0	6.0	0.0	4.7

Intersection Summary	
HCM 7th Control Delay, s/veh	38.2
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	984	278	84	787	74	147	345	54	120	547	105
Future Volume (veh/h)	75	984	278	84	787	74	147	345	54	120	547	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	1025	258	88	820	71	153	359	46	125	570	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	1876	472	111	2240	193	179	713	91	151	637	106
Arrive On Green	0.06	0.46	0.46	0.06	0.47	0.47	0.10	0.23	0.23	0.08	0.21	0.21
Sat Flow, veh/h	1781	4065	1022	1781	4786	413	1781	3169	403	1781	3048	506
Grp Volume(v), veh/h	78	858	425	88	582	309	153	200	205	125	332	333
Grp Sat Flow(s),veh/h/ln	1781	1702	1682	1781	1702	1795	1781	1777	1795	1781	1777	1777
Q Serve(g_s), s	5.2	21.8	21.8	5.8	13.2	13.3	10.1	11.8	12.0	8.3	21.8	21.9
Cycle Q Clear(g_c), s	5.2	21.8	21.8	5.8	13.2	13.3	10.1	11.8	12.0	8.3	21.8	21.9
Prop In Lane	1.00		0.61	1.00		0.23	1.00		0.22	1.00		0.28
Lane Grp Cap(c), veh/h	99	1571	777	111	1593	840	179	400	404	151	371	371
V/C Ratio(X)	0.79	0.55	0.55	0.79	0.37	0.37	0.85	0.50	0.51	0.83	0.89	0.90
Avail Cap(c_a), veh/h	282	1571	777	282	1593	840	282	459	464	282	459	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	23.3	23.3	55.5	20.5	20.5	53.1	40.6	40.7	54.1	46.2	46.2
Incr Delay (d2), s/veh	5.1	1.4	2.8	4.8	0.6	1.2	8.2	0.4	0.4	4.4	15.1	15.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	8.4	8.6	2.7	5.0	5.5	4.8	5.1	5.2	3.8	10.9	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.0	24.6	26.0	60.3	21.1	21.7	61.3	41.0	41.0	58.5	61.3	62.0
LnGrp LOS	E	C	C	E	C	C	E	D	D	E	E	E
Approach Vol, veh/h		1361			979			558			790	
Approach Delay, s/veh		27.2			24.8			46.6			61.1	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	60.4	17.1	30.1	11.7	61.2	15.1	32.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	19.0	31.0	19.0	31.0	19.0	31.0	19.0	31.0
Max Q Clear Time (g_c+I1), s	7.8	23.8	12.1	23.9	7.2	15.3	10.3	14.0
Green Ext Time (p_c), s	0.0	1.0	0.0	0.4	0.0	0.7	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	36.8
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	645	412	390	653	85	208	347	289	90	466	85
Future Volume (veh/h)	53	645	412	390	653	85	208	347	289	90	466	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	679	275	411	687	38	219	365	210	95	491	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	920	366	322	1293	572	255	966	445	152	423	354
Arrive On Green	0.07	0.26	0.26	0.18	0.36	0.36	0.14	0.28	0.28	0.09	0.23	0.23
Sat Flow, veh/h	1781	3575	1423	1781	3554	1572	1781	3404	1568	1781	1870	1564
Grp Volume(v), veh/h	56	646	308	411	687	38	219	365	210	95	491	72
Grp Sat Flow(s),veh/h/ln	1781	1702	1594	1781	1777	1572	1781	1702	1568	1781	1870	1564
Q Serve(g_s), s	3.3	19.2	19.7	20.0	16.9	1.7	13.3	9.5	12.2	5.7	25.0	4.1
Cycle Q Clear(g_c), s	3.3	19.2	19.7	20.0	16.9	1.7	13.3	9.5	12.2	5.7	25.0	4.1
Prop In Lane	1.00		0.89	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	876	410	322	1293	572	255	966	445	152	423	354
V/C Ratio(X)	0.42	0.74	0.75	1.28	0.53	0.07	0.86	0.38	0.47	0.62	1.16	0.20
Avail Cap(c_a), veh/h	322	1231	577	322	1293	572	644	966	445	644	423	354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	37.6	37.8	45.3	27.7	22.9	46.3	31.8	32.8	48.9	42.8	34.7
Incr Delay (d2), s/veh	2.1	1.5	3.5	146.1	0.4	0.0	8.2	0.2	0.8	4.1	95.8	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.8	7.7	21.5	6.8	0.6	6.3	3.8	4.6	2.6	22.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.1	39.1	41.3	191.4	28.2	23.0	54.5	32.0	33.5	53.0	138.6	35.0
LnGrp LOS	D	D	D	F	C	C	D	C	C	D	F	D
Approach Vol, veh/h		1010			1136			794			658	
Approach Delay, s/veh		40.4			87.1			38.6			114.9	
Approach LOS		D			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	34.5	20.8	30.3	13.2	46.3	14.5	36.7
Change Period (Y+Rc), s	5.0	6.0	5.0	5.3	5.0	6.0	5.0	5.3
Max Green Setting (Gmax), s	20.0	40.0	40.0	25.0	20.0	40.0	40.0	25.0
Max Q Clear Time (g_c+I1), s	22.0	21.7	15.3	27.0	5.3	18.9	7.7	14.2
Green Ext Time (p_c), s	0.0	5.5	0.6	0.0	0.1	4.2	0.2	2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	68.4
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	309	685	457	286	3	845	7	594	3	10	26
Future Volume (veh/h)	15	309	685	457	286	3	845	7	594	3	10	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	315	511	466	292	3	862	0	217	3	10	5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1407	741	447	1862	19	699	0	913	4	222	103
Arrive On Green	0.01	0.28	0.28	0.25	0.52	0.52	0.20	0.00	0.29	0.00	0.09	0.09
Sat Flow, veh/h	1781	5106	1560	1781	3603	37	3563	0	3170	1781	2361	1090
Grp Volume(v), veh/h	15	315	511	466	144	151	862	0	217	3	7	8
Grp Sat Flow(s),veh/h/ln	1781	1702	1560	1781	1777	1863	1781	0	1585	1781	1777	1674
Q Serve(g_s), s	1.1	6.1	32.8	32.0	5.4	5.4	25.0	0.0	6.7	0.2	0.5	0.5
Cycle Q Clear(g_c), s	1.1	6.1	32.8	32.0	5.4	5.4	25.0	0.0	6.7	0.2	0.5	0.5
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	18	1407	741	447	918	963	699	0	913	4	167	158
V/C Ratio(X)	0.85	0.22	0.69	1.04	0.16	0.16	1.23	0.00	0.24	0.71	0.04	0.05
Avail Cap(c_a), veh/h	447	2044	935	447	918	963	699	0	913	210	167	158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	35.6	26.4	47.7	16.2	16.2	51.2	0.0	34.7	63.5	52.5	52.5
Incr Delay (d2), s/veh	31.1	0.0	0.9	53.8	0.0	0.0	117.1	0.0	0.6	118.2	0.5	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.5	12.2	20.5	2.2	2.3	22.5	0.0	2.7	0.2	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.1	35.7	27.3	101.5	16.2	16.2	168.3	0.0	35.3	181.8	53.0	53.1
LnGrp LOS	F	D	C	F	B	B	F		D	F	D	D
Approach Vol, veh/h		841			761			1079			18	
Approach Delay, s/veh		31.6			68.4			141.6			74.5	
Approach LOS		C			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	41.5	30.2	18.1	6.9	72.2	5.5	42.8
Change Period (Y+Rc), s	5.6	6.4	5.2	6.1	5.6	6.4	5.2	6.1
Max Green Setting (Gmax), s	32.0	51.0	25.0	12.0	32.0	51.0	15.0	22.0
Max Q Clear Time (g_c+I1), s	34.0	34.8	27.0	2.5	3.1	7.4	2.2	8.7
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	86.2
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1006	129	358	846	0	0	0	0	471	6	482
Future Volume (veh/h)	0	1006	129	358	846	0	0	0	0	471	6	482
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1059	112	377	891	0				496	6	386
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1046	467	421	1128	0				379	5	341
Arrive On Green	0.00	0.29	0.29	0.24	0.60	0.00				0.22	0.22	0.22
Sat Flow, veh/h	0	3647	1585	1781	1870	0				1761	21	1585
Grp Volume(v), veh/h	0	1059	112	377	891	0				502	0	386
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1870	0				1782	0	1585
Q Serve(g_s), s	0.0	19.1	3.5	13.3	23.5	0.0				14.0	0.0	14.0
Cycle Q Clear(g_c), s	0.0	19.1	3.5	13.3	23.5	0.0				14.0	0.0	14.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1046	467	421	1128	0				384	0	341
V/C Ratio(X)	0.00	1.01	0.24	0.90	0.79	0.00				1.31	0.00	1.13
Avail Cap(c_a), veh/h	0	1046	467	438	1128	0				384	0	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.16	0.16	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.9	17.4	24.0	9.8	0.0				25.5	0.0	25.5
Incr Delay (d2), s/veh	0.0	30.8	1.2	4.0	1.0	0.0				156.1	0.0	89.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.9	1.2	5.2	5.6	0.0				22.1	0.0	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	53.8	18.6	28.1	10.7	0.0				181.6	0.0	114.5
LnGrp LOS		F	B	C	B					F		F
Approach Vol, veh/h		1171			1268						888	
Approach Delay, s/veh		50.4			15.9						152.4	
Approach LOS		D			B						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	20.1	25.1		19.8		45.2
Change Period (Y+Rc), s	4.7	6.0		5.8		6.0
Max Green Setting (Gmax), s	16.0	18.2		14.0		39.2
Max Q Clear Time (g_c+I1), s	15.3	21.1		16.0		25.5
Green Ext Time (p_c), s	0.1	0.0		0.0		3.0

Intersection Summary	
HCM 7th Control Delay, s/veh	64.5
HCM 7th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	1175	0	0	1076	552	94	3	361	0	0	0
Future Volume (veh/h)	310	1175	0	0	1076	552	94	3	361	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	337	1277	0	0	1170	205	102	3	342			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	729	1576	0	0	1214	541	80	2	268			
Arrive On Green	0.41	0.84	0.00	0.00	0.34	0.34	0.22	0.22	0.22			
Sat Flow, veh/h	1781	1870	0	0	3647	1585	371	11	1245			
Grp Volume(v), veh/h	337	1277	0	0	1170	205	447	0	0			
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1777	1585	1628	0	0			
Q Serve(g_s), s	9.0	22.0	0.0	0.0	21.0	6.4	14.0	0.0	0.0			
Cycle Q Clear(g_c), s	9.0	22.0	0.0	0.0	21.0	6.4	14.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.23		0.77			
Lane Grp Cap(c), veh/h	729	1576	0	0	1214	541	351	0	0			
V/C Ratio(X)	0.46	0.81	0.00	0.00	0.96	0.38	1.28	0.00	0.00			
Avail Cap(c_a), veh/h	729	1576	0	0	1214	541	351	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.0	2.5	0.0	0.0	21.0	16.2	25.5	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	18.5	2.0	144.2	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.8	0.2	0.0	0.0	10.0	2.2	19.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.0	3.0	0.0	0.0	39.5	18.2	169.7	0.0	0.0			
LnGrp LOS	B	A			D	B	F					
Approach Vol, veh/h		1614			1375			447				
Approach Delay, s/veh		5.3			36.3			169.7				
Approach LOS		A			D			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.8			32.6	28.2		19.8				
Change Period (Y+Rc), s		6.0			6.0	* 6		5.8				
Max Green Setting (Gmax), s		39.2			12.0	* 22		14.0				
Max Q Clear Time (g_c+I1), s		24.0			11.0	23.0		16.0				
Green Ext Time (p_c), s		6.0			0.1	0.0		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	39.1
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑			↱
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	1083
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Ctrl Dly (s/v)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	1620	-	-	0	980	1083
Stage 1	-	-	-	0	980	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1620	-	-	-	980	1083
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1620	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-

Appendix F: Queuing Sheets



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1171	88	287	761	400	282
v/c Ratio	1.06	0.15	0.74	0.68	1.05	0.56
Control Delay (s/veh)	72.2	2.8	39.7	12.8	89.0	11.8
Queue Delay	15.4	0.0	0.0	0.0	17.9	0.0
Total Delay (s/veh)	87.5	2.8	39.7	12.8	106.8	11.8
Queue Length 50th (ft)	~283	0	116	103	~178	24
Queue Length 95th (ft)	#431	17	m129	m145	#325	85
Internal Link Dist (ft)	3314			338	1598	
Turn Bay Length (ft)						
Base Capacity (vph)	1102	579	490	1123	381	504
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	88	0	0	0	17	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.15	0.59	0.68	1.10	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	538	979	840	416	477
v/c Ratio	1.38	0.95	0.91	0.59	0.93
Control Delay (s/veh)	196.2	14.9	39.9	7.4	46.1
Queue Delay	0.0	44.1	0.0	0.0	0.0
Total Delay (s/veh)	196.2	59.0	39.9	7.4	46.1
Queue Length 50th (ft)	~293	411	172	8	145
Queue Length 95th (ft)	m#266	m99	#283	75	#313
Internal Link Dist (ft)		338	369		1326
Turn Bay Length (ft)	240			115	
Base Capacity (vph)	389	1032	927	701	534
Starvation Cap Reductn	0	218	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.38	1.20	0.91	0.59	0.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1059	136	377	891	502	507
v/c Ratio	1.02	0.24	0.90	0.79	1.31	1.10
Control Delay (s/veh)	59.0	5.1	34.1	7.4	185.4	91.3
Queue Delay	0.0	0.0	0.0	49.8	1.9	0.0
Total Delay (s/veh)	59.0	5.1	34.1	57.1	187.3	91.3
Queue Length 50th (ft)	~247	0	91	99	~264	~179
Queue Length 95th (ft)	#360	35	m95	m91	#430	#353
Internal Link Dist (ft)	3314			338	1598	
Turn Bay Length (ft)						
Base Capacity (vph)	1039	560	435	1123	382	463
Starvation Cap Reductn	0	0	0	337	0	0
Spillback Cap Reductn	0	0	0	0	62	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.24	0.87	1.13	1.57	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	337	1277	1170	600	497
v/c Ratio	1.01	1.14	0.97	0.71	1.23
Control Delay (s/veh)	43.6	84.8	42.5	10.1	146.8
Queue Delay	0.0	0.1	0.0	0.0	0.0
Total Delay (s/veh)	43.6	84.9	42.5	10.1	146.8
Queue Length 50th (ft)	~95	~564	235	40	~229
Queue Length 95th (ft)	m83	m#382	#368	145	#401
Internal Link Dist (ft)		338	369		1326
Turn Bay Length (ft)	240			115	
Base Capacity (vph)	334	1123	1208	842	405
Starvation Cap Reductn	0	23	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.01	1.16	0.97	0.71	1.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Appendix G: Signal Warrants

Fehr & Peers

Intersection	1	Project	Ranch at Coachella (COVA)
Major Street	Calhoun Street	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 1	Peak Hour	AM

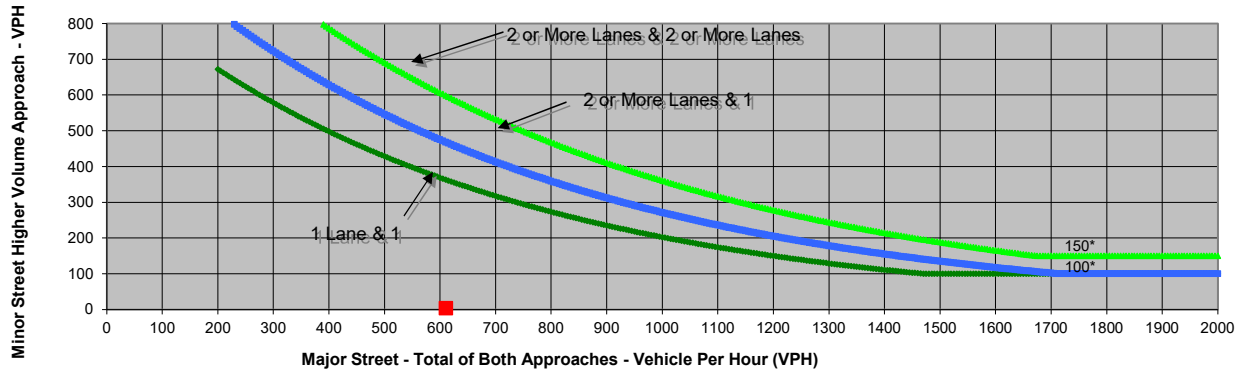
Turn Movement Volumes

	NB	SB	EB	WB
Left		25	1	
Through	292	292	0	
Right	1		3	
Total	293	317	4	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Calhoun Street	Minor Street Driveway 1	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**610**	**4**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	1	Project	Ranch at Coachella (COVA)
Major Street	Calhoun Street	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 1	Peak Hour	PM

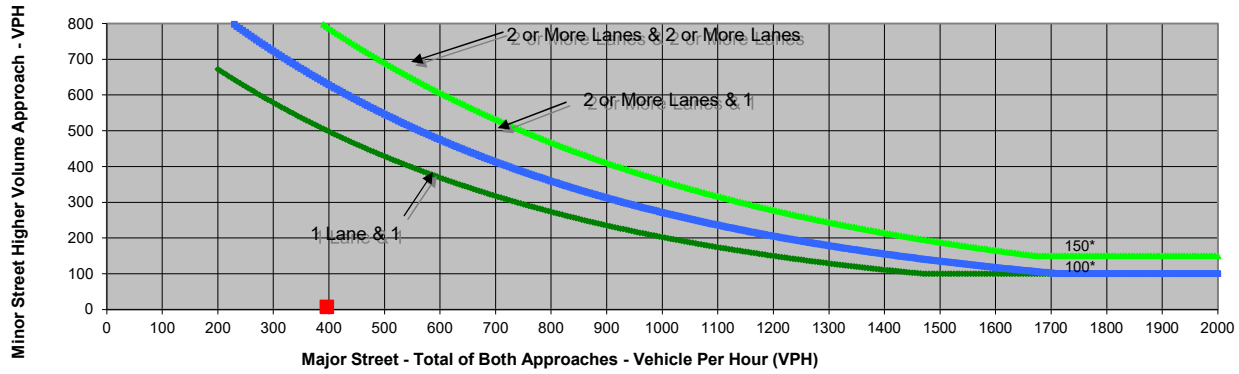
Turn Movement Volumes

	NB	SB	EB	WB
Left		56	1	
Through	174	164	0	
Right	2		7	
Total	176	220	8	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Calhoun Street	Minor Street Driveway 1	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**396**	**8**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	2	Project	Ranch at Coachella (COVA)
Major Street	Calhoun Street	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 2	Peak Hour	AM

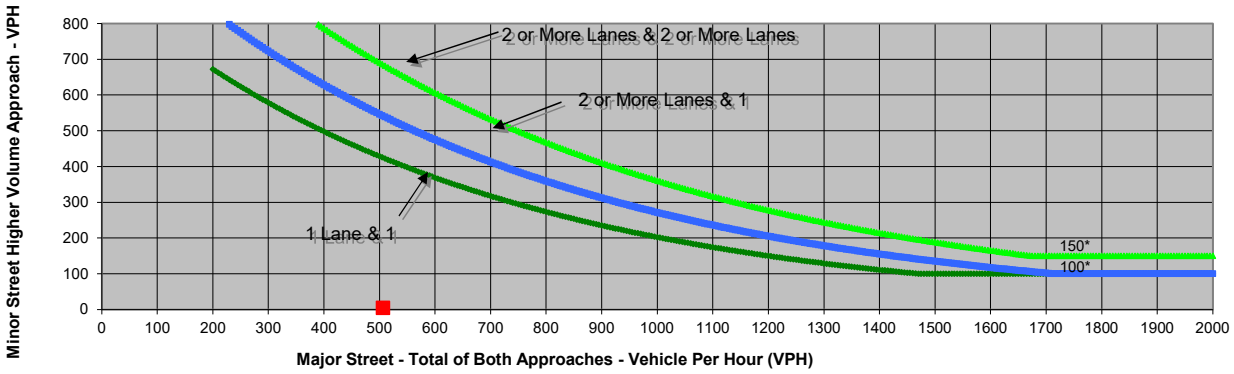
Turn Movement Volumes

	NB	SB	EB	WB
Left			0	
Through	295	211	0	
Right	0		5	
Total	295	211	5	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Calhoun Street	Minor Street Driveway 2	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**506**	**5**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	2	Project	Ranch at Coachella (COVA)
Major Street	Calhoun Street	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 2	Peak Hour	PM

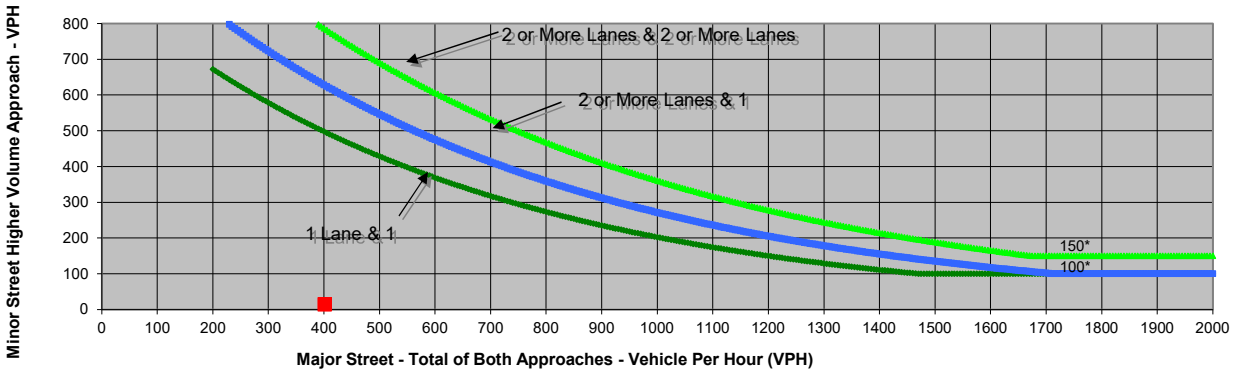
Turn Movement Volumes

	NB	SB	EB	WB
Left			0	
Through	180	220	0	
Right	1		15	
Total	181	220	15	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Calhoun Street	Minor Street Driveway 2	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**401**	**15**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	3	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Existing
Minor Street	Calhoun Street	Peak Hour	AM

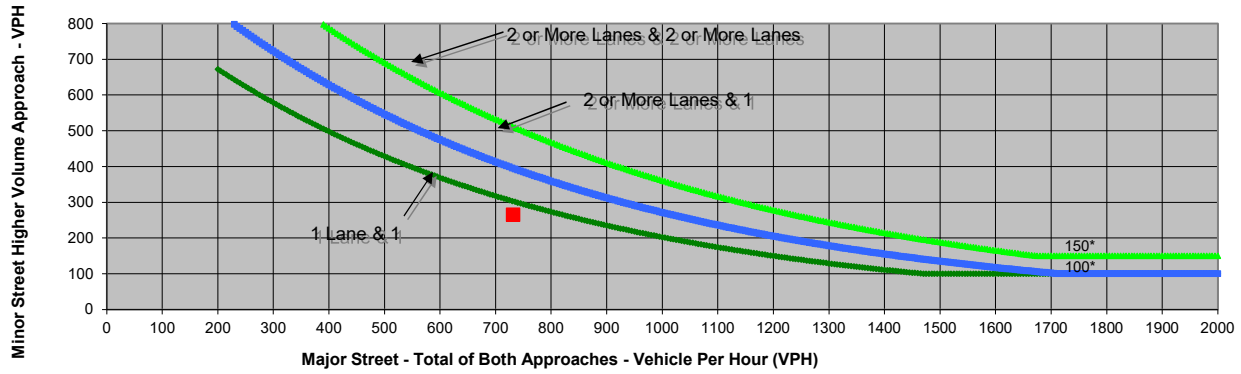
Turn Movement Volumes

	NB	SB	EB	WB
Left	14	75	11	3
Through	211	148	190	442
Right	30	43	6	79
Total	255	266	207	524

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Calhoun Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**731**	**266**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	3	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Existing
Minor Street	Calhoun Street	Peak Hour	PM

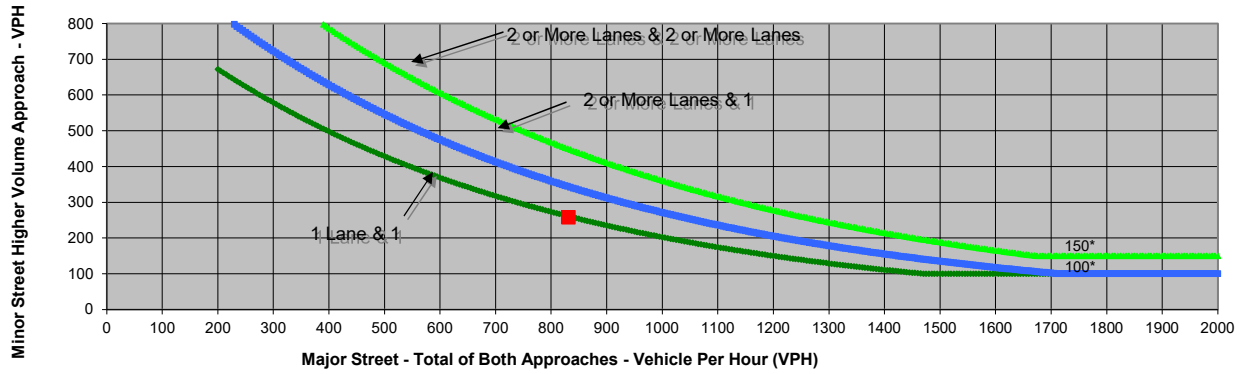
Turn Movement Volumes

	NB	SB	EB	WB
Left	11	111	29	3
Through	118	127	436	296
Right	13	20	6	61
Total	142	258	471	360

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Calhoun Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**831**	**258**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	3	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) Plus Project
Minor Street	Calhoun Street	Peak Hour	1

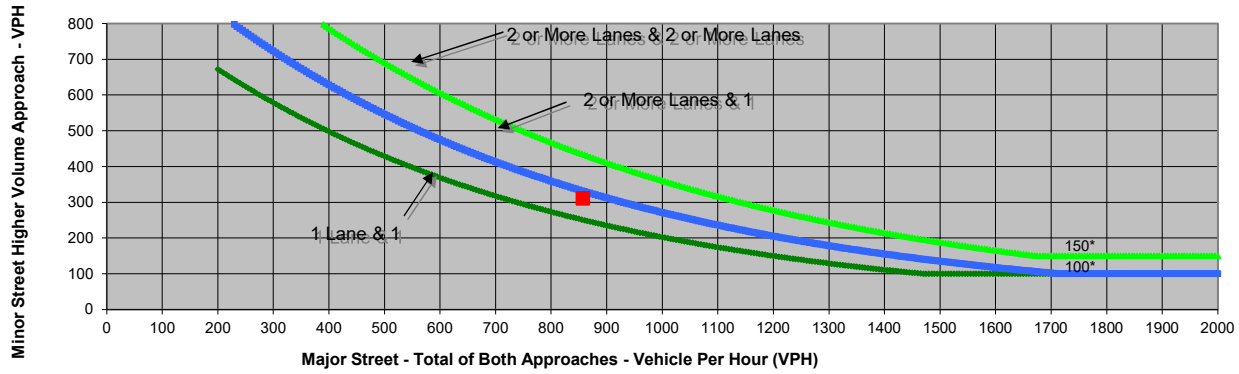
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	86	13	14
Through	238	177	221	508
Right	34	48	8	93
Total	289	311	242	615

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Calhoun Street	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**857**	**311**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	3	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) Plus Project
Minor Street	Calhoun Street	Peak Hour	1

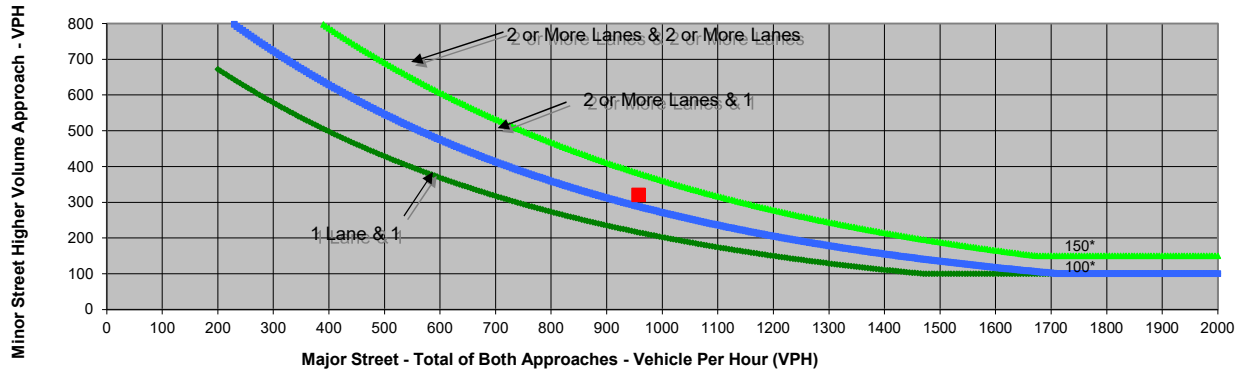
Turn Movement Volumes

	NB	SB	EB	WB
Left	15	128	32	29
Through	146	171	484	329
Right	19	22	10	73
Total	180	321	526	431

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Calhoun Street	Warrant Met
Number of Approach Lanes	**1**	**2**	**YES**
Traffic Volume (VPH) *	**957**	**321**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	3	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) Plus Project with Cumulative Projects
Minor Street	Calhoun Street	Peak Hour	AM

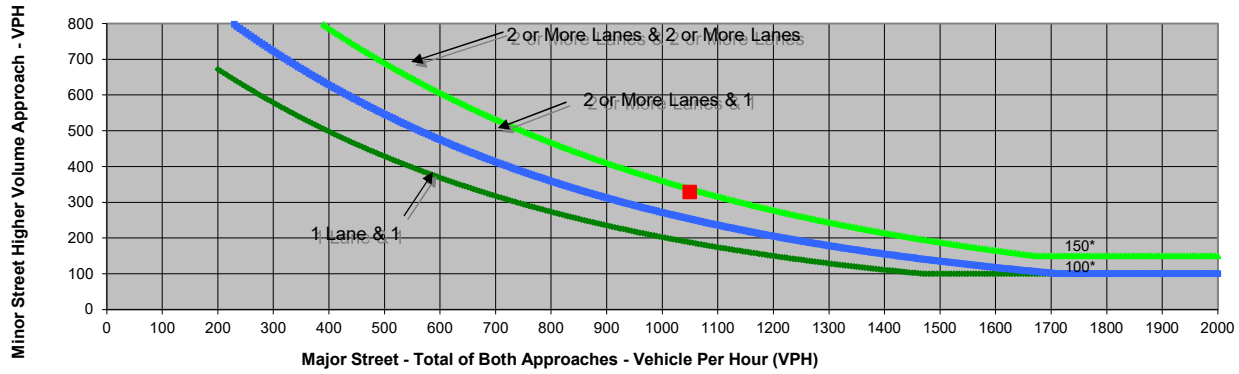
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	88	28	15
Through	247	188	308	596
Right	36	53	8	94
Total	300	329	344	705

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Calhoun Street	Warrant Met
Number of Approach Lanes	**1**	**2**	**YES**
Traffic Volume (VPH) *	**1,049**	**329**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	3	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) Plus Project with Cumulative Projects
Minor Street	Calhoun Street	Peak Hour	PM

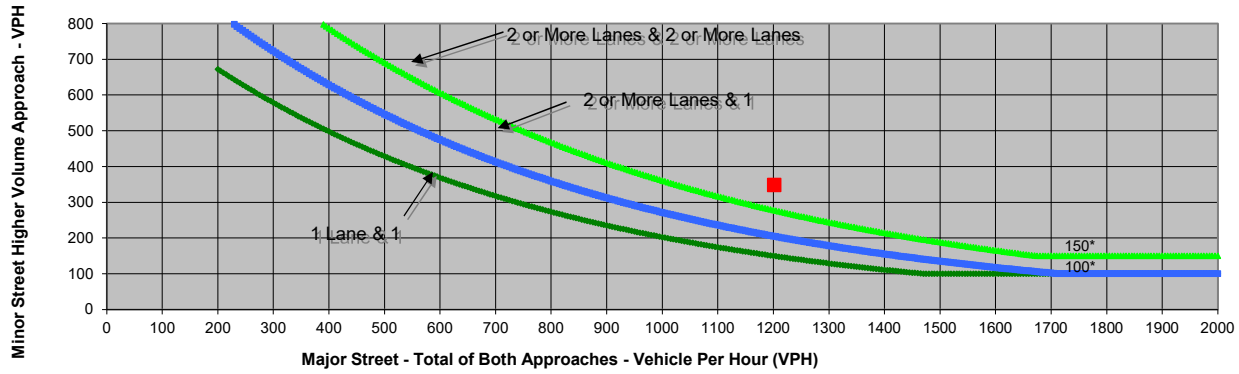
Turn Movement Volumes

	NB	SB	EB	WB
Left	15	132	42	76
Through	159	179	602	440
Right	21	38	10	31
Total	195	349	654	547

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Calhoun Street	Warrant Met
Number of Approach Lanes	**1**	**2**	**YES**
Traffic Volume (VPH) *	**1,201**	**349**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	4	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 3	Peak Hour	AM

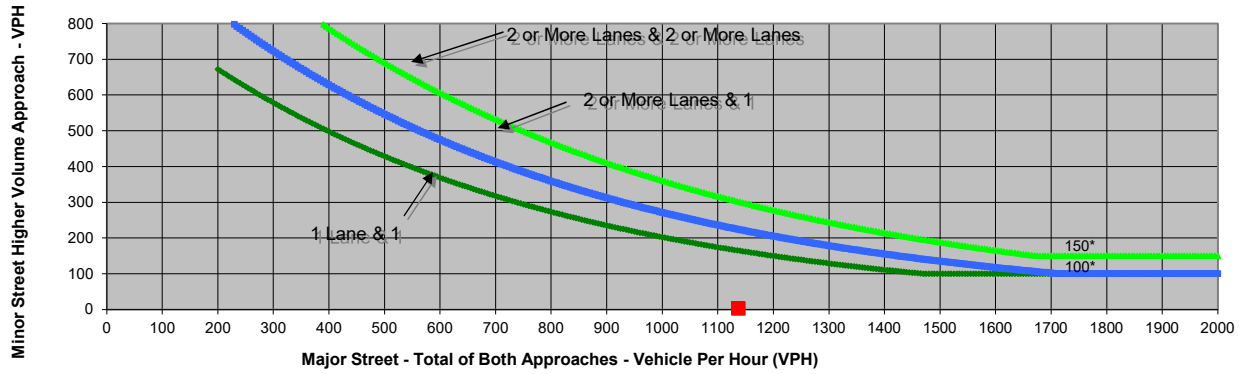
Turn Movement Volumes

	NB	SB	EB	WB
Left			0	
Through	0		432	705
Right	3		0	
Total	3	0	432	705

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Driveway 3	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,137**	**3**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	4	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 3	Peak Hour	PM

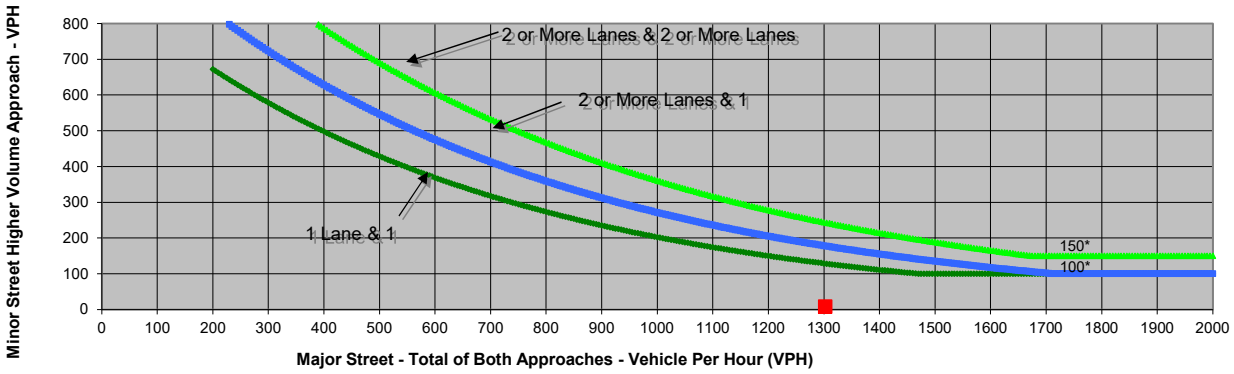
Turn Movement Volumes

	NB	SB	EB	WB
Left			0	
Through	0		755	547
Right	9		0	
Total	9	0	755	547

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Driveway 3	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,302**	**9**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	5	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 4	Peak Hour	AM

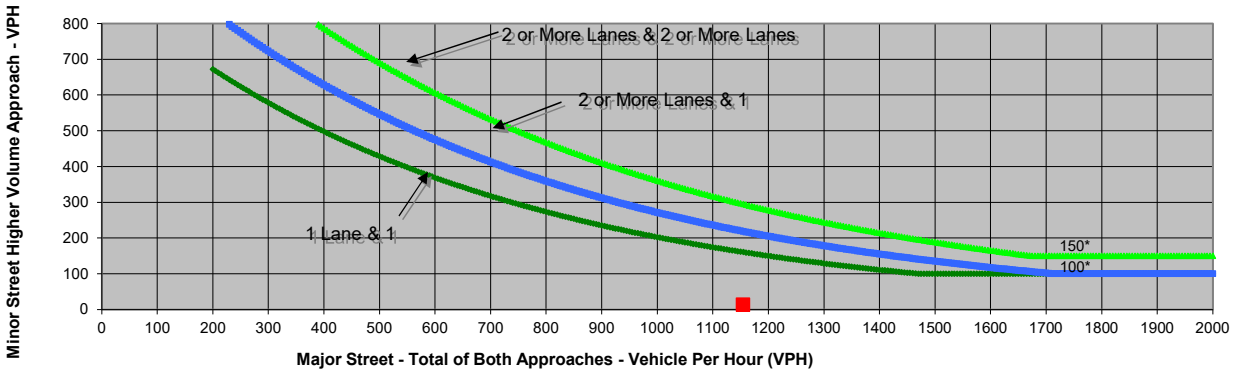
Turn Movement Volumes

	NB	SB	EB	WB
Left	5		0	19
Through	0		432	700
Right	9		3	
Total	14	0	435	719

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Driveway 4	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,154**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	5	Project	Ranch at Coachella (COVA)
Major Street	Avenue 52	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 4	Peak Hour	PM

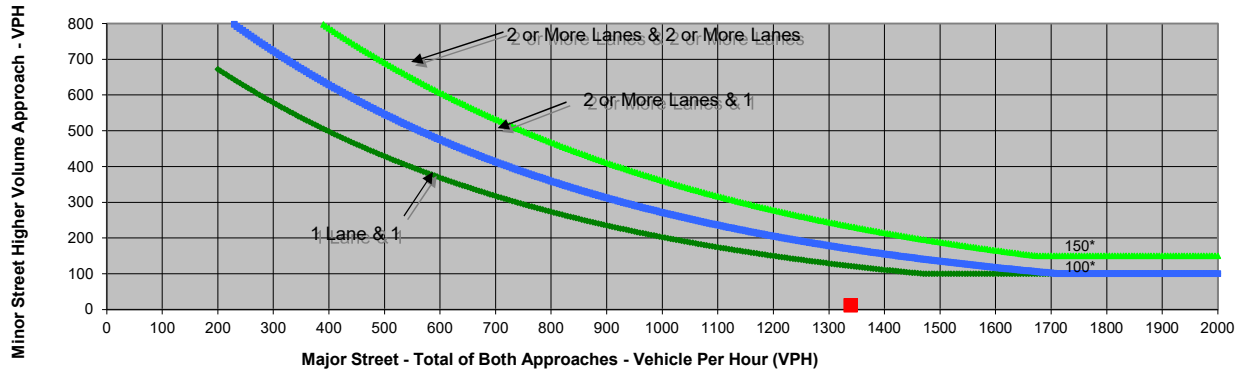
Turn Movement Volumes

	NB	SB	EB	WB
Left	4		0	543
Through	0		759	32
Right	8		5	
Total	12	0	764	575

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Avenue 52	Minor Street Driveway 4	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,339**	**12**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	7	Project	Ranch at Coachella (COVA)
Major Street	Van Burent St	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 5	Peak Hour	AM

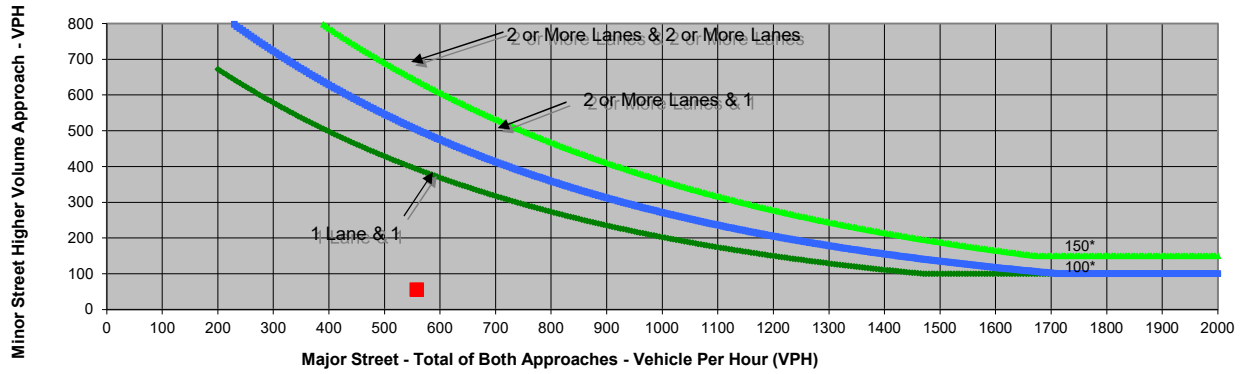
Turn Movement Volumes

	NB	SB	EB	WB
Left	1		54	0
Through	0	225	0	0
Right	312	20	2	
Total	313	245	56	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Van Burent St	Minor Street Driveway 5	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**558**	**56**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Fehr & Peers

Intersection	7	Project	Ranch at Coachella (COVA)
Major Street	Van Burent St	Scenario	Opening Year (2030) with Project and Cumulative Projects
Minor Street	Driveway 5	Peak Hour	PM

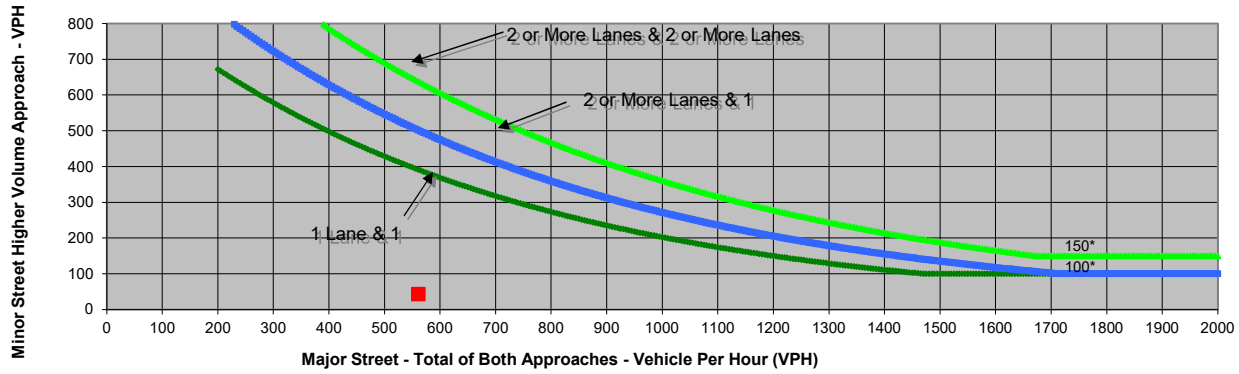
Turn Movement Volumes

	NB	SB	EB	WB
Left	2		42	0
Through	0	221	0	0
Right	303	35	2	
Total	305	256	44	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street Van Burent St	Minor Street Driveway 5	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**561**	**44**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Appendix H: Classic Club Specific Plan Arena Trip Generation Memorandum

FEHR PEERS

Memorandum

Date: December 22, 2023

To: Eva Covarrubias, County of Riverside

From: Paul Herrmann, T.E.
Marsha Phillips

Subject: Classic Club Specific Plan Arena Trip Generation Memorandum

OC23-0962

Fehr & Peers has completed a trip generation assessment in support of the proposed Classic Club Specific Plan Amendment (Project) located in located in Western Coachella Valley within an unincorporated portion of Riverside County, California. This assessment evaluates previous trip generation estimates for the arena as compared to empirically collected data after the opening of the Acrisure Arena (Arena).

The remainder of this memorandum outlines the Project Description, Analysis Description, Data Collection, Trip Generation, Trip Generation Comparison, Classic Club Specific Plan Trip Generation and Next Steps.

Project Description

The Classic Club Specific Plan Area is located north of I-10 and east of the Cook Street interchange. This existing Specific Plan Area is bounded by Cook Street to the west and Varner Road to the south, which provides access directly to the site. The Project is a proposed amendment to the NorthStar Specific Plan, originally approved in 2006 and amended in 2021. The 2021 amendment reconfigured the Planning Areas to allow the addition of a new Planning Area to allow the development of the Arena. This amendment reduced the size of the Business Park Planning Area to accommodate the Arena. An Addendum to the 2006 Specific Plan EIR was prepared for this amendment (2021 Addendum),

The Arena, which opened in December 2022, is 260 KSF Event Center with a 35 KSF training facility for the Coachella Valley Firebirds, an American Hockey League (AHL) team. The Arena

hosts AHL games with a capacity of 9,918 patrons and other events, including concerts, with a maximum capacity of 11,000 patrons.

The Berger Foundation Iceplex, which contains the training center ice sheet is open about nine months of the year (closed in the three summer months between June and August). It is used about 50% of the time by the AHL team for practice. When not in use by the AHL team, the training ice rink is available as a community ice facility on non-event days (approximately 135 days a year). It is open 7 days a week and for 6 to 8 hours per day, with typically 20 to 40 people using it per hour. It is used for public skating sessions, skate/hockey lessons, or hockey leagues.

Analysis Scenarios

The Arena events vary in size, vary in type of event, with events scheduled approximately 180 days out of the year. Project trip counts for a hockey game and a concert were taken in April 2023 to develop custom Arena trip generation rates to compare against the assumptions in traffic study (2021 Traffic Study) prepared for the Arena incorporated into the 2021 Addendum. The following scenarios were analyzed in the 2021 Traffic Study:

- Typical Hockey Game: Represents a typical (average) attendance of 7,500 patrons for a hockey game.
- Sellout Hockey Game: Represents a sellout (maximum) attendance of 9,918 patrons for a hockey game.
- Typical Concert: Represents a typical (average) attendance of 7,500 patrons for a concert or event.
- Sellout Concert: Represents a sellout (maximum) attendance of 11,000 patrons for a concert or an event.

Data Collection

Twenty-four hour driveway counts were collected on April 4, 2023 (during a hockey game) and April 5, 2023 (during a concert) at the arena parking lot. The parking lot for the Arena also provides parking for the Berger Foundation Iceplex, (Iceplex) which was operational during the days when the data was collected. The Iceplex is open from as early as 6:15 AM for figure skating with skating lessons and open public skating sessions continuing throughout the day. **Table 1** and **Table 2** show the counts on the day of a hockey game and a concert, respectively, by the peak arrival and departure time for the events and the peak AM and PM time.

Table 1: Hockey Game Trip Counts

Peak Hour	Time	Trips	In	Out
Daily	24 Hours from Midnight to Midnight	7,133	3,544	3,589
AM Peak	7:45 AM to 8:45 AM	86	57	29
PM Peak	5:00 PM to 6:00 PM	462	398	64
Event Arrival Peak	6:00 PM to 7:00 PM	1,924	1,816	108
Event Departure Peak	9:00 PM to 10:00 PM	2,609	92	2,517

Note: Data was collected on Wednesday April 5th, 2023, on the day of a Coachella Firebirds AHL Game with 6,558 attendees.
Source: Fehr & Peers, 2023.

Table 2: Concert Trip Counts

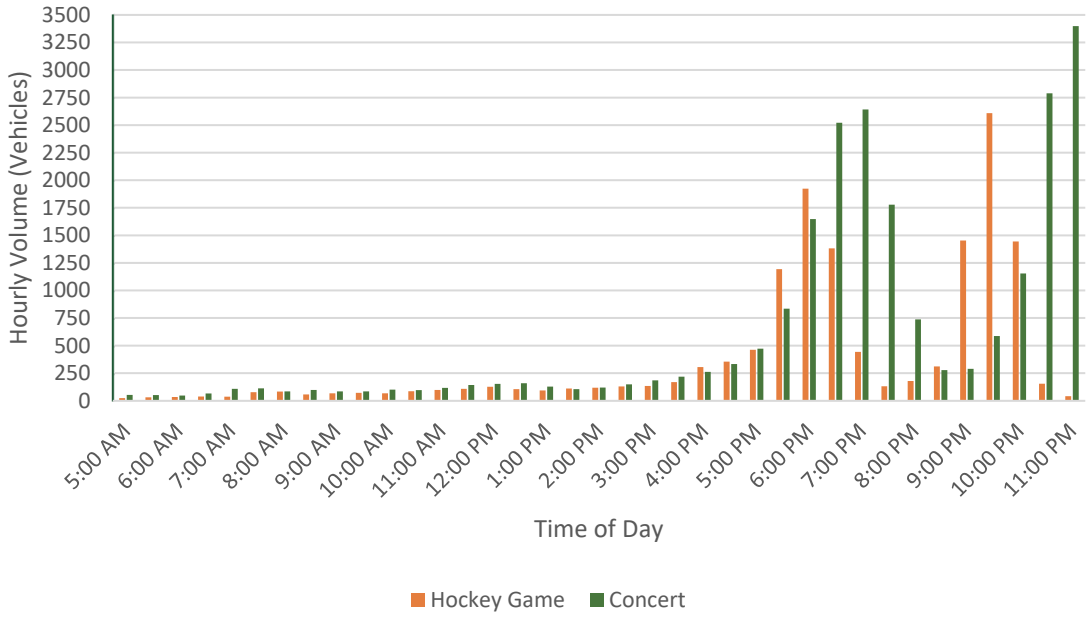
Peak Hour	Time	Trips	In	Out
Daily	24 Hours from Midnight to Midnight	11,811	6,021	5,790
AM Peak	7:30 AM to 8:30 AM	112	90	22
PM Peak	5:00 PM to 6:00 PM	472	364	108
Event Arrival Peak	7:00 PM to 8:00 PM	2,751	2,251	500
Event Departure Peak	11:00 PM to 12:00 PM	3,482	308	3,174

Note: Data was collected on Thursday April 6th, 2023, on the day of a John Mayer Concert with 9,077 attendees.
Source: Fehr & Peers, 2023.

The trip generation pattern for a hockey game and a concert exhibit a similar trend during peak hours. **Figure 1** shows the differences between the trip counts on the day of a hockey game compared to a concert. The observed counts during the AM peak hours can be attributed to the early lessons held during that time at the ice rink. It is observed that trips arrive and depart earlier for a hockey game as compared to a concert, as most hockey games commence between 5:00 PM and 7:00 PM, while a concert usually starts between 7:00 PM and 8:30 PM, and generally

attendees arrive to see the start of a sporting event while they may show up later to a concert for only the headline performance.

Figure 1: Arena Houly Volumes



Source: Fehr & Peers, 2023.

Trip Generation Analysis

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Estimates for the Project were created for the daily condition and for the peak one-hour period during the morning and evening commutes when traffic volumes on the adjacent streets are typically the highest. Custom public ice skating, hockey game, and concert trip generation rates were developed from the traffic counts collected and are described in more detail below.

Public Skating Rink and General Arena Operations Trip Generation

The morning peak hour and much of the daily trips on site are not tied to event attendance as the public ice skating is unrelated to the evening event, and general operational activities occur regularly at the arena, such as maintenance, deliveries and arena office use. A trip generation rate was developed based on the average of the two days of data collection. During the overlap of public ice skating and event arrival time traffic, the hourly average was estimated and extended through the rink's closing time to separate the public skating rink from the event traffic.

Table 3: Typical Arena (Non-Event Related) Generation Estimates

Source	Daily	AM Total Trips	AM In	AM Out	PM Total	PM In	PM Out
Driveway Counts Average	2,626	100	74	26	90	45	45

Source: Fehr & Peers, 2023.

Hockey Game Trip Generation

Table 4 summarizes the trip generation rates used to estimate trip generations for a hockey game, which are summarized in **Table 5** using the total arena trip generation by patron for daily and PM peak hour. These trips are in addition to the typical arena (non-event related) trip estimates.

Table 4: Hockey Game Trip Generation Rates

Source	Unit	Daily Trip Rate	AM Total Rate	AM In	AM Out	PM Total Rate	PM In	PM Out
Driveway Counts	Per Attendee	0.687	0.000	0.000	0.000	0.057	0.054	0.003

Source: Fehr & Peers, 2023.

Table 5: Hockey Game Trip Generation Estimates

Number of Attendees	Daily Trips	AM Total Trips	AM In	AM Out	PM Total	PM In	PM Out
Maximum Number of Attendees							
9,918	6,816	0	0	0	562	534	29
Average Number of Attendees							
7,500	5,154	0	0	0	425	404	22

Source: Fehr & Peers, 2023.

Concert Trip Generation

Table 6 summarizes the trip generation rates used to estimate trip generations per attendee for a concert, which are summarized in **Table 7** using the total arena trip generation by patron.

Table 6: Concert Trip Generation Rates

Source	Unit	Daily Trip Rate	AM Total Rate	AM In	AM Out	PM Total Rate	PM In	PM Out
Driveway Counts	Per Attendee	1.012	0.000	0.000	0.000	0.042	0.035	0.007

Source: Fehr & Peers, 2023.

Table 7: Concert Trip Generation Estimates

Number of Attendees	Daily Trips	AM Total Trips	AM In	AM Out	PM Total	PM In	PM Out
Maximum Number of Attendees							
11,000	11,131	0	0	0	463	386	76
Average Number of Attendees							
7,500	7,589	0	0	0	315	263	52

Source: Fehr & Peers, 2023.

NorthStar Specific Plan EIR Trip Generation Assumptions

The previous EIR trip generation is shown in **Table 8**, which was completed in January 2021. The trip generation of the amended plan will be compared to the trip generation of the original plan.

Table 8: Trip Generation Assumptions

Event Type	Attendance Level	Number of Events	Daily	AM	PM	Arrival Peak	Departure Peak
Concert Sellout	11,000	23	9,384	0	906	3,166	4,199
Concert Average	7,500	22	6,398	0	618	2,160	2,862
Hockey Sellout	9,918	5	8,550	0	822	2,874	3,824
Hockey Average	7,500	41	6,492	0	622	2,175	2,902
Non-Event (Ice Rink)	-	-	760	6	86	86	0

Source: Riverside County Arena Project Transportation Analysis Report (The Mobility Group, January 2021)

Trip Generation Comparison

Table 9 shows a comparison of the previous EIR trip generation and the current trip generation using trip counts from a sellout hockey game and sellout concert with the public skating rink and typical arena operations included.

As compared to the estimates prepared in the EIR, the driveway counts indicate less PM peak hour, and a greater amount of daily and AM trips than estimated in the 2021 Traffic Study. We believe this is attributed to several factors:

- Traffic from typical daily operations at the arena for event set up, standard maintenance and typical daily operations is greater than accounted for in the 2021 Traffic Study
- Public use of the Iceplex is greater than assumed in the 2021 Traffic Study, with more use in the mornings for lessons and throughout the day assumed in the 2021 Traffic Study.
- The events occur later in the evening which results in people arriving later than assumed in the 2021 Traffic Study
- The average vehicle occupancy is higher for the hockey games than the concerts, resulting in less vehicle trips per attendee for hockey game and more vehicle trips per attendee for concerts.

Table 9: Amended Specific Plan Trip Generation Comparison for a Hockey Game

Source	Daily	AM Total	PM Total
Sellout Hockey Game			
Arena Traffic Counts	9,442	100	652
2021 Traffic Study Estimate	9,310	6	908
Net Difference	**132**	**94**	**(256)**
Sellout Concert			
Arena Traffic Counts	13,757	100	553
2021 Traffic Study Estimate	10,144	6	992
Net Difference	**3,613**	**94**	**(439)**

Source: Fehr & Peers, 2023.

Classic Club Specific Plan Trip Generation

Attachment A provides an updated Classic Club Specific Plan trip generation estimate for a weekday, Saturday and Sunday with a sellout concert and **Attachment B** provides an update with an average concert.

Next Steps

Following confirmation of the latest trip generation updates, Fehr & Peers will submit an updated scoping memo on the Project's behalf to determine requirements of the transportation study.

Attachments

Attachment A - Classic Club Specific Plan Amendment No. 3 (Sellout Concert) Trip Generation Rates and Estimates, December 22, 2023

Attachment B - Classic Club Specific Plan Amendment No. 3 (Average Concert) Trip Generation Rates and Estimates, December 22, 2023

Classic Club Specific Plan Amendment No. 3
(Sellout Concert)
Trip Generation Rates and Estimates
December 22, 2023

					Weekday							Saturday				Sunday				Weekday							Saturday				Sunday			
Planning Area	Land Use	ITE Land Use	Units	Quantity	Daily Rate	AM Rate	AM In	AM Out	PM Rate	PM In	PM Out	Daily Rate	Peak Rate	Peak In	Peak Out	Daily Rate	Peak Rate	Peak In	Peak Out	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily	Peak In	Peak Out	Midday Peak	Daily	Peak In	Peak Out	Midday Peak
1	Other	(430) - Golf Course (Adj Streets, 7-9A, 4-6P)	Holes	18	30.38	1.76	79%	21%	2.91	53%	47%	19.89	3.03	49%	51%	18.89	1.39	12%	88%	547	25	7	32	28	24	52	358	27	28	55	340	3	22	25
3	Hotel	(310) Hotel (Adj Streets, 7-9A, 4-6P)	Rooms	366	7.99	0.46	56%	44%	0.59	51%	49%	8.07	0.72	56%	44%	5.94	0.57	48%	52%	2,924	94	74	168	110	106	216	2,954	148	116	264	2,174	100	108	209
4	Hotel	(310) Hotel (Adj Streets, 7-9A, 4-6P)	Rooms	275	7.99	0.46	56%	44%	0.59	51%	49%	8.07	0.72	56%	44%	5.94	0.57	48%	52%	2,197	71	56	127	83	79	162	2,219	111	87	198	1,634	75	82	157
4	Retail	(820) Shopping Center (>150k) (Adj Streets, 7-9A, 4-6P)	1,000 Sq. Ft	250	37.01	0.84	62%	38%	3.4	48%	52%	46.6	4.40	52%	48%	18.97	2.35	49%	51%	9,253	130	80	210	408	442	850	####	572	528	1,100	4,743	288	300	588
4	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	500	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	3,370	48	152	200	161	94	255	2,275	103	103	205	1,930	90	90	180
5	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	100	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	674	10	30	40	32	19	51	455	21	21	41	386	23	23	45
5	Hotel	(310) Hotel (Adj Streets, 7-9A, 4-6P)	Rooms	125	7.99	0.46	56%	44%	0.59	51%	49%	8.07	0.72	56%	44%	5.94	0.57	48%	52%	999	32	26	58	38	36	74	1,009	50	40	90	743	48	52	100
6	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	205	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	1,382	20	62	82	66	39	105	933	42	42	84	791	37	37	74
7	Retail	(820) Shopping Center (>150k) (Adj Streets, 7-9A, 4-6P)	1,000 Sq. Ft	400	37.01	0.84	62%	38%	3.4	48%	52%	46.6	4.40	52%	48%	18.97	2.35	49%	51%	14,804	208	128	336	653	707	1,360	####	915	845	1,760	7,588	461	479	940
7	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	150	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	1,011	14	46	60	49	28	77	683	31	31	62	579	27	27	54
8	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	150	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	1,011	14	46	60	49	28	77	683	31	31	62	579	45	45	90
8	Hotel	(310) Hotel (Adj Streets, 7-9A, 4-6P)	Rooms	125	7.99	0.46	56%	44%	0.59	51%	49%	8.07	0.72	56%	44%	5.94	0.57	48%	52%	999	32	26	58	38	36	74	1,009	50	40	90	743	34	37	71
9	Retail	(820) Shopping Center (>150k) (Adj Streets, 7-9A, 4-6P)	1,000 Sq. Ft	75	37.01	0.84	62%	38%	3.4	48%	52%	46.6	4.40	52%	48%	18.97	2.35	49%	51%	2,776	39	24	63	122	133	255	3,495	172	158	330	1,423	86	90	176
10	Arena/Ice Rink	Typical Arena Operations and the Iceplex	Arenas	1	2626	100	74%	26%	90	50%	50%	#####	90.00	50%	50%	######	90.00	50%	50%	2,626	74	26	100	45	45	90	2,626	45	45	90	2,626	45	45	90
																				44,573	811	783	1,594	1,882	1,816	3,698	48,987	2,316	2,113	4,429	26,277	1,362	1,436	2,798
																				15%	-	-	19%	-	-	18%	15%			15%	15%			15%
																				-6,820	(152)	(151)	(303)	(328)	(327)	(655)	(7,495)	(339)	(339)	(678)	(4,020)	(214)	(214)	(428)
																				37,753	659	632	1,291	1,554	1,489	3,043	####	1,977	1,774	3,751	####	1148	1222	2,370
10	Other	Concert Sell Out	Attendance Level	11,000	1.01		-	-	0.04	84%	16%	1.01	-	-	-	1.01	-	-	-	11,131	0	0	0	387	76	463	####	0	0	0	####	0	0	0
																				33%						33%	33%				33%			
																				(7,346)	0	0	0	-255	-50	-306	(7,346)	0	0	0	(7,346)	0	0	0
																				41,538	**659**	**632**	**1,291**	**1,686**	**1,515**	**3,200**	**45,277**	**1,977**	**1,774**	**3,751**	**26,042**	**1,148**	**1,222**	**2,370**

Project Land Uses, Except Arena, Gross Vehicle Trips

Project Land Uses, Except Arena, Internalization Reductions

Project Land Uses, Except Arena, net External Vehicle Trips

Arena to Hotel/Retail/Residential Two-Way Trip Internalization Reductions

Net External Vehicle Trips

Classic Club Specific Plan Amendment No. 3
(Average Concert)
Trip Generation Rates and Estimates
December 22, 2023

					Weekday							Saturday				Sunday				Weekday							Saturday				Sunday			
Planning Area	Land Use	ITE Land Use	Units	Quantity	Daily Rate	AM Rate	AM In	AM Out	PM Rate	PM In	PM Out	Daily Rate	Peak Rate	Peak In	Peak Out	Daily Rate	Peak Rate	Peak In	Peak Out	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily	Peak In	Peak Out	Midday Peak	Daily	Peak In	Peak Out	Midday Peak
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4	Retail	(820) Shopping Center (>150k) (Adj Streets, 7-9A, 4-6P)	1,000 Sq. Ft	250	37.01	0.84	62%	38%	3.4	48%	52%	46.6	4.40	52%	48%	18.97	2.35	49%	51%	9,253	130	80	210	408	442	850	####	572	528	1,100	4,743	288	300	588
4	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	500	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	3,370	48	152	200	161	94	255	2,275	103	103	205	1,930	90	90	180
5	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	100	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	674	10	30	40	32	19	51	455	21	21	41	386	23	23	45
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7	Retail	(820) Shopping Center (>150k) (Adj Streets, 7-9A, 4-6P)	1,000 Sq. Ft	400	37.01	0.84	62%	38%	3.4	48%	52%	46.6	4.40	52%	48%	18.97	2.35	49%	51%	14,804	208	128	336	653	707	1,360	####	915	845	1,760	7,588	461	479	940
7	Residential	(220) Multifamily Housing (Low- Rise) Not Close to Rail Transit (Adj Streets, 7-9A, 4-6P)	Dwelling Units	150	6.74	0.4	24%	76%	0.51	63%	37%	4.55	0.41	50%	50%	3.86	0.36	50%	50%	1,011	14	46	60	49	28	77	683	31	31	62	579	27	27	54
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10	Arena/Ice Rink	Typical Arena Operations and the Iceplex	Arenas	1	2626	100	74%	26%	90	50%	50%	#####	90.00	50%	50%	######	90.00	50%	50%	2,626	74	26	100	45	45	90	2,626	45	45	90	2,626	45	45	90
																				44,573	811	783	1,594	1,882	1,816	3,698	48,987	2,316	2,113	4,429	26,277	1,362	1,436	2,798
																				15%	-	-	19%	-	-	18%	15%			15%	15%			15%
																				-6,820	(152)	(151)	(303)	(328)	(327)	(655)	(7,495)	(339)	(339)	(678)	(4,020)	(214)	(214)	(428)
																				37,753	659	632	1,291	1,554	1,489	3,043	####	1,977	1,774	3,751	####	1148	1222	2,370
10	Other	Concert Average Attendance	Attendance Level	7,500	1.01		-	-	0.04	84%	16%	1.01	-	-	-	1.01	-	-	-	7,589	0	0	0	263	52	315	7,589	0	0	0	7,589	0	0	0
																				33%						33%	33%				33%			
																				(5,009)	0	0	0	-174	-34	-208	(5,009)	0	0	0	(5,009)	0	0	0
																				40,333	**659**	**632**	**1,291**	**1,643**	**1,507**	**3,150**	**44,072**	**1,977**	**1,774**	**3,751**	**24,837**	**1,148**	**1,222**	**2,370**

Project Land Uses, Except Arena, Gross Vehicle Trips

Project Land Uses, Except Arena, Internalization Reductions

Project Land Uses, Except Arena, net External Vehicle Trips

Arena to Hotel/Retail/Residential Two-Way Trip Internalization Reductions

Net External Vehicle Trips