LAX ATMP

Non-CEQA Transportation Assessment

Prepared for:
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FEHR PEERS

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Executive Summary

This report presents outcomes from the non-CEQA transportation assessment for the Airfield and Terminal Modernization Project (ATMP or the Project) at Los Angeles International Airport (LAX). Los Angeles World Airports (LAWA) proposes to implement airfield, concourse and terminal, and landside roadway improvements at LAX as part of LAWA's continuing commitment to maintain LAX as a world-class airport. The proposed Project consists of several primary elements, including airfield improvements, that would enhance operational management and safety within the north airfield, new terminal facilities (i.e., Concourse 0 and Terminal 9) to upgrade passenger processing capabilities and enhance the passenger experience, and an improved system of roadways to better access the Central Terminal Area (CTA) and new facilities. This transportation assessment is focused on the elements of the proposed Project that directly relate to the operations of the surrounding roadways. A more detailed description of those improvements is provided in **Proposed Project Roadway Modifications.**

The non-CEQA transportation assessment for the Project was conducted in line with guidance provided in the Los Angeles Department of Transportation's *Transportation Assessment Guidelines* (2020). The analyses included in the non-CEQA assessment and summarized in this report are:

- **Pedestrian, Bicycle, and Transit Assessment:** This analysis determined the Project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed Project. The analysis included an inventory of existing facilities, as well as an evaluation utilizing criteria provided in the LADOT's *Transportation Assessment Guidelines* (LADOT TAG).
- **Project Access, Safety, and Circulation Evaluation**: This analysis covered intersection operations, roadway design and collision history, and passenger loading in line with the evaluation methodologies and criteria provided in the LADOT TAG. Under Senate Bill 743 and the LADOT TAG, the operational evaluation performed for the Project is not for consideration under the California Environmental Quality Act (CEQA) and is instead provided for informational purposes only.
- **Project Construction Analysis:** This analysis addressed activities associated with Project construction through the lens of temporary transportation constraints, temporary loss of access, and temporary impacts to transit.

The LADOT TAG also includes guidance on a residential street cut-through analysis. Following conversations with LADOT it was decided this analysis was not required for the proposed Project. The reason for this is that the most common routes to and from the airport are on major Boulevards such as Sepulveda Boulevard, Lincoln Boulevard, Manchester Avenue, Century Boulevard, and La Tijera Boulevard. Motorists typically do not gain a travel time advantage by cutting through a residential neighborhood in the Westchester area, as the Boulevards provide the most direct access to airport facilities.

For each of these analyses, the LADOT TAG and LADOT staff have provided the following thresholds to determine if an identified deficiency is Project-related:

- **Pedestrian, Bicycle, and Transit Assessment:** A project-related deficiency could be identified if a project would directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities, or if a project would intensify pedestrian, bicycle, or transit demand in locations where there are currently missing or substandard facilities.
- **Project Access, Safety, and Circulation Evaluation:** Project-related deficiencies can be tied to intersection operations, safety, and/or passenger loading:
  - **Intersection operations:** The LADOT TAG considers project access constrained if a project's traffic would contribute to unacceptable or extended queueing, leading to spillover from turn pockets, blockage at cross streets or alleys, or contributing to "gridlock" congestion. This is defined as locations where:
    - The projected peak hour intersection level of service (LOS) is D, and the lane queue change at any directional LOS greater than D exceeds 75 feet, or
    - The projected peak hour intersection LOS is greater than D, and the lane queue change at any directional LOS greater than D exceeds 50 feet.
  - **Safety:** A project-related deficiency could be identified if a project would result in changes to roadway operations that would be expected to affect safety for vulnerable road users. This analysis assumes vulnerable road users are defined as people who walk or bike.
  - **Passenger Loading:** A project-related deficiency could be identified if a project's curbside loading (e.g. passenger pick up and drop off) demand could not be accommodated within the allocated curb space, or if it would create traffic, transit, bicycle, or pedestrian conflicts. This is typically assessed for passenger loading that affects public right of way.
- **Project Construction Analysis:** A project-related deficiency could be identified if project construction is expected to substantially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas.

Based on the criteria outlined above, Project-related deficiencies were only identified in the Project Access, Safety, and Circulation evaluation:

- **Project Access, Safety, and Circulation:** The Sepulveda Boulevard/96th Street intersection was found to have Project-related queueing deficiencies in the westbound right and northbound through movements. A series of corrective actions are identified in **Recommended Actions**. The proposed recommended actions are anticipated to fully address the identified queueing deficiency.

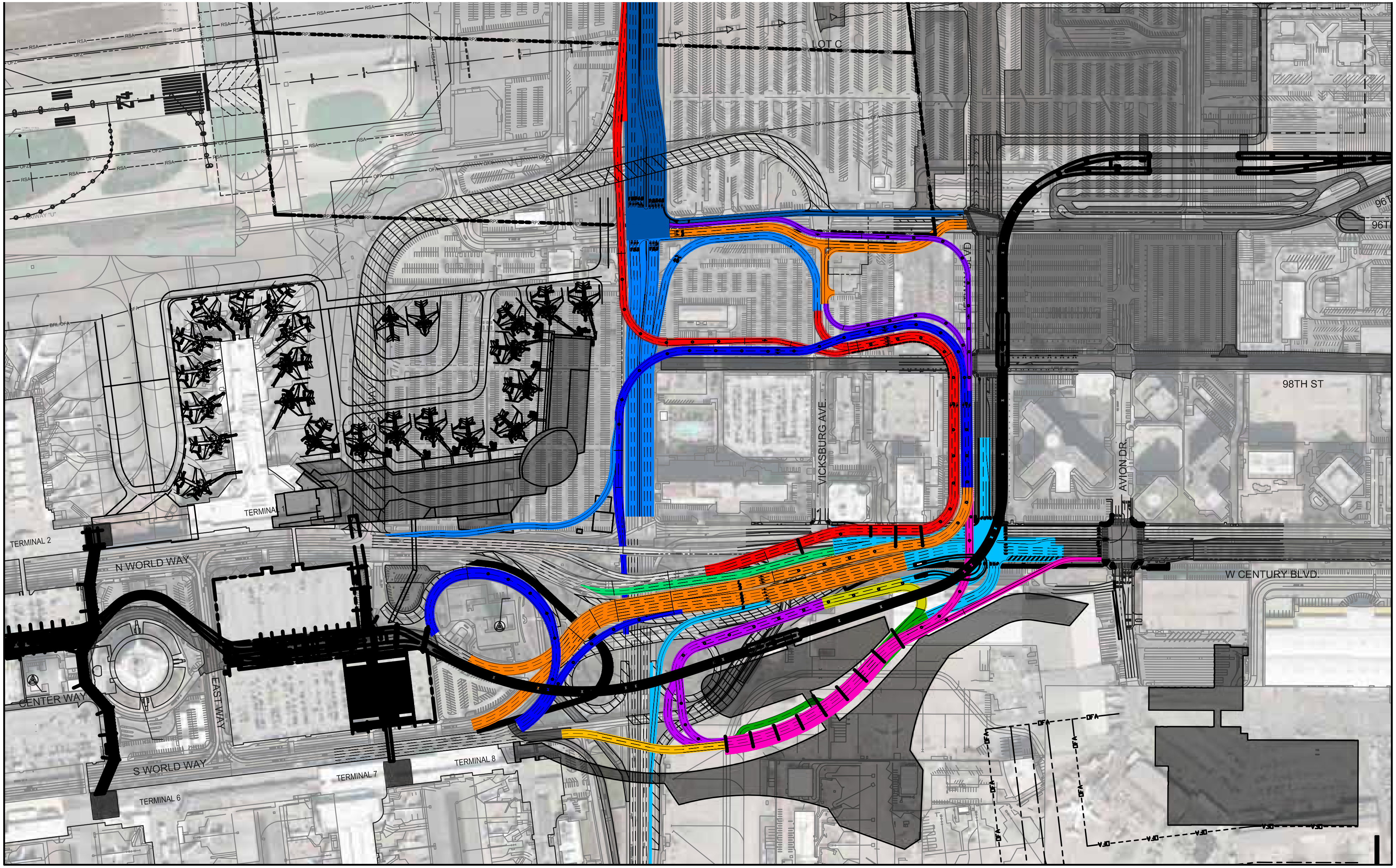
Proposed Project Roadway Modifications

The main elements of the LAX Airfield and Terminal Modernization Program include airfield improvements, concourse and terminal improvements, and landside improvements, including, but not limited to, roadway system improvements as further described below. The landside improvements are comprised of new arrival and departure roadways and a parking facility to support Terminal 9; an additional station on the previously-approved LAX Automated People Mover (APM) line with a pedestrian connection to Terminal 9; a pedestrian corridor between Terminals 8 and 9 that would bridge Sepulveda Boulevard; new roadway segments that would further improve vehicle access into and out of the LAX Central Terminal Area; and other projects related to these improvements.

The elements most relevant to this report are the landside roadway modifications. These modifications would build upon improvements approved as part of the LAX Landside Access Modernization Program (LAMP) and provide the following additional benefits related to the Central Terminal Area (CTA):

- Reroute exiting CTA vehicles to Sepulveda Boulevard via new grade-separated ramps north of Century Boulevard to extend the merging zones and vehicle queueing areas
- Reroute entering CTA vehicles on Sepulveda Boulevard via a new at-grade ramp for northbound traffic and a new grade-separated ramp for southbound traffic, both of which would tie into a new elevated roadway system that includes vehicle queueing areas
- Create a common entry point east of Sepulveda Boulevard for all vehicles entering the CTA
- Improve traffic flow into and out of the CTA
- Provide a more simplified roadway configuration and maximize distances for driver wayfinding and decision-making to multiple destinations
- Improve through-traffic flow for surrounding communities (i.e., vehicles on Sepulveda Boulevard that are not accessing the airport) by reducing traffic congestion on Sepulveda Boulevard
- Integrate the proposed roadway system improvements, including landside access to Terminal 9, with the approved LAX Landside Access Modernization Program improvements

The proposed Project roadway modifications are shown in **Figure 1.** The Landside Access Modernization Program Phase 1 improvements, approved as part of a separate project, are scheduled to be implemented prior to the proposed Project completion. The roadway modifications included as part of Phase 1 of the Landside Access Modernization Program are included in **Figure 2.**

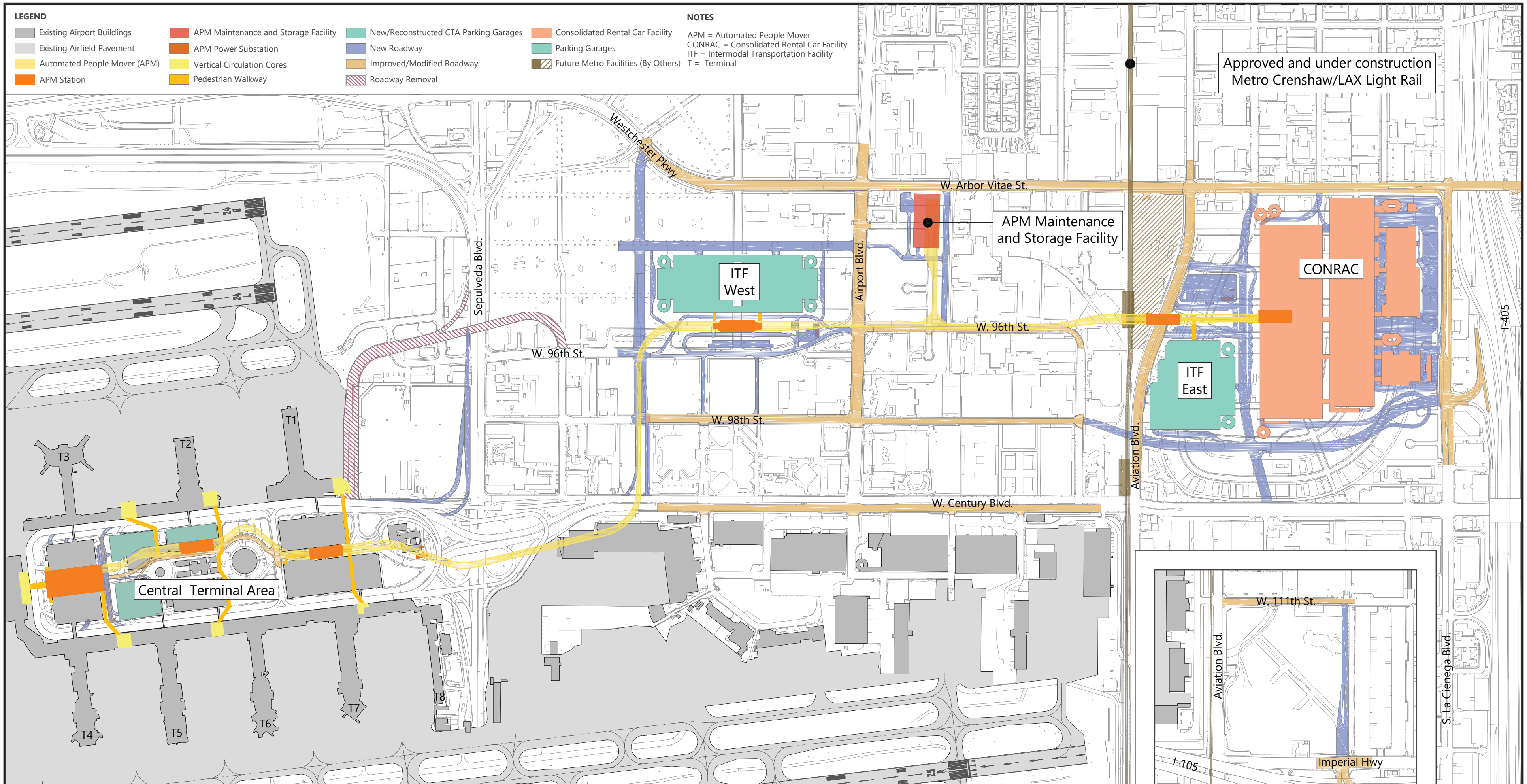


Source: CDM Smith, 2021

Figure 1

LAX Airfield and Terminal Modernization Project

Proposed Project Roadway System



Notes: Improvements depicted are conceptual only and do not represent engineered design.
Source: LAX Landside Access Modernization Program DEIR

Figure 2

LAX Landside Access Modernization Program Components

Phase 1 Improvements

Pedestrian, Bicycle, and Transit Access

The proposed Project was assessed to understand its effects on the surrounding pedestrian, bicycle, and transit facilities. This assessment analyzed the particular effects of removal, degradation, or modification of facilities and intensification of use, including that on the City's High-Injury Network. This assessment followed the evaluation criteria outlined in the LADOT TAG and was conducted under the context of the relatively low existing active mobility and transit uses at LAX. The pedestrian, bicycle, and transit facilities in the study area function primarily to move visitors and employees between parking garages and other airport-related land uses, including the CTA. Finally, the evaluation also took into consideration relevant improvements under the LAX Landside Access Modernization Program – a separate LAWA project that will significantly modify the roadway around LAX. For more detail on those roadway modifications, please refer to the *LAX Landside Access Modernization Program EIR* (LAWA, 2016).

Existing Facilities Inventory

An inventory of existing active transportation and transit facilities within a quarter mile of the Project was completed to understand the existing conditions of these facilities. Maps of pedestrian, bicycle, and transit facilities are provided in **Figure 3, Figure 4,** and **Figure 5**. **Figure 3** provides an inventory of pedestrian amenities at major intersections in the Project area. Pedestrian facilities were generally found to be in adequate condition. Most crossings have actuated pedestrian push buttons, with the exception of a few east-west pedestrian crossings along Century Boulevard.

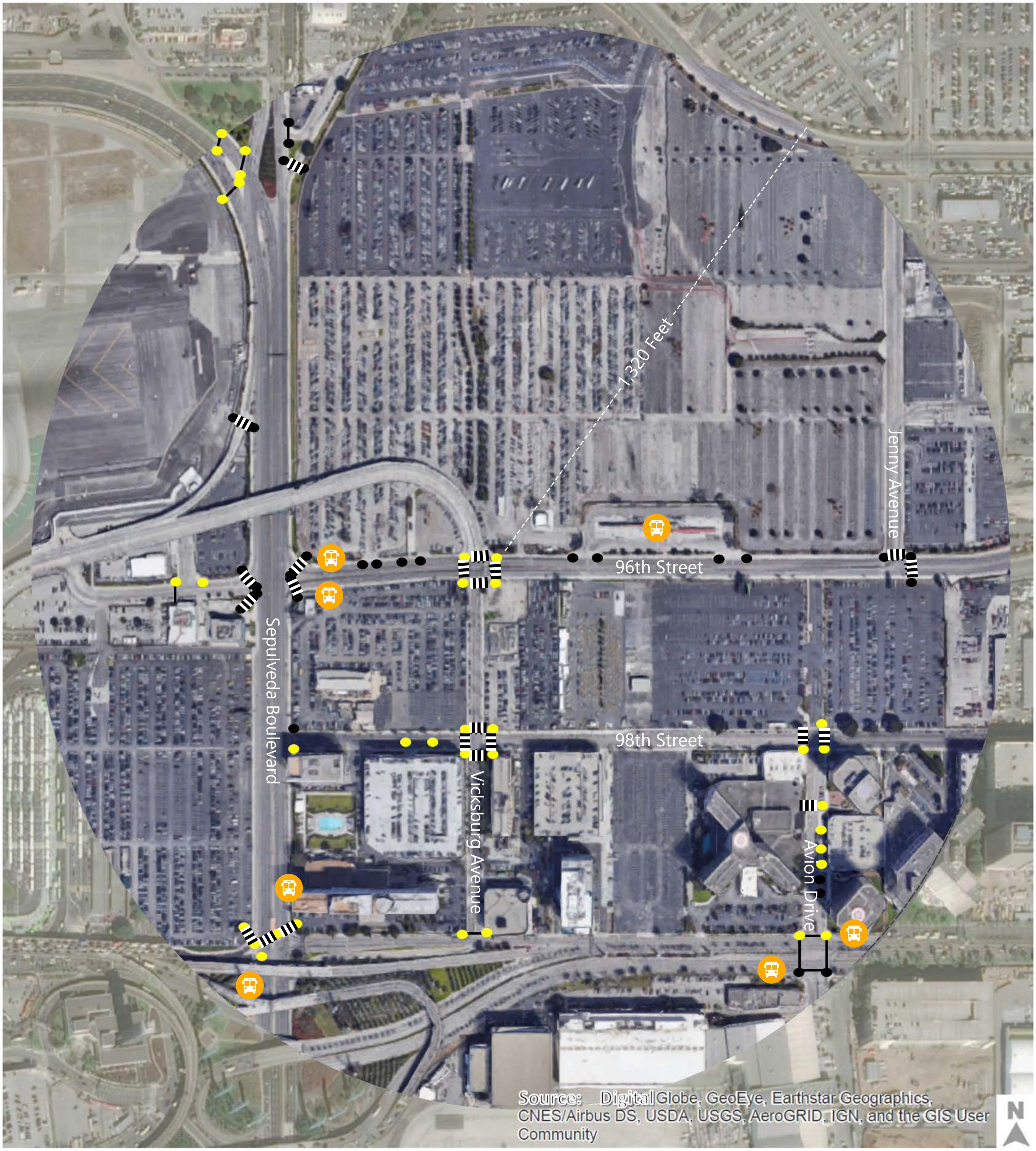
Future Programmed LAX Landside Access Modernization Program Improvements

While the LADOT TAG requires the proposed Project to be assessed compared to existing conditions, it is important to note that the LAX Landside Access Modernization Program includes a variety of bike, pedestrian, and transit improvements that will be implemented in the future:

- **Bike Facilities:** The LAX Landside Access Modernization Program includes modifications to bike facilities in the Project area, including:
    - 3.3 miles of bicycle lanes along 94th Street, Jetway Boulevard, Westchester Parkway, and Aviation Boulevard
    - 1.2 miles of a new multi-use path along Arbor Vitae Street, Aviation Boulevard, and Century Boulevard
- **Pedestrian Facilities:** The LAX Landside Access Modernization Program includes modifications to pedestrian facilities in the Project area, including:

- 4.9 miles of new sidewalk along Jetway Boulevard, 94th Street, Maintenance Road, 93rd Street, 94th Street Connector, 98th Street, Concourse Way, and Tuskegee Way
- 7.0 miles of improved sidewalks and parkways throughout the Project area
- Over 960 new street trees throughout the Project Area

- **Transit Facilities:** The LAX Landside Access Modernization Program also includes the Automated People Mover. The APM is an electric train system on a 2.25-mile long elevated guideway that will have six stations – three in the CTA and three outside of the airport. Separately, LA Metro will construct a new multimodal transportation center to connect LAX to the regional bus and transit system. The transportation center will include at-grade light rail transit platforms, a bus plaza, a bicycle hub, a pedestrian plaza, a passenger vehicle pick-up and drop-off area, and a transit center/terminal building ("Metro Hub") to connect passengers among the multiple transportation modes.



Curb Ramp
Curb Ramp + Tactile Warning
Lateral Crosswalk
Continental Crosswalk
Bus Stop

Figure 3

Existing Bus Stop and Pedestrian Infrastructure Inventory

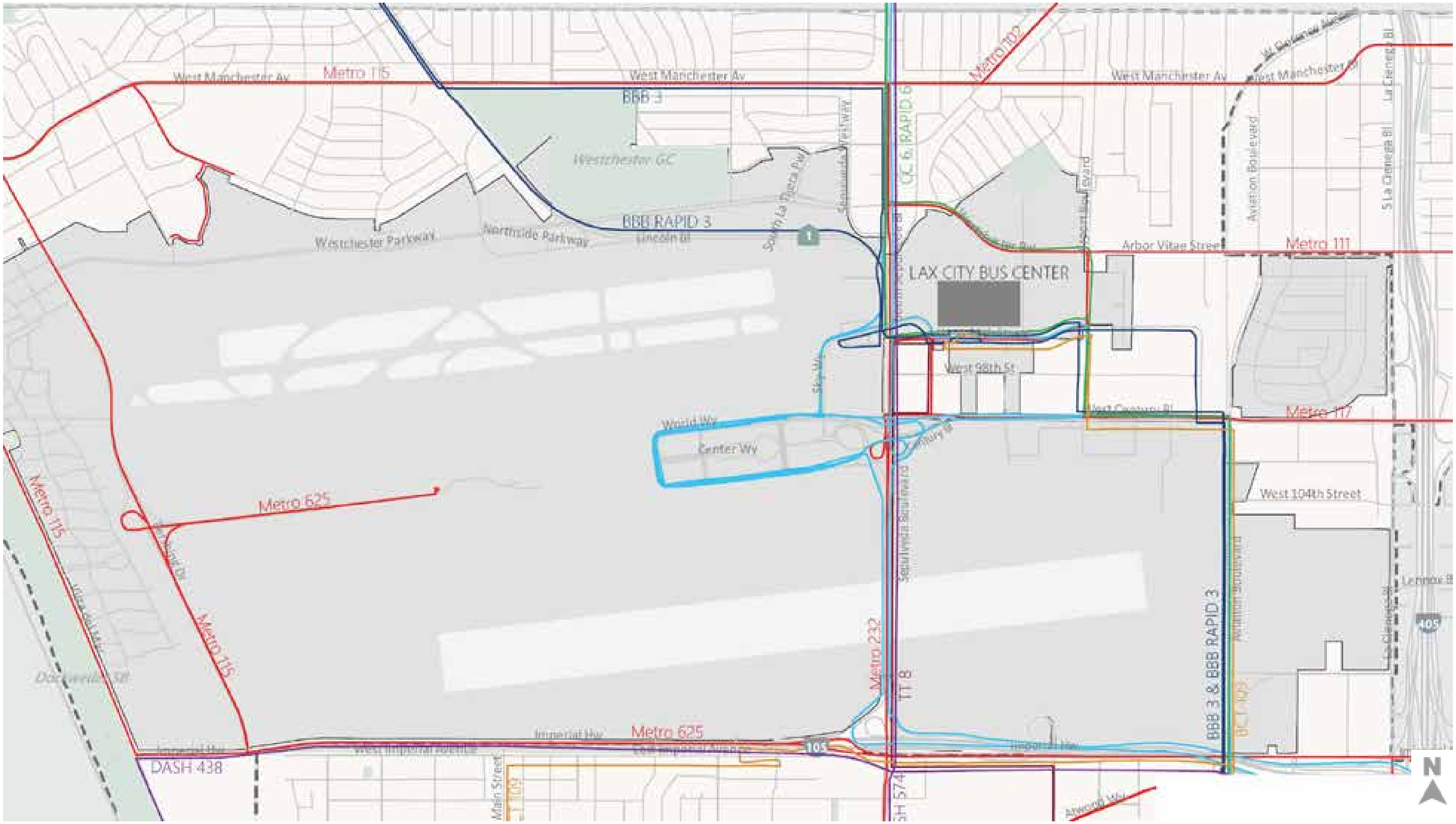
This figure does not include the proposed roadway modifications included as part of the Landside Access Modernization Program (LAMP). For more details on the roadway modifications proposed under LAMP, see Figure 2 of the LAMP DEIR.

Map originally prepared by CDM Smith

---- Existing Bike Facilities

Figure 4

Existing Bike Facilities



Map prepared by CDM Smith

- Beach Cities Transit (BCT)
- Big Blue Bus (BBB)
- Culver City Bus (CC)
- FlyAway (F)
- LADOT DASH (DASH)
- LA Metro (Metro)
- Torrance Transit (TT)

Figure 5

Existing Transit Routes

Table 1: Existing Pedestrian Amenities – Sidewalk Widths and Crossing Distance[1,2]

Street Name	Study Area Extents	Direction	Existing Sidewalk Width (feet)	Average Distance between Marked Crossings (feet)
Sepulveda Boulevard	Lincoln Boulevard to Century Boulevard	North-South	3′ – 12′	1,150′
Vicksburg Avenue	96th Street to Century Boulevard	North-South	5′ – 14′	510′
Jenny Avenue	South of Westchester Parkway to 96th Street	North-South	3′ – 7′	1,270′[3]
Avion Drive	98th Street to Century Boulevard	North-South	6′ – 15′	290′
96th Street	Sepulveda Boulevard to Jenny Avenue	East-West	5′ – 12′	950′
98th Street	Sepulveda Boulevard to Avion Drive	East-West	5′ – 11′	1,070′
Century Boulevard	Sepulveda Boulevard to Avion Drive	East-West	5′ – 14′	820′

Notes
1. This inventory was completed using aerial imagery and reflects existing conditions. Programmed improvements under the LAX Landside Access Modernization Program are not reflected in this analysis.
2. Sidewalks are on both sides of all streets listed in this table with the exception of Century Boulevard, which only has a sidewalk on the north side of the street.
3. The nearest crosswalk is outside the study area.

Source: Fehr & Peers, 2020.

Table 2: Existing Pedestrian Amenities – Intersection Amenities[1]

Intersection	Pedestrian Signals	Pedestrian Button	Amenities[2]
Sepulveda Boulevard/Lincoln Boulevard	✓	✓	
Sepulveda Boulevard/Sepulveda Eastway	*Not signalized*	*Not signalized*	Bus benches, bus shelters, street trees
Sepulveda Boulevard/96th Street	*Not signalized*	*Not signalized*	
Sepulveda Boulevard/98th Street	*Not signalized*	*Not signalized*	
Sepulveda Boulevard/Century Boulevard	✓ - with the exception of the west-leg crossing	✓	
Vicksburg Avenue/96th Street	✓	✓	Street trees
Vicksburg Avenue/98th Street	*Not signalized*	*Not signalized*	
Vicksburg Avenue/Century Boulevard	✓ - with the exception of the north-leg crossing	✓	
Avion Drive/98th Street	*Not signalized*	*Not signalized*	Bus benches, bus shelters, street trees
Avion Drive/Century Boulevard	✓	✓	
96th Street/Alverstone Avenue	*Not signalized*	*Not signalized*	Bus benches, bus shelters, street trees
96th Street/Jenny Avenue	✓ - with the exception of the north-leg crossing	✓	

Note:
1. This inventory was completed using aerial imagery and reflects existing conditions. Programmed improvements under the LAX Landside Access Modernization Program are not reflected in this analysis.

Source: Fehr & Peers, 2020.

Evaluation

The following evaluation criteria, as outlined in the LADOT TAG, were used to assess the effects of the proposed Project on surrounding pedestrian, bicycle, and transit facilities.

Would the Project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities, including but not limited to:

- Removal or degradation of existing bikeways and/or supporting facilities (e.g., bikeshare stations, on-street bike racks/parking, bike corrals, etc.)?
    - No, the Project would not remove or degrade the existing bikeways and/or supporting facilities. The Project would require the removal of existing bicycle lanes on 96th Street; however, these bicycle facilities are already approved for removal under the *Landside Access Modernization Program EIR*, which provides an alternative connection with the construction of bicycle and multi-use paths in the vicinity. Please see **Figure 4** for a map of the existing bicycle facilities and **Future Programmed LAX Landside Access Modernization Program Improvements** for more details on the programmed bike facilities.
- Removal or degradation of existing transit and/or local circulator facilities including stops, benches, shelters, concrete pads, bus lanes, or other amenities?
    - No, although the Project may require repositioning of two bus stops on 96th Street in conjunction with the proposed realignment of a portion of that street, the repositioning would not lead to degradation of transit facilities. Such repositioning of the bus stops, if needed, would be coordinated with the affected transit operator(s), and bus service in the area would continue. Furthermore, there are several planned improvements to existing transit services including ongoing Metro efforts to construct the Metro Crenshaw/LAX Line that will include a station near the Aviation Boulevard and Arbor Vitae Street intersection. In addition, the APM and transit consolidation improvements are proposed as part of the LAX Landside Access Modernization Program. Please see **Figure 5** for a map of the existing transit connections.
- Removal of other existing transportation system elements supporting sustainable mobility?
    - No, the Project does not propose to remove transportation system elements supporting sustainable mobility. The Project has been shown to be consistent with transportation-related plans, programs, ordinances, and policies that were adopted to protect the environment.
- Increase street crossing distance for pedestrians; increase number of travel/turning lanes; or increase turning radius or turning speeds?
    - Yes, the Project would increase the number of travel/turning lanes, and therefore increase the street crossing distance for pedestrians at two locations – the Sepulveda Boulevard/96th Street and Century Boulevard/Jetway Boulevard intersections. The proposed reconfigurations of the Jetway Boulevard/Century Boulevard and Sepulveda Boulevard/96th Street intersections

would be designed in compliance with City design standards. The Project also includes an increase in the number of travel lanes via newly constructed above-grade ramps, but not at locations where marked crosswalks exist.

- Removal, degradation, or narrowing of an existing sidewalk, path, crossing, or pedestrian access way?
  - No, the Project would not remove, degrade, or narrow existing pedestrian facilities in the pedestrian environment because the Project would retain the existing sidewalk widths adjacent to the Project.
- Removal or narrowing of existing sidewalk-street buffering elements (e.g., curb extension, parkway, planting strip, street trees, etc.)?
  - No, the Project does not propose to remove or narrow existing sidewalk-street buffering elements. The Project may include redesigning the existing landscaping at Sepulveda and Century Boulevards due to the construction of new ramps. The proposed changes would be in line with the Century Boulevard Streetscape Plan.

Would the Project intensify use of existing pedestrian, bicycle, or transit facilities, including but not limited to:

- Increase in pedestrian or vehicle volume, thereby increasing the need or attraction to cross a street at unmarked pedestrian crossings or unsignalized or uncontrolled intersections where a crossing is not available without significant rerouting?
  - No, the proposed Project would not increase the need or attraction to cross a street at unmarked pedestrian crossings or unsignalized or uncontrolled intersections. Based on the proposed infrastructure, level of existing activity, and anticipated level of activity attributable to the proposed Project, no significant rerouting for pedestrians or vehicles is anticipated.
- Result in new pedestrian demand between project site entries/exits and major destinations or transit stops expected to serve the development where there are missing pedestrian facilities (e.g., gaps in the sidewalk network) or substandard pedestrian facilities (e.g., narrow or uneven sidewalks, no crosswalks at intersections or mid-block, no marked crossing, or push button crossing rather than actuated, etc.)?
  - No, the Project would not result in new pedestrian demand where there are missing pedestrian facilities between the Project and nearby major destinations or transit stops. As shown in **Figure 3**, the Project area includes marked crosswalks and curb ramps with tactile warnings at intersections in the vicinity of the Project.
- Increase transit demand at bus stops that lack marked crossings, with insufficient sidewalks, or are in isolated, unshaded, or unlit areas?

  - No, the Project would not increase transit demand at bus stops that lack marked crossings, with insufficient sidewalks, or are in isolated, unshaded, or unlit areas. All bus stops near the Project area are accessible by crosswalks and sidewalks. The bus stops on the southwest corner of Sepulveda Boulevard and Century Boulevard, operated by LA Metro, Torrance Transit, and others, includes one sheltered bench, one unsheltered bench, and one bench underneath the overpass. Street lighting is also provided. The bus stops on the northeast corner have two bus benches without shelters. Street lighting is provided, with unshaded areas. The bus stops along 96th Street, at Sepulveda Boulevard, include two bus benches on the south side of the street, with street lighting and unshaded area. The north side of the street includes one bus bench, a seating area, street lighting, and street trees that provide some shade for the area. Furthermore, there are several planned improvements to existing transit services including Metro's completion of the Metro Crenshaw/LAX Line that will include a station near the Aviation Boulevard/Arbor Vitae Street intersection, and a "Metro Hub" to connect passengers among multiple transportation modes.

- Increase pedestrian demand of streets on the High-Injury Network and Vision Zero
  - In order to achieve Vison Zero, the City of Los Angeles is implementing a data-driven approach. The High-Injury Network (HIN) spotlights streets with a high concentration of traffic collisions that result in severe injuries and deaths, with an emphasis on those involving people walking and bicycling. Both Sepulveda Boulevard south of Century Boulevard, between Century Boulevard and the Century Boulevard ramps (roughly 350 feet), and Century Boulevard between Sepulveda Boulevard and La Cienega Boulevard, are designated as part of the City's HIN. There is no expected increase in intensification of use of pedestrian facilities in the vicinity of the Project above the level of demand that currently exists in the study area, including along the High-Injury Network. Sidewalks will be added along the south side of Century Boulevard between Jetway Boulevard and Aviation Boulevard as part of the LAX Landside Access Modernization Program . Segments of World Way North and World Way South, located within the CTA, are also designated as part of the City's HIN. None of these sections are on the list of Prioritized (or targeted) Corridors as part of Vision Zero Los Angeles. The proposed Project would not preclude the City from implementing future planned improvements as part of Vision Zero Los Angeles.

The responses provided above reflect conditions upon Project completion. During construction there may be temporary closures that result in temporary impacts.

Recommended Actions

Based on the above evaluation of pedestrian, bicycle, and transit access, there are no potential Project effects on pedestrian, bicycle, and transit facilities in the vicinity of the proposed Project that would require recommended actions. Detailed engineering concepts were not available at the time of this review. Detailed roadway plans would be developed in accordance with documented safety best practices and City of Los Angeles guidelines. These guidelines include:

- The City of Los Angeles Complete Streets Design Guide
- The City of Los Angeles Supplemental Street Design Guide (May 2020)
- Bureau of Engineering (BOE) Street Design Manual and Standard Plans
- Department of Transportation (LADOT) Manual on Policies and Procedures

Project Access, Safety, and Circulation Evaluation

Project access, safety, and circulation were evaluated from the perspective of intersection operations, roadway design and collision history, and passenger loading.

Operational Evaluation

This section presents outcomes from the intersection level of service and queueing evaluation completed for the Project. Under Senate Bill 743 and the LADOT TAG, the operational evaluation performed for the Project is not subject to CEQA and is instead provided outside of the CEQA process for informational purposes only.

Analysis Scenarios

Traffic operations were evaluated for the following scenarios:

- **Projected Future Conditions Baseline (2028 Baseline):** Future (Year 2028) conditions with projected background vehicle trip growth in the study area and anticipated ground transportation system improvements included in Phase 1 of the LAX Landside Access Modernization Program, but without the proposed Project.
- **Projected Future Conditions with Proposed Project (2028 with Project):** Future (Year 2028) conditions described above plus the proposed Project.

The proposed Project is not evaluated under existing conditions as the study area is expected to change significantly due to the LAX Landside Access Modernization Program between now and the completion of the proposed Project. Therefore, the proposed Project conditions are only evaluated and compared against future baseline conditions. However, existing conditions were still evaluated to understand how the roadway is currently operating today. The existing conditions analysis can be reviewed in **Appendix A**.

More specifically, one of the objectives of the proposed Project is to complete construction of the proposed Project prior to the 2028 Olympic and Paralympic Games scheduled to be held in Los Angeles. By year 2028, Phase 1 of the LAX Landside Access Modernization Program, including the Automated People Mover (APM), Intermodal Transportation Facility (ITF) East, ITF West, Consolidated Rental Car Facility (CONRAC), Phase 1 roadways, and a connection to the Airport Metro Connector 96th Street Transit Station, will be completed. Phase 1 of the LAX Landside Access Modernization Program is approved, funded, under construction, and scheduled for completion well before 2028. For this reason, it would be misleading and without informative value to analyze the Project's impacts at buildout in 2028 without accounting for the APM, ITF East, ITF West, CONRAC, and other LAX Landside Access Modernization Program Phase 1 improvements. These improvements will substantially change the surface transportation characteristics around the airport. Therefore, projected future conditions in year 2028 are used as the sole baseline for the traffic operations impact analysis since use of existing conditions (2019) as the baseline would be misleading and without informative value.

Study Intersection Locations

The list of study intersections was developed in conjunction with LADOT staff and based on guidance provided in LADOT's *Transportation Assessment Guidelines*. The LADOT TAG specifies that intersections immediately adjacent to the project and in proximity to the project through which 100 or more project-generated trips would travel should be analyzed. The study intersections meeting that criterion are listed in **Table 3** and shown on **Figure 6.**

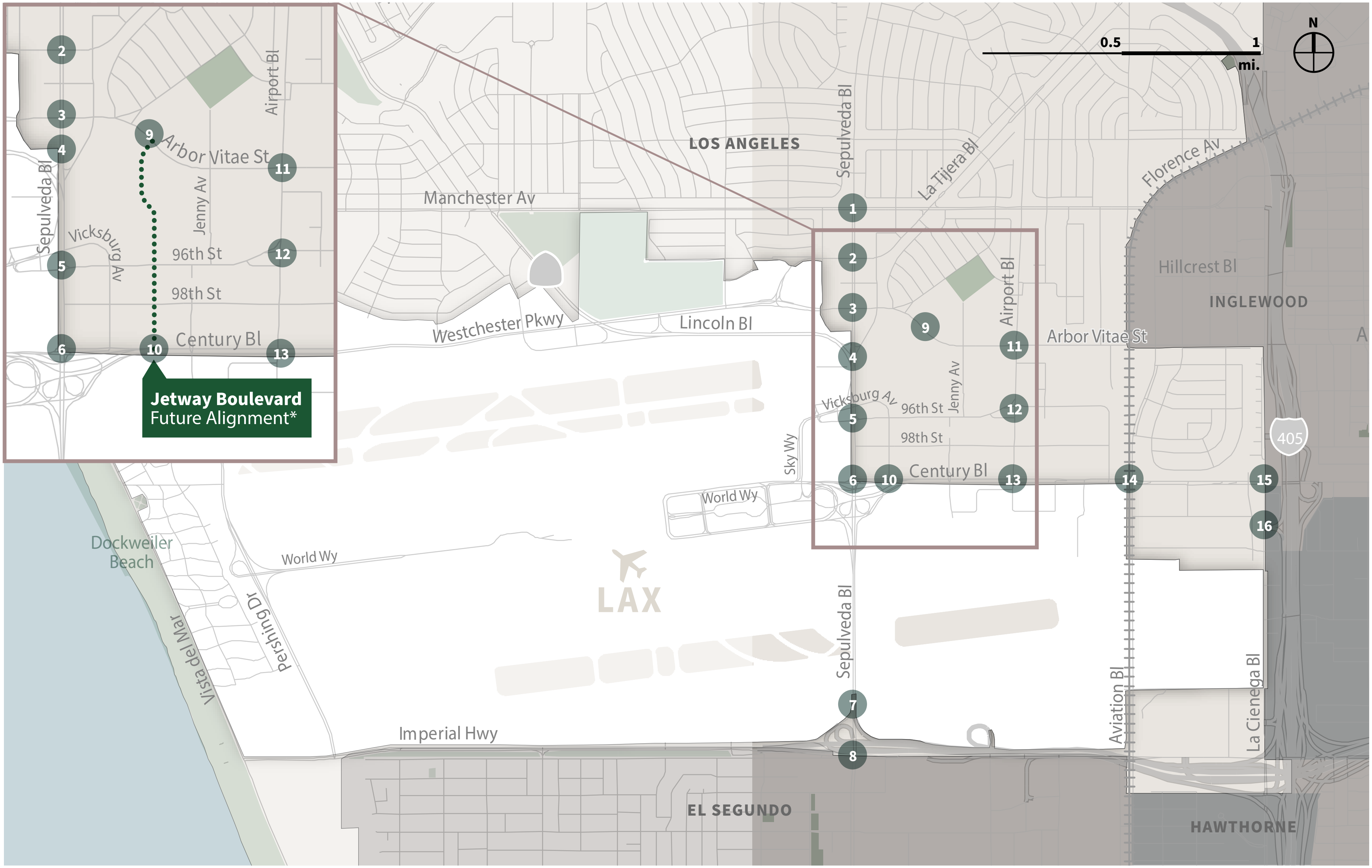
Table 3: Study Intersections

Intersection #	Study Intersections
1	Sepulveda Boulevard/Manchester Avenue
2	Sepulveda Boulevard/La Tijera Boulevard
3	Sepulveda Boulevard/Westchester Parkway
4	Sepulveda Boulevard/Lincoln Boulevard
5	Sepulveda Boulevard/96th Street
6	Sepulveda Boulevard/Century Boulevard
7	Sepulveda Boulevard (northbound)/ I-105 Westbound Off-Ramp
8	Sepulveda Boulevard/Imperial Highway
9	Jetway Boulevard/Westchester Parkway *(new intersection in Projected Future Conditions)*[1]
10	Jetway Boulevard/Century Boulevard *(new intersection in Projected Future Conditions)*[1]
11	Airport Boulevard/Westchester Parkway/Arbor Vitae Street
12	Airport Boulevard/96th Street
13	Airport Boulevard/Century Boulevard
14	Aviation Boulevard/Century Boulevard
15	La Cienega Boulevard/Century Boulevard
16	La Cienega Boulevard (south of Century Boulevard)/I-405 Southbound ramps

Note:

1. These two intersections will be built as part of the LAX Landside Access Modernization Program. They do not exist under existing conditions.

Source: Fehr & Peers, 2020.



Study Intersections

*Jetway Boulevard Future Alignment shown is not exact; it is shown for information purposes only.

Figure 6

LAX Airfield and Terminal Modernization Project

Study Intersections

Analysis Methodology

Traffic operations, including intersection level of service (LOS) and queueing, were evaluated using the *Highway Capacity Manual* (HCM) and Synchro 10 software. The methodology employed is in line with guidance provided in the *Transportation Assessment Guidelines*. LADOT typically considers LOS A through D as acceptable operating conditions.

This operations analysis reports the 95th percentile queue lengths (in feet) for all key turning movements and intersection control delay (in seconds) along with the corresponding level of service for each study intersection. "Key turning movements" are defined as movements where the 95th percentile queue length exceeds the existing storage capacity. 95th percentile queue length is defined as the queue length that has only a five-percent probability of being exceeded during the analyzed peak period. The 95th percentile queue length is a conservative assumption commonly employed for intersection design considerations and does not represent the typical queue length an average driver would experience.

Level of Service Methodology

This analysis uses the Transportation Research Board's *Highway Capacity Manual, 6th Edition* (HCM) methodology to evaluate intersection level of service and delay at both signalized and unsignalized intersections. The calculation of delay represents the amount of delay experienced by vehicles passing through the intersection.

At signalized and all-way stop intersections, the delay and corresponding LOS represent the average delay experienced. For two-way stop intersections, the delay and corresponding LOS represent the worst-case approach. HCM level of service thresholds for signalized and unsignalized intersections are presented in **Table 4**.

Table 4: LOS Thresholds for Signalized and Unsignalized Intersections

Level of Service (LOS)	LOS Definition[1]	Signalized Intersection Average Control Delay[2]	Unsignalized Intersection Average Control Delay[2]
A	Excellent. No vehicle waits longer than one red light and no approach phase is fully used.	$\le$ 10.0	$\le$ 10.0
B	Very good. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10.1 to 20.0	> 10.1 to 15.0
C	Good. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20.1 to 35.0	> 15.1 to 25.0
D	Fair. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35.1 to 55.0	> 25.1 to 35.0
E	Poor. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55.1 to 80.0	> 35.1 to 50.0
F	Failure. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths	> 80.0	> 50.0

Notes:

1. Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980.
2. Delay shown in seconds per vehicle. Source: *Highway Capacity Manual, 6th Edition* Transportation Research Board, 2016.

2028 Conditions

2028 Conditions Forecasts

The traditional process for developing future project turning movement volumes involves applying an estimated annual growth rate to existing volumes, establishing a project trip distribution, and adding the project trip generation to the network based on the established project trip distribution (trip assignment). However, given the complexities of the Project, including significant background growth and changes in roadway design and LAX access points, this traditional process is not appropriate. Instead, turning movement volumes for Projected Future Conditions (Year 2028) were developed using the LAX ATMP Travel Demand Model (Project Travel Demand Model). This model is based on the City of Los Angeles Travel Demand Forecasting Model (owned and maintained by LADOT) and was developed for the vehicle-miles-traveled assessment completed for the CEQA analysis for the Project. The Project Travel Demand Model was calibrated and validated for accuracy and sensitivity based on the latest California modeling guidance specified in the 2017 California Regional Transportation Plan guidelines.

The Projected Future Conditions project analysis is based on a Friday in August 2019, as this represents the peak activity and trip generation of the proposed Project. This varies from the existing conditions analysis, summarized in **Appendix A**, which utilizes weekday traffic counts collected in February and March of 2019. While February and March are more typical analysis months for the purpose of operations analysis in the City of Los Angeles, they are not the peak months of trip generation for the proposed Project site. To understand the traffic volume differences between the February/March and August timeframes, peak hour volumes were compared using historic Freeway Performance Measurement System (PeMS) data. This check revealed that, on average, the August volumes were about two percent higher for the AM peak hour and about four percent lower in the PM peak hour.

Future Roadway Modifications

2028 Baseline

The surface transportation characteristics around LAX will be substantially changed by the modifications associated with Phase 1 of the LAX Landside Access Modernization Program. As such, the model developed for the 2028 Baseline scenario includes roadway system modifications included in Phase 1 of the LAX Landside Access Modernization Program, but without the roadway system modifications associated with the proposed Project. The LAX Landside Access Modernization Program Phase 1 roadway modifications are shown in **Figure 1.** The model was also updated based on the roadway modifications included in the 2040 City of Los Angeles Travel Demand Forecasting Model.

2028 with Project

The proposed Project includes a series of airport access improvements that significantly change the surrounding roadways. As such, the model developed for the 2028 with Project scenario includes roadway system modifications proposed by the Project, as well as the LAX Landside Access Modernization Program Phase 1 modifications. The proposed Project roadway modifications are shown in **Figure 2.**

Background Traffic Growth

To estimate the future growth and change in traffic for Projected Future Conditions (Year 2028), the Project Travel Demand Model was updated with model socio-economic data (SED) and growth associated with cumulative projects. The full list of cumulative projects considered in model development can be found in **Appendix B**.

Project Future Conditions Vehicle Trip Generation

Future trip generation models were developed for LAX using airport passenger and employee trip generation data provided by LAWA, and Southern California Association of Governments' (SCAG) regional aviation forecasts included in their 2016 *Regional Transportation Plan*. Based on this analysis, the passenger forecasts for this analysis included the following:

- **Million annual passenger estimates:** 110.8 million annual passengers (MAP) for 2028

- **Typical, peak month conditions:** Assumes a peak month, average day airline passenger schedule
- **Central Terminal Area model:** Includes data from the Traffic Model for the LAX CTA, validated based on observed counts in 2019, and automatic vehicle identification (AVI) count data that provides number of vehicles by terminal by mode by time of day
- **Airport parking allocation:** A parking allocation model for LAX based on transaction data and surveys of LAWA and private parking lots

Employee trip generation is based on various factors including passengers, tenant facilities, and current and future work shifts. The existing employee trip generation was factored by 1.5 percent per year to account for the growth in employment associated with increased activity. New employee trip generation for Terminal 9 and Concourse 0 were estimated separately.

The trip generation estimates for LAX in Projected Future Conditions, both Baseline and with Project, are summarized in **Table 5** and shown in detail in **Table 6.**

The trip generation presented in **Table 5** and used in this operations analysis differs from that presented and used in the October 2019 *LAX Airfield & Terminal Modernization Project Draft Environmental Impact Report*. A detailed description of the assumptions used in this analysis are presented in **Appendix C**.

Table 5: Summary of LAX Trip Generation in Projected Future Conditions (Year 2028)[1]

Project Scenario	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Future 2028 Baseline[2]	11,240	9,750	20,990	10,630	11,390	22,020
Future 2028 with Project[2]	11,570	9,840	21,410	10,840	11,670	22,510
Future 2028 with TDM Adjustments[3]	**10,880**	**9,770**	**20,650**	**10,740**	**10,820**	**21,560**
Trip Generation Difference (with Project-Baseline)	**-360**	**20**	**-340**	**110**	**-570**	**-460**

Notes:

1. Trip generation includes cars, trucks, and vans accessing LAX and associated land uses, including CTA, Terminal 9, ITF East and West, cargo facilities, employee parking lots, and rental car and other passenger parking facilities. Transportation Network Companies (TNCs) are included. This trip generation includes a reasonable representation of all LAX employee vehicle trips but may not represent 100 percent of the airport employment.
2. Future 2028 Baseline and with Project trip generation estimates factor in TDM strategies approved as part of the LAMP EIR.
3. As part of the mitigation for the proposed Project, LAX has committed to implementing additional TDM measures above and beyond what was proposed in the LAMP EIR. The associated trip adjustments from those TDM strategies are accounted for here and are established from research-based trip reduction factors.

Source: Ricondo and Associates, Inc. and Fehr & Peers, 2021.

Table 6: LAX Trip Generation in Projected Future Conditions (Year 2028)

Peak Hour	2028 Baseline								2028 with Project							
	Inbound				Outbound				Inbound				Outbound			
	Cars[1]	Trucks	Van/ Bus	Total	Cars*	Trucks	Van/ Bus	Total	Cars[1]	Trucks	Van/ Bus	Total	Cars[1]	Trucks	Van/ Bus	Total
AM Peak Hour																
CTA	5,470	-	30	5,500	5,250	-	30	5,280	4,890	-	30	4,920	4,690	-	30	4,720
Terminal 9	-	-	-	-	-	-	-	-	590	-	-	590	570	-	-	570
ITF East	790	-	80	870	790	-	80	870	790	-	80	870	790	-	80	870
IFT West	1,680	-	470	2,150	1,510	-	470	1,980	1,680	-	470	2,150	1,510	-	470	1,980
Cargo Facilities / Employee Parking World Way West[2]	1,140	340	10	1,490	790	290	10	1,090	1,140	340	10	1,490	790	290	10	1,090
Employee Parking Lots[2]	530	-	50	580	160	-	50	210	850	-	50	900	240	-	50	290
Rental Car and Other Passenger Parking Facilities (Private and Public)	460	80	110	650	140	80	100	320	460	80	110	650	140	80	100	320
AM Peak Hour Total Vehicle Trips without TDM Adjustments	10,070	420	750	11,240	8,640	370	740	9,750	10,400	420	750	11,570	8,730	370	740	9,840
TDM Trip Adjustments[3,4]	-	-	-	-	-	-	-	-	-690	-	-	-690	-70	-	-	-70
AM Peak Hour Total Vehicle Trips with TDM Adjustments	**10,070**	**420**	**750**	**11,240**	**8,640**	**370**	**740**	**9,750**	**9,710**	**420**	**750**	**10,880**	**8,660**	**370**	**740**	**9,770**

Table 6: LAX Trip Generation in Projected Future Conditions (Year 2028)

Peak Hour	2028 Baseline								2028 with Project							
	Inbound				Outbound				Inbound				Outbound			
	Cars[1]	Trucks	Van/ Bus	Total	Cars*	Trucks	Van/ Bus	Total	Cars[1]	Trucks	Van/ Bus	Total	Cars[1]	Trucks	Van/ Bus	Total
PM Peak Hour																
CTA	5,020	-	50	5,070	5,320	-	50	5,370	4,470	-	50	4,520	4,730	-	50	4,780
Terminal 9	-	-	-	-	-	-	-	-	580	-	-	580	620	-	-	620
ITF East	700	-	90	790	700	-	90	790	700	-	90	790	700	-	90	790
IFT West	2,060	-	320	2,380	2,220	-	330	2,550	2,060	-	320	2,380	2,220	-	330	2,550
Cargo Facilities / Employee Parking World Way West[2]	1,200	390	-	1,590	1,250	370	-	1,620	1,200	390	-	1,590	1,250	370	-	1,620
Employee Parking Lots[2]	400	-	40	440	600	-	40	640	580	-	40	620	850	-	40	890
Rental Car and Other Passenger Parking Facilities (Private and Public)	230	50	80	360	290	60	70	420	230	50	80	360	290	60	70	420
PM Peak Hour Total Vehicle Trips without TDM Adjustments	9,610	440	580	10,630	10,380	430	580	11,390	9,820	440	580	10,840	10,660	430	580	11,670
TDM Trip Adjustments[3,4]	-	-	-	-	-	-	-	-	-100	-	-	-100	-850	-	-	-850
PM Peak Hour Total Vehicle Trips with TDM Adjustments	**9,610**	**440**	**580**	**10,630**	**10,380**	**430**	**580**	**11,390**	**9,720**	**440**	**580**	**10,740**	**9,810**	**430**	**580**	**10,820**

Notes:

1. Transportation Network Companies (TNCs) included under the car mode.
2. Includes a reasonable representation of all LAX employee vehicle trips, but may not represent 100 percent of the airport employment.
3. Future 2028 Baseline and with Project trip generation estimates factor in TDM strategies approved as part of the LAMP EIR.
4. As part of the mitigation for the proposed Project, LAX has committed to implementing additional TDM measures above and beyond what was proposed in the LAMP EIR. The associated trip adjustments from those TDM strategies are accounted for here and are established from research-based trip reduction factors.

Source: Ricondo and Associates, Inc. and Fehr & Peers.

2028 Conditions Operations

This section presents traffic operations for the weekday AM and PM peak hours at the study intersections for Projected Future Conditions (Year 2028).

2028 Conditions Level of Service

Table 7 summarizes the Projected Future Conditions (Year 2028) weekday peak hour intersection level of service for the study intersections both with and without the Project. The 2028 Baseline and 2028 with Project AM and PM peak hour turning movement counts and assumed lane configurations for each of the study intersections are presented in **Appendix D**. Please refer to the section above, **2028 Conditions Forecasts**, for more detail on the development of these volumes. **Appendix E** provides the detailed intersection LOS calculation worksheets. Because traffic signals in the City are remotely monitored and adjusted according to current traffic conditions, it was assumed that traffic signals at study intersections would be optimized in any future year operations analysis.

Changes in level of service at the study intersections can be attributed to the following:

- **Changes in trip assignment due to the implementation of the proposed Project:** Minor changes in intersection delay are anticipated at all study intersections due to shifts in how motorists will access the Airport as well as trip generation associated with the proposed Project.
- **Induced background traffic volumes due to the proposed Project:** Due to the capacity increases on Sepulveda Boulevard associated with the proposed Project's new roadway system diverting airport traffic off of Sepulveda Boulevard, background non-airport traffic volumes in the Projected Future with Project Conditions are expected to slightly increase.
- **New access point for the Central Terminal Area:** The new ramp for motorists entering the CTA from northbound Sepulveda Boulevard will shift from south of Century Boulevard to north of Century Boulevard with the proposed Project.
- **Access to Terminal 9 via Jetway Boulevard:** The main egress from Terminal 9, a major component of the proposed Project, is off of Jetway Boulevard.

Table 7: Projected Future Conditions (Year 2028) Intersection Levels of Service[1]

#	Study Intersection[2]	Peak Hour	2028 Baseline		2028 with Project	
			Delay[3]	LOS	Delay[3]	LOS
1	Sepulveda Boulevard/Manchester Avenue	AM	46	D	47	D
		PM	67	E	69	E
2	Sepulveda Boulevard/La Tijera Boulevard	AM	49	D	44	D
		PM	43	D	49	D
3	Sepulveda Boulevard/Westchester Parkway	AM	32	C	29	C
		PM	26	C	22	C
4	Sepulveda Boulevard/Lincoln Boulevard	AM	25	C	25	C

Table 7: Projected Future Conditions (Year 2028) Intersection Levels of Service[1]

#	Study Intersection[2]	Peak Hour	2028 Baseline		2028 with Project	
			Delay[3]	LOS	Delay[3]	LOS
		PM	26	C	26	C
5	Sepulveda Boulevard/96th Street[4]	AM	23	C	96	F
		PM	33	C	81	F
6	Sepulveda Boulevard/Century Boulevard[4]	AM	26	C	80	F
		PM	20	C	77	E
7	Sepulveda Boulevard (northbound)/I-105 Westbound Off-Ramp[4]	AM	>120	F	115	F
		PM	>120	F	>120	F
8	Sepulveda Boulevard/Imperial Highway	AM	47	D	48	D
		PM	56	E	56	E
9	Jetway Boulevard/Westchester Parkway	AM	24	C	24	C
		PM	78	E	57	E
10	Jetway Boulevard/Century Boulevard[4]	AM	10	A	21	C
		PM	11	B	27	C
11	Airport Boulevard/Westchester Parkway/Arbor vitae Street	AM	40	D	50	D
		PM	32	C	32	C
12	Airport Boulevard/96th Street[4]	AM	54	D	50	D
		PM	31	C	33	C
13	Airport Boulevard/Century Boulevard[4]	AM	39	D	35	C
		PM	32	C	32	C
14	Aviation Boulevard/Century Boulevard	AM	105	F	116	F
		PM	61	E	59	E
15	La Cienega Boulevard/Century Boulevard	AM	76	E	57	E
		PM	67	E	67	E
16	La Cienega Boulevard (south of Century Boulevard)/I-405 Southbound ramps[4]	AM	11	B	9	A
		PM	7	A	7	A

Notes:

1. Intersection control delay analyzed using HCM 6th Edition and Synchro 10 software unless otherwise noted. For signalized intersections, delay results show the average control delay experienced at the intersection.
2. All intersections are signalized
3. Delay is presented in seconds per vehicle
4. Intersection control delay measured using HCM 2000 due to incompatibilities between the intersection configuration and/or signal phasing and Synchro 10's application of HCM 6th Edition.

Source: Fehr & Peers, 2020.

The changes in level of service between 2028 Baseline and 2028 with Project Conditions are most notable at the Sepulveda Boulevard/96th Street and Sepulveda Boulevard/Century Boulevard intersections.

- **Sepulveda Boulevard/96th Street:** While all four factors outlined above contribute to the change in level of service at this intersection, the most substantial factor is egress from Terminal 9 via Jetway Boulevard. Motorists who would like to go northbound on Sepulveda Boulevard from Terminal 9 would likely do so via Jetway Boulevard and the Sepulveda Boulevard/96th Street intersection. This causes a heavy westbound right turn movement from 96th Street onto Sepulveda Boulevard that leads to the degradation of level of service between 2028 Baseline and with Project Conditions. It should be noted that already planned and approved LAX Landside Access Modernization Program Phase 2 includes similar access changes that are anticipated to result in a comparable level of service as the proposed Project. The LAX Landside Access Modernization Program Phase 2 is not scheduled to be completed until 2035 and therefore is not represented in the 2028 Baseline level of service results.
- **Sepulveda Boulevard/Century Boulevard:** While all four factors outlined above contribute to the change in level of service at this intersection, the most substantial factor is the new access point to the CTA. The access point for the CTA for northbound motorists on Sepulveda Boulevard would shift from its current location (just south of Century Boulevard) to the new proposed location north of Century Boulevard, just before 96th Street. Due to this shift, CTA-bound motorists would be routed through the Sepulveda Boulevard/Century Boulevard intersection, adding traffic to the northbound through movement at this intersection. Similar to above, it should be noted that already approved LAX Landside Access Modernization Program Phase 2 roadway improvements scheduled for 2035 also propose shifting the access point to the CTA.

2028 Conditions Queueing Analysis

Table 8 summarizes the weekday peak hour 95th percentile queues for key turning movements at study intersections in Projected Future Conditions (Year 2028). "Key turning movements" are defined as movements where the 95th percentile queue length exceeds the existing storage capacity. These movements are shown in bold in **Table 8**. **Appendix F** provides the detailed queueing reports.

The LADOT TAG considers Project access constrained if the Project's traffic would contribute to unacceptable or extended queueing, leading to spillover from turn pockets, blockage at cross streets or alleys, or contributing to "gridlock" congestion. This is defined as locations where:

- The projected peak hour intersection LOS is D, and the lane queue change at any directional LOS greater than D exceeds 75 feet, or
- The projected peak hour intersection LOS is greater than D, and the lane queue change at any directional LOS greater than D exceeds 50 feet.

These criteria are met in only two locations, both at Sepulveda Boulevard/96th Street. These locations are shown in red text in **Table 8.**

Table 8: Projected Future Conditions (Year 2028) 95th percentile Queueing at Key Movements[1]

#	Study Intersection	2028 with Project LOS					95th Percentile Queue[4]			
		Intersection LOS (AM/PM)	Directional LOS[2]				2028 Baseline		2028 with Project	
			AM Peak Hour	PM Peak Hour	Movement[3]	Storage Length[3]	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1	Sepulveda Boulevard/ Manchester Avenue	D/E	D	F	EBT	500	300	**550**	300	**550**
			D	D	WBR	150	**375**	125	**375**	75
			C	F	NBL	225	100	**300**	100	**300**
			F	F	SBL	200	**275**	**500**	**275**	**500**
			C	F	SBT	575	425	**625**	450	**675**
			C	C	SBR	200	50	**225**	50	**225**
2	Sepulveda Boulevard/ La Tijera Boulevard	D/D	C	C	EBL	75	**150**	**125**	**150**	**125**
			F	F	WBL	200	**225**	175	**225**	**225**
			F	F	NBL	150	**225**	**200**	**200**	**200**
			C	D	NBT	400	**425**	**425**	**450**	**425**
			B	C	NBR	100	75	**200**	75	**200**
3	Sepulveda Boulevard/ Westchester Parkway	C/C	C	D	WBL	175	175	**200**	175	**200**
			E	C	WBT	350	**475**	225	**475**	175
			D	F	SBL	150	100	**175**	100	**175**
			A	A	SBT	400	**425**	**550**	**425**	**550**
4	Sepulveda Boulevard/ Lincoln Boulevard	C/C	--	--	SBT	350	**550**	**550**	**550**	**575**
5	Sepulveda Boulevard/ 96th Street	F/F	F	F	WBR	575	**600**	**700**	**700**	**600**
			F	F	NBT	1,000	925	1,000	**1,575**	**1,525**

Table 8: Projected Future Conditions (Year 2028) 95th percentile Queueing at Key Movements[1]

#	Study Intersection	2028 with Project LOS			Movement[3]	Storage Length[3]	95th Percentile Queue[4]			
		Intersection LOS (AM/PM)	Directional LOS[2]				2028 Baseline		2028 with Project	
			AM Peak Hour	PM Peak Hour			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
6	Sepulveda Boulevard/ Century Boulevard	F/E	*No key movements*							
7	Sepulveda Boulevard (northbound)/ I-105 Westbound Off-Ramp	F/F	F	F	NBT	450	**800**	**925**	**775**	**925**
8	Sepulveda Boulevard/ Imperial Highway	D/E	C	F	WBR	350	275	**550**	275	**550**
			F	F	NBL	300	275	**350**	275	**350**
			E	F	SBL	225	**325**	**300**	**325**	**300**
9	Jetway Boulevard/ Westchester Parkway	C/E	E	F	NBL	250	**400**	**775**	**400**	**675**
10	Jetway Boulevard/ Century Boulevard	C/C	--	--	EBL	200	**250**	**275**	**--**	**--**
			E	E	WBL	150	**--**	**--**	**175**	**200**
11	Airport Boulevard/ Westchester Parkway/Arbor Vitae Street	D/C	C	C	NBL	125	**150**	**175**	**150**	**200**
12	Airport Boulevard/ 96th Street	D/C	D	D	EBL	225	150	**300**	**250**	**400**
			D	C	EBT	400	200	325	225	325
			E	D	EBR	100	**400**	**425**	**350**	**400**
			F	E	WBL	100	**200**	100	**200**	100
			F	C	SBL	175	**300**	**225**	**300**	**200**
13	Airport Boulevard/ Century Boulevard	C/C	E	D	EBL	300	**425**	300	**400**	275
			C	C	WBR	350	**575**	225	350	250
			C	C	SBR	275	**400**	**450**	**400**	**475**
14	Aviation Boulevard/ Century Boulevard	F/E	D	C	EBL	250	225	**375**	**300**	**450**
			C	B	EBT	375	350	**750**	375	**750**

Table 8: Projected Future Conditions (Year 2028) 95th percentile Queueing at Key Movements[1]

#	Study Intersection	2028 with Project LOS					95th Percentile Queue[4]			
		Intersection LOS (AM/PM)	Directional LOS[2]				2028 Baseline		2028 with Project	
			AM Peak Hour	PM Peak Hour	Movement[3]	Storage Length[3]	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
			B	B	EBR	375	**575**	**825**	**575**	**875**
			F	F	WBL	150	**400**	**425**	**400**	**425**
			E	F	NBL	350	**450**	**475**	**450**	**450**
			F	F	NBT	550	**725**	**750**	**700**	**750**
15	La Cienega Boulevard/ Century Boulevard	E/E	D	D	EBL	225	100	**275**	125	**325**
			D	F	WBL	175	**550**	**325**	**550**	**350**
			F	C	WBR	925	**1,175**	75	**1,000**	75
			F	E	NBL	175	**300**	150	**300**	150
			B	D	NBR	100	75	**300**	75	**300**
			F	F	SBL	400	225	**500**	250	**550**
			D	C	SBR	125	**225**	**300**	**225**	**325**
16	La Cienega Boulevard (south of Century Boulevard)/I-405 Southbound ramps	A/A	*No key movements*							

Notes:
1. Queue lengths are only shown for turning movements where the 95th percentile queue is greater than the existing storage capacity in one or both peak hour. Turning movements not shown all have 95th percentile queues that can be accommodated within the existing storage capacity. Queue lengths are outputs from the 2028 Baseline and 2028 with Project Synchro 10 AM and PM peak hour models developed for this Project. "Key turning movements" are shown in **bold**. Locations with Project-related deficiencies are shown in **red text**. The 95th percentile queue length is a conservative assumption commonly employed for intersection design considerations and does not represent the typical queue length that an average driver would experience.
2. Directional level of service represents the average delay experienced for each turning movement at the intersection.
3. Movement acronyms represent the cardinal direction (first two letters) and the turn movement (last letter). For example, NBL=Northbound-left movement, NBR = Northbound-right movement, and NBT = Northbound-through movement.
4. Storage lengths and queues are shown in feet and rounded up to the nearest 25.

Source: Fehr & Peers, 2020.

Safety Evaluation

A transportation safety evaluation was completed to determine if the Project would result in changes to roadway operations that would be expected to affect safety for vulnerable road users. This analysis assumes vulnerable road users are defined as people who walk or bike. This review was performed using the most recent proposed roadway plans available at time of review, which do not include details of pedestrian and bicycle facilities. As more detailed pedestrian and bicycle facility plans become available, LAWA will determine design considerations in consultation with LADOT staff.

Table 9 summarizes the intersection modifications proposed as part of the Project that are relevant to this analysis. Project modifications relevant to vulnerable road user safety have been grouped into four primary categories:

- **Approach and Access Changes:** A change in the number of approaches or points of access affects bicycle and pedestrian crossings, as well as potential conflict points with vehicles.
- **Intersection Control:** A change in intersection control can affect bicycle and pedestrian crossings, separation of modes, and may change driver yielding behavior.
- **Lane Reconfiguration:** A change in vehicle capacity may affect the space available for bicycle or pedestrian facilities, vehicular conflict points, and vehicular exposure experienced by vulnerable roadway users (e.g., pedestrian crossing distance)
- **Exposure:** Vehicle volume changes at an intersection may affect exposure for pedestrians and bicyclists.

Table 9: Proposed Project Intersection Modifications

Intersection	Project Modifications
96th Street/Sepulveda Boulevard[1]	• **Approach and Access Changes:** Converted from a four- to three-leg intersection through removal of the west leg. • **Intersection Control:** New signal at intersection, including signalization of westbound right turns (currently free rights). • **Lane Reconfiguration:** Reduced from four to three lanes in both the northbound and southbound directions. Additional westbound right lane, for total of two right lanes. • **Exposure:** Expected increase in northbound through vehicle volume.
96th Street/Vicksburg Avenue	• **Approach and Access Changes:** North leg of intersection removed. Westbound and eastbound traffic separated; south leg becomes right-in/right-out only. • **Intersection Control:** Signal removed from intersection. • **Lane Reconfiguration:** No changes proposed. • **Exposure:** No sizable vehicle volume changes expected, aside from those associated with removal of north leg.

Table 9: Proposed Project Intersection Modifications

Intersection	Project Modifications
98th Street/Vicksburg Avenue	• **Approach and Access Changes:** North leg of intersection removed. • **Intersection Control:** No changes proposed. • **Lane Reconfiguration:** No changes proposed. • **Exposure:** No sizable vehicle volume changes expected, aside from those associated with removal of north leg.
Century Boulevard/Sepulveda Boulevard	• **Approach and Access Changes:** Converted from a four- to three-leg intersection through removal of the west leg. • **Intersection Control:** No changes proposed. • **Lane Reconfiguration:** Westbound through lane converted to left-turn lane. Southbound right turn slip lane removed (due to closure of west leg). • **Exposure:** Primary access to the airport is proposed to be relocated north of this intersection, thus increasing northbound through movement volume.
Century Boulevard/Jetway Boulevard[2]	• **Approach and Access Changes:** Converted from a three- to four-leg intersection through the addition of the south leg with two northbound through lanes and a right-turn lane. • **Intersection Control:** No changes proposed. • **Lane Reconfiguration:** Southbound approach of intersection converted from a two- to three-lane approach: one right-turn lane, one through lane, and one left-turn lane. Westbound approach converted to one left-turn lane, three through lanes, and one shared through/right lane. Eastbound approach converted to four through lanes and one right-turn lane. The eastbound double left-turn lanes proposed as part of the LAX Landside Access Modernization Program are removed as part of this project. • **Exposure:** Sizable vehicle volume change not expected.
Century Boulevard/Avion Drive	• **Approach and Access Changes:** No changes proposed. • **Intersection Control:** No changes proposed. • **Lane Reconfiguration:** Eastbound right-turn lane converted to through/right lane. • **Exposure:** Sizable vehicle volume change not expected.

Notes:
1. The LAX Landside Access Modernization Program roadway improvements documented in the *Landside Access Modernization Program EIR* show this intersection becoming signalized.
2. Analysis of modifications based on future intersection approved as part of the LAX Landside Access Modernization Program. The LAX Landside Access Modernization Program roadway improvements documented in the *Landside Access Modernization Program EIR* includes the new, signalized intersection at Century Boulevard/Jetway Boulevard.

Source: CDM Smith, January 2020.

Safety Evaluation

A collision history summary was compiled for the most recent five years of collision data (2015-2019). The collisions were organized by number of severe injuries and fatalities, by mode, and by segment or intersection location. This summary does not include Property Damage Only collisions or collisions that took place on airport property. However, per information provided by the LAWA Police Division, no "killed or severely injured" (KSI) collisions have been reported on CTA ramps in the last five years.

Table 10 provides a summary of historic intersection collision data by number of severe injuries and fatalities, and by mode. **Table 11** provides a summary of historic segment collision data.

Table 10: Intersection Injury Collision Summary, 2015-2019

Intersection (Collisions within 100 feet of intersection)	Total Collisions	Killed or Severely Injured (KSI) Collisions	Bicycle-Involved Collisions	Pedestrian-Involved Collisions	Vehicle Collisions
Century Boulevard/Sepulveda Boulevard	57	4	0	3	54
Century Boulevard/Vicksburg Avenue	15	1	3	6	6
Century Boulevard/Avion Drive	20	1	2	4	14
98th Street/Vicksburg Avenue	3	0	0	1	2
96th Street/Sepulveda Boulevard	2	0	0	1	1
96th Street/Vicksburg Avenue	27	2	1	2	24

Note: Only locations with proposed modifications are shown.
Source: UC Berkeley SafeTREC Transportation Injury Mapping System (TIMS), 2015-2019.

Table 11: Segment Injury Collision Summary, 2015-2019

Intersection (Collisions within 100 feet of intersection)	Total Collisions	Killed or Severely Injured (KSI) Collisions	Bicycle-Involved Collisions	Pedestrian-Involved Collisions	Vehicle Collisions
Little Century from Sky Way to Sepulveda Boulevard	0	0	0	0	0
Century Boulevard from Sepulveda Boulevard to Vicksburg Avenue	4	0	0	0	4
Century Boulevard from Vicksburg Avenue to Avion Drive	10	0	1	1	8
Sepulveda Boulevard from Century Boulevard to 98th Street	0	0	0	0	0
Sepulveda Boulevard from 98th Street to 96th Street	0	0	0	0	0
98th Street from Sepulveda Boulevard to Vicksburg Avenue	1	0	0	1	0
98th Street from Vicksburg Avenue to Avion Drive	2	0	0	0	2
96th Street from Sepulveda Boulevard to Vicksburg Avenue	0	0	0	0	0
96th Street from Vicksburg Avenue to Avion Drive	9	0	0	0	9
Vicksburg Avenue from 98th Street to Century Boulevard	1	0	1	0	0

Source: UC Berkeley SafeTREC Transportation Injury Mapping System (TIMS), 2015-2019.

After analyzing the historic collision data, countermeasures and crash reduction factors in **Table 12** were identified and associated with the proposed Project's geometric roadway changes. For this analysis, "countermeasures" are defined infrastructure-oriented safety treatments and strategies that are part of a roadway design. Countermeasures identified in **Table 12** are currently included in the proposed Project design.

Due to the conceptual nature of the current plans, two high-level countermeasures are identified as being a part of the proposed Project: corridor access management and installation of signals. The countermeasures referenced are documented in either the FHWA Proven Safety Countermeasures ("Proven Safety Countermeasures - Safety." US DOT – FHWA Office of Safety, 2021, https://safety.fhwa.dot.gov/provencountermeasures) or as part of the *Local Roadway Safety: A Manual for California's Local Road Owners* (Caltrans, April 2020). The source is noted for each, along with an associated crash reduction factor documented by either FHWA or Caltrans. A summary of each of these countermeasures is included below.

Access Management

According to FHWA's Proven Safety Countermeasures resource, access management refers to the design, application, and control of entry and exit points along a roadway. Access management includes limited-movement designs, intersection leg/driveway closure, raised medians that preclude across-roadway movements, or intersection design that reduce left-turn conflicts. FHWA quantifies the safety benefit for access management along urban/suburban arterials as a 25 to 31 percent reduction in injury and fatal crashes.

Install Signals

Local Roadway Safety: A Manual for California's Local Road Owners (LRSM) notes that installing traffic signals at unsignalized locations, when warranted per the *California Manual on Uniform Traffic Control Devices* (CA MUTCD), can be used to prevent the most severe types of crashes, right-angle and left-turn crashes. Caltrans documents the safety benefit for the installation of signals as a reduction of 30 percent for all collisions within the influence area of the new signal.

Table 12: Safety Countermeasures in Proposed Roadway Changes

Geometric Change	Associated Countermeasure	Crash Reduction Factor[1]
96th Street/Sepulveda Boulevard		
West leg of intersection removed	Corridor Access Management (FHWA Proven Safety Countermeasures[2])	25-31%
New signal at intersection	Install Signals (LRSM[3])	30%
96th Street/Vicksburg Avenue		
North leg of intersection removed Westbound and eastbound traffic separated South leg becomes right-in/right-out only	Corridor Access Management (FHWA Proven Safety Countermeasures)	25-31%
Century Boulevard/Sepulveda Boulevard		
West leg of intersection removed Southbound right-turn slip lane removed	Corridor Access Management (FHWA Proven Safety Countermeasures)	25-31%
Century Boulevard/Jetway Boulevard		
Eastbound left turn lanes removed, and left turns eliminated	Corridor Access Management (FHWA Proven Safety Countermeasures)	25-31%

Notes:
1. FHWA defines a crash reduction factor (CRF) as the percentage crash reduction that might be expected after implementing a given countermeasure at a specific site. For example, the use of corridor access management along urban and suburban arterials may result in a 25-31% reduction in injury and fatal crashes.
2. Countermeasure and Crash Reduction Factor from Federal Highway Administration Office of Safety Proven Safety Countermeasures list, https://safety.fhwa.dot.gov/provencountermeasures/
3. Countermeasure and Crash Reduction Factor from *Local Roadway Safety: A Manual for California's Local Road Owners*, Caltrans, https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/hsip/2020/lrsm2020.pdf

Source: Fehr & Peers, 2020.

Additional safety countermeasures may be incorporated as LAWA develops detailed plans. Specific recommendations related to this safety evaluation were not crafted due to limited detailed engineering concepts available at the time of the analysis.

Passenger Loading Evaluation

Relative to the proposed Project, Terminal 9 would provide for passenger loading by including arrivals/departures curbs that would be appropriately sized and managed. Concourse 0 would not have a curbside, but rather passengers would use the curbs at Terminal 1, which would also be actively managed. In the event there were to be curbside congestion at Terminal 9 or Terminal 1 due to passenger loading, it is estimated that the queue backup would not extend onto public streets and could be accommodated within the storage capacity of the Project roadway system.

Recommended Actions

LADOT's *Transportation Assessment Guidelines* require transportation projects to develop a series of corrective actions to address deficiencies in the transportation network that a project is expected to contribute to and as identified through the Project Access, Safety, and Circulation Evaluation. **Table 13** summarizes the recommended corrective actions for the Project-related queueing deficiencies identified through the operations analysis. Recommended corrective actions include specific intersection treatments related to lane configuration, as well as area-wide recommendations, including recommended Transportation Demand Management (TDM) and Transportation System Management (TSM) strategies. **Table 14** provides a summary of the level of service and queueing analysis at the deficient locations with the implementation of the recommended intersection treatments. As can be seen, the corrective actions result in an improvement in operations and adequately address the deficiency.

Table 13: Recommended Corrective Actions for Project-Related Queueing Deficiencies[1]

#	Study Intersection	Project-Related Queueing Deficiency Location	Recommended Corrective Actions[2]	Queueing Deficiency Addressed?
5	Sepulveda Boulevard/ 96th Street	• WBR, NBT[3]	• **Lane Re-Configuration:** Consider adding a third westbound right lane and a northbound through/right pocket.	√[4]
Transportation System Management			• **Transportation System Management (TSM):** Work with LADOT to determine and install the specific TSM upgrades necessary at signalized intersections along Sepulveda Boulevard between Manchester Avenue and Imperial Highway.	NA
Travel Demand Management			• **Transit:** Expand on demand micro transit program from five to ten-mile radius around LAX • **Transit:** Continue ongoing evaluation and enhancement of FlyAway service, which could result in improved headways and coverage • **Transit:** Explore providing subsidized transit passes to employees via the Transportation Management Organization and work with airlines and other airport operators to promote mass transit options for passengers as part of ticketing or frequent flyer programs. • **Bicycle Infrastructure:** Target employees that live in zip codes within 5 miles of the airport for a commute mode shift to biking. Promote the use of the APM as the first-mile/last-mile connection between the airport and bike storage and other facilities at ITF.	NA

Notes:

1. Study intersections not discussed were not found to have Project-related queueing deficiencies. Recommended actions at individual intersection locations are based off aerial imagery and conversations with LAWA.
2. Proposed signal modifications and lane reconfigurations would require further engineering and operational analysis and approval from LADOT and/or Caltrans prior to installation.
3. Project-related queueing deficiencies were identified through isolated intersection analyses. Deficiencies identified in through movements on the Sepulveda Boulevard corridor should be further analyzed with microsimulation to better understand how queueing impacts the adjacent intersections.
4. **Table 14** provides the level of service and queueing results with the recommended corrective actions in place. The LADOT TAG's guidance only identifies deficiencies for intersections operating at LOS D or worse. As shown in **Table 14**, these recommended corrective actions improve overall level of service to LOS C and therefore the Project-related queueing deficiencies are fully addressed. However, 95th percentile queue lengths for the northbound through movement in the AM peak hour would likely still exceed existing storage capacity with the corrective actions. Microsimulation should be done to understand the impact that this has on the adjacent Sepulveda Boulevard/Century Boulevard intersection. The Synchro 10 LOS and queueing worksheets for the intersection with the corrective actions in place is included in **Appendix G**.

Source: Fehr & Peers, 2020.

Table 14: LOS and Queueing with Corrective Action at Deficient Locations[1]

#	Study Intersection	2028 with Project					2028 with Corrective Actions[2]					
		Level of Service (AM/PM)	Movement[2]	Storage Length[3]	95th Percentile Queue Length		Level of Service (AM/PM)	Movement[2]	Storage Length[3]	95th Percentile Queue Length[4]		
					AM Peak Hour	PM Peak Hour				AM Peak Hour	PM Peak Hour	Deficiency Addressed?
5	Sepulveda Boulevard/ 96th Street	F/F	WBR	575	**700**	**600**	C/C	WBR	575	450	400	✓
			NBT	1,000	**1,575**	**1,525**		NBT	1,000	**1,050**	875	✓

Notes:

1. Level of service and queue lengths are only shown for locations where a Project-related deficiency was identified. "Key turning movements" are shown in **bold**. Locations with Project-related deficiencies are shown in **red text**. The 95th percentile queue length is a conservative assumption commonly employed for intersection design considerations and does not represent the typical queue length that an average driver would experience.
2. Corrective actions analyzed include those identified in **Table 13** for this specific location. To be conservative, this assessment does not include any of the recommended area-wide recommendations or travel demand management strategies.
3. Movement acronyms represent the cardinal direction (first two letters) and the turn movement (last letter). For example, NBL=Northbound-left movement, NBR = Northbound-right movement, and NBT = Northbound-through movement.
4. Storage lengths and queues are shown in feet and rounded up to the nearest 25.
5. The LADOT TAG's guidance only identifies deficiencies for intersections operating at LOS D or worse. Since the recommended corrective actions improve overall level of service to LOS C, the Project-related queueing deficiencies are fully addressed. However, 95th percentile queue lengths for the northbound through movement in the AM peak hour would likely still exceed existing storage capacity with the corrective actions. Microsimulation should be done to understand the impact that this has on the adjacent Sepulveda Boulevard/Century Boulevard intersection. The Synchro 10 LOS and queueing worksheets for the intersection with the corrective actions in place is included in **Appendix G**.

Source: Fehr & Peers, 2020.

Transportation System Management

A series of signal system upgrades at intersections along Sepulveda Boulevard between Manchester Avenue and Imperial Highway are recommended to enhance LADOT's ability to remotely monitor traffic conditions and adjust signal timing parameters in real time when congested conditions are observed. The following intersections were identified for improvements in conversation with LADOT:

- Sepulveda Boulevard/Manchester Avenue
- Sepulveda Boulevard/La Tijera Boulevard
- Sepulveda Boulevard/Westchester Parkway
- Sepulveda Boulevard/Lincoln Boulevard
- Sepulveda Boulevard/96th Street
- Sepulveda Boulevard/Century Boulevard
- Sepulveda Boulevard/I-105 Westbound Off-ramps
- Sepulveda Boulevard/Imperial Highway

Specific upgrades will be determined based on the need of each intersection, but will include enhancements such as:

- Closed-circuit television (CCTV) cameras (The proposed Project will implement CCTV at the Sepulveda Boulevard/96th Street intersection. All other intersections listed above will have CCTV installed through the Landside Access Modernization Program.)
- Back-up batteries
- Signal interconnect
- Advanced signal system loops
- 100 mile-per-hour wind load traffic signal poles
- Accessible pedestrian signals (APS)
- ADA-compliant curb ramps
- High-visibility crosswalk striping

Together with the TDM improvements described in **Table 13**, these upgrades would help facilitate traffic flows along Sepulveda Boulevard. The Landside Access Modernization Program (LAMP) will provide traffic signal hardware components which will enable the monitoring required to accommodate real-time and adaptive operation of the traffic signal system around LAX. The proposed upgrades along Sepulveda Boulevard enable system-wide benefits when coupled with upgrades already implemented by LADOT and those that will be installed by the LAMP project.

Enhancements proposed on intersections along State Route 1 and within Caltrans' jurisdiction may require a Caltrans encroachment permit prior to installation. LAWA's contribution for the signal system investments is expected to be approximately $3,000,000.

Roadway Safety Enhancements

Specific recommendations related to the safety evaluation were not developed due to limited detailed engineering concepts available at the time of the analysis. It is recommended that LAWA develop detailed plans in accordance with documented safety best practices and the City of Los Angeles guidelines. These guidelines include:

- The City of Los Angeles Complete Streets Design Guide
- The City of Los Angeles Supplemental Street Design Guide (May 2020)
- Bureau of Engineering (BOE) Street Design Manual and Standard Plans
- Department of Transportation (LADOT) Manual on Policies and Procedures

As more detailed roadway, pedestrian, and bicycle facility plans become available, it is recommended that LAWA determine design considerations to enhance safety for vulnerable roadway users in consultation with LADOT staff. These design elements may include safety countermeasures with documented crash reduction factors, within the following categories:

- Striping and pavement markings (e.g., high visibility marked crosswalks, advance stop bars)
- Pedestrian crossing improvements (e.g., straightened or shortened crosswalks, median refuge islands, enhanced crossing signage)
- Signal phasing (e.g., protected turn phases, separated pedestrian or bicycle phases, yellow and all-red intervals)
- Signal timing (e.g., leading pedestrian interval, shortened cycle lengths, increased crossing time)
- Signal hardware (e.g., retroreflective backplates, advanced dilemma zone detection)
- Bicycle facilities (e.g., Class I bicycle path, Class IV separated bicycle facilities, bicycle boxes)

Project Construction

The proposed Project was assessed to understand how activities associated with Project construction may affect existing pedestrian, bicycle, transit, or vehicle circulation. This assessment follows the evaluation methodology outlined in the LADOT TAG. Much of the evaluation methodology and associated evaluation criteria set for in the LADOT TAG for assessing construction effects is directed towards projects where detailed construction plan information has been developed. While the purpose and overall characteristics of the proposed ATMP have been defined at this time, the Project is still at the conceptual design stage of planning and, as a result, certain aspects of the LADOT TAG evaluation that pertain to detailed construction plans cannot be fully addressed at this time. Much of the evaluation presented herein is provided at a conceptual level of analysis and is qualitatively assessed.

Methodology

The methodology defined in the LADOT TAG was used to assess potential Project-related deficiencies associated with Project construction. A set of screening criteria was reviewed to determine if further analysis is required to evaluate whether the Project could negatively affect existing pedestrian, bicycle, transit, or vehicle circulation. The additional evaluation coming out of the screening assessment took into consideration factors such as the location of the Project site, the functional classification of nearby streets, the availability of alternate routes or additional capacity, temporary loss of bicycle parking, temporary loss of bus stops or rerouting of transit lines, the duration of temporary loss of access, and whether there are emergency services (fire, hospital, etc.) located nearby that regularly use the affected streets.

Screening Criteria

Section 3.4.2 of the LADOT TAG sets forth several questions as screening criteria to determine the level of analysis required relative to construction impacts; a "yes" answer to any of the questions requires that further analysis be provided whereas if the answer is "no" to all the questions, no further analysis is required. These criteria include, among other things, considerations such as whether construction activities would require the closure of certain street types for more than one day; the loss of regular vehicle, bicycle, or pedestrian access for more than one day; or the temporary loss of an existing bus stop or rerouting of a bus stop that serves the project site for more than one day. Although detailed construction plans for the Project have not yet been developed, it is anticipated that such temporary closures or losses would occur, based on the location and scale of the roadway system improvements that are proposed. As such, a further evaluation of construction impacts was completed, as presented below.

Evaluation

The Project was assessed to determine whether construction of the Project would substantially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. Provided below, shown in italics, are the criteria set forth in the LADOT TAG for the further analysis of construction effects, along with a discussion the Project's effect related to those criteria.

1. Temporary transportation constraints:

- *The length of time of temporary street closures or closures of two or more travel lanes;*
- *The classification of the street (major arterial, state highway, substandard hillside local or collector, etc.) affected;*
- *The existing congestion levels on the affected street segments and intersections;*
- *The operational constraints of substandard hillside streets needing to access construction sites;*
- *Whether the affected street directly leads to a freeway on- or off-ramp or other state highway;*
- *Potential safety issues involved with street or lane closures; and*
- *The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street.*

Project Effect: The Project would result in temporary transportation constraints in the form of temporary roadway and/or lane closures. The current conceptual level of design for the Project does not enable the exact times or durations to be determined at this time, nor the specific lane closure lengths, design, or phasing approach. In general, roadway/lane closures would include, but may not be limited to: temporary closure(s) of 96th Street between Sepulveda Boulevard and Jetway Boulevard in conjunction with realignment of that roadway segment; permanent closure of Vicksburg Avenue between 98th Street and the City Los Angeles Department of Water and Power (DWP) substation north of 98th Street and temporary closure of Vicksburg Avenue between the DWP substation and 96th Street; temporary closures of 98th Street between Sepulveda Boulevard and Jetway Boulevard during construction of the elevated ramps proposed north of and at the east end of that roadway segment; temporary closures of Century Boulevard between Jetway Boulevard and Vicksburg Avenue during construction of the elevated ramps and at-grade ramps proposed in that general area; and permanent closure of the ramps adjacent to Sepulveda Boulevard south of Century Boulevard.

The permanent closure of Sky Way, including both the bridge over Sepulveda Boulevard and the off-ramps from southbound Sepulveda Boulevard, would be closed as part of the previously approved LAX Landside Access Modernization Program. In addition, it is anticipated that temporary lane closures on Sepulveda Boulevard would likely be required during construction of the new flyover ramps from and to southbound Sepulveda Boulevard. For each of the temporary closures, a detour plan, as part of a maintenance of traffic (MOT) plan, would be prepared and implemented, as coordinated with LADOT and with LAWA's Coordination and Logistics Management (CALM) Team, to maintain traffic flows in the local area. It is anticipated that the MOTs for the various roadway system improvements would include a Site Logistics Plan that identifies construction access/egress, staging, laydown, haul routes, and additional provisions to ensure that access routes are preserved during construction. As necessary, this would also include rerouting inbound/outbound traffic, assigning motorists to the Intermodal Transportation Facility (ITF) West and/or ITF East, and redirecting motorists to active and open ramps and access ways. Access would be assisted by the use of real-time/dynamic Traffic Access Management Systems, including permanent and portable changeable message signs and a signage program. Finally, construction activities would be subject to requirements in the *2020 LAWA Design and Construction Handbook* (LAWA, 2020), including measures to control contractor work hours, lane closures, traffic detour plans, construction traffic staging, and construction deliveries and haul routes.

Project construction would not result in impacts to emergency services. Although temporary lane closures at and near the CTA entrance would be required to facilitate construction activities, LAWA's Design and Construction Handbook specifies that a Site Logistics Plan and fully documented Logistical Work Plan Checklist be developed for construction projects. Required information includes, but is not limited to, identification of emergency access provisions, emergency evacuation routes, and 24-hour emergency contact information. Further, LAWA would coordinate with the Los Angeles Fire Department and LAWA Police Division regarding emergency access and other design needs to ensure that emergency service levels are maintained during construction. In accordance with standard LAWA practice, emergency access routes in the vicinity of the Project site would be kept clear and unobstructed at all times during the construction period.

2. <u>Temporary loss of access:</u>

- *The length of time of any loss of pedestrian or bicycle circulation past a construction area;*
- *The length of time of any loss of vehicular, bicycle, or pedestrian access to a parcel fronting the construction area;*
- *The length of time of any loss or impedance of access by emergency vehicles or area residents to hillside properties;*
- *The length of time of any loss of Americans with Disabilities Act (ADA) pedestrian access to a transit station, stop, or facility;*
- *The availability of nearby vehicular or pedestrian access within ¼ mile of the lost access;*
- *The type of land uses affected, and related safety, convenience, and/or economic issues.*

<u>Project Effect:</u> A detailed discussion of pedestrian, bicycle, and transit access is provided earlier in this report. As discussed therein, Project construction would require temporary loss of access for some pedestrian and bicycle circulation routes. The Project would realign sidewalks along 96th Street in conjunction with the realignment of that street, temporarily limiting pedestrian access during construction. In addition, although the Project would require the removal of existing bicycle lanes on 96th Street, the LAX Landside Access Modernization Program already identified the need to remove these bicycle lanes and includes replacement facilities in the form of new bicycle and multi-use paths in the Project vicinity. The Project may also include construction along the landscaped area on Sepulveda Boulevard and Century Boulevard due to construction of new ramps. Although the construction work may cause temporary disruptions to access, alternative routing and detours would be identified and marked where feasible in coordination with the City of Los Angeles Department of Building and Safety and LADOT.

3. <u>Temporary Loss of Bus Stops or Rerouting of Bus Lines:</u>

- *The length of time that an existing bus stop would be unavailable or that existing service would be interrupted;*
- *The availability of a nearby location (within ¼ mile) to which the bus stop or route can be temporarily relocated;*
- *The existence of other bus stops or routes with similar routes/destinations within a ¼-mile radius of the affected stops or routes; and*
- *Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s).*

<u>Project Effect:</u> As discussed earlier in this report, the Project may require repositioning of two bus stops on 96th Street in conjunction with the proposed realignment of a portion of that street. The repositioning of the bus stops would be coordinated with the affected transit operator(s), and bus service in the area would continue during the construction period and after construction is complete. In addition, transit stops along Sepulveda Boulevard and Century Boulevard may require temporary closure during the construction period, however, no permanent changes would be required to the stops. Furthermore, there are several planned improvements to the existing transit services, including ongoing Metro efforts to construct the Metro Crenshaw/LAX Line that will include a station near the Aviation Boulevard/Arbor Vitae Street intersection. In addition, the APM and transit consolidation improvements are proposed as part of the LAX Landside Access Modernization Program.

Recommended Actions

Based on the above assessment of pedestrian, bicycle, and transit access, construction of the Project would have a limited negative effect on pedestrian, bicycle, transit, and vehicle circulation in the vicinity of the proposed Project and would require recommended actions. As discussed, detailed design concepts are not available at this time, and will be developed in accordance with documented safety best practice and City of Los Angeles guidelines, including:

- The City of Los Angeles Complete Streets Design Guide
- The City of Los Angeles Supplemental Street Design Guide (May 2020)
- Bureau of Engineering (BOE) Street Design Manual and Standard Plans
- Department of Transportation (LADOT) Manual on Policies and Procedures

Notwithstanding that specific measures to avoid or minimize construction-related deficiencies would be identified in conjunction with future detailed construction plans, the following corrective actions for the Project are recommended at this time:

- In conjunction with development of MOTs for the proposed roadway improvements, LAWA will coordinate with LADOT and other appropriate agencies in preparation of a Site Logistics Plan and fully documented Logistical Work Plan Checklist in accordance with LAWA's Design and

Construction Handbook. LAWA will consult with LADOT if temporary closure of a travel lane may be necessary to stage equipment in the public right-of-way.

- LAWA will coordinate with emergency service and public transit providers.
- LAWA will provide alternative vehicular, bicycle, and/or pedestrian access to affected parcels where feasible and will consult with LADOT if temporary closure of a travel lane may be necessary to maintain adequate pedestrian and bicycle access as part of the traffic management plan.
- LAWA will coordinate with adjacent property owners and tenants to ensure property access is preserved during construction.
- LAWA will coordinate with transit service providers regarding maintenance of ADA access to transit stations, stops, and transit facilities (e.g., layover zones) during revenue hours.
- LAWA will coordinate with transit providers regarding the need to temporarily close or relocate bus stops or reroute service.

Appendix A: LAX ATMP non-CEQA Existing Conditions Operational Assessment

Memorandum

Date: February 2021

Subject: Appendix A: LAX Airfield and Terminal Modernization Project non-CEQA Existing Conditions Operational Assessment

LA19-3119.00

This memorandum presents outcomes from the existing conditions operational evaluation for the Airfield and Terminal Modernization Project (ATMP) at Los Angeles International Airport (LAX). Under Senate Bill 743 and the *Transportation Assessment Guidelines* (City of Los Angeles Department of Transportation, 2020), the operational evaluation performed for the ATMP (Project) is not for consideration under the California Environmental Quality Act (CEQA) and is instead provided for information purposes only.

The proposed Project is not evaluated under existing conditions as the study area is expected to change significantly due to the LAX Landside Access Modernization Program between now and the completion of the proposed Project. Therefore, the proposed Project conditions are only evaluated and compared against future baseline conditions. However, existing conditions were still evaluated to understand how the roadway is currently operating today. The results of the existing conditions evaluation are documented in this memorandum. Existing conditions are defined as 2019 Conditions, or the traffic and roadway conditions in Year 2019 without the proposed Project.

Study Intersection Locations

The list of study intersections was developed in conjunction with LADOT staff and based on guidance provided in LADOT's *Transportation Assessment Guidelines*. The LADOT TAG specifies that intersections immediately adjacent to the project and in proximity to the project through which 100 or more project-generated trips would travel should be analyzed. The study intersections meeting that criterion are listed in **Table 1** and shown on **Figure 1.**

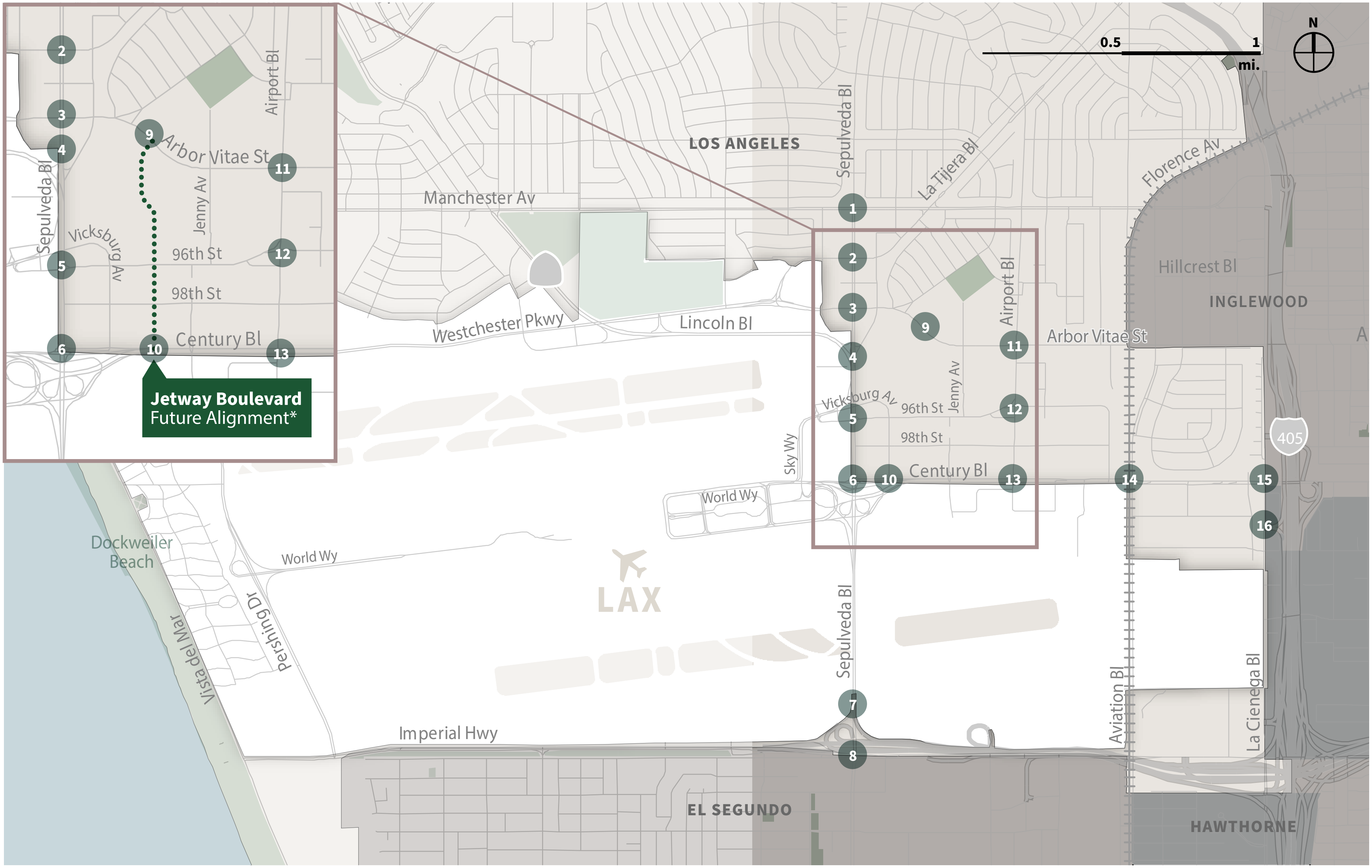
Table 1: Study Intersections

Intersection #	Study Intersections
1	Sepulveda Boulevard/Manchester Avenue
2	Sepulveda Boulevard/La Tijera Boulevard
3	Sepulveda Boulevard/Westchester Parkway
4	Sepulveda Boulevard/Lincoln Boulevard
5	Sepulveda Boulevard/96th Street
6	Sepulveda Boulevard/Century Boulevard
7	Sepulveda Boulevard (northbound)/ I-105 Westbound Off-Ramp
8	Sepulveda Boulevard/Imperial Highway
9	Jetway Boulevard/Westchester Parkway *(new intersection in Projected Future Conditions)*[1]
10	Jetway Boulevard/Century Boulevard *(new intersection in Projected Future Conditions)*[1]
11	Airport Boulevard/Westchester Parkway/Arbor Vitae Street
12	Airport Boulevard/96th Street
13	Airport Boulevard/Century Boulevard
14	Aviation Boulevard/Century Boulevard
15	La Cienega Boulevard/Century Boulevard
16	La Cienega Boulevard (south of Century Boulevard)/I-405 Southbound ramps

Note:

1. These two intersections will be built as part of the LAX Landside Access Modernization Program. They do not exist under Existing Conditions.

Source: Fehr & Peers, 2020.



Study Intersections

*Jetway Boulevard Future Alignment shown is not exact; it is shown for information purposes only.

Figure 1

LAX Airfield and Terminal Modernization Project

Study Intersections

Analysis Methodology

Traffic operations, including intersection level of service (LOS) and queueing, were evaluated using the *Highway Capacity Manual* (HCM) and Synchro 10 software. The methodology employed is in line with guidance provided in the *Transportation Assessment Guidelines*. LADOT typically considers LOS A through D as acceptable operating conditions.

This operations analysis reports the 95th percentile queue lengths (in feet) for all key turning movements and intersection control delay (in seconds) along with the corresponding level of service for each study intersection. "Key turning movements" are defined as movements where the 95th percentile queue length exceeds the existing storage capacity. 95th percentile queue length is defined as the queue length that has only a five-percent probability of being exceeded during the analyzed peak period. The 95th percentile queue length is a conservative assumption commonly employed for intersection design considerations and does not represent the typical queue length an average driver would experience.

Level of Service Methodology

This analysis uses the Transportation Research Board's *Highway Capacity Manual, 6th Edition* (HCM) methodology to evaluate intersection level of service and delay at both signalized and unsignalized intersections. The calculation of delay represents the amount of delay experienced by vehicles passing through the intersection.

At signalized and all-way stop intersections, the delay and corresponding LOS represent the average delay experienced. For two-way stop intersections, the delay and corresponding LOS represent the worst-case approach. HCM level of service thresholds for signalized and unsignalized intersections are presented in **Table 2**.

Table 2: LOS Thresholds for Signalized and Unsignalized Intersections

Level of Service (LOS)	LOS Definition[1]	Signalized Intersection Average Control Delay[2]	Unsignalized Intersection Average Control Delay[2]
A	Excellent. No vehicle waits longer than one red light and no approach phase is fully used.	$\leq$ 10.0	$\leq$ 10.0
B	Very good. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10.1 to 20.0	> 10.1 to 15.0
C	Good. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20.1 to 35.0	> 15.1 to 25.0
D	Fair. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35.1 to 55.0	> 25.1 to 35.0
E	Poor. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55.1 to 80.0	> 35.1 to 50.0
F	Failure. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths	> 80.0	> 50.0

Notes:

1. Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980.
2. Delay shown in seconds per vehicle. Source: *Highway Capacity Manual, 6th Edition* Transportation Research Board, 2016.

2019 Conditions

This section presents traffic operations for the weekday AM and PM peak hours at the study intersections in 2019 Conditions. The lane configurations utilized in the analysis represent on-the-ground conditions for each study intersection in 2019. Signal timing and phasing parameters were provided by LADOT.

2019 Conditions Turning Movement Volumes

Vehicle counts were collected during the weekday morning (7:00 AM to 10:00 AM) and evening (3:00 PM to 6:00 PM) commute periods to define 2019 Conditions. These time periods were selected because they are expected to represent the typical worst traffic conditions. New counts were collected at all study intersections except for the Sepulveda Boulevard/Manchester Avenue intersection, where count data collected for the *Landside Access Modernization Program EIR* (LAWA, 2016) was used.

Table 3 presents the origins of the count data for each study intersection. **Attachment A** includes the intersection turning movement count sheets for each study intersection.

Table 3: Existing 2019 Count Locations

#	2019 Conditions Study Intersections	Year of Count
1	Sepulveda Boulevard/Manchester Avenue	2015[1]
2	Sepulveda Boulevard/La Tijera Boulevard	2019
3	Sepulveda Boulevard/Westchester Parkway	2019
4	Sepulveda Boulevard/Lincoln Boulevard	2019
5	Sepulveda Boulevard/96th Street	2019
6	Sepulveda Boulevard/Century Boulevard	2019
7	Sepulveda Boulevard (northbound)/ I-105 Westbound Off-Ramp	2019
8	Sepulveda Boulevard/Imperial Highway	2019
9	Jetway Boulevard/Westchester Parkway	NA *(New future intersection)*[2]
10	Jetway Boulevard/Century Boulevard	NA *(New future intersection)*[2]
11	Airport Boulevard/Westchester Parkway/Arbor Vitae Street	2019
12	Airport Boulevard/96th Street	2019
13	Airport Boulevard/Century Boulevard	2019
14	Aviation Boulevard/Century Boulevard	2019
15	La Cienega Boulevard/Century Boulevard	2019
16	La Cienega Boulevard (south of Century Boulevard)/I-405 Southbound ramps	2018[1]

Notes:
1. The intersection turning movement counts were grown by an annual growth factor of 1.2% to represent 2019 Conditions.
2. These two intersections will be built as part of the LAX Landside Access Modernization Program. They do not exist under Existing Conditions.

2019 Conditions Level of Service

Table 4 summarizes the 2019 weekday peak hour intersection level of service for the study intersections. **Attachment B** represents the lane configurations and turning movement volumes at each study intersection in 2019 Conditions. **Attachment C** provides the detailed intersection LOS calculation worksheets.

Table 4: Existing 2019 Conditions Intersection Levels of Service[1]

#	Study Intersection	Traffic Control[2]	AM		PM	
			Delay[3]	LOS	Delay[3]	LOS
1	Sepulveda Boulevard/Manchester Avenue	Signal	37	D	50	D
2	Sepulveda Boulevard/La Tijera Boulevard	Signal	25	C	27	C
3	Sepulveda Boulevard/Westchester Parkway	Signal	20	B	17	B
4	Sepulveda Boulevard/Lincoln Boulevard	Signal	28	C	30	C
5	Sepulveda Boulevard/96th Street[4]	SSSC	23	C	35	D
6	Sepulveda Boulevard/Century Boulevard	Signal	25	C	23	C
7	Sepulveda Boulevard (northbound)/ I-105 Westbound Off-Ramp[5]	Signal	>120	F	59	E
8	Sepulveda Boulevard/Imperial Highway	Signal	30	C	33	C
9	Jetway Boulevard/Westchester Parkway	-	-	-	-	-
10	Jetway Boulevard/Century Boulevard	-	-	-	-	-
11	Airport Boulevard/Westchester Parkway/Arbor Vitae Street	Signal	39	D	26	C
12	Airport Boulevard/96th Street	Signal	7	A	12	B
13	Airport Boulevard/Century Boulevard	Signal	38	D	28	C
14	Aviation Boulevard/Century Boulevard	Signal	>120	F	42	D
15	La Cienega Boulevard/Century Boulevard	Signal	44	D	31	C
16	La Cienega Boulevard (south of Century Boulevard)/I-405 Southbound ramps[5]	Signal	8	A	7	A

Notes:

1. Intersection control delay analyzed using HCM 6th Edition and Synchro 10 software unless otherwise noted. For signalized intersections, delay results show the average control delay experienced at the intersection. For side-street stop-controlled intersections, the worst intersection approach delay is presented.
2. Signal = Signalized intersection; SSSC = Side-Street Stop-Controlled intersection
3. Delay is presented in seconds per vehicle
4. The Sepulveda Boulevard/96th Street intersection's eastbound right movement is stop controlled. All other movements are free flow.
5. Intersection control delay measured using HCM 2000 due to incompatibilities between the intersection configuration and/or signal phasing and Synchro 10's application of HCM 6th Edition.

Source: Fehr & Peers, 2020.

2019 Conditions Queueing Analysis

Table 5 summarizes the weekday peak hour 95th percentile queues for key turning movements at study intersections in Existing 2019 Conditions. "Key turning movements" are defined as movements where the 95th percentile queue length exceeds the existing storage capacity. Such conditions are shown in bold text in **Table 5**. **Attachment D** provides the detailed queueing reports.

Table 5: Existing 2019 Conditions 95th percentile Queuing at Key Movements[1]

#	Study Intersection	Movement[2]	Storage Length[3]	95th percentile Queue[3] AM Peak Hour	95th percentile Queue[3] PM Peak Hour
1	Sepulveda Boulevard/Manchester Avenue	WBR	150	**250**	100
		SBL	200	150	**575**
		SBT	575	375	**675**
2	Sepulveda Boulevard/La Tijera Boulevard	EBL	75	75	**100**
		WBL	200	**300**	150
		NBT	400	**450**	325
		NBR	100	100	**175**
3	Sepulveda Boulevard/Westchester Parkway	SBL	150	50	**175**
		SBT	400	**475**	400
4	Sepulveda Boulevard/Lincoln Boulevard	*No key movements*			
5	Sepulveda Boulevard/96th Street	*No key movements*			
6	Sepulveda Boulevard/Century Boulevard[4]	WBL	200	**250**	**375**
7	Sepulveda Boulevard (northbound)/I-105 Westbound Off-Ramp	NBT	450	**700**	**575**
8	Sepulveda Boulevard/Imperial Highway	NBR	575	200	**625**
		SBL	225	**250**	200
9	Jetway Boulevard/Westchester Parkway	*New intersection*			
10	Jetway Boulevard/Century Boulevard	*New intersection*			
11	Airport Boulevard/Westchester Parkway/Arbor Vitae Street	NBL	125	**150**	75
12	Airport Boulevard/96th Street	WBR	50	**75**	25
13	Airport Boulevard/Century Boulevard	EBL	300	**475**	275
14	Aviation Boulevard/Century Boulevard	EBT	375	350	**925**
		WBL	150	**175**	150
		NBL	350	**425**	200

Table 5: Existing 2019 Conditions 95th percentile Queuing at Key Movements[1]

#	Study Intersection	Movement[2]	Storage Length[3]	95th percentile Queue[3]	
				AM Peak Hour	PM Peak Hour
15	La Cienega Boulevard/Century Boulevard	WBL	175	**300**	75
		NBR	100	25	**300**
16	La Cienega Boulevard (south of Century Boulevard)/I-405 Southbound ramps	*No key movements*			

Notes:

1. Queue lengths shown in **bold** are turning movements where the 95th percentile queue is greater than the existing storage capacity. Turning movements not shown all have 95th percentile queues that can be accommodated within the existing storage capacity. Queue lengths are outputs from the Existing 2019 Synchro 10 AM and PM peak hour models developed for this Project. The 95th percentile queue length is a conservative assumption commonly employed for intersection design considerations and does not represent the typical queue length that an average driver would experience.
2. Movement acronyms represent the cardinal direction (first two letters) and the turn movement (last letter). For example, NBL=Northbound-left movement, NBR = Northbound-right movement, and NBT = Northbound-through movement.
3. Storage lengths and queues are shown in feet and rounded up to the nearest 25 feet.
4. The Sepulveda Boulevard/Century Boulevard intersection experiences long queue lengths in the northbound direction, however, the existing storage capacity can sufficiently accommodate the queue. More details are provided in Attachment D.

Source: Fehr & Peers, 2020.

Attachment A: Intersection Turning Movement Count Sheets

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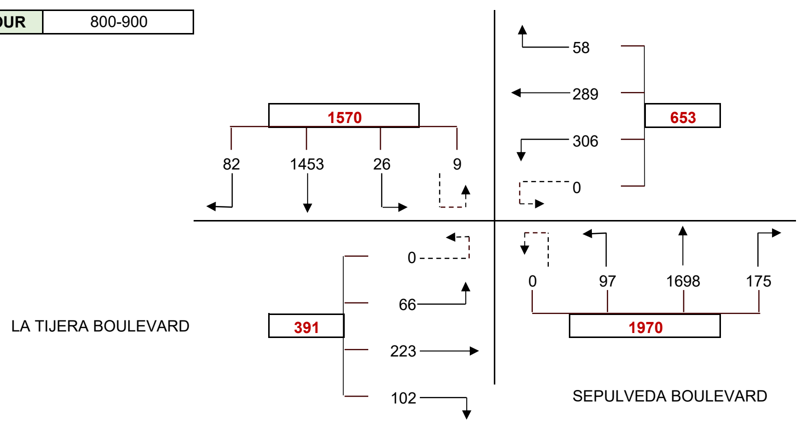
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	SEPULVEDA BOULEVARD
	E/W	LA TIJERA BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	15	293	4	2	3	27	55	0	33	444	16	0	16	28	14	0	950
715-730	16	340	4	1	7	66	59	0	35	418	31	0	23	30	6	0	1036
730-745	23	357	5	1	13	118	75	0	42	420	43	0	25	29	9	0	1160
745-800	18	315	8	0	8	94	64	0	27	446	35	0	21	57	14	0	1107
800-815	23	389	12	3	11	110	68	0	31	391	28	0	29	50	12	0	1157
815-830	20	363	4	2	10	75	87	0	37	401	22	0	25	68	18	0	1132
830-845	19	359	2	3	12	59	73	0	49	431	24	0	26	49	14	0	1120
845-900	20	342	8	1	25	45	78	0	58	475	23	0	22	56	22	0	1175
900-915	24	382	6	1	18	60	96	0	26	421	23	0	19	37	12	0	1125
915-930	17	331	9	2	18	23	66	0	42	388	16	0	24	26	6	0	968
930-945	15	321	10	6	10	47	57	0	47	390	15	1	21	36	24	0	1000
945-1000	16	316	14	1	21	42	49	0	29	354	19	0	21	46	13	0	941
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	72	1305	21	4	31	305	253	0	137	1728	125	0	85	144	43	0	4253
715-815	80	1401	29	5	39	388	266	0	135	1675	137	0	98	166	41	0	4460
730-830	84	1424	29	6	42	397	294	0	137	1658	128	0	100	204	53	0	4556
745-845	80	1426	26	8	41	338	292	0	144	1669	109	0	101	224	58	0	4516
800-900	82	1453	26	9	58	289	306	0	175	1698	97	0	102	223	66	0	4584
815-915	83	1446	20	7	65	239	334	0	170	1728	92	0	92	210	66	0	4552
830-930	80	1414	25	7	73	187	313	0	175	1715	86	0	91	168	54	0	4388
845-945	76	1376	33	10	71	175	297	0	173	1674	77	1	86	155	64	0	4268
900-1000	72	1350	39	10	67	172	268	0	144	1553	73	1	85	145	55	0	4034

PEAK HOUR	800-900



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	3	1	4
715-730	0	0	6	2	8
730-745	1	1	0	2	4
745-800	3	3	2	2	10
800-815	4	4	5	1	14
815-830	3	3	5	3	14
830-845	1	1	6	2	10
845-900	8	8	11	4	31
900-915	4	4	1	2	11
915-930	3	3	5	5	16
930-945	3	3	7	3	16
945-1000	8	8	7	8	31
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	4	4	11	7	26
715-815	8	8	13	7	36
730-830	11	11	12	8	42
745-845	11	11	18	8	48
800-900	16	16	27	10	69
815-915	16	16	23	11	66
830-930	16	16	23	13	68
845-945	18	18	24	14	74
900-1000	18	18	20	18	74

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	1	0	0	1
715-730	2	0	1	2	5
730-745	0	1	1	0	2
745-800	0	0	0	1	1
800-815	1	0	0	0	1
815-830	0	0	0	1	1
830-845	0	0	0	0	0
845-900	0	0	0	0	0
900-915	0	0	0	0	0
915-930	0	0	0	1	1
930-945	0	1	0	3	4
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	2	2	2	3	9
715-815	3	1	2	3	9
730-830	1	1	1	2	5
745-845	1	0	0	2	3
800-900	1	0	0	1	2
815-915	0	0	0	1	1
830-930	0	0	0	1	1
845-945	0	1	0	4	5
900-1000	0	1	0	4	5

APPROACH SUMMARIES										
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	1402	1806		589	302		1990	1643		272	502
715-815	1515	1760		693	330		1947	1765		305	605
730-830	1543	1759		733	370		1923	1818		357	609
745-845	1540	1776		671	394		1922	1819		383	527
800-900	1570	1831		653	424		1970	1861		391	468
815-915	1556	1866		638	400		1990	1872		368	414
830-930	1526	1849		573	368		1976	1818		313	353
845-945	1495	1819		543	361		1925	1760		305	328
900-1000	1471	1685		507	328		1771	1704		285	317

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INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

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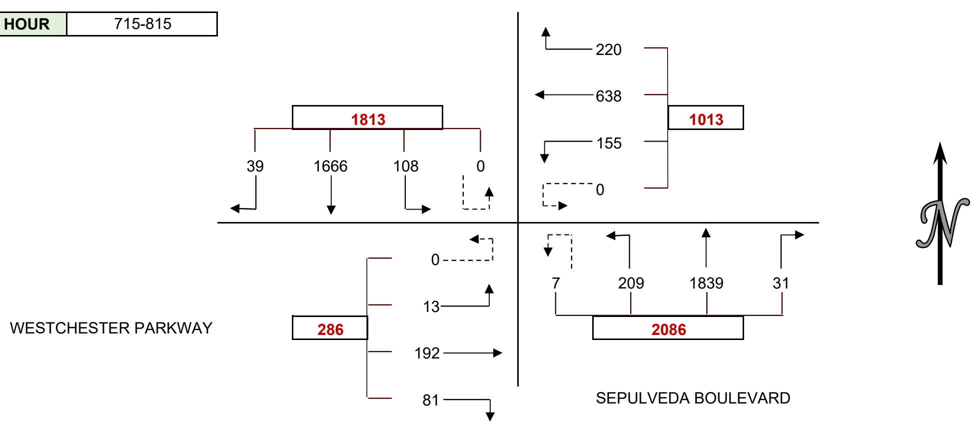
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	SEPULVEDA BOULEVARD
	E/W	WESTCHESTER PARKWAY
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	5	349	12	1	89	95	34	0	2	490	38	3	9	12	3	0	1142
715-730	8	405	22	0	56	134	37	0	7	455	56	3	14	39	3	0	1239
730-745	7	407	24	0	60	163	39	0	7	452	59	0	23	38	1	0	1280
745-800	7	379	34	0	61	191	37	0	6	489	47	1	26	60	7	0	1345
800-815	17	475	28	0	43	150	42	0	11	443	47	3	18	55	2	0	1334
815-830	9	400	35	1	55	109	46	0	5	457	37	3	19	55	5	0	1236
830-845	14	439	30	1	61	79	37	0	12	449	32	2	19	57	4	0	1236
845-900	15	420	32	2	83	88	49	0	12	481	29	2	23	53	4	0	1293
900-915	8	423	42	0	51	65	58	0	13	423	38	2	13	35	6	0	1177
915-930	17	387	36	2	34	55	47	0	8	435	32	3	4	27	4	0	1091
930-945	11	377	32	0	36	53	32	0	10	390	41	2	15	38	13	0	1050
945-1000	11	347	34	0	36	54	46	0	17	381	20	4	24	38	6	1	1019
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	27	1540	92	1	266	583	147	0	22	1886	200	7	72	149	14	0	5006
715-815	39	1666	108	0	220	638	155	0	31	1839	209	7	81	192	13	0	5198
730-830	40	1661	121	1	219	613	164	0	29	1841	190	7	86	208	15	0	5195
745-845	47	1693	127	2	220	529	162	0	34	1838	163	9	82	227	18	0	5151
800-900	55	1734	125	4	242	426	174	0	40	1830	145	10	79	220	15	0	5099
815-915	46	1682	139	4	250	341	190	0	42	1810	136	9	74	200	19	0	4942
830-930	54	1669	140	5	229	287	191	0	45	1788	131	9	59	172	18	0	4797
845-945	51	1607	142	4	204	261	186	0	43	1729	140	9	55	153	27	0	4611
900-1000	47	1534	144	2	157	227	183	0	48	1629	131	11	56	138	29	1	4337

PEAK HOUR	715-815



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	3	3	6	2	14
715-730	2	2	2	3	9
730-745	0	0	5	0	5
745-800	2	2	1	3	8
800-815	6	6	12	1	25
815-830	4	4	3	0	11
830-845	9	9	8	9	35
845-900	4	4	5	6	19
900-915	8	8	14	3	33
915-930	3	3	7	4	17
930-945	7	7	6	3	23
945-1000	3	3	6	1	13
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	7	7	14	8	36
715-815	10	10	20	7	47
730-830	12	12	21	4	49
745-845	21	21	24	13	79
800-900	23	23	28	16	90
815-915	25	25	30	18	98
830-930	24	24	34	22	104
845-945	22	22	32	16	92
900-1000	21	21	33	11	86

BICYCLE COUNTS					
15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	0	1	0	2
715-730	1	0	0	1	2
730-745	1	2	0	0	3
745-800	3	0	0	0	3
800-815	2	0	1	0	3
815-830	1	0	0	0	1
830-845	1	1	0	0	2
845-900	1	1	1	0	3
900-915	0	0	0	0	0
915-930	1	0	1	1	3
930-945	1	1	2	2	6
945-1000	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	6	2	1	1	10
715-815	7	2	1	1	11
730-830	7	2	1	0	10
745-845	7	1	1	0	9
800-900	5	2	2	0	9
815-915	3	2	1	0	6
830-930	3	2	2	1	8
845-945	3	2	4	3	12
900-1000	2	1	3	3	9

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	1660	2167		996	263		2115	1766		235	810
715-815	1813	2072		1013	331		2086	1909		286	886
730-830	1823	2076		996	358		2067	1918		309	843
745-845	1869	2078		911	388		2044	1946		327	739
800-900	1918	2091		842	385		2025	1997		314	626
815-915	1871	2083		781	381		1997	1955		293	523
830-930	1868	2040		707	357		1973	1928		249	472
845-945	1804	1964		651	338		1921	1857		235	452
900-1000	1727	1817		567	330		1819	1784		224	406

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INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
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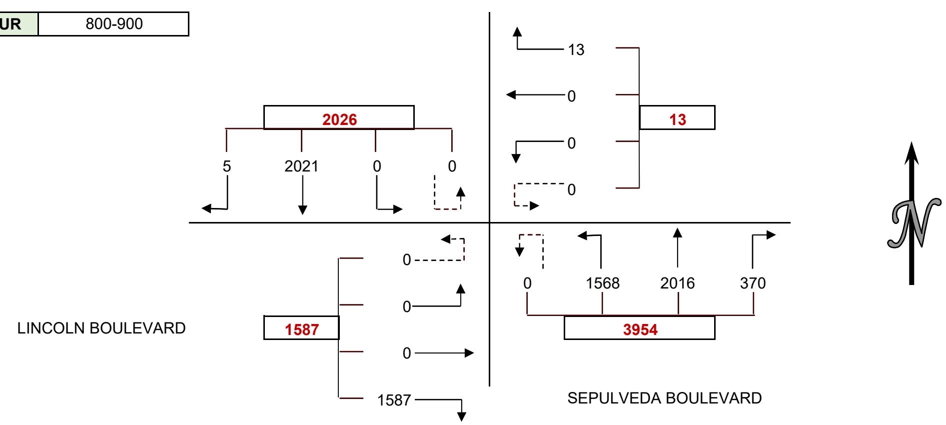
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	SEPULVEDA BOULEVARD
	E/W	LINCOLN BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	10	356	0	0	3	0	0	0	76	505	499	0	213	0	0	0	1662
715-730	10	428	0	0	0	0	0	0	77	586	451	0	251	0	0	0	1803
730-745	2	473	0	0	2	0	0	0	106	530	467	0	333	0	0	0	1913
745-800	3	510	0	0	2	0	0	0	98	520	319	0	357	0	0	0	1809
800-815	2	494	0	0	3	0	0	0	107	566	337	0	455	0	0	0	1964
815-830	1	519	0	0	1	0	0	0	86	440	413	0	370	0	0	0	1830
830-845	1	496	0	0	3	0	0	0	91	483	437	0	420	0	0	0	1931
845-900	1	512	0	0	6	0	0	0	86	527	381	0	342	0	0	0	1855
900-915	7	480	0	0	2	0	0	0	93	443	382	0	378	0	0	0	1785
915-930	10	502	0	0	7	0	0	0	121	419	405	0	285	0	0	0	1749
930-945	5	437	0	0	6	0	0	0	99	474	440	0	241	0	0	0	1702
945-1000	8	399	0	0	10	0	0	0	93	458	428	0	242	0	0	0	1638
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	25	1767	0	0	7	0	0	0	357	2141	1736	0	1154	0	0	0	7187
715-815	17	1905	0	0	7	0	0	0	388	2202	1574	0	1396	0	0	0	7489
730-830	8	1996	0	0	8	0	0	0	397	2056	1536	0	1515	0	0	0	7516
745-845	7	2019	0	0	9	0	0	0	382	2009	1506	0	1602	0	0	0	7534
800-900	5	2021	0	0	13	0	0	0	370	2016	1568	0	1587	0	0	0	7580
815-915	10	2007	0	0	12	0	0	0	356	1893	1613	0	1510	0	0	0	7401
830-930	19	1990	0	0	18	0	0	0	391	1872	1605	0	1425	0	0	0	7320
845-945	23	1931	0	0	21	0	0	0	399	1863	1608	0	1246	0	0	0	7091
900-1000	30	1818	0	0	25	0	0	0	406	1794	1655	0	1146	0	0	0	6874

PEAK HOUR	800-900



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	3	3
715-730	0	0	3	0	3
730-745	0	0	1	2	3
745-800	0	0	1	0	1
800-815	0	0	1	2	3
815-830	0	0	2	1	3
830-845	0	0	3	1	4
845-900	0	0	8	3	11
900-915	0	0	3	1	4
915-930	0	0	9	1	10
930-945	0	0	8	2	10
945-1000	0	0	8	3	11
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	0	5	5	10
715-815	0	0	6	4	10
730-830	0	0	5	5	10
745-845	0	0	7	4	11
800-900	0	0	14	7	21
815-915	0	0	16	6	22
830-930	0	0	23	6	29
845-945	0	0	28	7	35
900-1000	0	0	28	7	35

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	0	0	0	2	2
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	1	1
830-845	0	0	0	0	0
845-900	0	0	0	0	0
900-915	0	1	0	0	1
915-930	0	0	1	1	2
930-945	0	0	0	0	0
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	0	0	2	2
715-815	0	0	0	2	2
730-830	0	0	0	1	1
745-845	0	0	0	1	1
800-900	0	0	0	1	1
815-915	0	1	0	1	2
830-930	0	1	1	1	3
845-945	0	1	1	1	3
900-1000	0	1	1	1	3

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	1792	2148		7	357		4234	2921		1154	1761
715-815	1922	2209		7	388		4164	3301		1396	1591
730-830	2004	2064		8	397		3989	3511		1515	1544
745-845	2026	2018		9	382		3897	3621		1602	1513
800-900	2026	2029		13	370		3954	3608		1587	1573
815-915	2017	1905		12	356		3862	3517		1510	1623
830-930	2009	1890		18	391		3868	3415		1425	1624
845-945	1954	1884		21	399		3870	3177		1246	1631
900-1000	1848	1819		25	406		3855	2964		1146	1685

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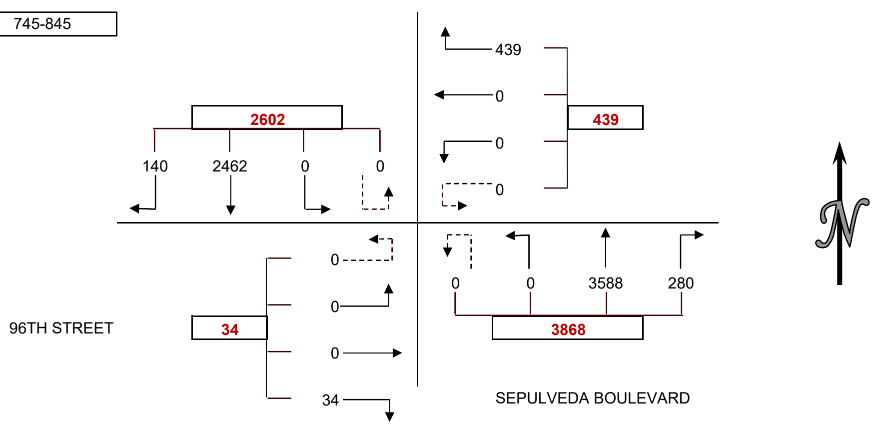
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY FEBRUARY 26, 2019
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W 96TH STREET
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	31	356	0	0	143	0	0	0	63	954	0	0	7	0	0	0	1554
715-730	44	438	0	0	115	0	0	0	92	955	0	0	5	0	0	0	1649
730-745	35	547	0	0	113	0	0	0	93	900	0	0	8	0	0	0	1696
745-800	46	634	0	0	125	0	0	0	77	909	0	0	10	0	0	0	1801
800-815	32	608	0	0	108	0	0	0	68	862	0	0	5	0	0	0	1683
815-830	31	618	0	0	111	0	0	0	63	923	0	0	12	0	0	0	1758
830-845	31	602	0	0	95	0	0	0	72	894	0	0	7	0	0	0	1701
845-900	40	547	0	0	93	0	0	0	85	861	0	0	17	0	0	0	1643
900-915	35	510	0	0	116	0	0	0	90	848	0	0	15	0	0	0	1614
915-930	46	394	0	0	138	0	0	0	84	834	0	0	14	0	0	0	1510
930-945	32	364	0	0	138	0	0	0	84	844	0	0	17	0	0	0	1479
945-1000	36	301	0	0	128	0	0	0	89	790	0	0	10	0	0	0	1354
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	156	1975	0	0	496	0	0	0	325	3718	0	0	30	0	0	0	6700
715-815	157	2227	0	0	461	0	0	0	330	3626	0	0	28	0	0	0	6829
730-830	144	2407	0	0	457	0	0	0	301	3594	0	0	35	0	0	0	6938
745-845	140	2462	0	0	439	0	0	0	280	3588	0	0	34	0	0	0	6943
800-900	134	2375	0	0	407	0	0	0	288	3540	0	0	41	0	0	0	6785
815-915	137	2277	0	0	415	0	0	0	310	3526	0	0	51	0	0	0	6716
830-930	152	2053	0	0	442	0	0	0	331	3437	0	0	53	0	0	0	6468
845-945	153	1815	0	0	485	0	0	0	343	3387	0	0	63	0	0	0	6246
900-1000	149	1569	0	0	520	0	0	0	347	3316	0	0	56	0	0	0	5957

PEAK HOUR	745-845



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	6	0	6
715-730	0	0	3	0	3
730-745	0	0	1	0	1
745-800	0	0	3	0	3
800-815	0	0	0	0	0
815-830	0	0	4	0	4
830-845	0	0	7	0	7
845-900	0	0	1	0	1
900-915	0	0	3	0	3
915-930	0	0	6	0	6
930-945	0	0	3	0	3
945-1000	0	0	1	0	1
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	0	13	0	13
715-815	0	0	7	0	7
730-830	0	0	8	0	8
745-845	0	0	14	0	14
800-900	0	0	12	0	12
815-915	0	0	15	0	15
830-930	0	0	17	0	17
845-945	0	0	13	0	13
900-1000	0	0	13	0	13

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	0	1	0	1	2
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	2	2
815-830	0	0	0	1	1
830-845	0	0	0	0	0
845-900	0	0	0	0	0
900-915	0	0	0	1	1
915-930	0	0	0	1	1
930-945	0	1	0	0	1
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	1	0	1	2
715-815	0	1	0	3	4
730-830	0	0	0	3	3
745-845	0	0	0	3	3
800-900	0	0	0	3	3
815-915	0	0	0	2	2
830-930	0	0	0	2	2
845-945	0	1	0	2	3
900-1000	0	1	0	2	3

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	2131	4214		496	325		4043	2005		30	156
715-815	2384	4087		461	330		3956	2255		28	157
730-830	2551	4051		457	301		3895	2442		35	144
745-845	2602	4027		439	280		3868	2496		34	140
800-900	2509	3947		407	288		3828	2416		41	134
815-915	2414	3941		415	310		3836	2328		51	137
830-930	2205	3879		442	331		3768	2106		53	152
845-945	1968	3872		485	343		3730	1878		63	153
900-1000	1718	3836		520	347		3663	1625		56	149

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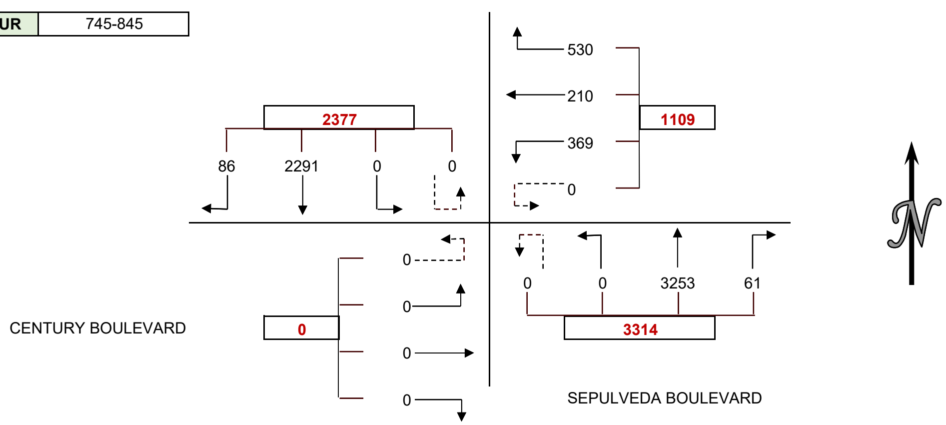
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	SEPULVEDA BOULEVARD
	E/W	CENTURY BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	20	261	0	0	130	29	96	0	11	868	0	0	0	0	0	0	1415
715-730	21	378	0	0	127	36	94	0	15	836	0	0	0	0	0	0	1507
730-745	19	454	0	0	138	65	94	0	9	844	0	0	0	0	0	0	1623
745-800	25	552	0	0	127	45	80	0	19	843	0	0	0	0	0	0	1691
800-815	18	582	0	0	138	26	83	0	13	782	0	0	0	0	0	0	1642
815-830	19	582	0	0	141	75	108	0	18	822	0	0	0	0	0	0	1765
830-845	24	575	0	0	124	64	98	0	11	806	0	0	0	0	0	0	1702
845-900	30	554	0	0	142	57	86	0	19	768	0	0	0	0	0	0	1656
900-915	31	483	0	0	135	57	97	0	11	771	0	0	0	0	0	0	1585
915-930	32	407	0	0	154	60	87	0	13	771	0	0	0	0	0	0	1524
930-945	28	313	0	0	127	49	98	0	9	819	0	0	0	0	0	0	1443
945-1000	23	311	0	0	113	53	83	0	15	740	0	0	0	0	0	0	1338
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	85	1645	0	0	522	175	364	0	54	3391	0	0	0	0	0	0	6236
715-815	83	1966	0	0	530	172	351	0	56	3305	0	0	0	0	0	0	6463
730-830	81	2170	0	0	544	211	365	0	59	3291	0	0	0	0	0	0	6721
745-845	86	2291	0	0	530	210	369	0	61	3253	0	0	0	0	0	0	6800
800-900	91	2293	0	0	545	222	375	0	61	3178	0	0	0	0	0	0	6765
815-915	104	2194	0	0	542	253	389	0	59	3167	0	0	0	0	0	0	6708
830-930	117	2019	0	0	555	238	368	0	54	3116	0	0	0	0	0	0	6467
845-945	121	1757	0	0	558	223	368	0	52	3129	0	0	0	0	0	0	6208
900-1000	114	1514	0	0	529	219	365	0	48	3101	0	0	0	0	0	0	5890

PEAK HOUR	745-845



PEDESTRIAN COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	16	16	0	0	32
715-730	22	22	0	0	44
730-745	15	15	0	0	30
745-800	18	18	0	0	36
800-815	15	15	0	0	30
815-830	20	20	0	0	40
830-845	25	25	0	0	50
845-900	9	9	0	0	18
900-915	19	19	0	0	38
915-930	18	18	0	0	36
930-945	21	21	1	0	43
945-1000	20	20	0	0	40
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	71	71	0	0	142
715-815	70	70	0	0	140
730-830	68	68	0	0	136
745-845	78	78	0	0	156
800-900	69	69	0	0	138
815-915	73	73	0	0	146
830-930	71	71	0	0	142
845-945	67	67	1	0	135
900-1000	78	78	1	0	157

BICYCLE COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	2	0	0	1	3
715-730	1	0	0	0	1
730-745	0	0	0	1	1
745-800	2	0	0	0	2
800-815	1	0	0	0	1
815-830	0	0	0	1	1
830-845	1	0	0	1	2
845-900	0	0	0	0	0
900-915	0	0	0	0	0
915-930	0	0	0	0	0
930-945	0	0	0	1	1
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	5	0	0	2	7
715-815	4	0	0	1	5
730-830	3	0	0	2	5
745-845	4	0	0	2	6
800-900	2	0	0	2	4
815-915	1	0	0	2	3
830-930	1	0	0	1	2
845-945	0	0	0	1	1
900-1000	0	0	0	1	1

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	1730	3913		1061	54		3445	2009		0	260
715-815	2049	3835		1053	56		3361	2317		0	255
730-830	2251	3835		1120	59		3350	2535		0	292
745-845	2377	3783		1109	61		3314	2660		0	296
800-900	2384	3723		1142	61		3239	2668		0	313
815-915	2298	3709		1184	59		3226	2583		0	357
830-930	2136	3671		1161	54		3170	2387		0	355
845-945	1878	3687		1149	52		3181	2125		0	344
900-1000	1628	3630		1113	48		3149	1879		0	333

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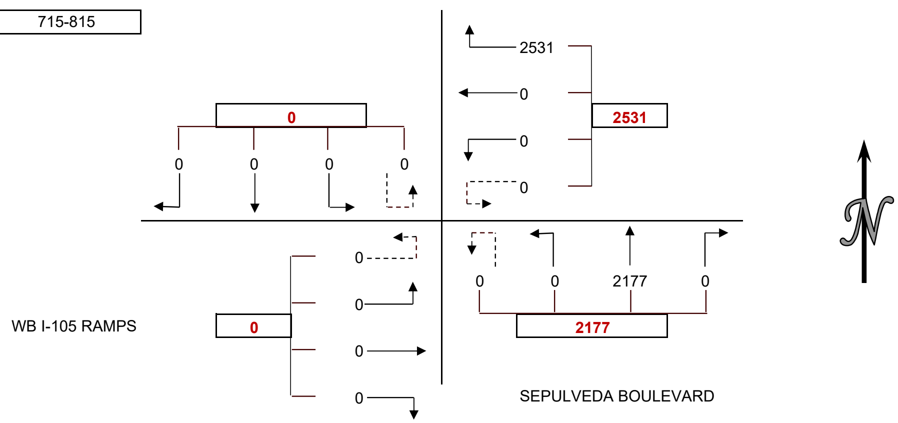
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: THURSDAY MARCH 7, 2019
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W WB I-105 RAMPS
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	0	0	0	0	479	0	0	0	0	502	0	0	0	0	0	0	981
715-730	0	0	0	0	613	0	0	0	0	559	0	0	0	0	0	0	1172
730-745	0	0	0	0	639	0	0	0	0	602	0	0	0	0	0	0	1241
745-800	0	0	0	0	633	0	0	0	0	508	0	0	0	0	0	0	1141
800-815	0	0	0	0	646	0	0	0	0	508	0	0	0	0	0	0	1154
815-830	0	0	0	0	598	0	0	0	0	548	0	0	0	0	0	0	1146
830-845	0	0	0	0	657	0	0	0	0	469	0	0	0	0	0	0	1126
845-900	0	0	0	0	651	0	0	0	0	460	0	0	0	0	0	0	1111
900-915	0	0	0	0	555	0	0	0	0	532	0	0	0	0	0	0	1087
915-930	0	0	0	0	653	0	0	0	0	467	0	0	0	0	0	0	1120
930-945	0	0	0	0	576	0	0	0	0	477	0	0	0	0	0	0	1053
945-1000	0	0	0	0	653	0	0	0	0	342	0	0	0	0	0	0	995
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	0	0	0	0	2364	0	0	0	0	2171	0	0	0	0	0	0	4535
715-815	0	0	0	0	2531	0	0	0	0	2177	0	0	0	0	0	0	4708
730-830	0	0	0	0	2516	0	0	0	0	2166	0	0	0	0	0	0	4682
745-845	0	0	0	0	2534	0	0	0	0	2033	0	0	0	0	0	0	4567
800-900	0	0	0	0	2552	0	0	0	0	1985	0	0	0	0	0	0	4537
815-915	0	0	0	0	2461	0	0	0	0	2009	0	0	0	0	0	0	4470
830-930	0	0	0	0	2516	0	0	0	0	1928	0	0	0	0	0	0	4444
845-945	0	0	0	0	2435	0	0	0	0	1936	0	0	0	0	0	0	4371
900-1000	0	0	0	0	2437	0	0	0	0	1818	0	0	0	0	0	0	4255

PEAK HOUR 715-815



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
900-915	0	0	0	0	0
915-930	0	0	0	0	0
930-945	0	0	0	0	0
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	0	0	0	0
715-815	0	0	0	0	0
730-830	0	0	0	0	0
745-845	0	0	0	0	0
800-900	0	0	0	0	0
815-915	0	0	0	0	0
830-930	0	0	0	0	0
845-945	0	0	0	0	0
900-1000	0	0	0	0	0

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
900-915	0	0	0	0	0
915-930	0	0	0	0	0
930-945	0	0	0	0	0
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	0	0	0	0
715-815	0	0	0	0	0
730-830	0	0	0	0	0
745-845	0	0	0	0	0
800-900	0	0	0	0	0
815-915	0	0	0	0	0
830-930	0	0	0	0	0
845-945	0	0	0	0	0
900-1000	0	0	0	0	0

APPROACH SUMMARIES										
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	0	4535		2364	0		2171	0		0	0
715-815	0	4708		2531	0		2177	0		0	0
730-830	0	4682		2516	0		2166	0		0	0
745-845	0	4567		2534	0		2033	0		0	0
800-900	0	4537		2552	0		1985	0		0	0
815-915	0	4470		2461	0		2009	0		0	0
830-930	0	4444		2516	0		1928	0		0	0
845-945	0	4371		2435	0		1936	0		0	0
900-1000	0	4255		2437	0		1818	0		0	0

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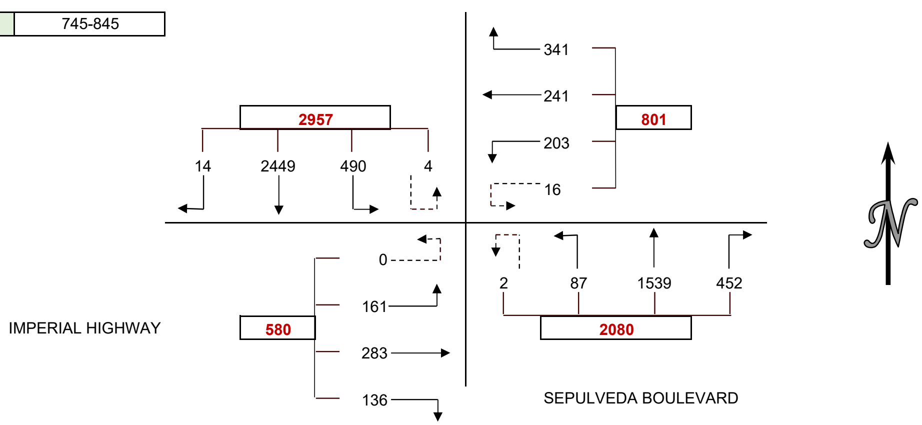
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY MARCH 26, 2019
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W IMPERIAL HIGHWAY
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	1	347	59	0	95	55	42	5	119	448	24	0	21	55	30	0	1301
715-730	2	444	66	1	109	73	64	2	110	421	16	0	21	71	27	0	1427
730-745	4	458	76	0	134	61	69	2	104	340	23	0	30	71	45	0	1417
745-800	3	581	125	1	78	66	56	1	115	419	20	0	38	70	56	0	1629
800-815	4	617	144	0	91	65	60	5	111	370	27	1	32	75	36	0	1638
815-830	5	579	112	0	87	53	49	3	120	354	21	0	31	75	41	0	1530
830-845	2	672	109	3	85	57	38	7	106	396	19	1	35	63	28	0	1621
845-900	0	641	110	1	75	63	50	3	127	342	23	1	31	68	33	0	1568
900-915	1	544	79	1	86	46	61	2	112	353	17	0	32	56	43	0	1433
915-930	5	494	80	4	88	44	35	1	106	375	23	0	31	60	27	0	1373
930-945	3	324	56	2	96	53	39	2	132	349	23	2	18	78	35	1	1213
945-1000	5	408	62	1	73	50	30	0	115	295	17	1	27	60	24	2	1170
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	10	1830	326	2	416	255	231	10	448	1628	83	0	110	267	158	0	5774
715-815	13	2100	411	2	412	265	249	10	440	1550	86	1	121	287	164	0	6111
730-830	16	2235	457	1	390	245	234	11	450	1483	91	1	131	291	178	0	6214
745-845	14	2449	490	4	341	241	203	16	452	1539	87	2	136	283	161	0	6418
800-900	11	2509	475	4	338	238	197	18	464	1462	90	3	129	281	138	0	6357
815-915	8	2436	410	5	333	219	198	15	465	1445	80	2	129	262	145	0	6152
830-930	8	2351	378	9	334	210	184	13	451	1466	82	2	129	247	131	0	5995
845-945	9	2003	325	8	345	206	185	8	477	1419	86	3	112	262	138	1	5587
900-1000	14	1770	277	8	343	193	165	5	465	1372	80	3	108	254	129	3	5189

PEAK HOUR	745-845



PEDESTRIAN COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	2	2
715-730	0	0	0	0	0
730-745	0	0	1	2	3
745-800	0	0	0	5	5
800-815	0	0	0	5	5
815-830	0	0	1	4	5
830-845	0	0	1	4	5
845-900	0	0	1	2	3
900-915	0	0	0	1	1
915-930	1	1	1	4	7
930-945	0	0	1	5	6
945-1000	0	0	0	3	3
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	0	1	9	10
715-815	0	0	1	12	13
730-830	0	0	2	16	18
745-845	0	0	2	18	20
800-900	0	0	3	15	18
815-915	0	0	3	11	14
830-930	1	1	3	11	16
845-945	1	1	3	12	17
900-1000	1	1	2	13	17

BICYCLE COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	1	0	1
715-730	0	0	3	0	3
730-745	0	0	1	0	1
745-800	1	1	4	0	6
800-815	0	0	1	0	1
815-830	1	0	2	0	3
830-845	0	0	5	0	5
845-900	1	0	1	0	2
900-915	0	0	0	0	0
915-930	0	0	0	0	0
930-945	0	0	1	0	1
945-1000	0	0	2	1	3
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	1	1	9	0	11
715-815	1	1	9	0	11
730-830	2	1	8	0	11
745-845	2	1	12	0	15
800-900	2	0	9	0	11
815-915	2	0	8	0	10
830-930	1	0	6	0	7
845-945	1	0	2	0	3
900-1000	0	0	3	1	4

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	2168	2204		912	1051		2159	2171		535	348
715-815	2526	2128		936	1148		2077	2471		572	364
730-830	2709	2052		880	1209		2025	2601		600	352
745-845	2957	2045		801	1241		2080	2790		580	342
800-900	2999	1942		791	1238		2019	2838		548	339
815-915	2859	1928		765	1152		1992	2765		536	307
830-930	2746	1940		741	1089		2001	2666		507	300
845-945	2345	1910		744	1072		1985	2303		513	302
900-1000	2069	1852		706	1001		1920	2046		494	290

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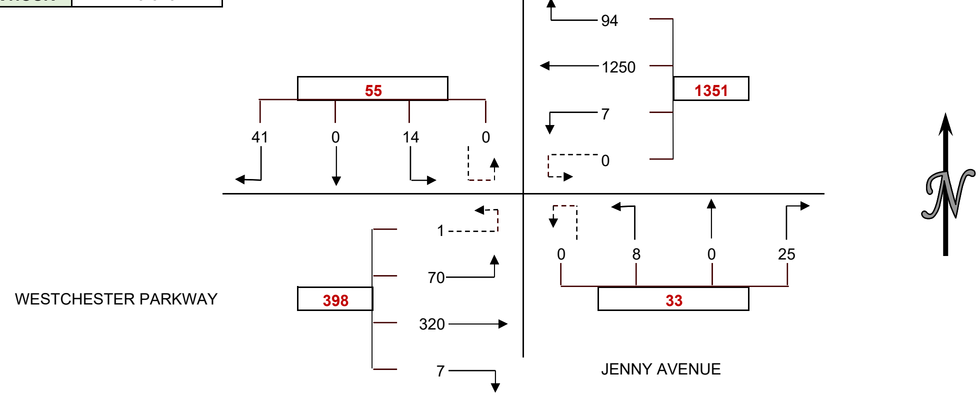
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		WEDNESDAY FEBRUARY 27, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	JENNY AVENUE
	E/W	WESTCHESTER PARKWAY
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	11	0	2	0	25	262	0	0	3	1	0	0	1	56	16	0	377
715-730	8	0	4	0	31	317	3	0	6	0	1	0	4	62	18	0	454
730-745	12	0	3	0	16	284	1	0	5	0	3	0	0	69	22	0	415
745-800	13	0	4	0	21	349	0	0	8	0	2	0	2	99	18	0	516
800-815	8	0	3	0	26	300	3	0	6	0	2	0	1	90	12	1	452
815-830	10	0	6	0	36	240	0	0	6	0	4	0	4	104	12	0	422
830-845	7	0	3	0	17	246	0	0	3	0	4	0	3	91	9	0	383
845-900	7	1	5	0	15	235	1	1	14	1	4	0	3	81	7	1	376
900-915	12	0	5	0	22	195	2	0	19	0	5	0	2	88	13	0	363
915-930	11	0	11	0	24	159	2	0	14	0	6	0	0	87	12	0	326
930-945	10	0	7	0	28	153	0	0	8	0	10	0	2	83	11	0	312
945-1000	19	0	8	0	17	166	0	0	11	0	7	0	5	75	14	0	322
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	44	0	13	0	93	1212	4	0	22	1	6	0	7	286	74	0	1762
715-815	41	0	14	0	94	1250	7	0	25	0	8	0	7	320	70	1	1837
730-830	43	0	16	0	99	1173	4	0	25	0	11	0	7	362	64	1	1805
745-845	38	0	16	0	100	1135	3	0	23	0	12	0	10	384	51	1	1773
800-900	32	1	17	0	94	1021	4	1	29	1	14	0	11	366	40	2	1633
815-915	36	1	19	0	90	916	3	1	42	1	17	0	12	364	41	1	1544
830-930	37	1	24	0	78	835	5	1	50	1	19	0	8	347	41	1	1448
845-945	40	1	28	0	89	742	5	1	55	1	25	0	7	339	43	1	1377
900-1000	52	0	31	0	91	673	4	0	52	0	28	0	9	333	50	0	1323

PEAK HOUR	715-815



PEDESTRIAN COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	6	6	1	0	13
715-730	3	3	0	1	7
730-745	4	4	1	0	9
745-800	1	1	0	1	3
800-815	2	2	0	1	5
815-830	2	2	0	0	4
830-845	0	0	3	1	4
845-900	2	2	0	0	4
900-915	1	1	2	1	5
915-930	3	3	1	2	9
930-945	2	2	0	1	5
945-1000	6	6	0	0	12
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	14	14	2	2	32
715-815	10	10	1	3	24
730-830	9	9	1	2	21
745-845	5	5	3	3	16
800-900	6	6	3	2	17
815-915	5	5	5	2	17
830-930	6	6	6	4	22
845-945	8	8	3	4	23
900-1000	12	12	3	4	31

BICYCLE COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	3	0	2	0	5
800-815	2	0	0	0	2
815-830	0	0	0	0	0
830-845	0	0	1	0	1
845-900	3	0	0	0	3
900-915	0	0	0	0	0
915-930	0	0	0	0	0
930-945	1	0	0	0	1
945-1000	1	0	0	0	1
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	3	0	2	0	5
715-815	5	0	2	0	7
730-830	5	0	2	0	7
745-845	5	0	3	0	8
800-900	5	0	1	0	6
815-915	3	0	1	0	4
830-930	3	0	1	0	4
845-945	4	0	0	0	4
900-1000	2	0	0	0	2

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	57	168		1309	321		29	11		367	1262
715-815	55	164		1351	359		33	14		398	1300
730-830	59	163		1276	403		36	11		434	1228
745-845	54	151		1238	423		35	13		446	1186
800-900	50	135		1120	413		44	16		419	1069
815-915	56	132		1010	426		60	16		418	970
830-930	62	120		919	422		70	14		397	892
845-945	69	133		837	423		81	13		390	808
900-1000	83	141		768	416		80	13		392	753

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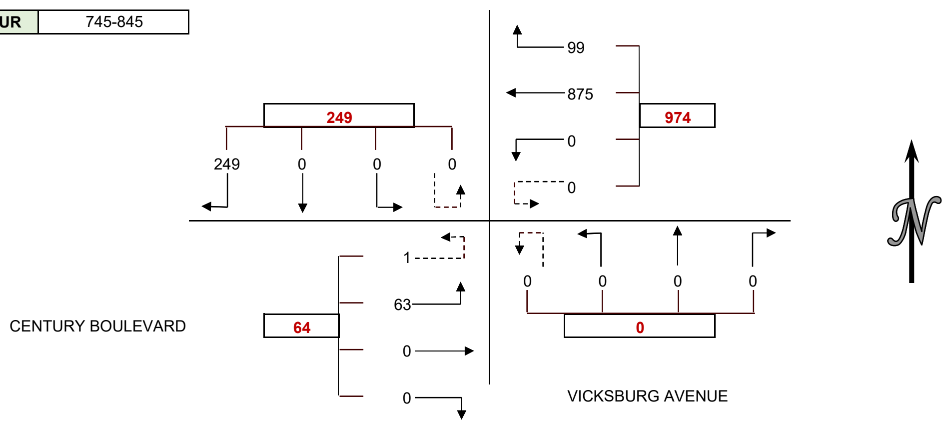
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	VICKSBURG AVENUE
	E/W	CENTURY BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	29	0	0	0	13	228	0	0	0	0	0	0	0	0	17	0	287
715-730	34	0	0	0	27	211	0	0	0	0	0	0	0	0	12	1	285
730-745	42	0	0	0	19	220	0	0	0	0	0	0	0	0	8	0	289
745-800	74	0	0	0	31	204	0	0	0	0	0	0	0	0	15	0	324
800-815	72	0	0	0	24	211	0	0	0	0	0	0	0	0	19	1	327
815-830	64	0	0	0	22	228	0	0	0	0	0	0	0	0	13	0	327
830-845	39	0	0	0	22	232	0	0	0	0	0	0	0	0	16	0	309
845-900	29	0	0	0	26	242	0	0	0	0	0	0	0	0	13	0	310
900-915	45	0	0	0	19	240	0	0	0	0	0	0	0	0	14	0	318
915-930	41	0	0	0	19	237	0	0	0	0	0	0	0	0	10	0	307
930-945	40	0	0	0	17	216	0	0	0	0	0	0	0	0	13	0	286
945-1000	52	0	0	0	18	230	0	0	0	0	0	0	0	0	12	1	313
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	179	0	0	0	90	863	0	0	0	0	0	0	0	0	52	1	1185
715-815	222	0	0	0	101	846	0	0	0	0	0	0	0	0	54	2	1225
730-830	252	0	0	0	96	863	0	0	0	0	0	0	0	0	55	1	1267
745-845	249	0	0	0	99	875	0	0	0	0	0	0	0	0	63	1	1287
800-900	204	0	0	0	94	913	0	0	0	0	0	0	0	0	61	1	1273
815-915	177	0	0	0	89	942	0	0	0	0	0	0	0	0	56	0	1264
830-930	154	0	0	0	86	951	0	0	0	0	0	0	0	0	53	0	1244
845-945	155	0	0	0	81	935	0	0	0	0	0	0	0	0	50	0	1221
900-1000	178	0	0	0	73	923	0	0	0	0	0	0	0	0	49	1	1224

PEAK HOUR	745-845



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	9	9	0	0	18
715-730	5	5	0	0	10
730-745	17	17	0	0	34
745-800	13	13	0	0	26
800-815	10	10	0	0	20
815-830	17	17	0	0	34
830-845	20	20	0	0	40
845-900	22	22	0	0	44
900-915	6	6	0	0	12
915-930	9	9	0	0	18
930-945	14	14	0	0	28
945-1000	8	8	0	0	16
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	44	44	0	0	88
715-815	45	45	0	0	90
730-830	57	57	0	0	114
745-845	60	60	0	0	120
800-900	69	69	0	0	138
815-915	65	65	0	0	130
830-930	57	57	0	0	114
845-945	51	51	0	0	102
900-1000	37	37	0	0	74

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	1	0	0	0	1
715-730	1	0	0	0	1
730-745	0	0	0	0	0
745-800	1	0	0	0	1
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	1	0	0	0	1
845-900	1	0	0	0	1
900-915	0	0	0	0	0
915-930	1	0	0	0	1
930-945	1	0	0	0	1
945-1000	1	0	0	0	1
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	3	0	0	0	3
715-815	2	0	0	0	2
730-830	1	0	0	0	1
745-845	2	0	0	0	2
800-900	2	0	0	0	2
815-915	2	0	0	0	2
830-930	3	0	0	0	3
845-945	3	0	0	0	3
900-1000	3	0	0	0	3

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	179	142		953	0		0	0		53	1043
715-815	222	155		947	0		0	0		56	1070
730-830	252	151		959	0		0	0		56	1116
745-845	249	162		974	0		0	0		64	1125
800-900	204	155		1007	0		0	0		62	1118
815-915	177	145		1031	0		0	0		56	1119
830-930	154	139		1037	0		0	0		53	1105
845-945	155	131		1016	0		0	0		50	1090
900-1000	178	122		996	0		0	0		50	1102

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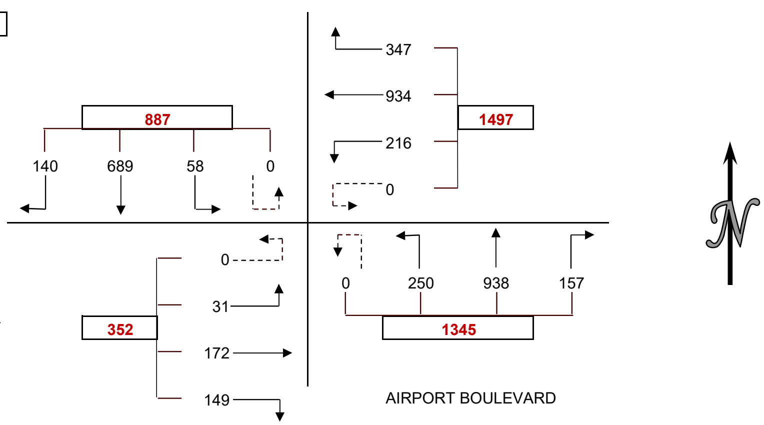
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	AIRPORT BOULEVARD
	E/W	ARBOR VITAE STREET / WESTCHESTER PARKWAY
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	39	142	13	0	78	237	39	0	25	224	47	0	21	15	11	0	891
715-730	36	167	14	0	96	203	49	0	35	305	60	0	37	34	4	0	1040
730-745	33	155	16	0	93	253	54	0	44	232	66	0	32	37	7	0	1022
745-800	36	183	11	0	88	245	67	0	45	220	55	0	44	42	9	0	1045
800-815	35	184	17	0	70	233	46	0	33	181	69	0	36	59	11	0	974
815-830	46	182	17	0	72	167	63	0	38	209	46	0	47	46	9	0	942
830-845	26	156	7	0	103	186	62	0	41	224	63	0	39	45	12	0	964
845-900	26	181	17	0	66	206	59	0	41	215	44	0	35	56	5	0	951
900-915	29	166	15	0	50	151	56	0	38	184	66	0	43	28	18	0	844
915-930	41	199	18	0	49	116	64	0	34	159	40	0	47	42	23	0	832
930-945	35	120	28	0	44	98	61	0	43	152	50	0	32	42	23	0	728
945-1000	31	143	12	0	54	94	35	0	36	161	65	0	33	50	16	0	730
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	144	647	54	0	355	938	209	0	149	981	228	0	134	128	31	0	3998
715-815	140	689	58	0	347	934	216	0	157	938	250	0	149	172	31	0	4081
730-830	150	704	61	0	323	898	230	0	160	842	236	0	159	184	36	0	3983
745-845	143	705	52	0	333	831	238	0	157	834	233	0	166	192	41	0	3925
800-900	133	703	58	0	311	792	230	0	153	829	222	0	157	206	37	0	3831
815-915	127	685	56	0	291	710	240	0	158	832	219	0	164	175	44	0	3701
830-930	122	702	57	0	268	659	241	0	154	782	213	0	164	171	58	0	3591
845-945	131	666	78	0	209	571	240	0	156	710	200	0	157	168	69	0	3355
900-1000	136	628	73	0	197	459	216	0	151	656	221	0	155	162	80	0	3134

PEAK HOUR	715-815



STREET / WESTCHESTER PARKWAY

PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	1	1	1	0	3
715-730	0	0	4	1	5
730-745	6	6	4	1	17
745-800	1	1	6	2	10
800-815	0	0	2	2	4
815-830	1	1	2	2	6
830-845	1	1	1	2	5
845-900	2	2	11	1	16
900-915	1	1	6	1	9
915-930	2	2	0	5	9
930-945	4	4	1	0	9
945-1000	1	1	4	3	9
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	8	8	15	4	35
715-815	7	7	16	6	36
730-830	8	8	14	7	37
745-845	3	3	11	8	25
800-900	4	4	16	7	31
815-915	5	5	20	6	36
830-930	6	6	18	9	39
845-945	9	9	18	7	43
900-1000	8	8	11	9	36

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	3	2	0	0	5
715-730	1	0	1	1	3
730-745	0	0	0	0	0
745-800	1	0	1	0	2
800-815	5	0	0	0	5
815-830	1	0	0	0	1
830-845	1	0	0	1	2
845-900	0	1	2	0	3
900-915	1	0	1	0	2
915-930	3	2	0	0	5
930-945	0	0	1	0	1
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	5	2	2	1	10
715-815	7	0	2	1	10
730-830	7	0	1	0	8
745-845	8	0	1	1	10
800-900	7	1	2	1	11
815-915	3	1	3	1	8
830-930	5	3	3	1	12
845-945	4	3	4	0	11
900-1000	4	2	2	0	8

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	845	1367		1502	331		1358	990		293	1310
715-815	887	1316		1497	387		1345	1054		352	1324
730-830	915	1201		1451	405		1238	1093		379	1284
745-845	900	1208		1402	401		1224	1109		399	1207
800-900	894	1177		1333	417		1204	1090		400	1147
815-915	868	1167		1241	389		1209	1089		383	1056
830-930	881	1108		1168	382		1149	1107		393	994
845-945	875	988		1020	402		1066	1063		394	902
900-1000	837	933		872	386		1028	999		397	816

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

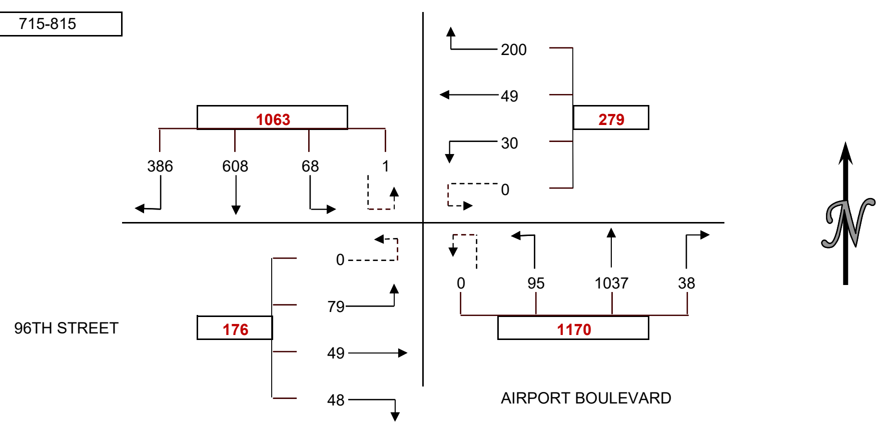
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	AIRPORT BOULEVARD
	E/W	96TH STREET
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	93	103	11	0	36	12	7	0	11	263	23	0	7	6	15	0	587
715-730	92	135	17	0	73	10	7	0	5	288	25	0	14	10	20	0	696
730-745	85	146	20	0	76	12	11	0	12	246	27	0	4	17	28	0	684
745-800	109	172	12	0	26	11	4	0	11	264	27	0	15	13	17	0	681
800-815	100	155	19	1	25	16	8	0	10	239	16	0	15	9	14	0	627
815-830	113	161	21	0	34	11	6	0	4	229	16	0	19	9	21	0	644
830-845	90	142	15	0	36	12	6	0	2	291	23	0	18	13	20	0	668
845-900	98	163	24	0	39	4	6	0	5	236	20	0	14	6	24	0	639
900-915	110	143	8	0	23	10	9	0	11	218	18	0	17	10	29	0	606
915-930	143	165	16	0	23	9	12	0	6	204	19	0	17	13	24	0	651
930-945	65	131	11	0	15	5	5	0	10	205	30	0	9	12	32	0	530
945-1000	83	126	8	0	22	6	7	0	6	192	22	0	16	13	29	0	530
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	379	556	60	0	211	45	29	0	39	1061	102	0	40	46	80	0	2648
715-815	386	608	68	1	200	49	30	0	38	1037	95	0	48	49	79	0	2688
730-830	407	634	72	1	161	50	29	0	37	978	86	0	53	48	80	0	2636
745-845	412	630	67	1	121	50	24	0	27	1023	82	0	67	44	72	0	2620
800-900	401	621	79	1	134	43	26	0	21	995	75	0	66	37	79	0	2578
815-915	411	609	68	0	132	37	27	0	22	974	77	0	68	38	94	0	2557
830-930	441	613	63	0	121	35	33	0	24	949	80	0	66	42	97	0	2564
845-945	416	602	59	0	100	28	32	0	32	863	87	0	57	41	109	0	2426
900-1000	401	565	43	0	83	30	33	0	33	819	89	0	59	48	114	0	2317

PEAK HOUR	715-815



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	4	4	3	4	15
715-730	12	12	3	6	33
730-745	3	3	4	4	14
745-800	8	8	8	4	28
800-815	3	3	3	5	14
815-830	3	3	4	3	13
830-845	3	3	7	5	18
845-900	2	2	7	0	11
900-915	4	4	2	3	13
915-930	5	5	1	5	16
930-945	6	6	5	3	20
945-1000	2	2	5	1	10
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	27	27	18	18	90
715-815	26	26	18	19	89
730-830	17	17	19	16	69
745-845	17	17	22	17	73
800-900	11	11	21	13	56
815-915	12	12	20	11	55
830-930	14	14	17	13	58
845-945	17	17	15	11	60
900-1000	17	17	13	12	59

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	1	1	1	1	4
730-745	0	1	0	0	1
745-800	0	0	0	0	0
800-815	1	0	0	1	2
815-830	0	0	0	0	0
830-845	1	0	0	1	2
845-900	0	1	0	0	1
900-915	0	0	0	0	0
915-930	0	1	0	0	1
930-945	0	0	0	1	1
945-1000	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	1	2	1	1	5
715-815	2	2	1	2	7
730-830	1	1	0	1	3
745-845	2	0	0	2	4
800-900	2	1	0	2	5
815-915	1	1	0	1	3
830-930	1	2	0	1	4
845-945	0	2	0	1	3
900-1000	0	1	0	1	2

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	995	1352		285	145		1202	625		166	526
715-815	1063	1317		279	155		1170	686		176	530
730-830	1114	1220		240	157		1101	716		181	543
745-845	1110	1217		195	138		1132	721		183	544
800-900	1102	1209		203	137		1091	713		182	519
815-915	1088	1200		196	128		1073	704		200	525
830-930	1117	1167		189	129		1053	712		205	556
845-945	1077	1072		160	132		982	691		207	531
900-1000	1009	1016		146	124		941	657		221	520

WILTEC

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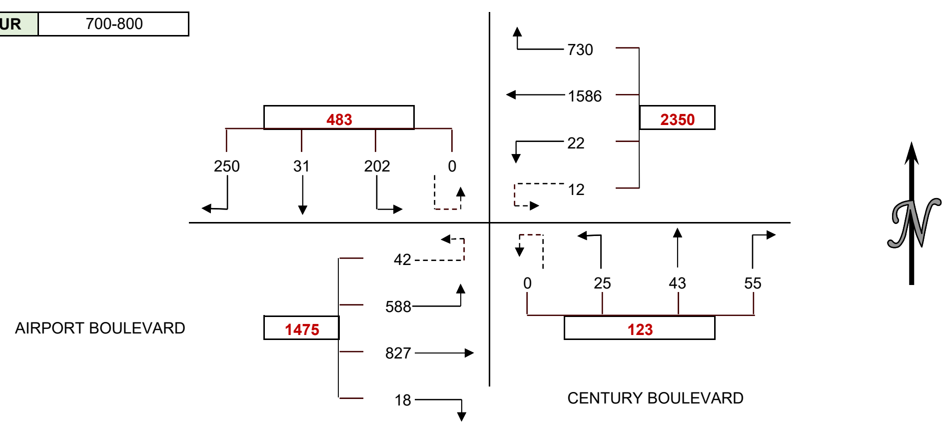
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: THURSDAY MARCH 7, 2019
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S CENTURY BOULEVARD
E/W AIRPORT BOULEVARD
CITY: LOS ANGELES

VEHICLE COUNTS																	
15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	48	6	34	0	180	457	4	3	21	11	2	0	2	180	147	13	1108
715-730	66	7	37	0	196	425	6	4	14	8	5	0	7	216	145	8	1144
730-745	67	6	59	0	208	377	5	2	12	17	8	0	7	227	141	10	1146
745-800	69	12	72	0	146	327	7	3	8	7	10	0	2	204	155	11	1033
800-815	89	5	46	0	168	364	2	3	7	9	7	0	10	191	135	10	1046
815-830	85	11	63	0	148	387	8	4	6	4	4	0	4	216	142	7	1089
830-845	79	7	52	0	133	344	7	2	11	16	11	0	9	221	134	11	1037
845-900	84	5	55	0	129	439	11	3	5	9	6	0	7	236	137	16	1142
900-915	81	8	58	0	121	415	4	6	13	8	3	0	2	228	136	14	1097
915-930	94	7	81	0	106	368	4	6	6	12	7	0	2	218	137	10	1058
930-945	89	8	86	0	127	379	6	5	5	6	4	0	5	263	118	10	1111
945-1000	118	5	69	0	109	356	8	3	3	9	6	0	1	272	136	10	1105
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	250	31	202	0	730	1586	22	12	55	43	25	0	18	827	588	42	4431
715-815	291	30	214	0	718	1493	20	12	41	41	30	0	26	838	576	39	4369
730-830	310	34	240	0	670	1455	22	12	33	37	29	0	23	838	573	38	4314
745-845	322	35	233	0	595	1422	24	12	32	36	32	0	25	832	566	39	4205
800-900	337	28	216	0	578	1534	28	12	29	38	28	0	30	864	548	44	4314
815-915	329	31	228	0	531	1585	30	15	35	37	24	0	22	901	549	48	4365
830-930	338	27	246	0	489	1566	26	17	35	45	27	0	20	903	544	51	4334
845-945	348	28	280	0	483	1601	25	20	29	35	20	0	16	945	528	50	4408
900-1000	382	28	294	0	463	1518	22	20	27	35	20	0	10	981	527	44	4371

PEAK HOUR	700-800



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	8	8	0	4	20
715-730	1	1	0	1	3
730-745	8	8	0	0	16
745-800	7	7	1	0	15
800-815	9	9	0	6	24
815-830	21	21	0	1	43
830-845	7	7	0	1	15
845-900	1	1	0	1	3
900-915	8	8	0	4	20
915-930	8	8	0	4	20
930-945	4	4	0	7	15
945-1000	4	4	0	1	9
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	24	24	1	5	54
715-815	25	25	1	7	58
730-830	45	45	1	7	98
745-845	44	44	1	8	97
800-900	38	38	0	9	85
815-915	37	37	0	7	81
830-930	24	24	0	10	58
845-945	21	21	0	16	58
900-1000	24	24	0	16	64

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	1	0	0	1
815-830	1	0	0	0	1
830-845	0	0	0	0	0
845-900	2	0	1	0	3
900-915	0	0	0	0	0
915-930	2	0	0	0	2
930-945	2	0	2	1	5
945-1000	1	0	0	0	1
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	0	0	0	0	0
715-815	0	1	0	0	1
730-830	1	1	0	0	2
745-845	1	1	0	0	2
800-900	3	1	1	0	5
815-915	3	0	1	0	4
830-930	4	0	1	0	5
845-945	6	0	3	1	10
900-1000	5	0	2	1	8

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	483	1361		2350	1096		123	71		1475	1903
715-815	535	1335		2243	1105		112	76		1479	1853
730-830	584	1280		2159	1123		99	79		1472	1832
745-845	590	1197		2053	1109		100	84		1462	1815
800-900	581	1164		2152	1121		95	86		1486	1943
815-915	588	1117		2161	1179		96	83		1520	1986
830-930	611	1078		2098	1201		107	73		1518	1982
845-945	656	1046		2129	1274		84	69		1539	2019
900-1000	704	1025		2023	1322		82	60		1562	1964

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Inglewood	PROJECT #:	IBEC
Thu, Apr 26, 18	NORTH & SOUTH:	La Cienega	LOCATION #:	15
	EAST & WEST:	I-405 SB Ramps (s/o Century)	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

	NORTHBOUND La Cienega			SOUTHBOUND La Cienega			EASTBOUND I-405 SB Ramps			WESTBOUND I-405 SB Ramps			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:	X	2	0	2	2	X	X	X	X	X	X	2	
AM 7:00 AM	1	269	13	82	93	0	0	0	0	0	0	14	472
7:15 AM	0	301	11	116	129	0	0	0	0	0	0	20	577
7:30 AM	1	291	10	128	132	0	0	0	0	0	0	19	581
7:45 AM	0	248	16	121	167	0	0	0	0	0	0	27	579
8:00 AM	0	240	11	122	186	0	0	0	0	0	0	18	577
8:15 AM	0	235	6	107	144	0	0	0	0	0	0	22	514
8:30 AM	0	193	7	107	131	0	0	0	0	0	0	35	473
8:45 AM	0	206	9	62	129	0	0	0	0	0	0	18	424
VOLUMES	2	1,983	83	845	1,111	0	0	0	0	0	0	173	4,197
APPROACH %	0%	96%	4%	43%	57%	0%	0%	0%	0%	0%	0%	100%	
APP/DEPART	2,068	/	2,157	1,956	/	1,113	0	/	927	173	/	0	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	1	1,080	48	487	614	0	0	0	0	0	0	84	2,314
APPROACH %	0%	96%	4%	44%	56%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.905			0.894			0.000			0.778		0.996
APP/DEPART	1,129	/	1,164	1,101	/	615	0	/	535	84	/	0	0
PM 4:00 PM	0	144	11	89	221	0	0	0	0	0	0	135	600
4:15 PM	0	142	7	88	200	0	0	0	0	0	0	114	551
4:30 PM	0	176	13	81	227	0	0	0	0	0	0	131	628
4:45 PM	0	135	8	73	215	0	0	0	0	0	0	144	575
5:00 PM	0	165	8	114	268	0	0	0	0	0	0	118	673
5:15 PM	0	145	6	101	226	0	0	0	0	0	0	113	591
5:30 PM	0	116	10	113	195	0	0	0	0	0	0	95	529
5:45 PM	0	99	8	93	220	0	0	0	0	0	0	124	544
VOLUMES	0	1,122	71	752	1,772	0	0	0	0	0	0	974	4,691
APPROACH %	0%	94%	6%	30%	70%	0%	0%	0%	0%	0%	0%	100%	
APP/DEPART	1,193	/	2,109	2,524	/	1,772	0	/	810	974	/	0	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	621	35	369	936	0	0	0	0	0	0	506	2,467
APPROACH %	0%	95%	5%	28%	72%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.868			0.854			0.000			0.878		0.916
APP/DEPART	656	/	1,133	1,305	/	936	0	/	398	506	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
	0	0	0	0	
7:00 AM	1	0	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	2	1	0	0	3
4:00 PM	0	1	0	0	1
4:15 PM	0	3	0	0	3
4:30 PM	0	1	0	0	1
4:45 PM	0	1	0	0	1
5:00 PM	0	4	0	0	4
5:15 PM	0	0	0	0	0
5:30 PM	0	2	0	0	2
5:45 PM	0	1	0	0	1
VOLUMES	0	13	0	0	13

La Cienega

NORTH SIDE

I-405 SB Ramps WEST SIDE

EAST SIDE **I-405 SB Ramps**

SOUTH SIDE

La Cienega

	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
7:15 AM	0	0	3	1	4	0	0	3	1	4	0	0	0	0	0
7:30 AM	0	0	4	1	5	0	0	4	1	5	0	0	0	0	0
7:45 AM	0	0	1	2	3	0	0	1	2	3	0	0	0	0	0
8:00 AM	0	0	1	1	2	0	0	0	1	1	0	0	1	0	1
8:15 AM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
8:30 AM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
8:45 AM	0	2	6	4	12	0	2	5	3	10	0	0	1	1	2
TOTAL	0	2	17	12	31	0	2	15	10	27	0	0	2	2	4
AM BEGIN PEAK HR			7:15 AM			0	0	8	5	13					
PM 4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
4:15 PM	1	0	3	0	4	1	0	2	0	3	0	0	1	0	1
4:30 PM	0	0	6	0	6	0	0	5	0	5	0	0	1	0	1
4:45 PM	0	0	3	2	5	0	0	3	2	5	0	0	0	0	0
5:00 PM	0	0	5	2	7	0	0	1	1	2	0	0	4	1	5
5:15 PM	0	0	4	3	7	0	0	3	2	5	0	0	1	1	2
5:30 PM	0	0	2	2	4	0	0	1	0	1	0	0	1	2	3
5:45 PM	0	0	6	0	6	0	0	5	0	5	0	0	1	0	1
TOTAL	1	0	30	9	40	1	0	21	5	27	0	0	9	4	13
PM BEGIN PEAK HR			4:30 PM			0	0	12	5	17					

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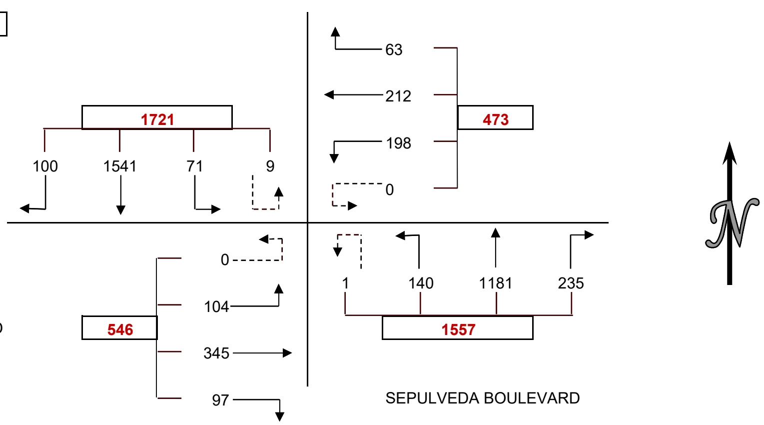
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY FEBRUARY 26, 2019
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W LA TIJERA BOULEVARD
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	29	298	14	1	21	98	62	0	49	350	29	0	26	60	27	0	1064
315-330	37	343	27	2	23	83	67	0	33	226	24	0	21	92	23	0	1001
330-345	18	325	20	0	23	56	54	0	47	245	26	0	23	80	15	0	932
345-400	27	356	21	1	17	58	48	0	52	263	28	0	17	90	20	0	998
400-415	28	362	22	2	21	59	35	0	58	266	37	0	19	83	24	0	1016
415-430	38	396	25	4	24	45	34	0	39	221	24	1	20	83	26	0	980
430-445	44	416	21	3	16	31	47	0	46	301	23	0	26	81	27	0	1082
445-500	36	395	15	5	15	69	65	0	55	293	29	0	25	89	27	0	1118
500-515	38	400	11	2	17	39	58	0	62	243	37	0	30	91	25	0	1053
515-530	0	362	18	5	10	48	40	0	56	318	39	1	23	72	21	0	1013
530-545	36	382	25	1	22	60	52	0	52	289	33	0	22	93	31	0	1098
545-600	26	397	17	1	14	65	48	0	65	331	31	0	22	89	27	0	1133
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	111	1322	82	4	84	295	231	0	181	1084	107	0	87	322	85	0	3995
315-415	110	1386	90	5	84	256	204	0	190	1000	115	0	80	345	82	0	3947
330-430	111	1439	88	7	85	218	171	0	196	995	115	1	79	336	85	0	3926
345-445	137	1530	89	10	78	193	164	0	195	1051	112	1	82	337	97	0	4076
400-500	146	1569	83	14	76	204	181	0	198	1081	113	1	90	336	104	0	4196
415-515	156	1607	72	14	72	184	204	0	202	1058	113	1	101	344	105	0	4233
430-530	118	1573	65	15	58	187	210	0	219	1155	128	1	104	333	100	0	4266
445-545	110	1539	69	13	64	216	215	0	225	1143	138	1	100	345	104	0	4282
500-600	100	1541	71	9	63	212	198	0	235	1181	140	1	97	345	104	0	4297

PEAK HOUR 500-600



LA TIJERA BOULEVARD

PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	7	7	14	8	36
315-330	8	8	14	8	38
330-345	6	6	9	6	27
345-400	4	4	12	4	24
400-415	5	5	15	5	30
415-430	4	4	14	8	30
430-445	11	11	17	9	48
445-500	6	6	13	4	29
500-515	5	5	17	3	30
515-530	3	3	13	5	24
530-545	5	5	11	5	26
545-600	9	9	11	6	35
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	25	25	49	26	125
315-415	23	23	50	23	119
330-430	19	19	50	23	111
345-445	24	24	58	26	132
400-500	26	26	59	26	137
415-515	26	26	61	24	137
430-530	25	25	60	21	131
445-545	19	19	54	17	109
500-600	22	22	52	19	115

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	0	0
315-330	1	0	0	0	1
330-345	0	0	0	1	1
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	1	0	0	0	1
430-445	0	1	0	1	2
445-500	0	0	0	1	1
500-515	0	0	0	0	0
515-530	0	0	1	2	3
530-545	1	1	2	0	4
545-600	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	1	0	0	1	2
315-415	1	0	0	1	2
330-430	1	0	0	1	2
345-445	1	1	0	1	3
400-500	1	1	0	2	4
415-515	1	1	0	2	4
430-530	0	1	1	4	6
445-545	1	1	3	3	8
500-600	1	1	3	2	7

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	1519	1257		610	585		1372	1640		494	513
315-415	1591	1171		544	625		1305	1670		507	481
330-430	1645	1172		474	620		1307	1690		500	444
345-445	1766	1236		435	621		1359	1777		516	442
400-500	1812	1275		461	617		1393	1841		530	463
415-515	1849	1249		460	618		1374	1913		550	453
430-530	1771	1328		455	617		1503	1888		537	433
445-545	1731	1324		495	639		1507	1855		549	464
500-600	1721	1357		473	651		1557	1837		546	452

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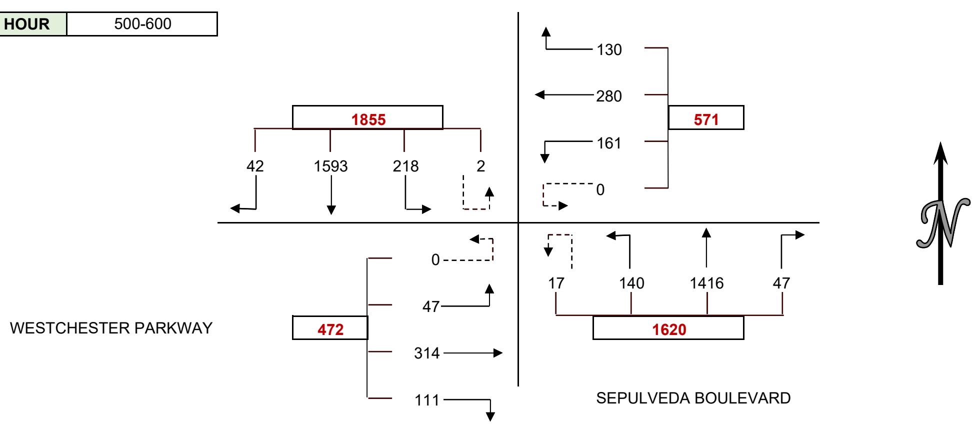
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY FEBRUARY 26, 2019
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W WESTCHESTER PARKWAY
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	19	329	32	0	29	56	47	0	9	358	41	5	27	76	16	0	1044
315-330	14	354	40	0	26	51	37	0	19	305	41	6	30	62	9	0	994
330-345	10	366	41	1	23	58	57	0	19	274	26	3	17	72	16	0	983
345-400	11	371	64	1	27	75	45	0	9	289	42	6	28	76	13	0	1057
400-415	10	334	53	0	27	56	49	0	8	330	28	9	21	88	12	0	1025
415-430	9	423	60	0	32	49	41	0	16	282	35	2	21	65	12	0	1047
430-445	19	382	70	1	45	70	44	0	11	318	31	1	17	78	13	0	1100
445-500	18	408	55	0	28	66	44	0	14	302	32	6	19	73	11	0	1076
500-515	15	414	58	1	36	74	42	0	14	327	40	1	28	78	6	0	1134
515-530	9	374	44	1	31	73	44	0	8	344	23	9	27	89	11	0	1087
530-545	7	386	61	0	33	82	43	0	16	364	38	2	33	70	17	0	1152
545-600	11	419	55	0	30	51	32	0	9	381	39	5	23	77	13	0	1145
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	54	1420	177	2	105	240	186	0	56	1226	150	20	102	286	54	0	4078
315-415	45	1425	198	2	103	240	188	0	55	1198	137	24	96	298	50	0	4059
330-430	40	1494	218	2	109	238	192	0	52	1175	131	20	87	301	53	0	4112
345-445	49	1510	247	2	131	250	179	0	44	1219	136	18	87	307	50	0	4229
400-500	56	1547	238	1	132	241	178	0	49	1232	126	18	78	304	48	0	4248
415-515	61	1627	243	2	141	259	171	0	55	1229	138	10	85	294	42	0	4357
430-530	61	1578	227	3	140	283	174	0	47	1291	126	17	91	318	41	0	4397
445-545	49	1582	218	2	128	295	173	0	52	1337	133	18	107	310	45	0	4449
500-600	42	1593	218	2	130	280	161	0	47	1416	140	17	111	314	47	0	4518

PEAK HOUR	500-600



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	4	4	9	9	26
315-330	8	8	4	5	25
330-345	7	7	3	5	22
345-400	13	13	4	0	30
400-415	11	11	20	10	52
415-430	5	5	11	10	31
430-445	6	6	8	2	22
445-500	13	13	6	8	40
500-515	7	7	6	3	23
515-530	3	3	10	7	23
530-545	8	8	1	3	20
545-600	6	6	3	1	16
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	32	32	20	19	103
315-415	39	39	31	20	129
330-430	36	36	38	25	135
345-445	35	35	43	22	135
400-500	35	35	45	30	145
415-515	31	31	31	23	116
430-530	29	29	30	20	108
445-545	31	31	23	21	106
500-600	24	24	20	14	82

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	1	1	2
345-400	0	0	1	0	1
400-415	0	0	0	1	1
415-430	1	0	0	1	2
430-445	0	1	0	0	1
445-500	1	0	1	0	2
500-515	0	0	0	2	2
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	2	0	2	2	6
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	0	2	1	3
315-415	0	0	2	2	4
330-430	1	0	2	3	6
345-445	1	1	1	2	5
400-500	2	1	1	2	6
415-515	2	1	1	3	7
430-530	1	1	1	2	5
445-545	1	0	1	2	4
500-600	2	0	2	4	8

APPROACH SUMMARIES										
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	1653	1387		531	519		1452	1728		442	444
315-415	1670	1353		531	551		1414	1733		444	422
330-430	1754	1339		539	571		1378	1793		441	409
345-445	1808	1402		560	598		1417	1794		444	435
400-500	1842	1413		551	591		1425	1821		430	423
415-515	1933	1414		571	592		1432	1893		421	458
430-530	1869	1475		597	592		1481	1860		450	470
445-545	1851	1512		596	580		1540	1880		462	477
500-600	1855	1595		571	579		1620	1882		472	462

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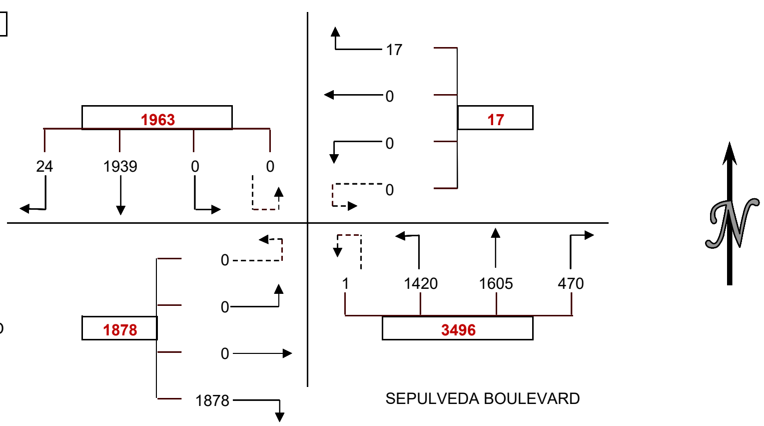
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		3:00 PM TO 6:00 PM
INTERSECTION:	N/S	SEPULVEDA BOULEVARD
	E/W	LINCOLN BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	3	414	0	0	5	0	0	0	126	331	361	0	364	0	0	0	1604
315-330	5	455	0	0	4	0	0	0	139	343	303	0	375	0	0	0	1624
330-345	1	412	0	0	6	0	0	0	138	399	275	0	395	0	0	0	1626
345-400	5	512	0	0	8	0	0	0	146	332	317	0	389	0	0	0	1709
400-415	8	458	0	0	11	0	0	0	145	325	296	0	476	0	0	0	1719
415-430	2	407	0	0	6	0	0	0	162	350	261	0	454	0	0	0	1642
430-445	5	524	0	0	9	0	0	0	150	393	260	0	415	0	0	0	1756
445-500	9	474	0	0	3	0	0	0	124	324	291	1	458	0	0	0	1684
500-515	4	478	0	0	3	0	0	0	129	396	307	0	512	0	0	0	1829
515-530	9	499	0	0	5	0	0	0	119	390	389	0	460	0	0	0	1871
530-545	9	477	0	0	6	0	0	0	117	436	352	1	475	0	0	0	1873
545-600	2	485	0	0	3	0	0	0	105	383	372	0	431	0	0	0	1781
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	14	1793	0	0	23	0	0	0	549	1405	1256	0	1523	0	0	0	6563
315-415	19	1837	0	0	29	0	0	0	568	1399	1191	0	1635	0	0	0	6678
330-430	16	1789	0	0	31	0	0	0	591	1406	1149	0	1714	0	0	0	6696
345-445	20	1901	0	0	34	0	0	0	603	1400	1134	0	1734	0	0	0	6826
400-500	24	1863	0	0	29	0	0	0	581	1392	1108	1	1803	0	0	0	6801
415-515	20	1883	0	0	21	0	0	0	565	1463	1119	1	1839	0	0	0	6911
430-530	27	1975	0	0	20	0	0	0	522	1503	1247	1	1845	0	0	0	7140
445-545	31	1928	0	0	17	0	0	0	489	1546	1339	2	1905	0	0	0	7257
500-600	24	1939	0	0	17	0	0	0	470	1605	1420	1	1878	0	0	0	7354

PEAK HOUR	500-600



LINCOLN BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	4	2	6
315-330	0	0	6	0	6
330-345	0	0	9	5	14
345-400	0	0	4	1	5
400-415	0	0	4	10	14
415-430	0	0	12	0	12
430-445	0	0	12	3	15
445-500	0	0	10	8	18
500-515	0	0	7	6	13
515-530	0	0	8	1	9
530-545	0	0	6	0	6
545-600	0	0	19	6	25
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	0	23	8	31
315-415	0	0	23	16	39
330-430	0	0	29	16	45
345-445	0	0	32	14	46
400-500	0	0	38	21	59
415-515	0	0	41	17	58
430-530	0	0	37	18	55
445-545	0	0	31	15	46
500-600	0	0	40	13	53

BICYCLE COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	1	1
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	1	0	0	1
430-445	0	0	1	1	2
445-500	0	0	0	1	1
500-515	0	0	1	1	2
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	-3	0	0	-3
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	0	0	1	1
315-415	0	0	0	0	0
330-430	0	1	0	0	1
345-445	0	1	1	1	3
400-500	0	1	1	2	4
415-515	0	1	2	3	6
430-530	0	0	2	3	5
445-545	0	0	1	2	3
500-600	0	-3	1	1	-1

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	1807	1428		23	549		3210	3316		1523	1270
315-415	1856	1428		29	568		3158	3472		1635	1210
330-430	1805	1437		31	591		3146	3503		1714	1165
345-445	1921	1434		34	603		3137	3635		1734	1154
400-500	1887	1421		29	581		3082	3667		1803	1132
415-515	1903	1484		21	565		3148	3723		1839	1139
430-530	2002	1523		20	522		3273	3821		1845	1274
445-545	1959	1563		17	489		3376	3835		1905	1370
500-600	1963	1622		17	470		3496	3818		1878	1444

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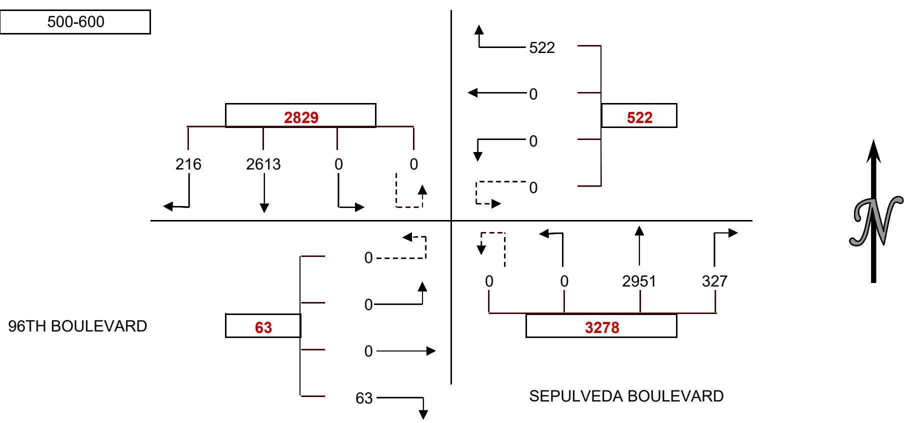
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY FEBRUARY 26, 2019
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W 96TH BOULEVARD
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	42	479	0	0	128	0	0	0	71	688	0	0	34	0	0	0	1442
315-330	63	519	0	0	138	0	0	0	74	673	0	0	16	0	0	0	1483
330-345	40	578	0	0	110	0	0	0	89	674	0	0	14	0	0	0	1505
345-400	47	578	0	0	120	0	0	0	86	676	0	0	14	0	0	0	1521
400-415	40	634	0	0	113	0	0	0	79	630	0	0	16	0	0	0	1512
415-430	57	619	0	0	98	0	0	0	85	623	0	0	11	0	0	0	1493
430-445	41	668	0	0	121	0	0	0	81	690	0	0	22	0	0	0	1623
445-500	44	593	0	0	125	0	0	0	80	659	0	0	14	0	0	0	1515
500-515	63	674	0	0	138	0	0	0	73	675	0	0	25	0	0	0	1648
515-530	50	667	0	0	108	0	0	0	79	759	0	0	11	0	0	0	1674
530-545	48	642	0	0	142	0	0	0	90	789	0	0	16	0	0	0	1727
545-600	55	630	0	0	134	0	0	0	85	728	0	0	11	0	0	0	1643
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	192	2154	0	0	496	0	0	0	320	2711	0	0	78	0	0	0	5951
315-415	190	2309	0	0	481	0	0	0	328	2653	0	0	60	0	0	0	6021
330-430	184	2409	0	0	441	0	0	0	339	2603	0	0	55	0	0	0	6031
345-445	185	2499	0	0	452	0	0	0	331	2619	0	0	63	0	0	0	6149
400-500	182	2514	0	0	457	0	0	0	325	2602	0	0	63	0	0	0	6143
415-515	205	2554	0	0	482	0	0	0	319	2647	0	0	72	0	0	0	6279
430-530	198	2602	0	0	492	0	0	0	313	2783	0	0	72	0	0	0	6460
445-545	205	2576	0	0	513	0	0	0	322	2882	0	0	66	0	0	0	6564
500-600	216	2613	0	0	522	0	0	0	327	2951	0	0	63	0	0	0	6692

PEAK HOUR	500-600



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	8	0	8
315-330	0	0	6	0	6
330-345	0	0	6	0	6
345-400	0	0	4	0	4
400-415	0	0	31	0	31
415-430	0	0	8	0	8
430-445	0	0	7	0	7
445-500	0	0	10	0	10
500-515	0	0	1	0	1
515-530	0	0	7	0	7
530-545	0	0	8	0	8
545-600	0	0	10	0	10
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	0	24	0	24
315-415	0	0	47	0	47
330-430	0	0	49	0	49
345-445	0	0	50	0	50
400-500	0	0	56	0	56
415-515	0	0	26	0	26
430-530	0	0	25	0	25
445-545	0	0	26	0	26
500-600	0	0	26	0	26

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	1	1
330-345	0	0	0	0	0
345-400	0	2	0	0	2
400-415	0	2	0	1	3
415-430	0	0	0	2	2
430-445	0	1	0	1	2
445-500	0	0	0	1	1
500-515	0	0	0	1	1
515-530	0	0	0	0	0
530-545	0	1	0	0	1
545-600	0	0	0	1	1
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	2	0	1	3
315-415	0	4	0	2	6
330-430	0	4	0	3	7
345-445	0	5	0	4	9
400-500	0	3	0	5	8
415-515	0	1	0	5	6
430-530	0	1	0	3	4
445-545	0	1	0	2	3
500-600	0	1	0	2	3

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	2346	3207		496	320		3031	2232		78	192
315-415	2499	3134		481	328		2981	2369		60	190
330-430	2593	3044		441	339		2942	2464		55	184
345-445	2684	3071		452	331		2950	2562		63	185
400-500	2696	3059		457	325		2927	2577		63	182
415-515	2759	3129		482	319		2966	2626		72	205
430-530	2800	3275		492	313		3096	2674		72	198
445-545	2781	3395		513	322		3204	2642		66	205
500-600	2829	3473		522	327		3278	2676		63	216

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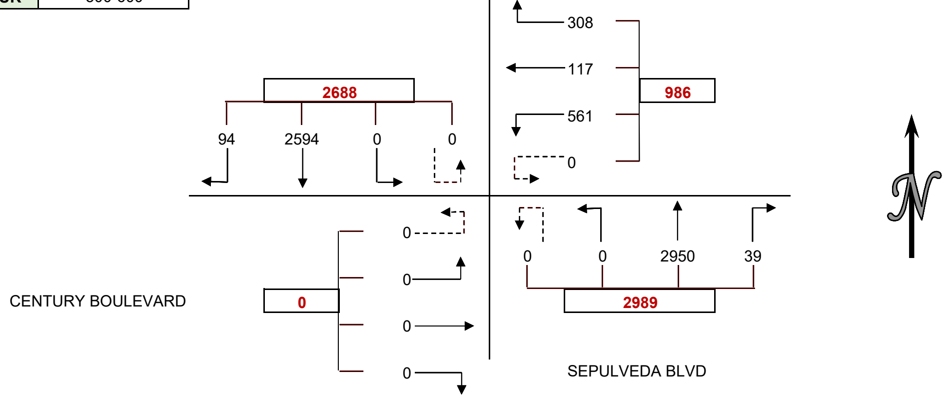
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY FEBRUARY 26, 2019
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S SEPULVEDA BLVD
E/W CENTURY BOULEVARD
CITY: LOS ANGELES

VEHICLE COUNTS																	
15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	25	502	0	0	81	43	106	0	12	676	0	0	0	0	0	0	1445
315-330	21	530	0	0	70	27	130	0	15	648	0	0	0	0	0	0	1441
330-345	23	562	0	0	68	32	109	0	11	658	0	0	0	0	0	0	1463
345-400	27	577	0	0	75	34	160	0	10	694	0	0	0	0	0	0	1577
400-415	16	658	0	0	62	27	133	0	17	634	0	0	0	0	0	0	1547
415-430	18	592	0	0	56	35	114	0	8	651	0	0	0	0	0	0	1474
430-445	23	643	0	0	63	30	151	0	8	653	0	0	0	0	0	0	1571
445-500	21	638	0	0	85	32	142	0	15	684	0	0	0	0	0	0	1617
500-515	24	633	0	0	80	26	124	0	12	657	0	0	0	0	0	0	1556
515-530	26	674	0	0	85	40	135	0	9	766	0	0	0	0	0	0	1735
530-545	27	627	0	0	71	26	147	0	9	781	0	0	0	0	0	0	1688
545-600	17	660	0	0	72	25	155	0	9	746	0	0	0	0	0	0	1684
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	96	2171	0	0	294	136	505	0	48	2676	0	0	0	0	0	0	5926
315-415	87	2327	0	0	275	120	532	0	53	2634	0	0	0	0	0	0	6028
330-430	84	2389	0	0	261	128	516	0	46	2637	0	0	0	0	0	0	6061
345-445	84	2470	0	0	256	126	558	0	43	2632	0	0	0	0	0	0	6169
400-500	78	2531	0	0	266	124	540	0	48	2622	0	0	0	0	0	0	6209
415-515	86	2506	0	0	284	123	531	0	43	2645	0	0	0	0	0	0	6218
430-530	94	2588	0	0	313	128	552	0	44	2760	0	0	0	0	0	0	6479
445-545	98	2572	0	0	321	124	548	0	45	2888	0	0	0	0	0	0	6596
500-600	94	2594	0	0	308	117	561	0	39	2950	0	0	0	0	0	0	6663

PEAK HOUR	500-600



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	24	24	0	0	48
315-330	29	29	0	0	58
330-345	14	14	0	0	28
345-400	37	37	0	0	74
400-415	24	24	0	0	48
415-430	24	24	0	0	48
430-445	24	24	0	0	48
445-500	20	20	1	0	41
500-515	15	15	0	0	30
515-530	28	28	0	0	56
530-545	14	14	1	0	29
545-600	29	29	0	0	58
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	104	104	0	0	208
315-415	104	104	0	0	208
330-430	99	99	0	0	198
345-445	109	109	0	0	218
400-500	92	92	1	0	185
415-515	83	83	1	0	167
430-530	87	87	1	0	175
445-545	77	77	2	0	156
500-600	86	86	1	0	173

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	1	1	0	0	2
400-415	0	0	0	0	0
415-430	0	0	0	1	1
430-445	3	0	0	0	3
445-500	2	0	0	0	2
500-515	1	0	0	1	2
515-530	0	0	0	1	1
530-545	0	0	0	0	0
545-600	2	0	0	1	3
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	1	1	0	0	2
315-415	1	1	0	0	2
330-430	1	1	0	1	3
345-445	4	1	0	1	6
400-500	5	0	0	1	6
415-515	6	0	0	2	8
430-530	6	0	0	2	8
445-545	3	0	0	2	5
500-600	3	0	0	3	6

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	2267	2970		935	48		2724	2676		0	232
315-415	2414	2909		927	53		2687	2859		0	207
330-430	2473	2898		905	46		2683	2905		0	212
345-445	2554	2888		940	43		2675	3028		0	210
400-500	2609	2888		930	48		2670	3071		0	202
415-515	2592	2929		938	43		2688	3037		0	209
430-530	2682	3073		993	44		2804	3140		0	222
445-545	2670	3209		993	45		2933	3120		0	222
500-600	2688	3258		986	39		2989	3155		0	211

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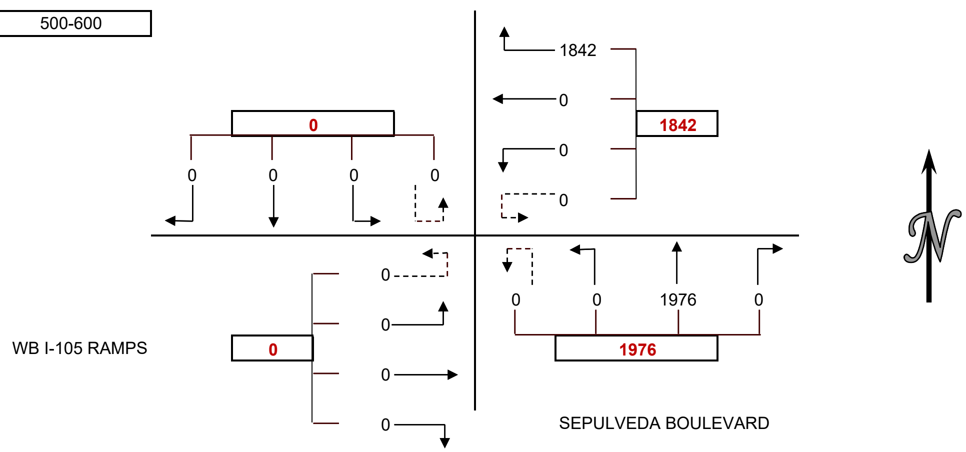
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		THURSDAY MARCH 7, 2019
PERIOD:		3:00 PM TO 6:00 PM
INTERSECTION:	N/S	SEPULVEDA BOULEVARD
	E/W	WB I-105 RAMPS
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	0	0	0	0	520	0	0	0	0	359	0	0	0	0	0	0	879
315-330	0	0	0	0	494	0	0	0	0	371	0	0	0	0	0	0	865
330-345	0	0	0	0	521	0	0	0	0	360	0	0	0	0	0	0	881
345-400	0	0	0	0	536	0	0	0	0	377	0	0	0	0	0	0	913
400-415	0	0	0	0	615	0	0	0	0	400	0	0	0	0	0	0	1015
415-430	0	0	0	0	512	0	0	0	0	365	0	0	0	0	0	0	877
430-445	0	0	0	0	487	0	0	0	0	465	0	0	0	0	0	0	952
445-500	0	0	0	0	471	0	0	0	0	428	0	0	0	0	0	0	899
500-515	0	0	0	0	432	0	0	0	0	469	0	0	0	0	0	0	901
515-530	0	0	0	0	523	0	0	0	0	488	0	0	0	0	0	0	1011
530-545	0	0	0	0	453	0	0	0	0	527	0	0	0	0	0	0	980
545-600	0	0	0	0	434	0	0	0	0	492	0	0	0	0	0	0	926
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	0	0	0	0	2071	0	0	0	0	1467	0	0	0	0	0	0	3538
315-415	0	0	0	0	2166	0	0	0	0	1508	0	0	0	0	0	0	3674
330-430	0	0	0	0	2184	0	0	0	0	1502	0	0	0	0	0	0	3686
345-445	0	0	0	0	2150	0	0	0	0	1607	0	0	0	0	0	0	3757
400-500	0	0	0	0	2085	0	0	0	0	1658	0	0	0	0	0	0	3743
415-515	0	0	0	0	1902	0	0	0	0	1727	0	0	0	0	0	0	3629
430-530	0	0	0	0	1913	0	0	0	0	1850	0	0	0	0	0	0	3763
445-545	0	0	0	0	1879	0	0	0	0	1912	0	0	0	0	0	0	3791
500-600	0	0	0	0	1842	0	0	0	0	1976	0	0	0	0	0	0	3818

PEAK HOUR	500-600



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	0	0	0	0
315-415	0	0	0	0	0
330-430	0	0	0	0	0
345-445	0	0	0	0	0
400-500	0	0	0	0	0
415-515	0	0	0	0	0
430-530	0	0	0	0	0
445-545	0	0	0	0	0
500-600	0	0	0	0	0

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	0	0	0	0
315-415	0	0	0	0	0
330-430	0	0	0	0	0
345-445	0	0	0	0	0
400-500	0	0	0	0	0
415-515	0	0	0	0	0
430-530	0	0	0	0	0
445-545	0	0	0	0	0
500-600	0	0	0	0	0

APPROACH SUMMARIES										
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	0	3538		2071	0		1467	0		0	0
315-415	0	3674		2166	0		1508	0		0	0
330-430	0	3686		2184	0		1502	0		0	0
345-445	0	3757		2150	0		1607	0		0	0
400-500	0	3743		2085	0		1658	0		0	0
415-515	0	3629		1902	0		1727	0		0	0
430-530	0	3763		1913	0		1850	0		0	0
445-545	0	3791		1879	0		1912	0		0	0
500-600	0	3818		1842	0		1976	0		0	0

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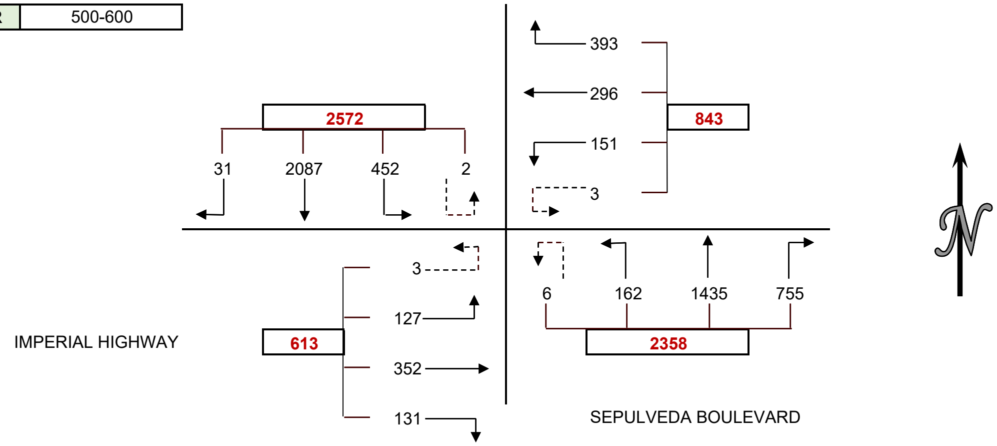
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY MARCH 26, 2019
PERIOD:		3:00 PM TO 6:00 PM
INTERSECTION:	N/S	SEPULVEDA BOULEVARD
	E/W	IMPERIAL HIGHWAY
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	3	422	102	1	69	54	32	0	197	270	32	1	41	83	30	0	1337
315-330	3	475	95	2	55	59	28	1	166	257	15	0	27	75	29	0	1287
330-345	5	520	100	0	67	44	16	0	222	299	30	0	29	104	30	0	1466
345-400	7	517	105	0	49	54	31	0	164	259	31	1	34	80	40	0	1372
400-415	7	488	114	1	79	42	28	0	218	281	31	0	37	106	36	0	1468
415-430	3	551	115	1	75	64	32	0	220	307	30	1	27	105	23	1	1555
430-445	6	533	129	0	87	63	28	0	229	333	28	0	28	115	30	0	1609
445-500	5	540	107	0	80	64	32	1	202	309	36	3	41	105	26	1	1552
500-515	6	485	91	0	109	77	36	1	213	342	51	4	32	90	30	1	1568
515-530	11	498	107	2	80	78	43	1	157	354	26	1	29	91	40	2	1520
530-545	6	532	131	0	118	76	43	0	192	351	39	0	37	82	34	0	1641
545-600	8	572	123	0	86	65	29	1	193	388	46	1	33	89	23	0	1657
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	18	1934	402	3	240	211	107	1	749	1085	108	2	131	342	129	0	5462
315-415	22	2000	414	3	250	199	103	1	770	1096	107	1	127	365	135	0	5593
330-430	22	2076	434	2	270	204	107	0	824	1146	122	2	127	395	129	1	5861
345-445	23	2089	463	2	290	223	119	0	831	1180	120	2	126	406	129	1	6004
400-500	21	2112	465	2	321	233	120	1	869	1230	125	4	133	431	115	2	6184
415-515	20	2109	442	1	351	268	128	2	864	1291	145	8	128	415	109	3	6284
430-530	28	2056	434	2	356	282	139	3	801	1338	141	8	130	401	126	4	6249
445-545	28	2055	436	2	387	295	154	3	764	1356	152	8	139	368	130	4	6281
500-600	31	2087	452	2	393	296	151	3	755	1435	162	6	131	352	127	3	6386

PEAK HOUR	500-600



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	0	0	2	2
315-330	0	0	1	4	5
330-345	0	0	1	3	4
345-400	1	1	0	1	3
400-415	0	0	2	3	5
415-430	0	0	0	3	3
430-445	0	0	2	4	6
445-500	0	0	0	5	5
500-515	0	0	1	4	5
515-530	0	0	0	4	4
530-545	0	0	0	2	2
545-600	0	0	1	1	2
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	1	1	2	10	14
315-415	1	1	4	11	17
330-430	1	1	3	10	15
345-445	1	1	4	11	17
400-500	0	0	4	15	19
415-515	0	0	3	16	19
430-530	0	0	3	17	20
445-545	0	0	1	15	16
500-600	0	0	2	11	13

BICYCLE COUNTS					
15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	0	0	0	0
315-330	0	0	1	0	1
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	1	0	1
415-430	1	0	0	0	1
430-445	1	0	1	1	3
445-500	0	0	1	0	1
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	2	0	0	0	2
545-600	3	0	1	0	4
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	0	0	1	0	1
315-415	0	0	2	0	2
330-430	1	0	1	0	2
345-445	2	0	2	1	5
400-500	2	0	3	1	6
415-515	2	0	2	1	5
430-530	1	0	2	1	4
445-545	2	0	1	0	3
500-600	5	0	1	0	6

APPROACH SUMMARIES												
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	2357	1457		559	1494		1944	2174		602	337
315-415	2439	1484		553	1550		1974	2231		627	328
330-430	2534	1547		581	1653		2094	2312		652	349
345-445	2577	1601		632	1700		2133	2336		662	367
400-500	2600	1668		675	1766		2228	2369		681	381
415-515	2572	1752		749	1723		2308	2373		655	436
430-530	2520	1822		780	1639		2288	2333		661	455
445-545	2521	1875		839	1571		2280	2356		641	479
500-600	2572	1957		843	1562		2358	2375		613	492

WILTEC

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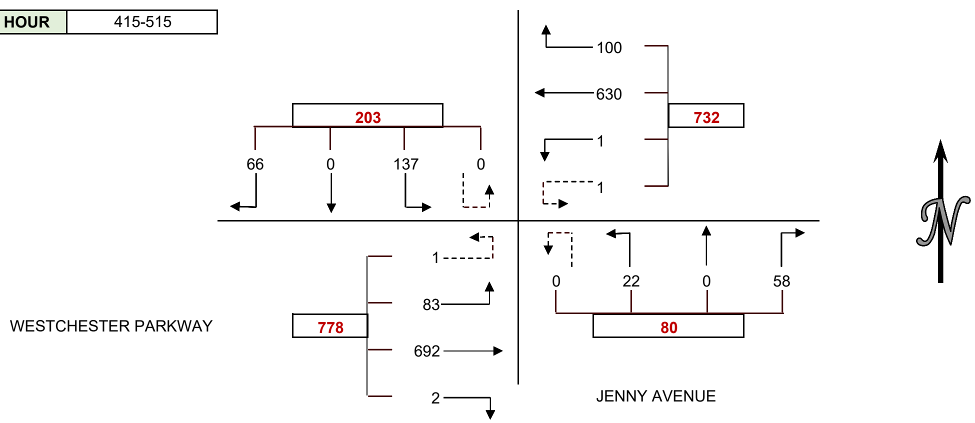
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: WEDNESDAY FEBRUARY 27, 2019
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S JENNY AVENUE
E/W WESTCHESTER PARKWAY
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	37	0	49	0	29	143	0	0	17	0	4	0	0	139	22	0	440
315-330	22	0	29	0	34	166	0	0	13	0	4	0	1	146	25	1	441
330-345	17	0	28	0	25	158	0	0	20	0	4	0	3	152	37	0	444
345-400	23	0	24	0	26	153	0	0	15	1	5	0	1	147	24	0	419
400-415	31	0	37	0	27	148	0	0	9	0	6	0	1	154	26	0	439
415-430	13	0	29	0	35	168	0	0	14	0	6	0	0	166	18	1	450
430-445	21	0	33	0	28	139	0	1	16	0	2	0	0	179	24	0	443
445-500	18	0	42	0	22	153	0	0	13	0	8	0	1	176	26	0	459
500-515	14	0	33	0	15	170	1	0	15	0	6	0	1	171	15	0	441
515-530	11	0	31	0	12	164	0	1	9	0	6	0	1	176	8	0	419
530-545	15	0	20	0	13	144	0	0	10	0	4	0	0	176	9	0	391
545-600	11	0	17	0	13	148	1	0	11	0	1	0	1	177	11	0	391
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	99	0	130	0	114	620	0	0	65	1	17	0	5	584	108	1	1744
315-415	93	0	118	0	112	625	0	0	57	1	19	0	6	599	112	1	1743
330-430	84	0	118	0	113	627	0	0	58	1	21	0	5	619	105	1	1752
345-445	88	0	123	0	116	608	0	1	54	1	19	0	2	646	92	1	1751
400-500	83	0	141	0	112	608	0	1	52	0	22	0	2	675	94	1	1791
415-515	66	0	137	0	100	630	1	1	58	0	22	0	2	692	83	1	1793
430-530	64	0	139	0	77	626	1	2	53	0	22	0	3	702	73	0	1762
445-545	58	0	126	0	62	631	1	1	47	0	24	0	3	699	58	0	1710
500-600	51	0	101	0	53	626	2	1	45	0	17	0	3	700	43	0	1642

PEAK HOUR	415-515



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	3	3	0	4	10
315-330	6	6	0	2	14
330-345	3	3	1	0	7
345-400	1	1	0	2	4
400-415	17	17	1	10	45
415-430	4	4	0	3	11
430-445	0	0	0	4	4
445-500	4	4	0	1	9
500-515	3	3	0	4	10
515-530	3	3	0	4	10
530-545	2	2	0	3	7
545-600	1	1	0	5	7
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	13	13	1	8	35
315-415	27	27	2	14	70
330-430	25	25	2	15	67
345-445	22	22	1	19	64
400-500	25	25	1	18	69
415-515	11	11	0	12	34
430-530	10	10	0	13	33
445-545	12	12	0	12	36
500-600	9	9	0	16	34

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	1	0	1	0	2
315-330	0	0	0	0	0
330-345	0	0	2	0	2
345-400	0	0	0	0	0
400-415	1	0	4	1	6
415-430	0	0	0	0	0
430-445	0	0	1	0	1
445-500	0	0	0	0	0
500-515	0	0	1	0	1
515-530	1	0	0	0	1
530-545	0	0	2	0	2
545-600	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	1	0	3	0	4
315-415	1	0	6	1	8
330-430	1	0	6	1	8
345-445	1	0	5	1	7
400-500	1	0	5	1	7
415-515	0	0	2	0	2
430-530	1	0	2	0	3
445-545	1	0	3	0	4
500-600	1	0	3	0	4

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	229	223		734	779		83	5		698	737
315-415	211	225		737	774		77	6		718	738
330-430	202	219		740	795		80	5		730	733
345-445	211	209		725	824		74	2		741	716
400-500	224	206		721	869		74	2		772	714
415-515	203	183		732	888		80	3		778	719
430-530	203	150		706	896		75	4		778	712
445-545	184	120		695	873		71	4		760	713
500-600	152	96		682	847		62	5		746	694

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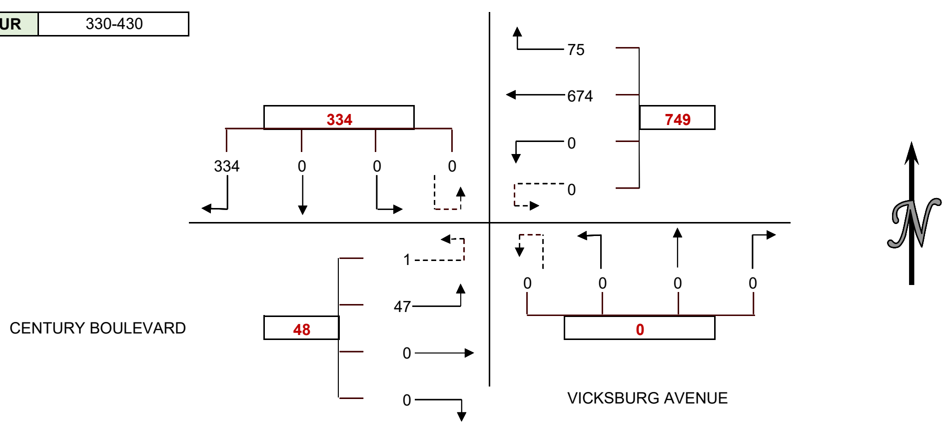
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY FEBRUARY 26, 2019
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S VICKSBURG AVENUE
E/W CENTURY BOULEVARD
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	98	0	0	0	11	156	0	0	0	0	0	0	0	0	13	1	279
315-330	72	0	0	0	20	138	0	0	0	0	0	0	0	0	10	1	241
330-345	106	0	0	0	17	178	0	0	0	0	0	0	0	0	12	0	313
345-400	84	0	0	0	17	133	0	0	0	0	0	0	0	0	9	0	243
400-415	68	0	0	0	27	197	0	0	0	0	0	0	0	0	12	1	305
415-430	76	0	0	0	14	166	0	0	0	0	0	0	0	0	14	0	270
430-445	75	0	0	0	19	169	0	0	0	0	0	0	0	0	13	0	276
445-500	75	0	0	0	21	147	0	0	0	0	0	0	0	0	9	0	252
500-515	57	0	0	0	13	157	0	0	0	0	0	0	0	0	6	1	234
515-530	70	0	0	1	8	160	0	0	0	0	0	0	0	0	11	0	250
530-545	71	0	0	0	18	168	0	0	0	0	0	0	0	0	9	0	266
545-600	80	0	0	0	18	178	0	0	0	0	0	0	0	0	10	1	287
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	360	0	0	0	65	605	0	0	0	0	0	0	0	0	44	2	1076
315-415	330	0	0	0	81	646	0	0	0	0	0	0	0	0	43	2	1102
330-430	334	0	0	0	75	674	0	0	0	0	0	0	0	0	47	1	1131
345-445	303	0	0	0	77	665	0	0	0	0	0	0	0	0	48	1	1094
400-500	294	0	0	0	81	679	0	0	0	0	0	0	0	0	48	1	1103
415-515	283	0	0	0	67	639	0	0	0	0	0	0	0	0	42	1	1032
430-530	277	0	0	1	61	633	0	0	0	0	0	0	0	0	39	1	1012
445-545	273	0	0	1	60	632	0	0	0	0	0	0	0	0	35	1	1002
500-600	278	0	0	1	57	663	0	0	0	0	0	0	0	0	36	2	1037

PEAK HOUR	330-430



PEDESTRIAN COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	9	9	0	0	18
315-330	16	16	0	0	32
330-345	12	12	0	0	24
345-400	32	32	0	0	64
400-415	14	14	0	0	28
415-430	15	15	0	0	30
430-445	13	13	0	0	26
445-500	11	11	0	0	22
500-515	21	21	0	0	42
515-530	24	24	0	0	48
530-545	27	27	0	0	54
545-600	11	11	0	0	22
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	69	69	0	0	138
315-415	74	74	0	0	148
330-430	73	73	0	0	146
345-445	74	74	0	0	148
400-500	53	53	0	0	106
415-515	60	60	0	0	120
430-530	69	69	0	0	138
445-545	83	83	0	0	166
500-600	83	83	0	0	166

BICYCLE COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	1	0	0	0	1
315-330	0	0	0	0	0
330-345	1	0	0	0	1
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	1	0	0	0	1
500-515	1	0	0	0	1
515-530	1	0	0	0	1
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	2	0	0	0	2
315-415	1	0	0	0	1
330-430	1	0	0	0	1
345-445	0	0	0	0	0
400-500	1	0	0	0	1
415-515	2	0	0	0	2
430-530	3	0	0	0	3
445-545	3	0	0	0	3
500-600	2	0	0	0	2

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	360	109		670	0		0	0		46	967
315-415	330	124		727	0		0	0		45	978
330-430	334	122		749	0		0	0		48	1009
345-445	303	125		742	0		0	0		49	969
400-500	294	129		760	0		0	0		49	974
415-515	283	109		706	0		0	0		43	923
430-530	278	101		694	0		0	0		40	911
445-545	274	96		692	0		0	0		36	906
500-600	279	94		720	0		0	0		38	943

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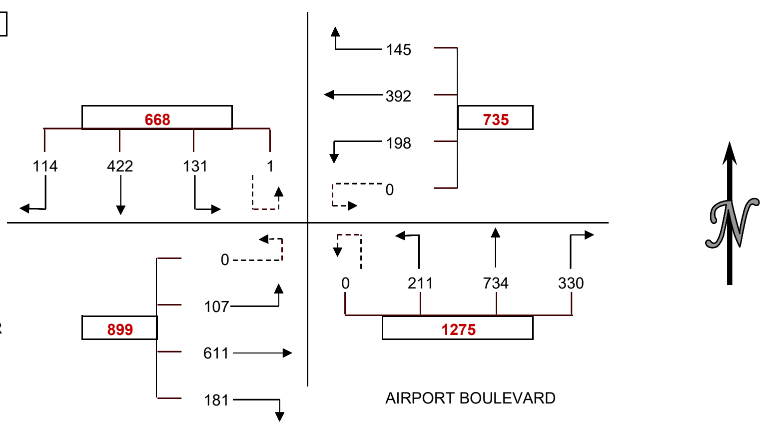
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		TUESDAY FEBRUARY 26, 2019
PERIOD:		3:00 PM TO 6:00 PM
INTERSECTION:	N/S	AIRPORT BOULEVARD
	E/W	ARBOR VITAE/ WESTCHESTER
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	32	138	30	0	34	104	56	0	51	146	55	0	38	108	27	0	819
315-330	34	108	16	0	45	78	45	0	75	161	70	0	38	126	30	0	826
330-345	40	107	32	0	31	80	49	0	82	201	71	0	38	107	21	0	859
345-400	34	112	28	0	35	104	41	0	72	170	57	0	42	139	33	0	867
400-415	28	119	26	0	35	86	41	0	77	177	54	0	36	136	20	0	835
415-430	28	122	34	1	36	103	53	0	67	153	48	0	44	132	27	0	848
430-445	38	107	34	0	42	107	49	0	91	191	43	0	37	160	35	0	934
445-500	22	100	30	0	33	99	54	0	77	194	52	0	50	143	22	0	876
500-515	26	93	33	0	34	83	42	0	95	196	68	0	50	176	23	0	919
515-530	24	85	36	0	22	94	36	0	72	141	54	0	36	154	27	0	781
530-545	27	93	38	1	38	100	40	0	54	159	49	0	35	152	22	0	808
545-600	25	109	35	0	27	76	45	0	42	170	41	0	49	128	23	0	770
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	140	465	106	0	145	366	191	0	280	678	253	0	156	480	111	0	3371
315-415	136	446	102	0	146	348	176	0	306	709	252	0	154	508	104	0	3387
330-430	130	460	120	1	137	373	184	0	298	701	230	0	160	514	101	0	3409
345-445	128	460	122	1	148	400	184	0	307	691	202	0	159	567	115	0	3484
400-500	116	448	124	1	146	395	197	0	312	715	197	0	167	571	104	0	3493
415-515	114	422	131	1	145	392	198	0	330	734	211	0	181	611	107	0	3577
430-530	110	385	133	0	131	383	181	0	335	722	217	0	173	633	107	0	3510
445-545	99	371	137	1	127	376	172	0	298	690	223	0	171	625	94	0	3384
500-600	102	380	142	1	121	353	163	0	263	666	212	0	170	610	95	0	3278

PEAK HOUR	415-515



ARBOR VITAE/ WESTCHESTER

AIRPORT BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	3	3	3	6	15
315-330	6	6	4	2	18
330-345	1	1	5	4	11
345-400	2	2	4	3	11
400-415	4	4	5	0	13
415-430	1	1	0	2	4
430-445	4	4	4	2	14
445-500	6	6	2	1	15
500-515	-4	-4	1	3	-4
515-530	1	1	13	6	21
530-545	2	2	6	0	10
545-600	3	3	2	1	9
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	12	12	16	15	55
315-415	13	13	18	9	53
330-430	8	8	14	9	39
345-445	11	11	13	7	42
400-500	15	15	11	5	46
415-515	7	7	7	8	29
430-530	7	7	20	12	46
445-545	5	5	22	10	42
500-600	2	2	22	10	36

BICYCLE COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	1	1	2
315-330	0	0	0	0	0
330-345	1	0	0	0	1
345-400	0	0	1	0	1
400-415	0	0	1	2	3
415-430	1	0	0	0	1
430-445	1	0	0	2	3
445-500	1	2	0	1	4
500-515	1	0	0	0	1
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	1	6	2	9
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	1	0	2	1	4
315-415	1	0	2	2	5
330-430	2	0	2	2	6
345-445	2	0	2	4	8
400-500	3	2	1	5	11
415-515	4	2	0	3	9
430-530	3	2	0	3	8
445-545	2	2	0	1	5
500-600	1	1	6	2	10

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	711	934		702	866		1211	812		747	759
315-415	684	959		670	916		1267	776		766	736
330-430	711	940		694	932		1229	804		775	733
345-445	711	955		732	996		1200	803		841	730
400-500	689	966		738	1007		1224	812		842	708
415-515	668	987		735	1072		1275	801		899	717
430-530	628	960		695	1101		1274	739		913	710
445-545	608	912		675	1060		1211	714		890	698
500-600	625	883		637	1015		1141	713		875	667

WILTEC

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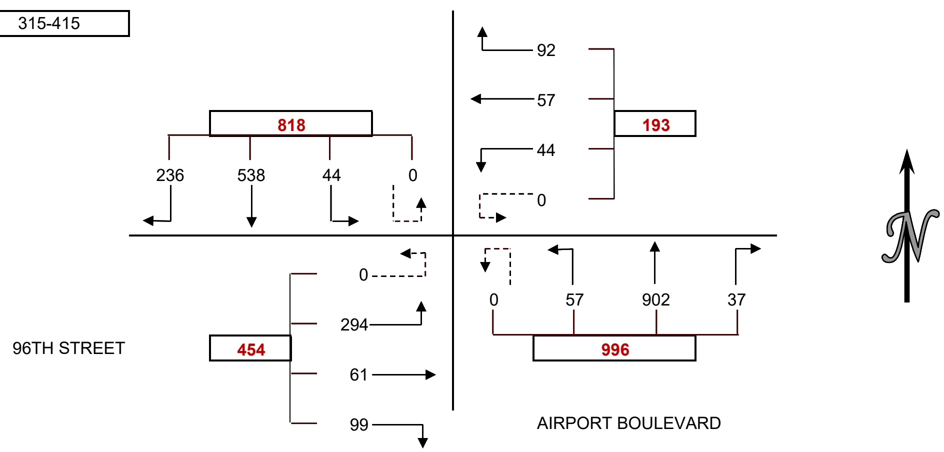
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: CDM SMITH
PROJECT: LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE: TUESDAY FRBRUARY 26, 2019
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S AIRPORT BOULEVARD
E/W 96TH STREET
CITY: LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	61	152	13	0	19	10	2	0	4	183	18	0	24	31	50	0	567
315-330	51	136	7	0	23	14	7	0	10	200	12	0	27	13	89	0	589
330-345	61	125	9	0	22	14	17	0	12	276	20	0	23	7	54	0	640
345-400	52	144	11	0	30	19	10	0	8	192	15	0	30	24	84	0	619
400-415	72	133	17	0	17	10	10	0	7	234	10	0	19	17	67	0	613
415-430	55	152	12	0	18	6	3	0	9	200	18	0	21	16	57	0	567
430-445	41	138	17	0	20	11	8	0	10	241	24	1	21	12	68	0	612
445-500	59	144	11	0	43	9	10	0	10	220	19	0	30	14	73	0	642
500-515	48	121	9	0	28	8	11	0	7	261	15	0	19	12	70	0	609
515-530	54	108	11	0	27	16	6	0	9	212	12	0	16	14	42	0	527
530-545	36	127	7	0	24	10	12	0	9	210	14	0	19	14	51	0	533
545-600	45	168	10	0	23	12	5	0	10	197	13	0	18	10	28	0	539
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	225	557	40	0	94	57	36	0	34	851	65	0	104	75	277	0	2415
315-415	236	538	44	0	92	57	44	0	37	902	57	0	99	61	294	0	2461
330-430	240	554	49	0	87	49	40	0	36	902	63	0	93	64	262	0	2439
345-445	220	567	57	0	85	46	31	0	34	867	67	1	91	69	276	0	2411
400-500	227	567	57	0	98	36	31	0	36	895	71	1	91	59	265	0	2434
415-515	203	555	49	0	109	34	32	0	36	922	76	1	91	54	268	0	2430
430-530	202	511	48	0	118	44	35	0	36	934	70	1	86	52	253	0	2390
445-545	197	500	38	0	122	43	39	0	35	903	60	0	84	54	236	0	2311
500-600	183	524	37	0	102	46	34	0	35	880	54	0	72	50	191	0	2208

PEAK HOUR	315-415



PEDESTRIAN COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	16	16	6	9	47
315-330	10	10	3	2	25
330-345	3	3	4	3	13
345-400	6	6	6	3	21
400-415	43	43	28	25	139
415-430	4	4	4	3	15
430-445	6	6	6	2	20
445-500	2	2	2	3	9
500-515	2	2	9	1	14
515-530	7	7	8	7	29
530-545	3	3	10	8	24
545-600	5	5	1	3	14
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	35	35	19	17	106
315-415	62	62	41	33	198
330-430	56	56	42	34	188
345-445	59	59	44	33	195
400-500	55	55	40	33	183
415-515	14	14	21	9	58
430-530	17	17	25	13	72
445-545	14	14	29	19	76
500-600	17	17	28	19	81

BICYCLE COUNTS					
15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	1	1
345-400	0	0	0	1	1
400-415	0	0	0	3	3
415-430	0	0	0	0	0
430-445	3	2	0	3	8
445-500	3	3	0	1	7
500-515	0	0	0	1	1
515-530	0	0	0	0	0
530-545	0	0	2	1	3
545-600	0	2	0	0	2
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-400	0	0	0	2	2
315-415	0	0	0	5	5
330-430	0	0	0	5	5
345-445	3	2	0	7	12
400-500	6	5	0	7	18
415-515	6	5	0	5	16
430-530	6	5	0	5	16
445-545	3	3	2	3	11
500-600	0	2	2	2	6

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	822	1222		187	149		950	697		456	347
315-415	818	1288		193	142		996	681		454	350
330-430	843	1251		176	149		1001	687		419	352
345-445	844	1228		162	160		969	690		436	333
400-500	851	1258		165	152		1003	690		415	334
415-515	807	1299		175	139		1035	679		413	313
430-530	761	1305		197	136		1041	633		391	316
445-545	735	1261		204	127		998	623		374	300
500-600	744	1173		182	122		969	630		313	283

WILTEC

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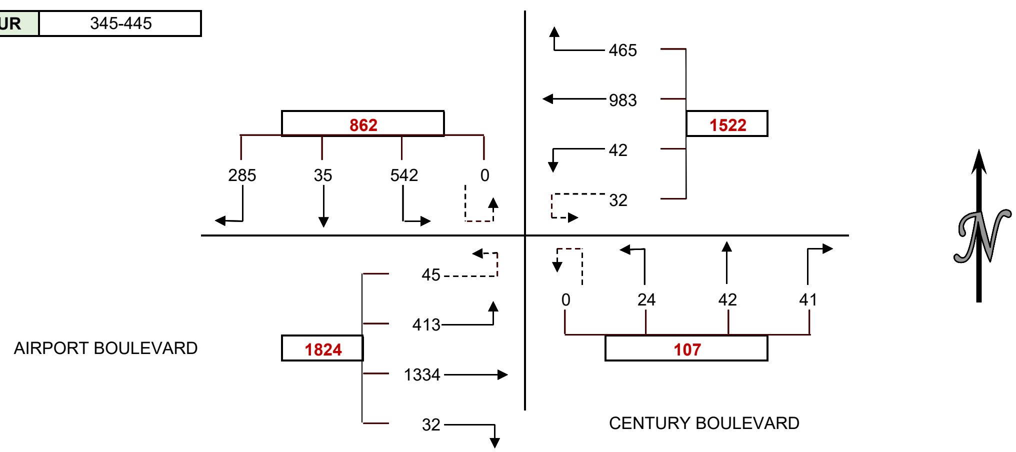
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		CDM SMITH
PROJECT:		LAX AIRFIELD AND TERMINAL MODERNIZATION PROJECT
DATE:		THURSDAY MARCH 7, 2019
PERIOD:		3:00 PM TO 6:00 PM
INTERSECTION:	N/S	CENTURY BOULEVARD
	E/W	AIRPORT BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	85	11	118	0	142	251	8	8	11	6	5	0	4	307	86	12	1054
315-330	68	17	116	0	92	241	3	6	10	11	7	0	8	268	103	7	957
330-345	90	13	134	0	83	230	10	11	14	16	10	0	7	295	94	8	1015
345-400	71	11	127	0	97	236	13	7	16	13	4	0	7	338	113	12	1065
400-415	61	13	138	0	122	253	9	7	9	7	5	0	6	363	104	7	1104
415-430	67	5	124	0	120	228	13	7	10	12	7	0	12	326	104	13	1048
430-445	86	6	153	0	126	266	7	11	6	10	8	0	7	307	92	13	1098
445-500	71	8	130	0	91	202	8	11	5	5	6	0	7	306	99	13	962
500-515	87	12	140	0	75	222	1	5	7	8	2	0	3	311	105	8	986
515-530	72	7	102	0	82	194	6	5	7	8	5	0	4	320	133	13	958
530-545	62	11	102	0	72	206	8	4	11	12	4	0	6	358	105	9	970
545-600	65	5	86	0	74	198	7	2	10	10	3	0	1	343	112	10	926
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	314	52	495	0	414	958	34	32	51	46	26	0	26	1208	396	39	4091
315-415	290	54	515	0	394	960	35	31	49	47	26	0	28	1264	414	34	4141
330-430	289	42	523	0	422	947	45	32	49	48	26	0	32	1322	415	40	4232
345-445	285	35	542	0	465	983	42	32	41	42	24	0	32	1334	413	45	4315
400-500	285	32	545	0	459	949	37	36	30	34	26	0	32	1302	399	46	4212
415-515	311	31	547	0	412	918	29	34	28	35	23	0	29	1250	400	47	4094
430-530	316	33	525	0	374	884	22	32	25	31	21	0	21	1244	429	47	4004
445-545	292	38	474	0	320	824	23	25	30	33	17	0	20	1295	442	43	3876
500-600	286	35	430	0	303	820	22	16	35	38	14	0	14	1332	455	40	3840

PEAK HOUR	345-445



PEDESTRIAN COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	16	16	0	6	38
315-330	16	16	2	2	36
330-345	10	10	0	3	23
345-400	15	15	0	6	36
400-415	14	14	0	2	30
415-430	14	14	1	4	33
430-445	7	7	0	3	17
445-500	13	13	0	0	26
500-515	15	15	0	4	34
515-530	10	10	0	2	22
530-545	7	7	0	1	15
545-600	8	8	0	1	17
HOUR TOTALS PERIOD	**NORTH LEG**	**EAST LEG**	**SOUTH LEG**	**WEST LEG**	**TOTAL**
300-400	57	57	2	17	133
315-415	55	55	2	13	125
330-430	53	53	1	15	122
345-445	50	50	1	15	116
400-500	48	48	1	9	106
415-515	49	49	1	11	110
430-530	45	45	0	9	99
445-545	45	45	0	7	97
500-600	40	40	0	8	88

BICYCLE COUNTS

15 MIN COUNTS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
300-315	0	0	1	0	1
315-330	0	0	1	1	2
330-345	0	0	1	0	1
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	1	0	0	0	1
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS PERIOD	**NORTH LEG**	**EAST LEG**	**SOUTH LEG**	**WEST LEG**	**TOTAL**
300-400	0	0	3	1	4
315-415	0	0	2	1	3
330-430	0	0	1	0	1
345-445	0	0	0	0	0
400-500	0	0	0	0	0
415-515	1	0	0	0	1
430-530	1	0	0	0	1
445-545	1	0	0	0	1
500-600	1	0	0	0	1

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	861	856		1438	1786		123	112		1669	1337
315-415	859	855		1420	1859		122	117		1740	1310
330-430	854	885		1446	1926		123	119		1809	1302
345-445	862	920		1522	1949		107	109		1824	1337
400-500	862	892		1481	1913		90	101		1779	1306
415-515	889	847		1393	1859		86	89		1726	1299
430-530	874	834		1312	1826		77	76		1741	1268
445-545	804	795		1192	1824		80	81		1800	1176
500-600	751	796		1161	1813		87	71		1841	1160

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Inglewood	PROJECT #:	IBEC
Thu, Apr 26, 18	NORTH & SOUTH:	La Cienega	LOCATION #:	15
	EAST & WEST:	I-405 SB Ramps (s/o Century)	CONTROL:	SIGNAL

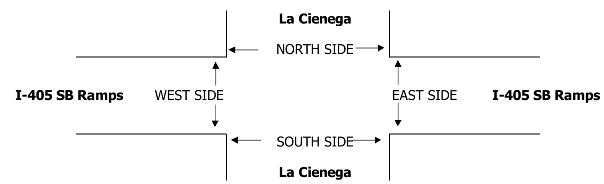
NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

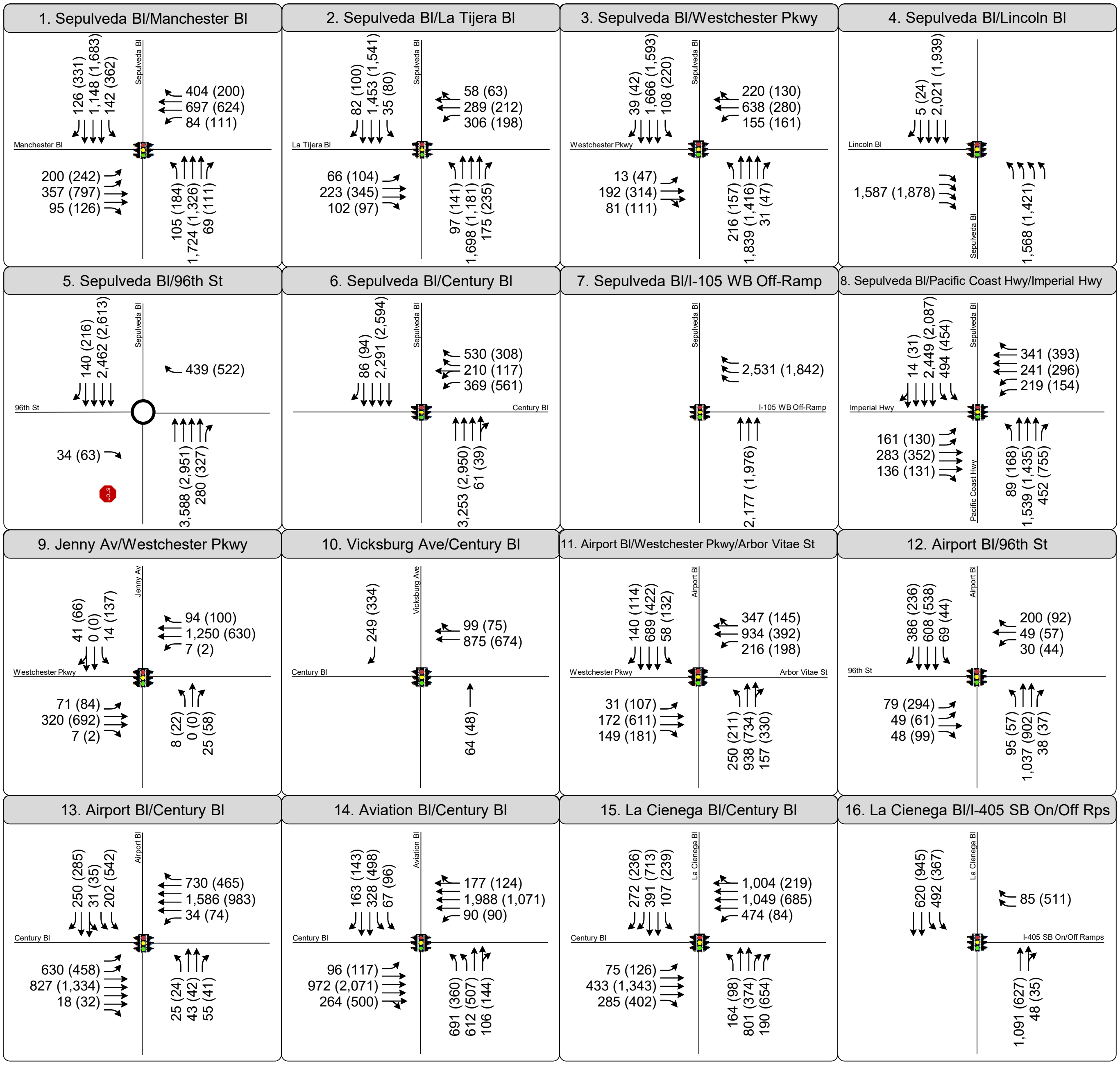
Add U-Turns to Left Turns

	NORTHBOUND La Cienega			SOUTHBOUND La Cienega			EASTBOUND I-405 SB Ramps			WESTBOUND I-405 SB Ramps				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	X	2	0	2	2	X	X	X	X	X	X	2		0	0	0	0	
AM 7:00 AM	1	269	13	82	93	0	0	0	0	0	0	14	472	1	0	0	0	1
7:15 AM	0	301	11	116	129	0	0	0	0	0	0	20	577	0	0	0	0	0
7:30 AM	1	291	10	128	132	0	0	0	0	0	0	19	581	1	0	0	0	1
7:45 AM	0	248	16	121	167	0	0	0	0	0	0	27	579	0	0	0	0	0
8:00 AM	0	240	11	122	186	0	0	0	0	0	0	18	577	0	0	0	0	0
8:15 AM	0	235	6	107	144	0	0	0	0	0	0	22	514	0	1	0	0	1
8:30 AM	0	193	7	107	131	0	0	0	0	0	0	35	473	0	0	0	0	0
8:45 AM	0	206	9	62	129	0	0	0	0	0	0	18	424	0	0	0	0	0
VOLUMES	2	1,983	83	845	1,111	0	0	0	0	0	0	173	4,197	2	1	0	0	3
APPROACH %	0%	96%	4%	43%	57%	0%	0%	0%	0%	0%	0%	100%						
APP/DEPART	2,068	/	2,157	1,956	/	1,113	0	/	927	173	/	0	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	1	1,080	48	487	614	0	0	0	0	0	0	84	2,314					
APPROACH %	0%	96%	4%	44%	56%	0%	0%	0%	0%	0%	0%	100%						
PEAK HR FACTOR		0.905			0.894			0.000			0.778		0.996					
APP/DEPART	1,129	/	1,164	1,101	/	615	0	/	535	84	/	0	0					
PM 4:00 PM	0	144	11	89	221	0	0	0	0	0	0	135	600	0	1	0	0	1
4:15 PM	0	142	7	88	200	0	0	0	0	0	0	114	551	0	3	0	0	3
4:30 PM	0	176	13	81	227	0	0	0	0	0	0	131	628	0	1	0	0	1
4:45 PM	0	135	8	73	215	0	0	0	0	0	0	144	575	0	1	0	0	1
5:00 PM	0	165	8	114	268	0	0	0	0	0	0	118	673	0	4	0	0	4
5:15 PM	0	145	6	101	226	0	0	0	0	0	0	113	591	0	0	0	0	0
5:30 PM	0	116	10	113	195	0	0	0	0	0	0	95	529	0	2	0	0	2
5:45 PM	0	99	8	93	220	0	0	0	0	0	0	124	544	0	1	0	0	1
VOLUMES	0	1,122	71	752	1,772	0	0	0	0	0	0	974	4,691	0	13	0	0	13
APPROACH %	0%	94%	6%	30%	70%	0%	0%	0%	0%	0%	0%	100%						
APP/DEPART	1,193	/	2,109	2,524	/	1,772	0	/	810	974	/	0	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	0	621	35	369	936	0	0	0	0	0	0	506	2,467					
APPROACH %	0%	95%	5%	28%	72%	0%	0%	0%	0%	0%	0%	100%						
PEAK HR FACTOR		0.868			0.854			0.000			0.878		0.916					
APP/DEPART	656	/	1,133	1,305	/	936	0	/	398	506	/	0	0					



	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
7:15 AM	0	0	3	1	4	0	0	3	1	4	0	0	0	0	0
7:30 AM	0	0	4	1	5	0	0	4	1	5	0	0	0	0	0
7:45 AM	0	0	1	2	3	0	0	1	2	3	0	0	0	0	0
8:00 AM	0	0	1	1	2	0	0	0	1	1	0	0	1	0	1
8:15 AM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
8:30 AM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
8:45 AM	0	2	6	4	12	0	2	5	3	10	0	0	1	1	2
TOTAL	0	2	17	12	31	0	2	15	10	27	0	0	2	2	4
AM BEGIN PEAK HR			7:15 AM			0	0	8	5	13					
PM 4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
4:15 PM	1	0	3	0	4	1	0	2	0	3	0	0	1	0	1
4:30 PM	0	0	6	0	6	0	0	5	0	5	0	0	1	0	1
4:45 PM	0	0	3	2	5	0	0	3	2	5	0	0	0	0	0
5:00 PM	0	0	5	2	7	0	0	1	1	2	0	0	4	1	5
5:15 PM	0	0	4	3	7	0	0	3	2	5	0	0	1	1	2
5:30 PM	0	0	2	2	4	0	0	1	0	1	0	0	1	2	3
5:45 PM	0	0	6	0	6	0	0	5	0	5	0	0	1	0	1
TOTAL	1	0	30	9	40	1	0	21	5	27	0	0	9	4	13
PM BEGIN PEAK HR			4:30 PM			0	0	12	5	17					

Attachment B: Existing 2019 Study Intersection Lane Configurations and Volumes



AM(PM) Peak Hour Turning Movement Volumes
and Lane Configurations
Existing 2019 Conditions

Attachment C: Existing 2019 LOS Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	357	95	84	697	404	105	1724	69	142	1148	126
Future Volume (veh/h)	200	357	95	84	697	404	105	1724	69	142	1148	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	368	14	87	719	255	108	1777	37	146	1184	38
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	340	608	271	419	960	428	327	2058	956	248	2065	641
Arrive On Green	0.10	0.17	0.17	0.20	0.27	0.27	0.09	0.40	0.40	0.09	0.40	0.40
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	206	368	14	87	719	255	108	1777	37	146	1184	38
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	6.9	11.5	0.7	0.4	22.2	16.8	3.9	38.2	0.3	5.4	21.6	1.8
Cycle Q Clear(g_c), s	6.9	11.5	0.7	0.4	22.2	16.8	3.9	38.2	0.3	5.4	21.6	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	608	271	419	960	428	327	2058	956	248	2065	641
V/C Ratio(X)	0.61	0.61	0.05	0.21	0.75	0.60	0.33	0.86	0.04	0.59	0.57	0.06
Avail Cap(c_a), veh/h	536	1285	573	419	1072	478	345	2058	956	264	2065	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	46.0	24.3	38.5	40.1	38.1	18.8	32.8	2.8	25.6	27.7	21.8
Incr Delay (d2), s/veh	1.7	2.4	0.2	0.2	3.5	3.0	0.4	3.9	0.1	3.0	1.2	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(95%),veh/ln	5.4	8.9	0.6	3.7	15.1	11.0	2.9	21.7	0.3	4.3	13.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	48.4	24.5	38.7	43.6	41.1	19.2	36.7	2.8	28.6	28.9	22.0
LnGrp LOS	D	D	C	D	D	D	B	D	A	C	C	C
Approach Vol, veh/h		588			1061			1922			1368	
Approach Delay, s/veh		49.7			42.6			35.1			28.6	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	52.5	15.8	36.6	15.2	52.4	27.9	24.5
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 10	34.6	* 16	* 34	* 10	34.6	9.0	41.2
Max Q Clear Time (g_c+I1), s	5.9	23.6	8.9	24.2	7.4	40.2	2.4	13.5
Green Ext Time (p_c), s	0.1	5.9	0.4	6.0	0.1	0.0	0.1	4.8

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

* HCM 6th 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	223	102	306	289	58	97	1698	175	35	1453	82
Future Volume (veh/h)	66	223	102	306	289	58	97	1698	175	35	1453	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.97	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	67	228	48	312	295	38	99	1733	133	36	1483	41
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	319	754	439	385	808	103	290	2493	889	183	2288	757
Arrive On Green	0.05	0.21	0.21	0.09	0.26	0.23	0.05	0.33	0.32	0.03	0.45	0.44
Sat Flow, veh/h	1781	3554	1525	1781	3156	402	1781	5106	1569	1781	5106	1568
Grp Volume(v), veh/h	67	228	48	312	165	168	99	1733	133	36	1483	41
Grp Sat Flow(s),veh/h/ln	1781	1777	1525	1781	1777	1781	1781	1702	1569	1781	1702	1568
Q Serve(g_s), s	2.7	4.9	2.1	8.0	6.8	7.0	2.4	26.6	4.6	1.0	20.3	1.3
Cycle Q Clear(g_c), s	2.7	4.9	2.1	8.0	6.8	7.0	2.4	26.6	4.6	1.0	20.3	1.3
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	754	439	385	455	456	290	2493	889	183	2288	757
V/C Ratio(X)	0.21	0.30	0.11	0.81	0.36	0.37	0.34	0.70	0.15	0.20	0.65	0.05
Avail Cap(c_a), veh/h	397	1106	590	385	553	554	358	2493	889	322	2288	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.41	0.41	0.41	0.76	0.76	0.76
Uniform Delay (d), s/veh	27.4	29.8	23.7	30.4	27.5	27.7	13.8	24.4	12.3	16.3	19.3	12.4
Incr Delay (d2), s/veh	0.3	0.2	0.1	12.3	0.5	0.5	0.3	0.7	0.1	0.4	1.1	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(95%),veh/ln	2.1	3.7	1.3	6.8	5.1	5.3	1.6	14.7	2.8	0.7	11.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	30.1	23.8	42.7	27.9	28.2	14.1	25.1	12.5	16.7	20.4	12.5
LnGrp LOS	C	C	C	D	C	C	B	C	B	B	C	B
Approach Vol, veh/h		343			645			1965			1560	
Approach Delay, s/veh		28.7			35.1			23.7			20.1	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	27.0	10.6	44.3	12.0	23.1	7.0	47.9
Change Period (Y+Rc), s	4.0	* 6	* 6	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	8.0	* 26	* 8	* 27	8.0	* 26	10.0	* 27
Max Q Clear Time (g_c+I1), s	4.7	9.0	4.4	22.3	10.0	6.9	3.0	28.6
Green Ext Time (p_c), s	0.0	1.6	0.1	3.5	0.0	1.4	0.0	0.0

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	192	81	155	638	220	216	1839	31	108	1666	39
Future Volume (veh/h)	13	192	81	155	638	220	216	1839	31	108	1666	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.98	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	13	198	27	160	658	189	223	1896	14	111	1718	15
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	677	91	409	782	224	317	2364	851	210	2178	678
Arrive On Green	0.02	0.22	0.20	0.09	0.29	0.28	0.09	0.46	0.45	0.11	0.85	0.83
Sat Flow, veh/h	1781	3136	421	1781	2709	778	1781	5106	1575	1781	5106	1574
Grp Volume(v), veh/h	13	111	114	160	431	416	223	1896	14	111	1718	15
Grp Sat Flow(s),veh/h/ln	1781	1777	1780	1781	1777	1710	1781	1702	1575	1781	1702	1574
Q Serve(g_s), s	0.5	4.7	4.9	6.1	20.5	20.6	6.2	28.5	0.4	3.2	13.6	0.1
Cycle Q Clear(g_c), s	0.5	4.7	4.9	6.1	20.5	20.6	6.2	28.5	0.4	3.2	13.6	0.1
Prop In Lane	1.00		0.24	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	384	384	409	513	494	317	2364	851	210	2178	678
V/C Ratio(X)	0.09	0.29	0.30	0.39	0.84	0.84	0.70	0.80	0.02	0.53	0.79	0.02
Avail Cap(c_a), veh/h	270	533	534	410	533	513	352	2364	851	310	2178	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.25	0.25	0.25	1.00	1.00	1.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	28.7	29.5	29.7	23.5	30.1	30.3	16.2	20.6	9.6	18.3	4.8	4.2
Incr Delay (d2), s/veh	0.3	0.4	0.4	0.2	3.1	3.3	5.5	3.0	0.0	1.4	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	3.6	3.8	3.8	11.4	11.1	4.9	16.5	0.2	2.2	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	29.9	30.1	23.6	33.2	33.6	21.7	23.6	9.6	19.7	6.9	4.3
LnGrp LOS	C	C	C	C	C	C	C	C	A	B	A	A
Approach Vol, veh/h		238			1007			2133			1844	
Approach Delay, s/veh		29.9			31.8			23.3			7.6	
Approach LOS		C			C			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	42.4	5.4	30.0	9.0	45.7	11.9	23.4				
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5	4.0	* 5	4.0	* 5				
Max Green Setting (Gmax), s	10.0	* 28	8.0	* 26	10.0	* 28	8.0	* 26				
Max Q Clear Time (g_c+I1), s	8.2	15.6	2.5	22.6	5.2	30.5	8.1	6.9				
Green Ext Time (p_c), s	0.1	8.8	0.0	1.7	0.1	0.0	0.0	1.1				

Intersection Summary		
HCM 6th Ctrl Delay		19.7
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1587	1568	0	2021	5
Future Volume (veh/h)	0	1587	1568	0	2021	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	1653	1633	0	2105	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	0	2108	0	0	
Arrive On Green	0.00	0.00	0.33	0.00	0.00	0.00
Sat Flow, veh/h	0		6484	1633	0	
Grp Volume(v), veh/h	0.0		1633	28.4	0.0	
Grp Sat Flow(s),veh/h/ln			1621	C		
Q Serve(g_s), s			20.4			
Cycle Q Clear(g_c), s			20.4			
Prop In Lane			1.00			
Lane Grp Cap(c), veh/h			2108			
V/C Ratio(X)			0.77			
Avail Cap(c_a), veh/h			2824			
HCM Platoon Ratio			1.00			
Upstream Filter(I)			1.00			
Uniform Delay (d), s/veh			27.4			
Incr Delay (d2), s/veh			1.0			
Initial Q Delay(d3),s/veh			0.0			
%ile BackOfQ(95%),veh/ln			12.2			
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			28.4			
LnGrp LOS			C			
Approach Vol, veh/h						
Approach Delay, s/veh						
Approach LOS						

Timer - Assigned Phs			3			
Phs Duration (G+Y+Rc), s			35.3			
Change Period (Y+Rc), s			* 6			
Max Green Setting (Gmax), s			* 39			
Max Q Clear Time (g_c+I1), s			22.4			
Green Ext Time (p_c), s			6.8			

Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	34	0	0	439	0	2691	210	0	1847	105
Future Vol, veh/h	0	0	34	0	0	439	0	2691	210	0	1847	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	14	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Free	-	-	Free	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	34	0	0	439	0	2691	210	0	1847	105

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	924	-	-	-	-	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	233	0	0	0	0	-	0	0	-	0
Stage 1	0	0	-	0	0	0	0	-	0	0	-	0
Stage 2	0	0	-	0	0	0	0	-	0	0	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	-	-	233	-	-	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.1	0	0	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBT	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	233	-	-
HCM Lane V/C Ratio	-	0.146	-	-
HCM Control Delay (s)	-	23.1	0	-
HCM Lane LOS	-	C	A	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	369	210	530	0	3253	61	0	2291	86
Future Volume (veh/h)	0	0	0	369	210	530	0	3253	61	0	2291	86
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.92	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	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				302	334	552	0	3389	62	0	2386	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				539	566	884	0	3966	72	0	3893	
Arrive On Green				0.10	0.10	0.10	0.00	0.61	0.61	0.00	0.61	0.00
Sat Flow, veh/h				1781	1870	2925	0	6817	119	0	6696	1585
Grp Volume(v), veh/h				302	334	552	0	2490	961	0	2386	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1462	0	1609	1849	0	1609	1585
Q Serve(g_s), s				19.4	20.5	21.7	0.0	50.5	51.3	0.0	27.9	0.0
Cycle Q Clear(g_c), s				19.4	20.5	21.7	0.0	50.5	51.3	0.0	27.9	0.0
Prop In Lane				1.00		1.00	0.00		0.06	0.00		1.00
Lane Grp Cap(c), veh/h				539	566	884	0	2920	1119	0	3893	
V/C Ratio(X)				0.56	0.59	0.62	0.00	0.85	0.86	0.00	0.61	
Avail Cap(c_a), veh/h				585	614	960	0	2920	1119	0	3893	
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.87	0.87	0.87	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				46.4	46.9	47.5	0.0	19.3	19.5	0.0	14.9	0.0
Incr Delay (d2), s/veh				0.9	1.1	1.0	0.0	2.6	6.9	0.0	0.7	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(95%),veh/ln				14.1	15.4	13.2	0.0	24.9	30.0	0.0	14.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				47.3	48.0	48.4	0.0	22.0	26.4	0.0	15.6	0.0
LnGrp LOS				D	D	D	A	C	C	A	B	
Approach Vol, veh/h					1188			3451			2386	A
Approach Delay, s/veh					48.0			23.2			15.6	
Approach LOS					D			C			B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		77.6		42.4		77.6
Change Period (Y+Rc), s		* 5		* 6.1		* 5
Max Green Setting (Gmax), s		* 70		* 39		* 70
Max Q Clear Time (g_c+I1), s		29.9		23.7		53.3
Green Ext Time (p_c), s		28.6		5.0		15.6

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2531	2177	0	0	0
Future Volume (vph)	0	2531	2177	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			
Lane Util. Factor		0.76	0.91			
Frt		0.85	1.00			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		3610	5085			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		3610	5085			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2664	2292	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2664	2292	0	0	0
Turn Type		Prot	NA			
Protected Phases		8	2			Free
Permitted Phases						
Actuated Green, G (s)		50.0	33.0			
Effective Green, g (s)		49.0	33.0			
Actuated g/C Ratio		0.54	0.37			
Clearance Time (s)		3.0	4.0			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		1965	1864			
v/s Ratio Prot		c0.74	c0.45			
v/s Ratio Perm						
v/c Ratio		1.36	1.23			
Uniform Delay, d1		20.5	28.5			
Progression Factor		1.00	1.00			
Incremental Delay, d2		163.5	108.3			
Delay (s)		184.0	136.8			
Level of Service		F	F			
Approach Delay (s)	184.0		136.8			0.0
Approach LOS	F		F			A

Intersection Summary			
HCM 2000 Control Delay	162.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	283	136	219	241	341	89	1539	452	494	2449	14
Future Volume (veh/h)	161	283	136	219	241	341	89	1539	452	494	2449	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	175	308	7	238	262	326	97	1673	303	537	2662	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	820	254	307	908	562	123	2019	618	613	3351	18
Arrive On Green	0.07	0.16	0.16	0.09	0.18	0.18	0.07	0.40	0.40	0.18	0.50	0.50
Sat Flow, veh/h	3456	5106	1579	3456	5106	1580	1781	5106	1563	3456	6654	35
Grp Volume(v), veh/h	175	308	7	238	262	326	97	1673	303	537	1930	746
Grp Sat Flow(s),veh/h/ln	1728	1702	1579	1728	1702	1580	1781	1702	1563	1728	1609	1864
Q Serve(g_s), s	4.5	4.8	0.3	6.1	4.0	15.1	4.8	26.5	13.1	13.6	29.8	29.8
Cycle Q Clear(g_c), s	4.5	4.8	0.3	6.1	4.0	15.1	4.8	26.5	13.1	13.6	29.8	29.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	248	820	254	307	908	562	123	2019	618	613	2430	939
V/C Ratio(X)	0.71	0.38	0.03	0.77	0.29	0.58	0.79	0.83	0.49	0.88	0.79	0.79
Avail Cap(c_a), veh/h	307	908	281	307	908	562	139	2019	618	653	2430	939
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	40.8	33.7	31.8	40.1	32.1	23.6	41.2	24.5	20.4	36.1	18.5	18.5
Incr Delay (d2), s/veh	5.5	0.3	0.0	11.7	0.2	1.5	23.1	4.1	2.8	12.3	2.8	6.9
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(95%),veh/ln	3.6	3.5	0.2	5.4	2.9	9.3	5.1	16.1	8.5	10.8	15.9	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	34.0	31.9	51.8	32.2	25.1	64.3	28.6	23.2	48.4	21.3	25.4
LnGrp LOS	D	C	C	D	C	C	E	C	C	D	C	C
Approach Vol, veh/h		490			826			2073			3213	
Approach Delay, s/veh		38.4			35.1			29.4			26.8	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	39.6	12.0	18.5	10.2	49.3	10.5	20.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	17.0	33.0	8.0	16.0	7.0	43.0	8.0	16.0				
Max Q Clear Time (g_c+I1), s	15.6	28.5	8.1	6.8	6.8	31.8	6.5	17.1				
Green Ext Time (p_c), s	0.3	3.8	0.0	1.2	0.0	10.1	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			29.5									
HCM 6th LOS			C									
Notes												

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	320	7	7	1250	94	8	0	25	14	0	41
Future Volume (veh/h)	71	320	7	7	1250	94	8	0	25	14	0	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.97		1.00	0.97		0.97
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	360	7	8	1404	88	9	0	0	16	0	19
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	351	2733	1211	832	2733	1214	216	208	176	233	197	171
Arrive On Green	0.77	0.77	0.77	1.00	1.00	1.00	0.11	0.00	0.00	0.11	0.00	0.11
Sat Flow, veh/h	352	3554	1575	1012	3554	1579	1359	1870	1585	1379	1777	1542
Grp Volume(v), veh/h	80	360	7	8	1404	88	9	0	0	16	0	19
Grp Sat Flow(s),veh/h/ln	352	1777	1575	1012	1777	1579	1359	1870	1585	1379	1777	1542
Q Serve(g_s), s	6.1	2.3	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.9	0.0	1.0
Cycle Q Clear(g_c), s	6.1	2.3	0.1	2.4	0.0	0.0	1.5	0.0	0.0	0.9	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	2733	1211	832	2733	1214	216	208	176	233	197	171
V/C Ratio(X)	0.23	0.13	0.01	0.01	0.51	0.07	0.04	0.00	0.00	0.07	0.00	0.11
Avail Cap(c_a), veh/h	351	2733	1211	832	2733	1214	602	740	627	626	703	610
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.1	2.7	2.4	0.0	0.0	0.0	36.7	0.0	0.0	36.0	0.0	36.0
Incr Delay (d2), s/veh	1.5	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.9	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	2.8	2.4	0.0	0.1	0.0	36.8	0.0	0.0	36.1	0.0	36.3
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	D
Approach Vol, veh/h		447			1500			9			35	
Approach Delay, s/veh		3.1			0.1			36.8			36.2	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.3		15.7		74.3		15.7				
Change Period (Y+Rc), s		* 5.1		5.7		* 5.1		5.7				
Max Green Setting (Gmax), s		* 44		35.6		* 44		35.6				
Max Q Clear Time (g_c+I1), s		4.4		3.0		8.1		3.5				
Green Ext Time (p_c), s		14.2		0.1		4.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			1.5									
HCM 6th LOS			A									
Notes												

* HCM 6th 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)	0	0	0	0	875	99	0	64	0	0	0	249
Future Volume (veh/h)	0	0	0	0	875	99	0	64	0	0	0	249
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
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	0	1870	0	0	0	1870
Adj Flow Rate, veh/h				0	893	92	0	65	0	0	0	219
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				0	2	2	0	2	0	0	0	2
Cap, veh/h				0	0	0	0	103	0	0	0	0
Arrive On Green				0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
Sat Flow, veh/h					0		0	1870	0		0	
Grp Volume(v), veh/h					0.0		0	65	0		0.0	
Grp Sat Flow(s),veh/h/ln							0	1870	0			
Q Serve(g_s), s							0.0	2.0	0.0			
Cycle Q Clear(g_c), s							0.0	2.0	0.0			
Prop In Lane							0.00		0.00			
Lane Grp Cap(c), veh/h							0	103	0			
V/C Ratio(X)							0.00	0.63	0.00			
Avail Cap(c_a), veh/h							0	823	0			
HCM Platoon Ratio							1.00	1.00	1.00			
Upstream Filter(I)							0.00	1.00	0.00			
Uniform Delay (d), s/veh							0.0	27.7	0.0			
Incr Delay (d2), s/veh							0.0	6.2	0.0			
Initial Q Delay(d3),s/veh							0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln							0.0	1.9	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh							0.0	33.9	0.0			
LnGrp LOS							A	C	A			
Approach Vol, veh/h								65				
Approach Delay, s/veh								33.9				
Approach LOS								C				
Timer - Assigned Phs								8				
Phs Duration (G+Y+Rc), s								7.0				
Change Period (Y+Rc), s								3.7				
Max Green Setting (Gmax), s								26.4				
Max Q Clear Time (g_c+I1), s								4.0				
Green Ext Time (p_c), s								0.3				
Intersection Summary												
HCM 6th Ctrl Delay			33.9									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	172	149	216	934	347	250	938	157	58	689	140
Future Volume (veh/h)	31	172	149	216	934	347	250	938	157	58	689	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		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	32	176	70	220	953	311	255	957	146	59	703	95
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	134	1038	596	525	921	299	387	1148	175	239	1662	561
Arrive On Green	0.03	0.29	0.29	0.09	0.35	0.35	0.18	0.74	0.74	0.04	0.33	0.33
Sat Flow, veh/h	1781	3554	1559	1781	2627	853	1781	3088	471	1781	5106	1575
Grp Volume(v), veh/h	32	176	70	220	643	621	255	550	553	59	703	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1559	1781	1777	1703	1781	1777	1782	1781	1702	1575
Q Serve(g_s), s	1.1	3.3	2.6	7.6	31.5	31.5	8.0	18.8	18.9	1.9	9.7	3.7
Cycle Q Clear(g_c), s	1.1	3.3	2.6	7.6	31.5	31.5	8.0	18.8	18.9	1.9	9.7	3.7
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	134	1038	596	525	623	597	387	660	662	239	1662	561
V/C Ratio(X)	0.24	0.17	0.12	0.42	1.03	1.04	0.66	0.83	0.83	0.25	0.42	0.17
Avail Cap(c_a), veh/h	238	1038	596	525	623	597	387	660	662	321	1662	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	23.7	18.0	18.5	29.2	29.2	17.5	9.7	9.7	19.9	23.7	19.9
Incr Delay (d2), s/veh	0.9	0.4	0.4	0.5	44.6	47.8	3.6	10.5	10.5	0.5	0.8	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(95%),veh/ln	0.9	2.5	1.7	5.5	28.3	28.1	5.9	8.7	8.7	1.5	6.9	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	24.1	18.4	19.0	73.8	77.0	21.1	20.2	20.2	20.5	24.5	20.5
LnGrp LOS	C	C	B	B	F	F	C	C	C	C	C	C
Approach Vol, veh/h		278			1484			1358			857	
Approach Delay, s/veh		22.8			67.0			20.4			23.8	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	34.3	6.8	36.9	7.9	38.4	12.0	31.7
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5.4	4.0	* 5	4.0	* 5.4
Max Green Setting (Gmax), s	8.0	* 29	8.0	* 26	8.0	* 29	8.0	* 26
Max Q Clear Time (g_c+I1), s	10.0	11.7	3.1	33.5	3.9	20.9	9.6	5.3
Green Ext Time (p_c), s	0.0	4.7	0.0	0.0	0.0	4.4	0.0	1.2

Intersection Summary			
HCM 6th Ctrl Delay			38.7
HCM 6th LOS			D

Notes

* HCM 6th 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)	79	49	48	30	49	200	95	1037	38	69	608	386
Future Volume (veh/h)	79	49	48	30	49	200	95	1037	38	69	608	386
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.96		0.95	0.99		0.98	0.99		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	51	22	31	51	17	98	1069	24	71	627	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	463	585	227	184	174	663	2247	1005	333	2444	
Arrive On Green	0.10	0.25	0.27	0.12	0.10	0.12	0.15	0.84	0.86	0.99	0.96	0.00
Sat Flow, veh/h	3456	1870	1553	1271	1870	1511	1781	3554	1553	513	5106	1585
Grp Volume(v), veh/h	81	51	22	31	51	17	98	1069	24	71	627	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1553	1271	1870	1511	1781	1777	1553	513	1702	1585
Q Serve(g_s), s	1.9	1.9	0.8	2.0	2.3	0.9	1.9	7.2	0.2	0.2	0.6	0.0
Cycle Q Clear(g_c), s	1.9	1.9	0.8	2.0	2.3	0.9	1.9	7.2	0.2	0.2	0.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	463	585	227	184	174	663	2247	1005	333	2444	
V/C Ratio(X)	0.22	0.11	0.04	0.14	0.28	0.10	0.15	0.48	0.02	0.21	0.26	
Avail Cap(c_a), veh/h	829	802	867	285	270	243	698	2247	1005	333	2444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86	0.92	0.92	0.00
Uniform Delay (d), s/veh	36.9	26.2	17.9	36.1	37.6	35.6	6.4	3.2	2.2	0.3	1.0	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.0	0.3	0.8	0.2	0.1	0.6	0.0	1.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	1.5	0.5	1.1	1.9	0.6	1.1	3.3	0.1	0.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	26.3	17.9	36.4	38.4	35.9	6.4	3.8	2.3	1.7	1.2	0.0
LnGrp LOS	D	C	B	D	D	D	A	A	A	A	A	
Approach Vol, veh/h		154			99			1191			698	A
Approach Delay, s/veh		30.9			37.3			4.0			1.3	
Approach LOS		C			D			A			A	

Timer - Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	13.8	48.4	13.4	14.4		62.2		27.8
Change Period (Y+Rc), s	5.6	* 5.3	5.6	5.5		* 5.3		5.5
Max Green Setting (Gmax), s	10.0	* 25	20.0	13.0		* 41		38.6
Max Q Clear Time (g_c+I1), s	3.9	2.6	3.9	4.3		9.2		3.9
Green Ext Time (p_c), s	0.1	9.4	0.2	0.2		16.4		0.3

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	630	827	18	34	1586	730	25	43	55	202	31	250
Future Volume (veh/h)	630	827	18	34	1586	730	25	43	55	202	31	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	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	649	853	9	35	1635	708	26	44	1	208	32	57
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1174	4371	1084	51	2295	727	100	134	87	485	136	142
Arrive On Green	0.68	1.00	1.00	0.01	0.12	0.12	0.06	0.04	0.06	0.09	0.07	0.09
Sat Flow, veh/h	3456	6434	1569	1781	6434	1555	1781	3554	1543	5344	1870	1559
Grp Volume(v), veh/h	649	853	9	35	1635	708	26	44	1	208	32	57
Grp Sat Flow(s),veh/h/ln	1728	1609	1569	1781	1609	1555	1781	1777	1543	1781	1870	1559
Q Serve(g_s), s	11.6	0.0	0.0	2.4	29.4	45.0	1.7	1.4	0.1	4.4	1.9	4.1
Cycle Q Clear(g_c), s	11.6	0.0	0.0	2.4	29.4	45.0	1.7	1.4	0.1	4.4	1.9	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1174	4371	1084	51	2295	727	100	134	87	485	136	142
V/C Ratio(X)	0.55	0.20	0.01	0.68	0.71	0.97	0.26	0.33	0.01	0.43	0.24	0.40
Avail Cap(c_a), veh/h	1174	4371	1084	163	2295	727	191	317	166	1332	432	388
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.99	0.99	0.99
Uniform Delay (d), s/veh	14.5	0.0	0.0	58.9	47.0	40.9	54.2	56.3	53.5	51.6	52.5	51.5
Incr Delay (d2), s/veh	0.5	0.1	0.0	15.0	1.9	27.6	1.4	1.4	0.1	1.3	1.9	3.9
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(95%),veh/ln	6.1	0.1	0.0	2.3	18.9	37.2	1.4	1.2	0.1	3.6	1.8	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.1	0.0	73.8	48.9	68.5	55.6	57.7	53.5	52.9	54.4	55.4
LnGrp LOS	B	A	A	E	D	E	E	E	D	D	D	E
Approach Vol, veh/h		1511			2378			71			297	
Approach Delay, s/veh		6.5			55.1			56.9			53.5	
Approach LOS		A			E			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	86.9		10.7	46.2	48.2		14.9				
Change Period (Y+Rc), s	* 4	5.4		* 6.2	5.4	* 5.4		6.2				
Max Green Setting (Gmax), s	* 11	48.8		* 11	17.0	* 43		27.7				
Max Q Clear Time (g_c+I1), s	4.4	2.0		3.7	13.6	47.0		6.4				
Green Ext Time (p_c), s	0.0	16.1		0.1	0.9	0.0		2.3				

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	972	264	90	1988	177	691	612	106	67	328	163
Future Volume (veh/h)	96	972	264	90	1988	177	691	612	106	67	328	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	1117	303	103	2285	203	794	703	108	77	377	79
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	1789	481	129	1389	123	846	930	143	239	468	522
Arrive On Green	0.40	0.70	0.70	0.02	0.08	0.08	0.24	0.30	0.30	0.07	0.13	0.13
Sat Flow, veh/h	1781	5084	1366	1781	6062	537	3456	3088	474	3456	3554	1585
Grp Volume(v), veh/h	110	1060	360	103	1817	671	794	404	407	77	377	79
Grp Sat Flow(s),veh/h/ln	1781	1609	1624	1781	1609	1774	1728	1777	1785	1728	1777	1585
Q Serve(g_s), s	5.1	13.9	14.2	6.9	27.5	27.5	27.0	24.7	24.7	2.5	12.4	0.0
Cycle Q Clear(g_c), s	5.1	13.9	14.2	6.9	27.5	27.5	27.0	24.7	24.7	2.5	12.4	0.0
Prop In Lane	1.00		0.84	1.00		0.30	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	352	1698	572	129	1106	406	846	535	538	239	468	522
V/C Ratio(X)	0.31	0.62	0.63	0.80	1.64	1.65	0.94	0.76	0.76	0.32	0.81	0.15
Avail Cap(c_a), veh/h	352	1698	572	153	1106	406	861	583	586	325	631	595
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.96	0.96	0.96	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	30.6	13.6	13.6	57.7	55.5	55.5	44.4	37.9	37.9	53.2	50.6	28.4
Incr Delay (d2), s/veh	0.5	1.7	5.1	20.8	293.5	302.9	17.5	5.1	5.2	0.3	5.0	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(95%),veh/ln	3.8	6.5	7.5	7.1	64.9	72.6	19.3	16.7	16.8	2.0	9.4	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	15.3	18.7	78.5	348.9	358.4	61.9	43.1	43.1	53.4	55.6	28.5
LnGrp LOS	C	B	B	E	F	F	E	D	D	D	E	C
Approach Vol, veh/h		1530			2591			1605			533	
Approach Delay, s/veh		17.2			340.6			52.4			51.3	
Approach LOS		B			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	48.0	35.9	21.8	29.5	32.8	15.0	42.7
Change Period (Y+Rc), s	5.6	* 5.8	* 6.5	6.0	5.8	* 5.3	* 6.7	* 6.5
Max Green Setting (Gmax), s	10.3	* 35	* 30	21.3	17.7	* 28	* 11	* 39
Max Q Clear Time (g_c+I1), s	8.9	16.2	29.0	14.4	7.1	29.5	4.5	26.7
Green Ext Time (p_c), s	0.0	9.6	0.3	1.4	0.2	0.0	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	163.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	433	285	474	1049	1004	164	801	190	107	391	272
Future Volume (veh/h)	75	433	285	474	1049	1004	164	801	190	107	391	272
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	442	196	484	1070	910	167	817	81	109	399	226
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	133	1966	650	616	2542	835	246	913	1181	146	913	785
Arrive On Green	0.01	0.13	0.12	0.18	0.53	0.51	0.04	0.26	0.24	0.03	0.17	0.16
Sat Flow, veh/h	1781	5106	1585	1781	4826	1585	1781	3554	2790	1781	3554	2790
Grp Volume(v), veh/h	77	442	196	484	1070	910	167	817	81	109	399	226
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1609	1585	1781	1777	1395	1781	1777	1395
Q Serve(g_s), s	3.2	9.3	12.7	19.3	16.2	63.2	5.0	26.6	2.1	5.0	12.1	8.2
Cycle Q Clear(g_c), s	3.2	9.3	12.7	19.3	16.2	63.2	5.0	26.6	2.1	5.0	12.1	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	1966	650	616	2542	835	246	913	1181	146	913	785
V/C Ratio(X)	0.58	0.22	0.30	0.79	0.42	1.09	0.68	0.89	0.07	0.75	0.44	0.29
Avail Cap(c_a), veh/h	431	1966	650	661	2542	835	246	918	1185	146	918	789
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	0.86	0.86	0.86	0.92	0.92	0.92
Uniform Delay (d), s/veh	30.9	36.3	34.3	16.8	17.3	29.4	40.7	43.0	20.5	39.0	41.9	37.4
Incr Delay (d2), s/veh	3.8	0.3	1.2	5.9	0.5	58.4	6.3	9.9	0.0	17.7	0.3	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(95%),veh/ln	2.7	7.5	9.4	13.3	9.9	49.3	4.8	18.0	1.2	5.6	9.2	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	36.5	35.4	22.6	17.8	87.8	47.0	52.9	20.6	56.6	42.2	37.6
LnGrp LOS	C	D	D	C	B	F	D	D	C	E	D	D
Approach Vol, veh/h		715			2464			1065			734	
Approach Delay, s/veh		36.0			44.6			49.5			42.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	50.2	9.0	34.8	8.9	67.2	9.0	34.8
Change Period (Y+Rc), s	4.0	6.0	4.0	* 6	4.0	6.0	4.0	* 6
Max Green Setting (Gmax), s	25.0	41.0	5.0	* 29	25.0	41.0	5.0	* 29
Max Q Clear Time (g_c+I1), s	21.3	14.7	7.0	14.1	5.2	65.2	7.0	28.6
Green Ext Time (p_c), s	0.6	3.7	0.0	2.9	0.1	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	85	1091	48	492	620
Future Volume (vph)	0	85	1091	48	492	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.9	4.0
Lane Util. Factor		0.88	0.95		0.97	0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	3514		3433	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	3514		3433	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	85	1091	48	492	620
RTOR Reduction (vph)	0	67	7	0	0	0
Lane Group Flow (vph)	0	18	1132	0	492	620
Confl. Peds. (#/hr)				8	8	
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		8	
Permitted Phases		8				2 8
Actuated Green, G (s)		8.8	26.0		8.8	45.0
Effective Green, g (s)		9.7	27.3		8.8	41.4
Actuated g/C Ratio		0.22	0.61		0.20	0.92
Clearance Time (s)		4.9	5.3		4.9	
Vehicle Extension (s)		3.0	3.8		3.0	
Lane Grp Cap (vph)		600	2131		671	3255
v/s Ratio Prot			c0.32		c0.14	
v/s Ratio Perm		0.01				0.18
v/c Ratio		0.03	0.53		0.73	0.19
Uniform Delay, d1		13.9	5.1		17.0	0.2
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.0	1.0		4.1	0.0
Delay (s)		14.0	6.1		21.1	0.2
Level of Service		B	A		C	A
Approach Delay (s)	14.0		6.1			9.5
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.9
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	797	126	111	624	200	184	1326	111	362	1683	331
Future Volume (veh/h)	242	797	126	111	624	200	184	1326	111	362	1683	331
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	249	822	38	114	643	81	190	1367	42	373	1735	196
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	1099	490	269	1032	460	247	1846	722	291	1857	577
Arrive On Green	0.11	0.31	0.31	0.09	0.29	0.29	0.10	0.36	0.36	0.10	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	249	822	38	114	643	81	190	1367	42	373	1735	196
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.3	24.9	1.4	0.0	18.8	4.6	7.7	28.0	0.4	12.3	39.3	10.8
Cycle Q Clear(g_c), s	8.3	24.9	1.4	0.0	18.8	4.6	7.7	28.0	0.4	12.3	39.3	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	1099	490	269	1032	460	247	1846	722	291	1857	577
V/C Ratio(X)	0.65	0.75	0.08	0.42	0.62	0.18	0.77	0.74	0.06	1.28	0.93	0.34
Avail Cap(c_a), veh/h	536	1285	573	272	1072	478	251	1846	722	291	1857	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	37.2	14.6	47.8	36.9	31.8	27.3	33.4	7.2	27.7	36.8	27.7
Incr Delay (d2), s/veh	1.9	3.1	0.2	1.1	1.6	0.4	11.8	2.4	0.1	149.6	10.2	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(95%),veh/ln	6.5	16.4	1.4	5.7	12.9	3.2	7.0	17.0	0.6	26.4	24.5	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	40.4	14.7	48.9	38.5	32.2	39.1	35.8	7.4	177.3	47.0	29.3
LnGrp LOS	D	D	B	D	D	C	D	D	A	F	D	C
Approach Vol, veh/h		1109			838			1599			2304	
Approach Delay, s/veh		42.3			39.3			35.4			66.6	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	47.6	17.3	39.0	16.3	47.4	15.2	41.1				
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2				
Max Green Setting (Gmax), s	* 10	34.6	* 16	* 34	* 10	34.6	9.0	41.2				
Max Q Clear Time (g_c+I1), s	9.7	41.3	10.3	20.8	14.3	30.0	2.0	26.9				
Green Ext Time (p_c), s	0.0	0.0	0.4	6.0	0.0	3.3	0.1	8.0				
Intersection Summary												
HCM 6th Ctrl Delay			49.6									
HCM 6th LOS			D									

Notes

* HCM 6th 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)	104	345	97	198	212	63	141	1181	235	80	1541	100
Future Volume (veh/h)	104	345	97	198	212	63	141	1181	235	80	1541	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.94	0.97		0.94	1.00		0.98	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	109	363	43	208	223	28	148	1243	163	84	1622	51
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	428	955	543	394	930	115	268	2123	772	234	1915	667
Arrive On Green	0.06	0.27	0.27	0.09	0.29	0.27	0.03	0.14	0.13	0.05	0.38	0.36
Sat Flow, veh/h	1781	3554	1493	1781	3159	390	1781	5106	1559	1781	5106	1556
Grp Volume(v), veh/h	109	363	43	208	124	127	148	1243	163	84	1622	51
Grp Sat Flow(s),veh/h/ln	1781	1777	1493	1781	1777	1772	1781	1702	1559	1781	1702	1556
Q Serve(g_s), s	4.0	7.5	1.7	7.9	4.8	4.9	4.1	20.6	7.2	2.6	26.2	1.7
Cycle Q Clear(g_c), s	4.0	7.5	1.7	7.9	4.8	4.9	4.1	20.6	7.2	2.6	26.2	1.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	955	543	394	523	522	268	2123	772	234	1915	667
V/C Ratio(X)	0.25	0.38	0.08	0.53	0.24	0.24	0.55	0.59	0.21	0.36	0.85	0.08
Avail Cap(c_a), veh/h	473	1106	606	394	553	551	306	2123	772	345	1915	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.74	0.74	0.24	0.24	0.24
Uniform Delay (d), s/veh	22.9	26.8	19.1	22.7	24.1	24.3	20.4	31.5	19.4	18.3	25.8	15.3
Incr Delay (d2), s/veh	0.3	0.2	0.1	1.3	0.2	0.2	1.3	0.9	0.5	0.2	1.2	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(95%),veh/ln	3.0	5.6	1.0	5.8	3.5	3.6	3.1	13.8	5.0	1.8	12.7	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	27.0	19.1	24.0	24.3	24.6	21.7	32.4	19.9	18.5	27.0	15.3
LnGrp LOS	C	C	B	C	C	C	C	C	B	B	C	B
Approach Vol, veh/h		515			459			1554			1757	
Approach Delay, s/veh		25.6			24.2			30.1			26.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	30.5	12.1	37.8	12.0	28.2	8.4	41.4
Change Period (Y+Rc), s	4.0	* 6	* 6	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	8.0	* 26	* 8	* 27	8.0	* 26	10.0	* 27
Max Q Clear Time (g_c+I1), s	6.0	6.9	6.1	28.2	9.9	9.5	4.6	22.6
Green Ext Time (p_c), s	0.0	1.2	0.1	0.0	0.0	2.2	0.1	3.1

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	314	111	161	280	130	157	1416	47	220	1593	42
Future Volume (veh/h)	47	314	111	161	280	130	157	1416	47	220	1593	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.97	1.00		0.98	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	48	320	67	164	286	65	160	1445	24	224	1626	21
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	327	640	132	347	774	173	309	2126	772	316	2247	730
Arrive On Green	0.04	0.22	0.21	0.09	0.27	0.26	0.07	0.42	0.41	0.19	0.88	0.86
Sat Flow, veh/h	1781	2913	600	1781	2870	640	1781	5106	1557	1781	5106	1558
Grp Volume(v), veh/h	48	193	194	164	175	176	160	1445	24	224	1626	21
Grp Sat Flow(s),veh/h/ln	1781	1777	1737	1781	1777	1733	1781	1702	1557	1781	1702	1558
Q Serve(g_s), s	1.9	8.6	8.8	6.2	7.2	7.5	4.6	20.7	0.7	6.7	9.5	0.2
Cycle Q Clear(g_c), s	1.9	8.6	8.8	6.2	7.2	7.5	4.6	20.7	0.7	6.7	9.5	0.2
Prop In Lane	1.00		0.35	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	327	390	382	347	479	468	309	2126	772	316	2247	730
V/C Ratio(X)	0.15	0.49	0.51	0.47	0.37	0.38	0.52	0.68	0.03	0.71	0.72	0.03
Avail Cap(c_a), veh/h	416	533	521	347	533	520	376	2126	772	341	2247	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	26.2	30.7	31.0	23.7	26.6	26.9	14.1	21.4	11.7	15.8	3.6	3.2
Incr Delay (d2), s/veh	0.2	1.0	1.0	0.9	0.4	0.5	1.3	1.8	0.1	4.0	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	6.5	6.6	4.6	5.3	5.4	3.3	12.7	0.4	4.4	2.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	31.7	32.1	24.6	27.0	27.3	15.4	23.1	11.8	19.8	4.9	3.2
LnGrp LOS	C	C	C	C	C	C	B	C	B	B	A	A
Approach Vol, veh/h		435			515			1629			1871	
Approach Delay, s/veh		31.3			26.4			22.2			6.7	
Approach LOS		C			C			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	43.6	7.5	28.3	12.7	41.5	12.0	23.8
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5	4.0	* 5	4.0	* 5
Max Green Setting (Gmax), s	10.0	* 28	8.0	* 26	10.0	* 28	8.0	* 26
Max Q Clear Time (g_c+I1), s	6.6	11.5	3.9	9.5	8.7	22.7	8.2	10.8
Green Ext Time (p_c), s	0.1	10.5	0.0	1.7	0.1	3.9	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1878	1421	0	1939	24
Future Volume (veh/h)	0	1878	1421	0	1939	24
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	1916	1450	0	1979	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	0	1907	0	0	
Arrive On Green	0.00	0.00	0.29	0.00	0.00	0.00
Sat Flow, veh/h	0		6484	1450	0	
Grp Volume(v), veh/h	0.0		1450	29.6	0.0	
Grp Sat Flow(s),veh/h/ln			1621	C		
Q Serve(g_s), s			18.3			
Cycle Q Clear(g_c), s			18.3			
Prop In Lane			1.00			
Lane Grp Cap(c), veh/h			1907			
V/C Ratio(X)			0.76			
Avail Cap(c_a), veh/h			2824			
HCM Platoon Ratio			1.00			
Upstream Filter(I)			1.00			
Uniform Delay (d), s/veh			28.9			
Incr Delay (d2), s/veh			0.7			
Initial Q Delay(d3),s/veh			0.0			
%ile BackOfQ(95%),veh/ln			11.2			
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			29.6			
LnGrp LOS			C			
Approach Vol, veh/h						
Approach Delay, s/veh						
Approach LOS						

Timer - Assigned Phs	3
Phs Duration (G+Y+Rc), s	32.5
Change Period (Y+Rc), s	* 6
Max Green Setting (Gmax), s	* 39
Max Q Clear Time (g_c+I1), s	20.3
Green Ext Time (p_c), s	6.2

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	63	0	0	522	0	2213	327	0	1960	216
Future Vol, veh/h	0	0	63	0	0	522	0	2213	327	0	1960	216
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	26	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Free	-	-	Free	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	68	0	0	567	0	2405	355	0	2130	235

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1065	-	-	-	-	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	188	0	0	0	0	-	0	0	-	0
Stage 1	0	0	-	0	0	0	0	-	0	0	-	0
Stage 2	0	0	-	0	0	0	0	-	0	0	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	-	-	188	-	-	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	34.7	0	0	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBT	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	188	-	-
HCM Lane V/C Ratio	-	0.364	-	-
HCM Control Delay (s)	-	34.7	0	-
HCM Lane LOS	-	D	A	-
HCM 95th %tile Q(veh)	-	1.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	561	117	308	0	2950	39	0	2594	94
Future Volume (veh/h)	0	0	0	561	117	308	0	2950	39	0	2594	94
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.91	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	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				671	0	321	0	3073	40	0	2702	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				1078	0	877	0	3989	52	0	3892	
Arrive On Green				0.10	0.00	0.10	0.00	0.60	0.60	0.00	0.60	0.00
Sat Flow, veh/h				3563	0	2900	0	6857	86	0	6696	1585
Grp Volume(v), veh/h				671	0	321	0	2247	866	0	2702	0
Grp Sat Flow(s),veh/h/ln				1781	0	1450	0	1609	1855	0	1609	1585
Q Serve(g_s), s				21.7	0.0	12.4	0.0	41.3	41.5	0.0	34.3	0.0
Cycle Q Clear(g_c), s				21.7	0.0	12.4	0.0	41.3	41.5	0.0	34.3	0.0
Prop In Lane				1.00		1.00	0.00		0.05	0.00		1.00
Lane Grp Cap(c), veh/h				1078	0	877	0	2919	1122	0	3892	
V/C Ratio(X)				0.62	0.00	0.37	0.00	0.77	0.77	0.00	0.69	
Avail Cap(c_a), veh/h				1170	0	952	0	2919	1122	0	3892	
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.85	0.00	0.85	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				47.4	0.0	43.3	0.0	17.5	17.6	0.0	16.1	0.0
Incr Delay (d2), s/veh				0.8	0.0	0.2	0.0	1.3	3.4	0.0	1.0	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(95%),veh/ln				15.4	0.0	8.2	0.0	20.7	24.3	0.0	17.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.2	0.0	43.5	0.0	18.8	20.9	0.0	17.2	0.0
LnGrp LOS				D	A	D	A	B	C	A	B	
Approach Vol, veh/h					992			3113			2702	A
Approach Delay, s/veh					46.7			19.4			17.2	
Approach LOS					D			B			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	77.6	42.4	77.6
Change Period (Y+Rc), s	* 5	* 6.1	* 5
Max Green Setting (Gmax), s	* 70	* 39	* 70
Max Q Clear Time (g_c+I1), s	36.3	23.7	43.5
Green Ext Time (p_c), s	28.1	3.7	23.5

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1842	1976	0	0	0
Future Volume (vph)	0	1842	1976	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			
Lane Util. Factor		0.76	0.91			
Frt		0.85	1.00			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		3610	5085			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		3610	5085			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1960	2102	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1960	2102	0	0	0
Turn Type		Perm	NA			
Protected Phases			2			Free
Permitted Phases		8				Free
Actuated Green, G (s)		47.0	36.0			
Effective Green, g (s)		46.0	36.0			
Actuated g/C Ratio		0.51	0.40			
Clearance Time (s)		3.0	4.0			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		1845	2034			
v/s Ratio Prot			c0.41			
v/s Ratio Perm		c0.54				
v/c Ratio		1.06	1.03			
Uniform Delay, d1		22.0	27.0			
Progression Factor		1.00	1.00			
Incremental Delay, d2		39.8	29.2			
Delay (s)		61.8	56.2			
Level of Service		E	E			
Approach Delay (s)	61.8		56.2			0.0
Approach LOS	E		E			A

Intersection Summary			
HCM 2000 Control Delay	58.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	352	131	154	296	393	168	1435	755	454	2087	31
Future Volume (veh/h)	130	352	131	154	296	393	168	1435	755	454	2087	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	135	367	14	160	308	365	175	1495	618	473	2174	30
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	205	867	268	232	908	537	139	2163	666	558	3342	46
Arrive On Green	0.06	0.17	0.17	0.07	0.18	0.18	0.08	0.42	0.42	0.16	0.51	0.51
Sat Flow, veh/h	3456	5106	1579	3456	5106	1580	1781	5106	1573	3456	6588	91
Grp Volume(v), veh/h	135	367	14	160	308	365	175	1495	618	473	1592	612
Grp Sat Flow(s),veh/h/ln	1728	1702	1579	1728	1702	1580	1781	1702	1573	1728	1609	1853
Q Serve(g_s), s	3.4	5.8	0.7	4.1	4.8	16.0	7.0	21.5	33.6	12.0	21.8	21.8
Cycle Q Clear(g_c), s	3.4	5.8	0.7	4.1	4.8	16.0	7.0	21.5	33.6	12.0	21.8	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	205	867	268	232	908	537	139	2163	666	558	2448	940
V/C Ratio(X)	0.66	0.42	0.05	0.69	0.34	0.68	1.26	0.69	0.93	0.85	0.65	0.65
Avail Cap(c_a), veh/h	307	908	281	307	908	537	139	2163	666	653	2448	940
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	41.4	33.4	31.3	41.1	32.4	25.5	41.5	21.1	24.6	36.7	16.3	16.3
Incr Delay (d2), s/veh	3.6	0.3	0.1	4.2	0.2	3.5	163.6	1.8	21.0	9.0	1.4	3.5
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(95%),veh/ln	2.7	4.2	0.5	3.3	3.4	11.0	15.4	13.1	21.6	9.5	12.1	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	33.7	31.4	45.2	32.6	29.0	205.1	23.0	45.6	45.7	17.7	19.8
LnGrp LOS	D	C	C	D	C	C	F	C	D	D	B	B
Approach Vol, veh/h		516			833			2288			2677	
Approach Delay, s/veh		36.6			33.4			43.0			23.1	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	42.1	10.0	19.3	11.0	49.7	9.3	20.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	17.0	33.0	8.0	16.0	7.0	43.0	8.0	16.0				
Max Q Clear Time (g_c+I1), s	14.0	35.6	6.1	7.8	9.0	23.8	5.4	18.0				
Green Ext Time (p_c), s	0.6	0.0	0.1	1.4	0.0	14.4	0.1	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		32.8
HCM 6th LOS		C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑	↱	↰	↑↱	
Traffic Volume (veh/h)	84	692	2	2	630	100	22	0	58	137	0	66
Future Volume (veh/h)	84	692	2	2	630	100	22	0	58	137	0	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.98	0.98		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	86	706	1	2	643	72	22	0	9	140	0	10
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	498	2542	1125	557	2542	1128	299	308	256	307	293	256
Arrive On Green	0.72	0.72	0.72	0.24	0.24	0.24	0.16	0.00	0.16	0.16	0.00	0.16
Sat Flow, veh/h	735	3554	1573	740	3554	1578	1375	1870	1550	1376	1777	1550
Grp Volume(v), veh/h	86	706	1	2	643	72	22	0	9	140	0	10
Grp Sat Flow(s),veh/h/ln	735	1777	1573	740	1777	1578	1375	1870	1550	1376	1777	1550
Q Serve(g_s), s	5.1	6.4	0.0	0.2	13.2	3.2	1.2	0.0	0.4	8.5	0.0	0.5
Cycle Q Clear(g_c), s	18.4	6.4	0.0	6.5	13.2	3.2	1.7	0.0	0.4	8.5	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	2542	1125	557	2542	1128	299	308	256	307	293	256
V/C Ratio(X)	0.17	0.28	0.00	0.00	0.25	0.06	0.07	0.00	0.04	0.46	0.00	0.04
Avail Cap(c_a), veh/h	498	2542	1125	557	2542	1128	616	740	613	624	703	613
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.5	4.6	3.7	14.8	14.8	11.0	32.3	0.0	31.6	34.9	0.0	31.6
Incr Delay (d2), s/veh	0.8	0.3	0.0	0.0	0.2	0.1	0.1	0.0	0.1	1.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	3.2	0.0	0.1	10.1	1.6	0.7	0.0	0.3	5.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	4.8	3.7	14.8	15.1	11.1	32.4	0.0	31.6	36.0	0.0	31.7
LnGrp LOS	B	A	A	B	B	B	C	A	C	D	A	C
Approach Vol, veh/h		793			717			31			150	
Approach Delay, s/veh		5.4			14.7			32.2			35.7	
Approach LOS		A			B			C			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.5		20.5		69.5		20.5				
Change Period (Y+Rc), s		* 5.1		5.7		* 5.1		5.7				
Max Green Setting (Gmax), s		* 44		35.6		* 44		35.6				
Max Q Clear Time (g_c+I1), s		15.2		10.5		20.4		3.7				
Green Ext Time (p_c), s		4.7		0.4		5.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		12.5
HCM 6th LOS		B

Notes

* HCM 6th 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)	0	0	0	0	674	75	0	48	0	0	0	334
Future Volume (veh/h)	0	0	0	0	674	75	0	48	0	0	0	334
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
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	0	1870	0	0	0	1870
Adj Flow Rate, veh/h				0	749	72	0	53	0	0	0	320
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				0	2	2	0	2	0	0	0	2
Cap, veh/h				0	0	0	0	91	0	0	0	0
Arrive On Green				0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Sat Flow, veh/h					0		0	1870	0		0	
Grp Volume(v), veh/h					0.0		0	53	0		0.0	
Grp Sat Flow(s),veh/h/ln							0	1870	0			
Q Serve(g_s), s							0.0	1.7	0.0			
Cycle Q Clear(g_c), s							0.0	1.7	0.0			
Prop In Lane							0.00		0.00			
Lane Grp Cap(c), veh/h							0	91	0			
V/C Ratio(X)							0.00	0.58	0.00			
Avail Cap(c_a), veh/h							0	823	0			
HCM Platoon Ratio							1.00	1.00	1.00			
Upstream Filter(I)							0.00	1.00	0.00			
Uniform Delay (d), s/veh							0.0	27.9	0.0			
Incr Delay (d2), s/veh							0.0	5.7	0.0			
Initial Q Delay(d3),s/veh							0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln							0.0	1.5	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh							0.0	33.6	0.0			
LnGrp LOS							A	C	A			
Approach Vol, veh/h								53				
Approach Delay, s/veh								33.6				
Approach LOS								C				

Timer - Assigned Phs								8				
Phs Duration (G+Y+Rc), s								6.6				
Change Period (Y+Rc), s								3.7				
Max Green Setting (Gmax), s								26.4				
Max Q Clear Time (g_c+I1), s								3.7				
Green Ext Time (p_c), s								0.2				

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↑↑	↱
Traffic Volume (veh/h)	107	611	181	198	392	145	211	734	330	132	422	114
Future Volume (veh/h)	107	611	181	198	392	145	211	734	330	132	422	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	111	636	69	206	408	107	220	765	285	138	440	46
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	368	1038	601	341	891	231	476	868	323	262	1662	610
Arrive On Green	0.06	0.29	0.29	0.09	0.32	0.32	0.18	0.69	0.69	0.07	0.33	0.33
Sat Flow, veh/h	1781	3554	1574	1781	2788	724	1781	2528	942	1781	5106	1573
Grp Volume(v), veh/h	111	636	69	206	259	256	220	538	512	138	440	46
Grp Sat Flow(s),veh/h/ln	1781	1777	1574	1781	1777	1734	1781	1777	1693	1781	1702	1573
Q Serve(g_s), s	3.9	13.9	2.6	7.2	10.4	10.6	7.8	21.6	21.6	4.6	5.7	1.7
Cycle Q Clear(g_c), s	3.9	13.9	2.6	7.2	10.4	10.6	7.8	21.6	21.6	4.6	5.7	1.7
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	368	1038	601	341	568	554	476	610	581	262	1662	610
V/C Ratio(X)	0.30	0.61	0.11	0.60	0.46	0.46	0.46	0.88	0.88	0.53	0.26	0.08
Avail Cap(c_a), veh/h	416	1038	601	341	568	554	476	610	581	294	1662	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	27.5	18.0	20.8	24.4	24.5	16.2	12.6	12.6	20.8	22.4	17.4
Incr Delay (d2), s/veh	0.4	2.6	0.4	3.0	2.6	2.8	0.6	15.1	15.8	1.6	0.4	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(95%),veh/ln	2.8	9.9	1.7	5.6	8.1	8.1	4.8	10.5	10.2	3.4	4.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	30.0	18.4	23.8	27.0	27.2	16.8	27.8	28.5	22.4	22.8	17.7
LnGrp LOS	C	C	B	C	C	C	B	C	C	C	C	B
Approach Vol, veh/h		816			721			1270			624	
Approach Delay, s/veh		27.8			26.2			26.2			22.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	34.3	9.5	34.2	10.4	35.9	12.0	31.7
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5.4	4.0	* 5	4.0	* 5.4
Max Green Setting (Gmax), s	8.0	* 29	8.0	* 26	8.0	* 29	8.0	* 26
Max Q Clear Time (g_c+I1), s	9.8	7.7	5.9	12.6	6.6	23.6	9.2	15.9
Green Ext Time (p_c), s	0.0	3.0	0.0	2.5	0.0	3.1	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

* HCM 6th 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)	294	61	99	44	57	92	57	902	37	44	538	236
Future Volume (veh/h)	294	61	99	44	57	92	57	902	37	44	538	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.91		0.89	0.99		0.95	0.98		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	306	64	69	46	59	5	59	940	22	46	560	0
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	459	518	598	213	187	165	643	2143	929	354	2367	
Arrive On Green	0.13	0.28	0.29	0.12	0.10	0.12	0.13	0.80	0.82	0.96	0.93	0.00
Sat Flow, veh/h	3456	1870	1519	1146	1870	1418	1781	3554	1505	574	5106	1585
Grp Volume(v), veh/h	306	64	69	46	59	5	59	940	22	46	560	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1519	1146	1870	1418	1781	1777	1505	574	1702	1585
Q Serve(g_s), s	7.6	2.3	2.6	3.3	2.6	0.3	1.2	7.3	0.2	0.4	0.9	0.0
Cycle Q Clear(g_c), s	7.6	2.3	2.6	3.3	2.6	0.3	1.2	7.3	0.2	0.4	0.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	459	518	598	213	187	165	643	2143	929	354	2367	
V/C Ratio(X)	0.67	0.12	0.12	0.22	0.32	0.03	0.09	0.44	0.02	0.13	0.24	
Avail Cap(c_a), veh/h	829	802	829	265	270	228	704	2143	929	354	2367	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	0.94	0.94	0.00
Uniform Delay (d), s/veh	37.1	24.4	17.6	36.6	37.7	35.3	7.3	4.3	3.1	1.0	1.8	0.0
Incr Delay (d2), s/veh	1.7	0.1	0.1	0.5	1.0	0.1	0.1	0.6	0.0	0.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	1.8	1.6	1.7	2.2	0.2	0.7	3.6	0.1	0.2	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	24.5	17.6	37.1	38.6	35.3	7.3	4.8	3.1	1.8	2.0	0.0
LnGrp LOS	D	C	B	D	D	D	A	A	A	A	A	
Approach Vol, veh/h		439			110			1021			606	A
Approach Delay, s/veh		33.4			37.8			5.0			2.0	
Approach LOS		C			D			A			A	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	12.5	47.0	16.0	14.5		59.6		30.4				
Change Period (Y+Rc), s	5.6	* 5.3	5.6	5.5		* 5.3		5.5				
Max Green Setting (Gmax), s	10.0	* 25	20.0	13.0		* 41		38.6				
Max Q Clear Time (g_c+I1), s	3.2	2.9	9.6	5.3		9.3		4.6				
Green Ext Time (p_c), s	0.0	7.9	0.8	0.2		14.1		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			11.5									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	458	1334	32	74	983	465	24	42	41	542	35	285
Future Volume (veh/h)	458	1334	32	74	983	465	24	42	41	542	35	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.89	1.00		0.97
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	467	1361	15	76	1003	439	24	43	1	553	36	60
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	1100	3694	886	98	1925	691	67	133	53	812	284	234
Arrive On Green	0.64	1.00	1.00	0.02	0.10	0.10	0.04	0.04	0.04	0.15	0.15	0.15
Sat Flow, veh/h	3456	6434	1544	1781	6434	1506	1781	3554	1414	5344	1870	1538
Grp Volume(v), veh/h	467	1361	15	76	1003	439	24	43	1	553	36	60
Grp Sat Flow(s),veh/h/ln	1728	1609	1544	1781	1609	1506	1781	1777	1414	1781	1870	1538
Q Serve(g_s), s	8.1	0.0	0.0	5.1	17.8	27.3	1.6	1.4	0.1	11.7	2.0	4.1
Cycle Q Clear(g_c), s	8.1	0.0	0.0	5.1	17.8	27.3	1.6	1.4	0.1	11.7	2.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1100	3694	886	98	1925	691	67	133	53	812	284	234
V/C Ratio(X)	0.42	0.37	0.02	0.78	0.52	0.64	0.36	0.32	0.02	0.68	0.13	0.26
Avail Cap(c_a), veh/h	1100	3694	886	212	2000	709	169	338	134	1256	440	361
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	16.3	0.0	0.0	58.2	45.9	32.9	56.4	56.3	55.6	48.1	44.0	44.9
Incr Delay (d2), s/veh	0.2	0.3	0.0	12.2	1.0	4.4	3.3	1.4	0.1	2.1	0.4	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(95%),veh/ln	4.8	0.1	0.0	4.8	12.4	21.3	1.4	1.2	0.1	9.1	1.7	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	0.3	0.0	70.4	46.9	37.3	59.6	57.7	55.8	50.3	44.4	46.1
LnGrp LOS	B	A	A	E	D	D	E	E	E	D	D	D
Approach Vol, veh/h		1843			1518			68			649	
Approach Delay, s/veh		4.4			45.3			58.3			49.6	
Approach LOS		A			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	74.3		10.7	43.6	41.3		24.4				
Change Period (Y+Rc), s	* 4	5.4		* 6.2	5.4	* 5.4		6.2				
Max Green Setting (Gmax), s	* 14	44.3		* 11	21.3	* 37		28.2				
Max Q Clear Time (g_c+I1), s	7.1	2.0		3.6	10.1	29.3		13.7				
Green Ext Time (p_c), s	0.1	27.0		0.1	1.3	6.6		4.5				

Intersection Summary			
HCM 6th Ctrl Delay			27.7
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	2071	500	90	1071	124	360	507	144	96	498	143
Future Volume (veh/h)	117	2071	500	90	1071	124	360	507	144	96	498	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	2180	526	95	1127	131	379	534	127	101	524	54
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	440	2228	529	128	1491	172	474	641	152	250	590	655
Arrive On Green	0.49	0.85	0.85	0.02	0.08	0.08	0.14	0.22	0.22	0.07	0.17	0.17
Sat Flow, veh/h	1781	5231	1241	1781	5893	680	3456	2851	675	3456	3554	1585
Grp Volume(v), veh/h	123	2008	698	95	921	337	379	332	329	101	524	54
Grp Sat Flow(s),veh/h/ln	1781	1609	1647	1781	1609	1748	1728	1777	1749	1728	1777	1585
Q Serve(g_s), s	4.9	44.1	49.5	6.4	22.4	22.6	12.8	21.4	21.6	3.4	17.3	0.0
Cycle Q Clear(g_c), s	4.9	44.1	49.5	6.4	22.4	22.6	12.8	21.4	21.6	3.4	17.3	0.0
Prop In Lane	1.00		0.75	1.00		0.39	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	440	2055	701	128	1221	442	474	400	393	250	590	655
V/C Ratio(X)	0.28	0.98	1.00	0.74	0.75	0.76	0.80	0.83	0.84	0.40	0.89	0.08
Avail Cap(c_a), veh/h	440	2055	701	163	1407	510	847	580	571	317	622	669
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.98	0.98	0.98	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	24.1	8.4	8.8	57.5	51.4	51.4	50.2	44.3	44.4	53.2	49.0	21.4
Incr Delay (d2), s/veh	0.3	13.9	30.6	12.4	4.3	11.5	3.2	6.7	7.2	0.3	12.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	9.4	13.8	6.1	15.3	17.7	9.5	15.1	15.1	2.6	13.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	22.2	39.3	69.8	55.6	62.9	53.3	51.0	51.6	53.5	61.6	21.4
LnGrp LOS	C	C	D	E	E	E	D	D	D	D	E	C
Approach Vol, veh/h		2829			1353			1040			679	
Approach Delay, s/veh		26.5			58.4			52.0			57.2	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	56.9	23.0	25.9	35.5	35.7	15.4	33.5
Change Period (Y+Rc), s	5.6	* 5.8	* 6.5	6.0	5.8	* 5.3	* 6.7	* 6.5
Max Green Setting (Gmax), s	11.0	* 35	* 29	21.0	11.0	* 35	* 11	* 39
Max Q Clear Time (g_c+I1), s	8.4	51.5	14.8	19.3	6.9	24.6	5.4	23.6
Green Ext Time (p_c), s	0.0	0.0	1.1	0.6	0.1	5.7	0.1	3.4

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	1343	402	84	685	219	98	374	654	239	713	236
Future Volume (veh/h)	126	1343	402	84	685	219	98	374	654	239	713	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	1429	356	89	729	185	104	398	640	254	759	68
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	378	2448	827	195	2410	592	238	902	778	301	1018	912
Arrive On Green	0.04	0.32	0.31	0.04	0.46	0.45	0.06	0.25	0.24	0.18	0.57	0.54
Sat Flow, veh/h	1781	5106	1585	1781	5191	1275	1781	3554	2790	1781	3554	2790
Grp Volume(v), veh/h	134	1429	356	89	676	238	104	398	640	254	759	68
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1609	1641	1781	1777	1395	1781	1777	1395
Q Serve(g_s), s	4.8	28.1	19.5	3.2	10.5	11.1	5.2	11.3	25.8	11.0	19.1	1.3
Cycle Q Clear(g_c), s	4.8	28.1	19.5	3.2	10.5	11.1	5.2	11.3	25.8	11.0	19.1	1.3
Prop In Lane	1.00		1.00	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	2448	827	195	2240	762	238	902	778	301	1018	912
V/C Ratio(X)	0.35	0.58	0.43	0.46	0.30	0.31	0.44	0.44	0.82	0.84	0.75	0.07
Avail Cap(c_a), veh/h	440	2448	827	284	2240	762	297	918	791	301	1018	912
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	0.89	0.89	0.89	0.64	0.64	0.64
Uniform Delay (d), s/veh	16.9	30.7	23.6	20.8	20.0	20.7	32.7	37.6	40.5	31.9	22.4	17.4
Incr Delay (d2), s/veh	0.5	1.0	1.5	1.7	0.3	1.1	1.1	0.3	6.2	13.2	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	17.8	12.5	2.5	7.1	7.9	4.1	8.3	14.0	9.1	8.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	31.7	25.1	22.4	20.4	21.8	33.8	37.9	46.7	45.0	24.3	17.4
LnGrp LOS	B	C	C	C	C	C	C	D	D	D	C	B
Approach Vol, veh/h		1919			1003			1142			1081	
Approach Delay, s/veh		29.5			20.9			42.5			28.8	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	61.5	11.1	38.4	10.8	59.7	15.0	34.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	* 6	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	11.0	49.0	11.0	* 29	11.0	41.0	11.0	* 29				
Max Q Clear Time (g_c+I1), s	5.2	30.1	7.2	21.1	6.8	13.1	13.0	27.8				
Green Ext Time (p_c), s	0.1	11.2	0.1	3.1	0.1	6.7	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			30.5									
HCM 6th LOS			C									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	511	627	35	367	945
Future Volume (vph)	0	511	627	35	367	945
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.9	4.0
Lane Util. Factor		0.88	0.95		0.97	0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	3508		3433	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	3508		3433	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	555	682	38	399	1027
RTOR Reduction (vph)	0	329	9	0	0	0
Lane Group Flow (vph)	0	226	711	0	399	1027
Confl. Peds. (#/hr)				12	12	
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		8	
Permitted Phases		8				2 8
Actuated Green, G (s)		8.8	26.0		8.8	45.0
Effective Green, g (s)		9.7	27.3		8.8	41.4
Actuated g/C Ratio		0.22	0.61		0.20	0.92
Clearance Time (s)		4.9	5.3		4.9	
Vehicle Extension (s)		3.0	3.8		3.0	
Lane Grp Cap (vph)		600	2128		671	3255
v/s Ratio Prot			c0.20		c0.12	
v/s Ratio Perm		0.08				0.29
v/c Ratio		0.38	0.33		0.59	0.32
Uniform Delay, d1		15.1	4.4		16.5	0.2
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.4	0.4		1.4	0.1
Delay (s)		15.5	4.8		17.9	0.3
Level of Service		B	A		B	A
Approach Delay (s)	15.5		4.8			5.2
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.9
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Attachment D: Existing 2019 Synchro Queue Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	206	368	98	87	719	416	108	1777	71	146	1184	130
v/c Ratio	0.48	0.53	0.23	0.19	0.69	0.66	0.44	1.01	0.07	0.61	0.67	0.19
Control Delay	52.2	45.5	2.9	34.0	41.5	21.4	24.3	62.5	0.1	34.7	36.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	45.5	2.9	34.0	41.5	21.4	24.3	62.5	0.1	34.7	36.1	0.8
Queue Length 50th (ft)	77	136	0	49	256	123	46	~543	0	63	287	0
Queue Length 95th (ft)	113	173	14	91	325	239	86	#683	0	134	358	3
Internal Link Dist (ft)		508			604			745			470	
Turn Bay Length (ft)	278		145	245		140	225		100	205		200
Base Capacity (vph)	532	1279	665	464	1067	638	255	1766	965	243	1774	685
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.29	0.15	0.19	0.67	0.65	0.42	1.01	0.07	0.60	0.67	0.19

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	67	228	104	312	354	99	1733	179	36	1483	84
v/c Ratio	0.24	0.38	0.22	0.97	0.50	0.38	0.64	0.18	0.17	0.63	0.09
Control Delay	23.5	34.1	9.0	74.8	32.4	12.8	26.6	14.2	10.5	20.8	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	34.1	9.0	74.8	32.4	12.8	26.6	14.2	10.5	20.8	1.5
Queue Length 50th (ft)	27	60	12	148	90	33	372	75	8	231	0
Queue Length 95th (ft)	54	90	44	#283	127	m48	431	m95	22	309	13
Internal Link Dist (ft)		517			373		888			745	
Turn Bay Length (ft)	70			200		160		100	230		100
Base Capacity (vph)	297	1101	487	321	1086	277	2721	1003	283	2340	901
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.21	0.21	0.97	0.33	0.36	0.64	0.18	0.13	0.63	0.09

Intersection Summary

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	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	282	160	885	223	1896	32	111	1718	40
v/c Ratio	0.07	0.34	0.44	0.86	0.81	0.85	0.04	0.45	0.85	0.05
Control Delay	16.5	21.0	23.0	37.8	42.1	31.0	0.5	17.3	24.4	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	21.0	23.0	37.8	42.1	31.0	0.5	17.3	24.4	1.7
Queue Length 50th (ft)	4	47	58	233	77	~408	0	11	375	3
Queue Length 95th (ft)	15	80	99	#321	#206	#550	3	m32	m#465	m4
Internal Link Dist (ft)		512		372		535			888	
Turn Bay Length (ft)	90		175		240		100	140		60
Base Capacity (vph)	237	1056	365	1053	282	2218	848	285	2020	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.27	0.44	0.84	0.79	0.85	0.04	0.39	0.85	0.05

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	EBR	NBL	SBT	SBR
Lane Group Flow (vph)	1653	1633	2105	5
v/c Ratio	0.94	0.58	0.77	0.00
Control Delay	35.8	20.3	24.6	0.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	35.8	20.3	24.6	0.0
Queue Length 50th (ft)	339	187	290	0
Queue Length 95th (ft)	#460	221	337	0
Internal Link Dist (ft)			206	
Turn Bay Length (ft)				
Base Capacity (vph)	1766	2805	2719	1583
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.94	0.58	0.77	0.00

Intersection Summary

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

Lane Group	EBR	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	35	457	3738	292	2565	146

Intersection Summary

Lane Group	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	296	307	552	3453	2386	90
v/c Ratio	0.62	0.62	0.76	0.87	0.60	0.13
Control Delay	38.4	38.2	41.8	22.5	15.0	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	38.2	41.8	22.5	15.0	2.6
Queue Length 50th (ft)	184	190	187	608	308	0
Queue Length 95th (ft)	243	250	222	732	379	22
Internal Link Dist (ft)		627		442	579	
Turn Bay Length (ft)	200		230			
Base Capacity (vph)	551	572	839	3987	3997	708
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.54	0.66	0.87	0.60	0.13

Intersection Summary

Lane Group	WBR	NBT
Lane Group Flow (vph)	2664	2292
v/c Ratio	1.36	1.23
Control Delay	186.2	136.2
Queue Delay	0.0	0.0
Total Delay	186.2	136.2
Queue Length 50th (ft)	~881	~595
Queue Length 95th (ft)	#995	#691
Internal Link Dist (ft)		157
Turn Bay Length (ft)		
Base Capacity (vph)	1965	1864
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.36	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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	175	308	148	238	262	371	97	1673	491	537	2677
v/c Ratio	0.59	0.49	0.45	0.78	0.41	0.62	0.71	0.77	0.58	0.85	0.75
Control Delay	47.9	39.2	9.8	59.0	37.9	24.6	69.5	25.7	11.3	49.7	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	39.2	9.8	59.0	37.9	24.6	69.5	25.7	11.3	49.7	17.9
Queue Length 50th (ft)	50	61	0	69	51	144	55	290	75	152	331
Queue Length 95th (ft)	83	86	46	#127	74	224	#132	375	188	#231	417
Internal Link Dist (ft)		494			5267			596			388
Turn Bay Length (ft)	240		120	270		350	300		150	220	
Base Capacity (vph)	305	904	407	305	904	606	137	2165	840	648	3563
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.34	0.36	0.78	0.29	0.61	0.71	0.77	0.58	0.83	0.75

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	80	360	8	8	1404	106	9	28	16	46
v/c Ratio	0.28	0.12	0.01	0.01	0.45	0.08	0.07	0.05	0.12	0.16
Control Delay	5.2	1.7	0.0	3.3	7.5	2.1	38.6	0.2	39.8	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	1.7	0.0	3.3	7.5	2.1	38.6	0.2	39.8	23.5
Queue Length 50th (ft)	9	18	0	1	326	11	5	0	9	5
Queue Length 95th (ft)	27	28	0	m2	m288	m12	19	0	28	22
Internal Link Dist (ft)		833			938					389
Turn Bay Length (ft)	200		140	180		180	200	200	130	
Base Capacity (vph)	286	3091	1368	872	3091	1337	599	863	594	1187
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.12	0.01	0.01	0.45	0.08	0.02	0.03	0.03	0.04

Intersection Summary

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

Lane Group	WBT	NBT	SBR
Lane Group Flow (vph)	994	65	254
v/c Ratio	0.45	0.17	0.64
Control Delay	7.0	18.0	24.2
Queue Delay	0.0	0.0	0.0
Total Delay	7.0	18.0	24.2
Queue Length 50th (ft)	76	19	68
Queue Length 95th (ft)	153	39	115
Internal Link Dist (ft)	299	136	
Turn Bay Length (ft)			
Base Capacity (vph)	2205	819	733
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.45	0.08	0.35

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	176	152	220	1307	255	1117	59	703	143
v/c Ratio	0.15	0.17	0.22	0.42	1.20	0.74	0.89	0.26	0.42	0.21
Control Delay	15.5	24.1	9.2	19.5	130.0	25.9	32.6	16.4	24.7	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	24.1	9.2	19.5	130.0	25.9	32.6	16.4	24.7	7.9
Queue Length 50th (ft)	10	40	22	77	~469	79	250	18	113	20
Queue Length 95th (ft)	27	66	60	128	#620	#144	#456	39	148	52
Internal Link Dist (ft)		938			1550		1066		410	
Turn Bay Length (ft)	195			250		130		270		150
Base Capacity (vph)	244	1034	692	518	1085	344	1250	243	1655	708
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.17	0.22	0.42	1.20	0.74	0.89	0.24	0.42	0.20

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	81	51	49	31	51	206	98	1069	39	71	627	398
v/c Ratio	0.20	0.11	0.08	0.19	0.25	0.54	0.17	0.47	0.04	0.28	0.24	0.40
Control Delay	37.2	24.7	5.1	37.5	39.4	11.1	8.9	11.0	1.4	29.7	21.4	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	24.7	5.1	37.5	39.4	11.1	8.9	11.0	1.4	29.7	21.4	14.9
Queue Length 50th (ft)	21	22	2	16	27	0	17	130	0	37	115	109
Queue Length 95th (ft)	43	47	19	41	59	59	57	268	m3	85	146	169
Internal Link Dist (ft)		708			482			724			1066	
Turn Bay Length (ft)	120		95	110		55	155		105	145		220
Base Capacity (vph)	823	799	624	213	269	427	576	2266	987	258	2590	991
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.06	0.08	0.15	0.19	0.48	0.17	0.47	0.04	0.28	0.24	0.40

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	649	853	19	35	1635	753	26	44	57	139	101	258
v/c Ratio	1.43	0.27	0.02	0.32	0.66	0.68	0.18	0.20	0.21	0.19	0.15	0.46
Control Delay	241.9	12.6	0.6	60.2	31.0	11.0	54.0	55.0	1.7	36.8	37.8	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	241.9	12.6	0.6	60.2	31.0	11.0	54.0	55.0	1.7	36.8	37.8	7.1
Queue Length 50th (ft)	~354	120	0	26	307	203	19	17	0	49	36	0
Queue Length 95th (ft)	#473	158	3	59	364	349	48	36	0	80	63	66
Internal Link Dist (ft)		1149			735			552			579	
Turn Bay Length (ft)	300		175	280		200	120		120	290		260
Base Capacity (vph)	453	3139	894	151	2490	1111	190	315	316	758	715	581
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.43	0.27	0.02	0.23	0.66	0.68	0.14	0.14	0.18	0.18	0.14	0.44

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.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	110	1420	103	2488	794	825	77	377	187
v/c Ratio	0.48	0.75	0.75	1.49	0.94	0.69	0.30	0.72	0.30
Control Delay	52.6	37.1	84.9	260.9	64.5	37.1	55.7	56.8	10.2
Queue Delay	0.0	0.2	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	37.3	84.9	262.8	64.5	37.1	55.7	56.8	10.3
Queue Length 50th (ft)	80	293	82	~814	311	291	29	147	29
Queue Length 95th (ft)	135	336	#159	#886	#402	335	53	188	74
Internal Link Dist (ft)		362		982		573		2599	
Turn Bay Length (ft)	250		155		278		124		100
Base Capacity (vph)	243	1898	141	1667	855	1219	323	628	617
Starvation Cap Reductn	0	68	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	647	0	0	0	0	13
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.78	0.73	2.44	0.93	0.68	0.24	0.60	0.31

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	77	442	291	484	2094	167	817	194	109	399	278
v/c Ratio	0.43	0.23	0.36	0.75	1.13dr	0.66	0.90	0.14	0.78	0.44	0.27
Control Delay	20.8	31.6	24.7	21.3	21.2	46.5	57.3	2.4	67.6	40.0	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	31.6	24.7	21.3	21.2	46.5	57.3	2.4	67.6	40.0	19.0
Queue Length 50th (ft)	40	104	148	194	308	95	322	0	59	117	48
Queue Length 95th (ft)	71	118	188	275	368	153	#433	20	#130	166	78
Internal Link Dist (ft)		1446			821		732			845	
Turn Bay Length (ft)	225			175		160		80	235		120
Base Capacity (vph)	431	1959	817	671	3103	253	914	1484	139	914	1425
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.23	0.36	0.72	0.67	0.66	0.89	0.13	0.78	0.44	0.20

Intersection Summary

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

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	85	1139	492	620
v/c Ratio	0.12	0.53	0.73	0.18
Control Delay	1.0	6.2	25.5	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	1.0	6.2	25.5	0.1
Queue Length 50th (ft)	0	70	62	0
Queue Length 95th (ft)	3	106	#117	0
Internal Link Dist (ft)		232		732
Turn Bay Length (ft)			450	
Base Capacity (vph)	734	2140	671	3539
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.12	0.53	0.73	0.18

Intersection Summary

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

Existing (2019) Conditions - PM Peak Hour
1: Sepulveda Bl & Manchester Bl

01/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	249	822	130	114	643	206	190	1367	114	373	1735	341
v/c Ratio	0.54	0.69	0.21	0.39	0.61	0.35	0.79	0.81	0.15	1.53	1.03	0.51
Control Delay	52.5	37.4	4.0	41.5	39.0	8.9	49.8	41.9	1.4	287.7	68.5	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	37.4	4.0	41.5	39.0	8.9	49.8	41.9	1.4	287.7	68.5	15.6
Queue Length 50th (ft)	93	278	0	65	219	18	95	363	0	~363	~555	78
Queue Length 95th (ft)	134	345	33	114	286	77	#216	428	14	#560	#659	174
Internal Link Dist (ft)		508			604			745			470	
Turn Bay Length (ft)	278		145	245		140	225		100	205		200
Base Capacity (vph)	532	1279	665	291	1078	602	244	1687	759	243	1692	666
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.64	0.20	0.39	0.60	0.34	0.78	0.81	0.15	1.53	1.03	0.51

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	109	363	102	208	289	148	1243	247	84	1622	105
v/c Ratio	0.35	0.55	0.21	0.75	0.43	0.55	0.50	0.26	0.30	0.72	0.12
Control Delay	24.7	36.2	8.5	41.7	28.5	19.9	28.7	17.0	11.8	23.6	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	36.2	8.5	41.7	28.5	19.9	28.7	17.0	11.8	23.6	2.5
Queue Length 50th (ft)	45	100	11	91	64	69	262	88	19	269	0
Queue Length 95th (ft)	78	135	41	#148	96	m117	316	168	43	360	22
Internal Link Dist (ft)		517			373		888			745	
Turn Bay Length (ft)	70			200		160		100	230		100
Base Capacity (vph)	320	1101	501	279	1086	275	2476	959	331	2243	866
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.33	0.20	0.75	0.27	0.54	0.50	0.26	0.25	0.72	0.12

Intersection Summary

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	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	48	433	164	419	160	1445	48	224	1626	43
v/c Ratio	0.18	0.65	0.64	0.53	0.62	0.65	0.06	0.81	0.71	0.05
Control Delay	21.7	33.6	49.4	32.9	24.7	22.1	1.5	43.4	13.7	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	33.6	49.4	32.9	24.7	22.1	1.5	43.4	13.7	1.4
Queue Length 50th (ft)	19	105	78	71	37	228	0	48	304	2
Queue Length 95th (ft)	40	143	124	82	104	310	9	m#155	397	m4
Internal Link Dist (ft)		512		372		535			888	
Turn Bay Length (ft)	90		175		240		100	140		60
Base Capacity (vph)	290	1050	256	1059	283	2239	841	283	2295	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.41	0.64	0.40	0.57	0.65	0.06	0.79	0.71	0.05

Intersection Summary

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	EBR	NBL	SBT	SBR
Lane Group Flow (vph)	1916	1450	1979	24
v/c Ratio	1.08	0.52	0.73	0.02
Control Delay	74.5	19.3	23.5	0.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	74.5	19.3	23.5	0.0
Queue Length 50th (ft)	~482	160	265	0
Queue Length 95th (ft)	#587	191	309	0
Internal Link Dist (ft)			206	
Turn Bay Length (ft)				
Base Capacity (vph)	1767	2805	2719	1583
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.08	0.52	0.73	0.02

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.

Lane Group	EBR	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	65	538	3042	337	2694	223

Intersection Summary

Lane Group	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	350	356	321	3114	2702	98
v/c Ratio	0.77	0.77	0.47	0.76	0.66	0.14
Control Delay	49.6	49.4	37.0	18.1	15.6	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	49.4	37.0	18.1	15.6	2.6
Queue Length 50th (ft)	244	248	106	472	364	0
Queue Length 95th (ft)	365	369	161	595	462	23
Internal Link Dist (ft)		627		442	579	
Turn Bay Length (ft)	200		230			
Base Capacity (vph)	551	562	832	4074	4082	691
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.63	0.39	0.76	0.66	0.14

Intersection Summary

Lane Group	WBR	NBT
Lane Group Flow (vph)	1960	2102
v/c Ratio	1.06	1.03
Control Delay	63.1	57.0
Queue Delay	0.0	0.0
Total Delay	63.1	57.0
Queue Length 50th (ft)	~543	~475
Queue Length 95th (ft)	#658	#570
Internal Link Dist (ft)		157
Turn Bay Length (ft)		
Base Capacity (vph)	1845	2034
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.06	1.03

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	135	367	136	160	308	409	175	1495	786	473	2206
v/c Ratio	0.46	0.53	0.39	0.54	0.44	0.67	1.28	0.70	0.95	0.77	0.66
Control Delay	44.5	38.6	7.5	46.5	37.2	25.9	206.1	24.4	40.4	44.3	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	38.6	7.5	46.5	37.2	25.9	206.1	24.4	40.4	44.3	17.3
Queue Length 50th (ft)	38	72	0	45	60	163	~127	252	306	131	250
Queue Length 95th (ft)	67	97	36	77	83	246	#255	333	#603	184	323
Internal Link Dist (ft)		494			5267			596			388
Turn Bay Length (ft)	240		120	270		350	300			220	
Base Capacity (vph)	305	904	407	305	904	625	137	2137	826	648	3335
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.41	0.33	0.52	0.34	0.65	1.28	0.70	0.95	0.73	0.66

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	86	706	2	2	643	102	22	59	140	67
v/c Ratio	0.16	0.28	0.00	0.00	0.25	0.09	0.10	0.15	0.62	0.11
Control Delay	6.1	5.5	0.0	5.0	3.7	1.2	30.7	0.8	46.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	5.5	0.0	5.0	3.7	1.2	30.7	0.8	46.7	0.3
Queue Length 50th (ft)	15	84	0	0	26	1	11	0	75	0
Queue Length 95th (ft)	m40	124	m0	m1	71	10	30	0	125	0
Internal Link Dist (ft)		833			938					389
Turn Bay Length (ft)	200		140	180		180	200	200	130	
Base Capacity (vph)	534	2544	1147	501	2544	1116	517	709	551	1269
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.28	0.00	0.00	0.25	0.09	0.04	0.08	0.25	0.05

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

Lane Group	WBT	NBT	SBR
Lane Group Flow (vph)	832	53	371
v/c Ratio	0.42	0.12	0.73
Control Delay	8.8	14.4	23.7
Queue Delay	0.0	0.0	0.0
Total Delay	8.8	14.4	23.7
Queue Length 50th (ft)	75	14	98
Queue Length 95th (ft)	149	29	149
Internal Link Dist (ft)	299	136	
Turn Bay Length (ft)			
Base Capacity (vph)	1986	819	745
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.06	0.50

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	111	636	189	206	559	220	1109	138	440	119
v/c Ratio	0.33	0.62	0.26	0.66	0.54	0.49	0.96	0.58	0.27	0.16
Control Delay	16.3	26.3	4.0	28.6	25.8	16.8	45.3	24.7	22.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	26.3	4.0	28.6	25.8	16.8	45.3	24.7	22.9	3.3
Queue Length 50th (ft)	29	132	10	72	124	81	336	43	67	0
Queue Length 95th (ft)	69	203	29	#128	176	58	#456	80	93	28
Internal Link Dist (ft)		938			1550		1066		410	
Turn Bay Length (ft)	195			250		130		270		150
Base Capacity (vph)	347	1034	730	310	1044	451	1158	243	1655	730
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.62	0.26	0.66	0.54	0.49	0.96	0.57	0.27	0.16

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	306	64	103	46	59	96	59	940	39	46	560	246
v/c Ratio	0.54	0.12	0.15	0.28	0.29	0.28	0.11	0.45	0.05	0.18	0.24	0.29
Control Delay	37.7	20.7	6.3	40.0	40.2	2.8	15.6	18.0	3.7	28.1	22.3	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	20.7	6.3	40.0	40.2	2.8	15.6	18.0	3.7	28.1	22.3	13.0
Queue Length 50th (ft)	82	26	14	24	32	0	18	196	0	20	95	0
Queue Length 95th (ft)	118	49	34	56	67	7	m46	287	m9	m50	138	92
Internal Link Dist (ft)		708			482			724			1066	
Turn Bay Length (ft)	120		95	110		55	155		105	145		220
Base Capacity (vph)	823	799	690	206	269	392	563	2097	842	259	2353	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.08	0.15	0.22	0.22	0.24	0.10	0.45	0.05	0.18	0.24	0.29

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	467	1361	33	76	1003	474	24	43	42	371	218	291
v/c Ratio	0.76	0.47	0.04	0.52	0.46	0.49	0.23	0.20	0.17	0.54	0.32	0.51
Control Delay	48.6	17.8	0.3	64.1	31.5	7.5	58.2	55.2	1.5	44.1	39.8	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	17.8	0.3	64.1	31.5	7.5	58.2	55.2	1.5	44.1	39.8	7.7
Queue Length 50th (ft)	175	224	0	57	184	83	18	16	0	146	81	0
Queue Length 95th (ft)	#259	284	2	106	216	150	46	36	0	202	122	73
Internal Link Dist (ft)		1149			735			552			579	
Turn Bay Length (ft)	300		175	280		200	120		120	290		260
Base Capacity (vph)	628	2882	816	196	2183	988	168	336	298	715	722	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.47	0.04	0.39	0.46	0.48	0.14	0.13	0.14	0.52	0.30	0.50

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	123	2706	95	1258	379	686	101	524	151
v/c Ratio	0.59	1.20	0.66	0.59	0.69	0.78	0.38	0.87	0.24
Control Delay	57.7	124.6	79.2	42.7	54.2	46.2	56.9	64.5	7.9
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	124.6	79.2	42.8	54.2	46.2	56.9	64.5	7.9
Queue Length 50th (ft)	94	~752	72	269	145	249	39	209	10
Queue Length 95th (ft)	#204	#911	#147	273	184	298	67	#294	59
Internal Link Dist (ft)		362		982		573		2599	
Turn Bay Length (ft)	250		155		278		124		100
Base Capacity (vph)	207	2254	151	2123	841	1139	314	619	633
Starvation Cap Reductn	0	31	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	98	0	0	0	0	3
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	1.22	0.63	0.62	0.45	0.60	0.32	0.85	0.24

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	134	1429	428	89	962	104	398	696	254	759	251
v/c Ratio	0.40	0.61	0.44	0.41	0.34	0.50	0.47	0.69	0.79	0.85	0.21
Control Delay	21.3	37.4	27.8	18.5	19.9	33.9	40.6	33.2	41.9	48.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	37.4	27.8	18.5	19.9	33.9	40.6	33.2	41.9	48.4	4.9
Queue Length 50th (ft)	74	383	251	31	126	53	137	228	137	268	6
Queue Length 95th (ft)	153	471	356	57	159	92	185	292	m#166	m314	m18
Internal Link Dist (ft)		1446			821		732			845	
Turn Bay Length (ft)	225			175		160		80	235		120
Base Capacity (vph)	355	2346	988	249	2861	229	914	1064	323	914	1208
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.61	0.43	0.36	0.34	0.45	0.44	0.65	0.79	0.83	0.21

Intersection Summary

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	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	555	720	399	1027
v/c Ratio	0.60	0.34	0.59	0.29
Control Delay	7.5	4.7	20.7	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.5	4.7	20.7	0.2
Queue Length 50th (ft)	16	37	48	0
Queue Length 95th (ft)	52	58	82	0
Internal Link Dist (ft)		232		732
Turn Bay Length (ft)			450	
Base Capacity (vph)	930	2137	671	3539
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.34	0.59	0.29

Intersection Summary

Appendix B: Cumulative Projects List

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation							
							Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
1	4471 Inglewood Bl	Culver City	School	537	800	Students	275		55	45	100	31	36	67
2	9919 Jefferson Bl	Culver City	Office	710	62.560	ksf	609		62	10	73	12	60	72
2	11924 Washington Bl	Culver City	Apartments	220	98	du	1,378		36	47	83	70	53	123
			Retail	820	11.250	ksf								
			Restaurant	932	3.750	ksf								
3	11259 Washington Bl	Culver City	Office	710	4.022	ksf	39		4	1	5	1	4	5
4	11281 Washington Pl	Culver City	Apartments	220	14	du	261		4	5	9	13	12	25
			Retail	820	4.897	ksf								
5	6161 Centinela Bl	Culver City	Office	710	281.194	ksf	2,739		281	46	327	52	272	324
6	6221 Bristol Pkwy	Culver City	Commercial	820	20.767	ksf	2,795		44	232	276	192	77	269
			Apartments	220	712	du								
7	445 N Douglas Street [a]	El Segundo	Office	710	106.000	ksf	1,148	252	113	23	136	23	110	133
			Warehouse Industrial Data Center	160	117.000	ksf								
8	2100 El Segundo Boulevard [a]	El Segundo	Office	710	1,751.921	ksf	22,815	10,753	1,845	340	2,185	599	1,998	2,597
			Warehouse	150	74	ksf								
			Retail	820	148.960	ksf								
9	455 Continental Boulevard and 1955 E. Grand Avenue [a]	El Segundo	Office Tower	710	300.000	ksf	2,922	663	299	49	348	55	290	345
10	2125 Campus Drive [a]	El Segundo	Hotel	310	121.450	ksf	1,634	1,135	98	33	131	49	97	146
			Office	710	63.550	ksf								

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation							
							Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
11	540 E Imperial Avenue	El Segundo	Apartments	220	58	units	447	493	6	20	27	27	20	48
12	500 S Douglas Street and 2330 Utah Avenue	El Segundo	Office	710	80.000	ksf	779		86	13	98	93	102	195
13	123 Nevada Street	El Segundo	Condominiums	221	4	units	22	20	1	1	2	1	1	2
14	140 Sheldon Street	El Segundo	Warehouse	150	7.116	ksf								
15	740 N. Sepulveda	El Segundo	Fast food restaurant with drive-through	934	4.696	ksf								
16	707 Pacific Coast Highway	El Segundo	Hotel	310	116	rooms	963	950	31	22	53	36	32	68
17	1301 E. El Segundo Boulevard	El Segundo	Warehouse	150	19.289	ksf								
			Office	710	6.266	ksf								
18	2120 E. Rosecrans Avenue	El Segundo	Office	710	240.000	ksf	2,338		257	38	295	278	307	586
			Studio and Production Facilities		66.000	ksf								
			Retail	820	7.000	ksf	264	322	4	2	7	14	14	28
19	400 S. PCH	El Segundo	Golf range	430	71.000	ksf								
20	140 Oregon Street	El Segundo	Office	710	70.000	ksf	682		75	11	86	81	90	171
21	401-615 N. PCH	El Segundo	Apartments	220	263	units	2,025	2,236	29	92	121	124	92	216
			Retail	820	11.000	ksf	415	506	7	4	10	21	22	43
22	212 Eucalyptus Dr.	El Segundo	Office	710	13.485	ksf	131		14	2	17	16	17	33
			Coffee shop	936	0.634	ksf								
23	2221 E. Park Place	El Segundo	Office	710	27.478	ksf	268		29	4	34	32	35	67
24	1225 E. Mariposa Avenue	El Segundo	Condominiums	221	15	units	83	74	3	4	7	4	4	8

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation							
							Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
25	14321 Van Ness Ave [a]	Gardena	Townhomes	210	40	townhomes	378	382	8	22	30	25	15	40
26	1720 West 135th Street [a]	Gardena	Industrial	110	100.438	ksf	498	200	62	8	70	8	55	63
27	13919 Normandie Ave [a]	Gardena	Single Room Occupancy	220	20	units	146	163	2	7	9	7	4	11
28	525 E Rosecrans Avenue	Gardena	Retail	820	3.140	ksf	119	145	2	1	3	6	6	12
29	4500 West 116th Street [a]	Hawthorne	Condominiums	221	116	units	631	570	11	31	42	31	20	51
30	13806 Hawthorne Boulevard [a]	Hawthorne	Apartments	220	171	units	1,569	1,464	51	66	117	66	67	133
			Office	710	32.500	ksf								
31	Crenshaw Boulevard/Jack Northop Avenue [c]	Hawthorne	Dwelling Units	220	230	units	2,099	2,325	44	99	143	103	62	165
32			Restaurant	932	3.700	ksf								
33	11519 Acacia Ave [a]	Hawthorne	Hotel	310	119	rooms	995	975	33	23	56	36	35	71
34	3222 W. 139th Street	Hawthorne	Condominiums	221	7	units	39	34	1	2	3	2	2	4
35	3670 W. Imperial Highway	Hawthorne	Condominiums	221	96	units	528	470	19	24	43	24	24	48
36	13403 Kornblum Avenue	Hawthorne	Condominiums	221	12	units	66	59	2	3	5	3	3	6
37	664 E. Manchester Terrace [a]	Inglewood	Condominiums	221	4	units	22	20	0	1	1	1	1	2
38	844 N. Centinela Avenue [a]	Inglewood	Apartments	220	4	units	29	33	0	2	2	1	1	2
39	501 E. 99th Street [a]	Inglewood	Condominiums	221	12	units	65	59	1	3	4	3	2	5
40	921 N. Edgewood Street [a]	Inglewood	Apartments	220	38	units	278	309	4	13	17	13	8	21
41	222 W Spruce Avenue [a]	Inglewood	Apartments	220	10	units	73	81	1	4	5	4	2	6
42	961 E 68th Street [a]	Inglewood	Condominiums	221	3	units	16	15	0	1	1	1	0	1
43	417 N Market Street [a]	Inglewood	Condominiums	221	12	units	65	59	1	3	4	3	2	5
44	819 E La Palma Drive [a]	Inglewood	Apartments	220	5	units	37	41	0	2	2	2	1	3

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation: Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
45	814 N Market Street [a]	Inglewood	Congregate Living Facility	253	18	beds	36	49	1	0	1	2	1	3
46	411 E Hazel Street [a]	Inglewood	Apartments	220	18	units	132	147	2	6	8	6	4	10
47	329 E. Hazel Street [a]	Inglewood	Condominiums	221	4	units	22	20	0	1	1	1	1	2
48	11111 S. Prairie Avenue [d]	Inglewood	Hotel	310	120	rooms	1,003	983	33	23	56	37	35	72
49	3920 W 108th Street [a]	Inglewood	Apartments	220	3	units	22	24	0	1	1	1	1	2
50	125 E. Spruce Avenue [a]	Inglewood	Apartments	220	7	units	51	57	1	2	3	3	1	4
51	704 N. Market Street [a]	Inglewood	Apartments	220	12	units	88	98	1	5	6	4	3	7
52	408 E. Warren Lane [a]	Inglewood	Commercial	820	2.542	ksf	96	117	1	1	2	5	5	10
53	508 S. Eucalyptus Avenue [a]	Inglewood	Senior Housing	252	40	units	148	129	3	5	8	6	4	10
54	417-433 Centinela Avenue [a]	Inglewood	Apartments	220	116	units	849	944	12	41	53	41	24	65
55	721 N. La Brea Avenue [a]	Inglewood	Commercial	820	1.312	ksf	4	5	0	0	0	0	0	0
			Commercial	820	-1.210	ksf								
56	101,125,139,140,150 Market Street [a]	Inglewood	Retail	820	40.000	ksf	1,510	1,845	24	14	38	73	79	152
57	113-133 Plymouth Street [a]	Inglewood	Townhomes	210	20	units	189	191	4	11	15	13	7	20
58	333 N. Prairie Avenue [a]	Inglewood	Townhomes	210	310	units	2,926	2,957	57	172	229	193	114	307
59	705-715 N. Centinela Avenue [a]	Inglewood	Self-Storage	151	81.613	ksf	123	159	5	3	8	7	7	14
60	3660 W. 107th Street [a]	Inglewood	Dwelling Units	220	3	units	22	24	0	1	1	1	1	2
61	614 E. Hyde Park Boulevard [a]	Inglewood	Congregate Living Facility	253	18	beds	36	49	1	0	1	2	1	3
62	1050 S. Prairie Avenue [e]	Inglewood	Sports Stadium	N/A	9,000	spaces	84,220	67,846	3,940	1,652	5,592	2,324	4,304	6,628

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation							
							Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
			Venue	N/A	6,000	seats								
			Dwelling Units	220	2,500	units								
			Retail	820	890.000	ksf								
			Office	710	780.000	ksf								
			Hotel	310	300	rooms								
			Open Space	411	1,089.000	acres								
			Civic Site	411	30.000	ksf								
63	D3 SITE (La Brea Avenue/Florence Avenue) [a]	Inglewood	Apartments	220	243	units	3,289	3,823	50	100	150	159	129	288
			Retail	820	40.000	ksf								
64	101 S La Brea [a]	Inglewood	Philharmonic Association	495	25.500	ksf	735	1,847	30	15	45	28	31	59
65	316 Hardy Street [a]	Inglewood	Condominiums	221	5	units	27	25	1	1	2	1	1	2
66	943-959 W Hyde Park Boulevard [a]	Inglewood	Self-Storage	151	159.498	ksf	241	311	10	6	16	13	14	27
67	8911 Aviation Boulevard [a]	Inglewood	Car Rental	841	173.804	ksf	4,703	9,080	281	89	370	306	346	652
68	3900 W. Century Blvd	Inglewood	Hotel	310	4	rooms	33	33	1	1	2	1	1	2
69	9800 S. Sepulveda Boulevard [a]	Los Angeles	Hotel	310	178	rooms	1,488	1,458	50	34	84	55	52	107
70	7407 S. La Tijera Boulevard [b]	Los Angeles	Apartments	220	140	units	799	1,260	10	55	65	57	26	83
			Retail	820	2.600	ksf								
71	8740 S. La Tijera Boulevard [b]	Los Angeles	Apartments	220	137	units	508	1,115	-60	-4	-64	42	14	56
72	8521 S. Sepulveda Boulevard [b]	Los Angeles	Fast food restaurant with drive-through	934	3.999	ksf	1,271	2,464	23	69	92	84	50	134

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation							
							Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
73	8540 S. La Tijera Boulevard [b]	Los Angeles	Middle School	522	525	students	868	2,090	173	142	315	99	111	210
74	6733 Sepulveda Boulevard [a]	Los Angeles	Apartments	220	176	units	1,288	1,433	19	62	81	62	37	99
75	5208 W Centinela Avenue [a]	Los Angeles	Fast food restaurant with drive-through	934	4.642	ksf	1,093	2,860	47	46	93	38	36	74
76	6711 S Sepulveda Boulevard [a]	Los Angeles	Apartments	220	180	units	1,318	1,465	19	64	83	64	37	101
77	6855 S La Cienega Boulevard [a]	Los Angeles	Supermarket	850	22.590	ksf	1,520	4,012	25	17	42	74	74	148
78	11604 Aviation Boulevard [a][b]	Los Angeles	Condominiums	221	281	units	3,349	3,514	54	124	178	164	124	288
			Retail/Commercial	820	26.500	ksf								
			Apartments	220	112	units								
79	3816 W 54th Street [a]	Los Angeles	Office Expansion	710	1.196	ksf	12	3	1	0	1	0	1	1
80	5550 S La Brea Avenue [a]	Los Angeles	Apartments	220	32	units	234	260	3	12	15	11	7	18
81	10501 S Buford Avenue [a]	Los Angeles	Townhomes	210	11	units	104	105	2	6	8	7	4	11
82	11824 Aviation Boulevard [a]	Los Angeles	Apartments	220	36	units	264	293	4	13	17	13	7	20
83	10505 Hawthorne Boulevard [a]	Los Angeles	Apartments	220	32	units	234	260	3	12	15	11	7	18
84	10609 S Inglewood Avenue [a]	Los Angeles	Apartments	220	9	units	66	73	1	3	4	3	2	5
85	10907 S Inglewood Avenue [a]	Los Angeles	Apartments	220	4	units	29	33	0	2	2	1	1	2
86	3838 W Slauson Avenue [a]	Los Angeles	Convenience Store	851	1.060	ksf	808	1,149	33	33	66	27	25	52
87	5101 Overhill Drive [a]	Los Angeles	Condominiums	221	88	units	479	432	8	24	32	24	15	39
88	LAX Northside Project Westchester Parkway b/t Pershing Drive and Sepulveda Boulevard [h]	Los Angeles	Office	710	612.500	ksf	23,635	18,076	1,584	425	2,009	758	1,785	2,543
			Playing Fields	488	5	fields								
			Dog Park	488	1	field								
			Retail	820	270.000	ksf								

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation							
							Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
			Research and Development	760	612.500	ksf								
			Civic Site	411	215.000	ksf								
			Park	411	130.680	ksf								
89	LAX LAMP Development [f]	Los Angeles	Office	710	300	ksf	13,816	13,163	527	197	724	543	804	1,347
			Hotel	310	400	rooms								
			Retail	820	200	ksf								
			Conference Center	N/A	100	ksf								
90	1 LMU Drive	Los Angeles	School	550	7,800	students	2540		146	30	176	112	111	223
91	1 Marina Expressway [g]	Los Angeles	Mixed Use	NA					622	1,085	1,707	1,378	1,125	2,503
92	4100 Del Rey Avenue	Los Angeles	Apartments	220	77	units	512		8	31	39	35	19	54
93	138 E. Culver Boulevard	Los Angeles	Mixed Use	NA			984		18	42	60	63	52	115
94	4140 S. Glencoe Avenue	Los Angeles	Mixed Use	NA			481		11	29	39	33	23	56
95	1027 Abbot Kinney Boulevard	Los Angeles	Mixed Use	NA			654		16	9	25	25	17	42
96	1020 E. Venice Boulevard	Los Angeles	Restaurant	932	3.784	ksf	396		18	15	33	20	13	33
97	1414 S. Main Street	Los Angeles	Mixed Use	NA			421		3	6	9	26	11	40
98	9204 S. Airport Boulevard	Los Angeles	Car wash	947			824		16	16	32	51	50	101
99	4091 S. Redwood Avenue	Los Angeles	Mixed Use	NA			391		4	21	25	29	22	51
100	4210 S. Del Rey Avenue	Los Angeles	Mixed Use	NA			627		24	47	71	48	37	85
101	12777 W. Jefferson Boulevard	Los Angeles	Office	710	49.950	ksf	550		68	9	77	17	83	100
102	4040 Del Rey Avenue	Los Angeles	Mixed Use	NA			1,839		-50	139	88	149	-28	121
103	5000 S. Beethoven Street	Los Angeles	Mixed Use	NA			1,569		24	96	120	107	58	165
104	11612 W. Culver Boulevard	Los Angeles	Mixed Use	NA			447		12	26	38	28	15	43

Appendix B: Cumulative Projects List

No.	Project Location	Jurisdiction	Land Use	ITE Land Use Code	Size	Units	Estimated Trip Generation							
							Daily Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
							Week-day	Week-end	In	Out	Total	In	Out	Total
105	12964 W. Panama Street	Los Angeles	Office	710	159.000	ksf	777		72	9	81	20	71	91
106	595 Venice Boulevard	Los Angeles	Mixed Use	NA			556		50	6	56	15	70	85
107	12575 W. Beatrice Street	Los Angeles	Office	710	199.500	ksf	1,946		242	33	275	57	277	334
108	4721 S. Alla Road	Los Angeles	Office	710	118.352	ksf	267		38	5	43	9	48	57
109	5748 Mesmer	Los Angeles	Automobile parts and service center	943	113.163	ksf	2,694		139	44	183	90	176	266
110	13488 W. Maxella Avenue	Los Angeles	Apartments	220	65	units	362		6	23	29	26	14	40
111	12870 W. Panama Street	Los Angeles	School	520	532	students	1,320		263	216	479	79	89	168
112	13400 W. Maxella Avenue [g]	Los Angeles	Mixed Use	NA			2,079		60	236	296	115	-32	83
113	11811 S. Teale Street	Los Angeles	Office	710	10.925	ksf	121		15	2	17	5	26	31
114	5405 S. Jandy Place	Los Angeles	Office	710	93.950	ksf	613		86	10	96	30	154	184
115	12331 W. Palms Boulevard [g]	Los Angeles	Mixed Use	NA			303		4	14	18	16	12	28
116	5208 W. Centinela Avenue	Los Angeles	Fast food restaurant with drive-through	934	4.642	ksf	1,093		47	46	93	38	36	74
117	3233 S. Thatcher Avenue	Los Angeles	Apartments	220	98	units	212		8	13	21	10	9	19
118	12555 W. Jefferson Boulevard	Los Angeles	Office	710	20.981	ksf	542		28	8	36	16	41	57
119	11869 S. Teale Street	Los Angeles	Office	710	29.819	ksf	240		35	5	40	10	59	69
120	11405 Venice Boulevard	Los Angeles	Apartments	220	85	units	204		11	4	15	7	15	22
121	204 N. Venice Boulevard	Los Angeles	Mixed Use	NA			911		39	49	88	63	61	124
122	480 Washington Boulevard	Los Angeles County	Office	710	6.000	ksf	58		6	1	7	7	8	15
123	13555 Fiji Way	Los Angeles County	Charter Boat		5	boats								

Notes:
ksf= one thousand square feet.
[a] Trip generation rates based on rates found from *Trip Generation, 10th Edition,* Institute of Transportation Engineers, 2017.
[b] Trip generation rates based on information provided by LADOT.
[c] Trip generation rates based on information in Downtown Hawthorne Specific Plan Environmental Impact Report.
[d] Trip generation rates based on information from Transit Oriented Development Plan for Downtown Inglewood and Fairview Heights Environmental Impact Report.
[e] Trip generation rates based on information from Hollywood Park Stadium Alternative Project (February 2015). Trip generation excludes casino trips from 2015 analysis, as Casino was already built when traffic counts for IBEC were taken in springs 2018.
[f] Trip generation rates based on trip rates from Environmental Impact Report for Los Angeles International Airport (LAX) Land Access Modernization Program (LAMP). An annual growth rate was developed using the existing 2015 volumes and future year 2024 from the LAMP EIR. This growth rate was applied to 2015 volumes to develop existing base volumes for 2018, and the difference between 2018 volumes and 2024 volumes are shown as the related project trips in the above table. Related project trips for weekends and late night weekdays were developed using ratios from counts taken during the LAMP EIR showing relative activity near LAX.
[g] Specific size of project not provided.
[h] Trip generation rates based on information from LAX Northside Environmental Impact Report.
Given the delay in the implementation of the project and magnitude of this development, only first phase of this project included in 2028 Scenario.
Prepared by Fehr & Peers, 2020.

Appendix C: Trip Generation Update Memorandum

RICONDO®

MEMORANDUM

Date: January 8, 2021

To: Anthony Skidmore
CDM

From: Darrin McKenna

Subject: ATMP TRIP GENERATION UPDATE

This memorandum provides a summary of the trip generation differences between the Airfield & Terminal Modernization Project (ATMP) Environmental Impact Report (EIR) traffic analyses and the non-California Environmental Quality Act (non-CEQA) analysis.

Trip Generation

The original EIR trip generation estimates for the future conditions are developed using calibrated mode splits representing the departures, arrivals, and overall airport vehicle peak hours. These calibrated mode splits are based on previously completed 2018 operational analysis completed for LAWA using a variety of data including loop detector counts, Automatic Vehicle Identification (AVI) data, Transportation Networking Company (TNC) transaction data, taxi transaction data, and closed-circuit television video. As part of the 2018 analysis, passenger mode splits for the three landside peak activity hours were developed, there are Departures Peak (approx. 6:00 am – 700 am), Arrival Peak (approx. 9:00 pm – 10:00 pm), and the Overall Airport Peak (approx. 11:00 am – 12:00 pm). To estimate the 24-hour airport trip generation for the EIR, these three calibrated mode splits are assumed to represent different periods of the day, as shown in Table 1. The calibrated mode splits are then forecast forward based on existing trends in changes to how passengers access the airport. To develop the estimates for the vehicle volumes the forecast mode splits are applied to number of passengers for each hour and the calibrated vehicle occupancies. The resulting vehicle volumes were used in the ATMP EIR analysis.

TABLE 1 ATMP EIR ASSUMED MODE SPLIT THROUGHOUT DAY

Hour Starting	Mode Split
12:00 AM	Arrivals Peak
1:00 AM	Arrivals Peak
2:00 AM	Departures Peak
3:00 AM	Departures Peak
4:00 AM	Departures Peak
5:00 AM	Departures Peak
6:00 AM	Departures Peak
7:00 AM	Departures Peak
8:00 AM	Departures Peak
9:00 AM	Overall Airport Peak
10:00 AM	Overall Airport Peak
11:00 AM	Overall Airport Peak
12:00 PM	Overall Airport Peak
1:00 PM	Overall Airport Peak
2:00 PM	Overall Airport Peak
3:00 PM	Overall Airport Peak
4:00 PM	Overall Airport Peak
5:00 PM	Arrivals Peak
6:00 PM	Arrivals Peak
7:00 PM	Arrivals Peak
8:00 PM	Arrivals Peak
9:00 PM	Arrivals Peak
10:00 PM	Arrivals Peak
11:00 PM	Arrivals Peak

Source: Ricondo & Associates, Inc., November 2020.

Based on the off-airport analysis the vehicle estimates appear to be too conservative. For the AM time period from 6:00 AM to 9:00 AM the Departures Peak mode split is applied throughout. The departures mode split is based on the 6:00 AM to 7:00 AM hour from the 2018 data. This mode split was noted for having a high proportion of single party vehicles as well as low occupancies in the vehicles generating a large number of vehicles per passenger. To investigate the vehicle volume estimate, Ricondo looked at the data for the 7:00 AM to 9:00 AM data from 2018 and performed a rough estimate of the mode split for these hours based on 2018 data. Compared with a calibrated mode split analysis which was conducted for Departures Peak Hour (6:00 am - 7:00 am), the result was the mode splits for 7:00 AM to 9:00 AM were generally closer to that of the Overall Airport Peak Hour and generated fewer vehicles per passenger. As a result of this the decision was made to adjust the mode split for the 7:00 AM to 9:00 AM portions of the AM peak period reducing the vehicle volumes generated to a more reasonable level.

Explanation for Conservative Estimate

The calibration peak hours are based on the peak vehicle volumes rather than the peak passenger volumes and if the passenger peak does not align with the vehicle peak hour the estimates will be conservative. For the Departures peak hour based on passengers, the passenger volume is approximately 26% larger than the number of passengers during the vehicle peak hour (6:00 am – 7:00 am). When comparing to the 2018 data, using the Departures peak hour mode split during the (7:00 – 9:00 am) period where departing passenger volumes peak resulted in many more vehicles being generated compared to the 2018 counts. A similar comparison was conducted for the Airport Peak Hour and the Arrivals Peak Hour which showed a much smaller effect from the vehicle peak hours not aligning with the passenger peak hours.

The Departures Peak Hour from 6:00 AM to 7:00 AM has a few unique factors contributing to the conservative mode split. The roadway network at that time is relatively unconstrained allowing demand to enter the airport more easily. In addition, during the departures heavy time vehicles are more likely to use the underutilized arrivals level for drop off which makes calibrating vehicle occupancies more challenging. Ricondo attempts to compensate and estimate this impact by assuming a percentage of passengers use the opposite level. The limited amount of CCTV available for this hour added an additional challenge estimating the number of people using the Arrivals level. Employees entering the CTA to park may be included as well, making the number of vehicles per passenger appear to be higher. All of these factors contribute to making the vehicle per passenger for 6:00 AM to 7:00 AM the highest of the peak hours. Applying this mode split to the 7:00 AM to 9:00 AM hours appears to be overly conservative and applying the mode split typical of the overall Airport Peak Hour is more reasonable.

TNC Rematch

The EIR trip generation estimate conservatively assumes that there are no Rematch operations for TNC vehicles in the CTA. Each TNC drop off and pick up is assumed to be served by a separate vehicle. In the past LAX has used TNC Rematch to reduce the volumes of TNCs entering the CTA by allowing a TNC to pick up a passenger after completing their drop off and without leaving the CTA. For example, prior to LAX-it, a TNC driver dropping off a passenger at Terminal 2, could receive a notification from the app Rematching them with a new passenger at to Terminal 4. Without leaving the CTA, the driver would pick up their new passenger at Terminal 4 and then depart airport. Over the course of the day this system can reduce the number of vehicles entering the airport for pickups by approximately 50-percent, with some hours reducing the pickups vehicles entering the CTA by more than 80-percent. For the non-CEQA analysis Rematch factors were applied to the TNC pickup operations occurring at the CTA and ITF West, reducing the trip generation for TNC Pickups at both facilities. If sufficient drop off vehicles were available to meet pick up demand, the CTA pickup vehicles were reduced up to 90% and ITF West by up to 50%. This change resulted in a reduction in the number of vehicles accessing the airport throughout the day to be more realistic to the expected TNC operations in the future.

cc: John Muggeridge, Fatemeh Ranaiefar – Fehr & Peers
Joe Huy, Joe Birge - Ricondo
17-14-1031

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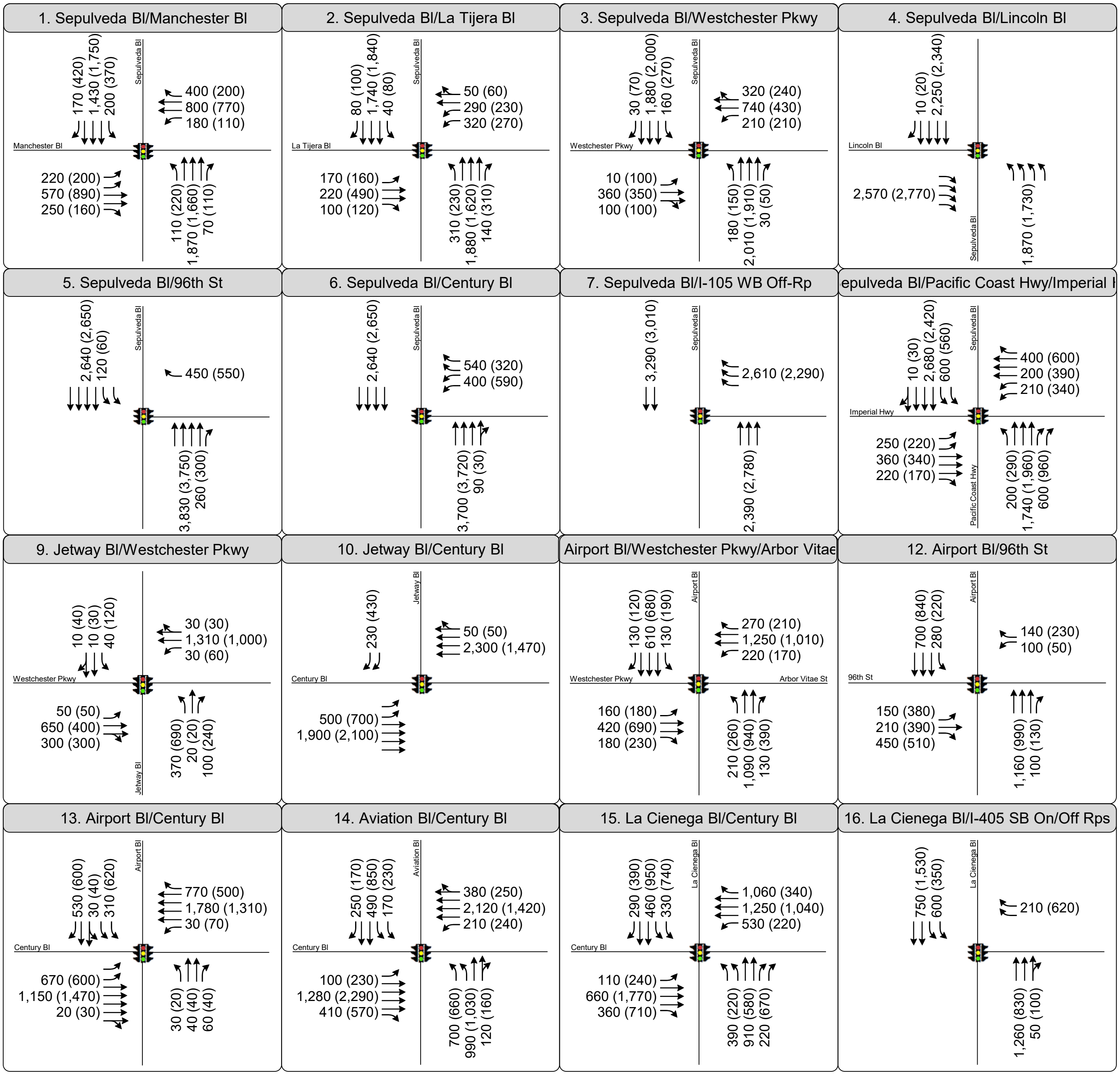
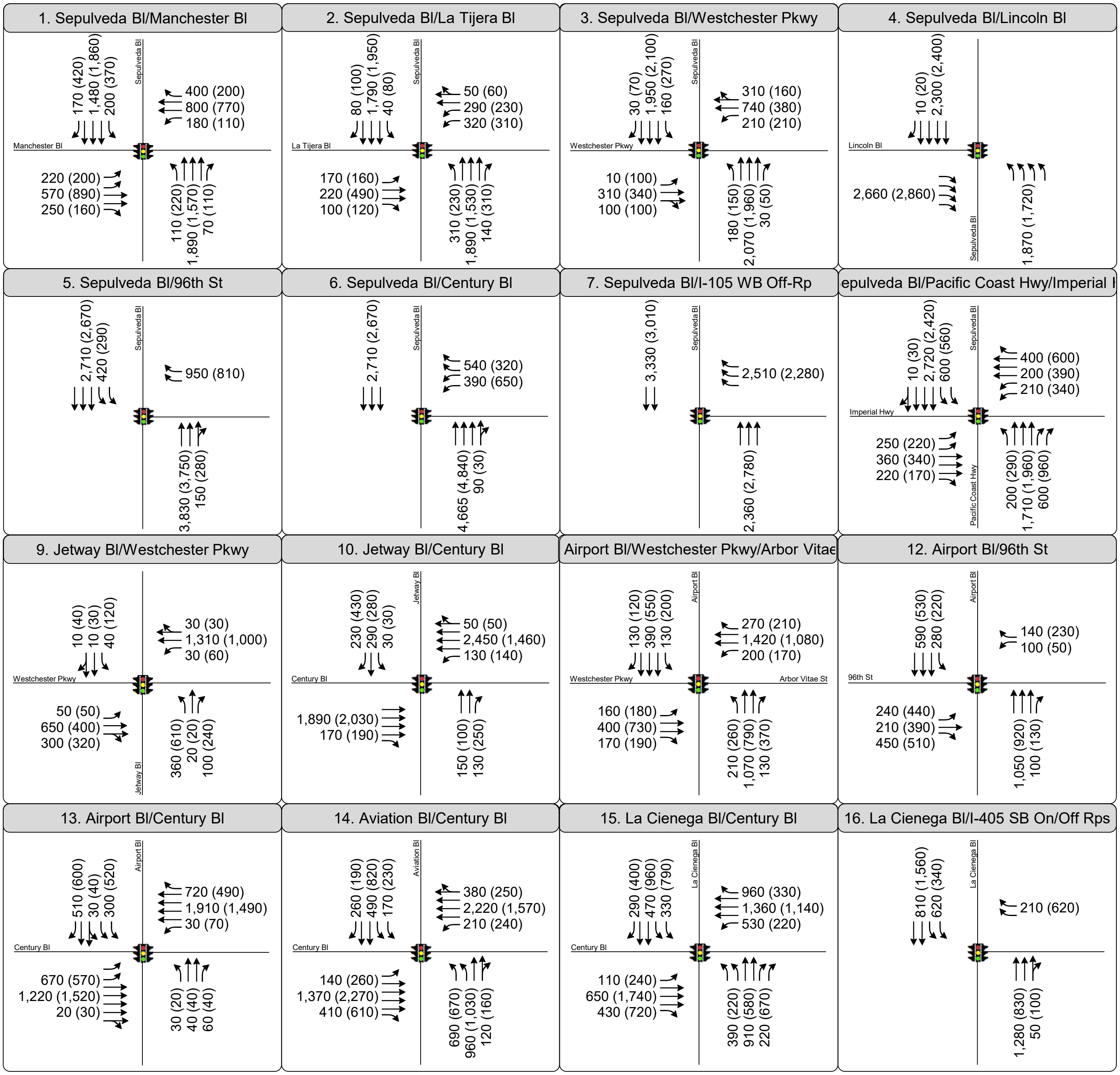
Appendix D: 2028 Conditions Study Intersection Lane Configurations and Volumes



Appendix D

AM (PM) Peak Hour Turning Movement Volumes and Lane Configurations
Projected Future Conditions Baseline (2028 Baseline)



Appendix G

AM (PM) Peak Hour Turning Movement Volumes and Lane Configurations
Projected Future Conditions with Proposed Project (2028 with Project)

Appendix E: 2028 Conditions LOS Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	570	250	180	800	400	110	1870	70	200	1430	170
Future Volume (veh/h)	220	570	250	180	800	400	110	1870	70	200	1430	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	227	588	105	186	825	289	113	1928	33	206	1474	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	750	334	295	884	394	246	2013	809	217	2073	643
Arrive On Green	0.08	0.21	0.21	0.12	0.25	0.25	0.07	0.39	0.39	0.09	0.41	0.41
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	227	588	105	186	825	289	113	1928	33	206	1474	65
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	7.8	18.8	5.3	5.7	27.3	20.1	4.3	44.1	0.4	9.4	28.9	3.0
Cycle Q Clear(g_c), s	7.8	18.8	5.3	5.7	27.3	20.1	4.3	44.1	0.4	9.4	28.9	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	750	334	295	884	394	246	2013	809	217	2073	643
V/C Ratio(X)	0.88	0.78	0.31	0.63	0.93	0.73	0.46	0.96	0.04	0.95	0.71	0.10
Avail Cap(c_a), veh/h	259	882	394	295	888	396	250	2013	809	217	2073	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	44.8	25.3	47.7	44.1	41.4	23.0	35.4	5.4	33.0	29.8	22.1
Incr Delay (d2), s/veh	26.7	5.7	1.3	4.2	16.8	8.3	0.9	9.3	0.1	46.6	2.1	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(95%),veh/ln	7.7	13.5	4.8	9.2	19.8	13.4	3.3	25.3	0.4	11.0	17.6	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	50.5	26.7	51.9	60.9	49.7	23.9	44.6	5.4	79.7	31.9	22.4
LnGrp LOS	F	D	C	D	E	D	C	D	A	E	C	C
Approach Vol, veh/h		920			1300			2074			1745	
Approach Delay, s/veh		55.4			57.1			42.9			37.2	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	55.1	15.6	36.3	16.5	53.7	20.3	31.5
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 9.1	46.5	* 9	* 30	* 10	45.4	9.4	29.8
Max Q Clear Time (g_c+I1), s	6.3	30.9	9.8	29.3	11.4	46.1	7.7	20.8
Green Ext Time (p_c), s	0.1	9.3	0.0	0.6	0.0	0.0	0.1	4.5

Intersection Summary	
HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

Notes

* HCM 6th 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)	200	890	160	110	770	200	220	1660	110	370	1750	420
Future Volume (veh/h)	200	890	160	110	770	200	220	1660	110	370	1750	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	918	53	113	794	93	227	1711	42	381	1804	264
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	894	399	191	876	391	236	1622	619	323	1885	585
Arrive On Green	0.08	0.25	0.25	0.07	0.25	0.25	0.10	0.32	0.32	0.15	0.37	0.37
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	206	918	53	113	794	93	227	1711	42	381	1804	264
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	7.0	30.2	2.3	3.2	26.0	5.6	10.8	38.1	0.7	17.7	41.4	15.1
Cycle Q Clear(g_c), s	7.0	30.2	2.3	3.2	26.0	5.6	10.8	38.1	0.7	17.7	41.4	15.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	894	399	191	876	391	236	1622	619	323	1885	585
V/C Ratio(X)	0.79	1.03	0.13	0.59	0.91	0.24	0.96	1.06	0.07	1.18	0.96	0.45
Avail Cap(c_a), veh/h	259	894	399	194	888	396	236	1622	619	323	1885	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	44.9	18.7	52.2	43.9	36.2	32.2	40.9	8.1	37.9	36.9	28.6
Incr Delay (d2), s/veh	15.6	37.0	0.4	4.7	13.3	0.7	37.5	34.7	0.1	108.5	12.8	2.5
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(95%),veh/ln	6.4	24.8	2.2	6.2	18.6	4.0	10.5	27.8	0.6	28.6	26.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.2	81.9	19.0	56.8	57.2	36.8	69.7	75.6	8.3	146.5	49.7	31.1
LnGrp LOS	E	F	B	E	E	D	E	F	A	F	D	C
Approach Vol, veh/h		1177			1000			1980			2449	
Approach Delay, s/veh		77.0			55.3			73.5			62.7	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	50.6	15.6	36.0	24.0	44.4	15.2	36.4
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 12	44.1	* 9	* 30	* 18	37.9	9.0	30.2
Max Q Clear Time (g_c+I1), s	12.8	43.4	9.0	28.0	19.7	40.1	5.2	32.2
Green Ext Time (p_c), s	0.0	0.7	0.0	1.4	0.0	0.0	0.1	0.0

Intersection Summary			
HCM 6th Ctrl Delay			67.4
HCM 6th LOS			E

Notes

* HCM 6th 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)	170	220	100	320	290	50	310	1880	140	40	1740	80
Future Volume (veh/h)	170	220	100	320	290	50	310	1880	140	40	1740	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	1.00		0.96	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	173	224	45	327	296	32	316	1918	108	41	1776	43
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	332	748	443	230	678	73	244	2432	851	172	2103	749
Arrive On Green	0.07	0.21	0.21	0.07	0.21	0.21	0.05	0.32	0.32	0.04	0.41	0.41
Sat Flow, veh/h	1781	3554	1517	3456	3222	345	1781	5106	1565	1781	5106	1562
Grp Volume(v), veh/h	173	224	45	327	162	166	316	1918	108	41	1776	43
Grp Sat Flow(s),veh/h/ln	1781	1777	1517	1728	1777	1790	1781	1702	1565	1781	1702	1562
Q Serve(g_s), s	6.0	4.8	2.0	6.0	7.1	7.3	7.0	30.8	3.9	1.2	28.2	1.3
Cycle Q Clear(g_c), s	6.0	4.8	2.0	6.0	7.1	7.3	7.0	30.8	3.9	1.2	28.2	1.3
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	748	443	230	374	377	244	2432	851	172	2103	749
V/C Ratio(X)	0.52	0.30	0.10	1.42	0.43	0.44	1.30	0.79	0.13	0.24	0.84	0.06
Avail Cap(c_a), veh/h	332	1027	562	230	513	517	244	2432	851	207	2103	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.64	0.64	0.64
Uniform Delay (d), s/veh	27.3	29.9	23.5	42.0	30.9	30.9	21.6	26.5	13.4	18.4	23.9	12.6
Incr Delay (d2), s/veh	1.5	0.2	0.1	212.2	0.8	0.8	140.1	0.6	0.1	0.5	2.9	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(95%),veh/ln	5.3	3.6	1.2	15.7	5.4	5.6	16.5	15.7	2.2	0.8	15.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	30.2	23.6	254.2	31.7	31.7	161.7	27.1	13.4	18.8	26.7	12.7
LnGrp LOS	C	C	C	F	C	C	F	C	B	B	C	B
Approach Vol, veh/h		442			655			2342			1860	
Approach Delay, s/veh		29.0			142.8			44.7			26.2	
Approach LOS		C			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	24.9	13.0	42.1	10.0	24.9	7.2	47.9
Change Period (Y+Rc), s	4.0	* 6	* 6	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	6.0	* 26	* 7	* 30	6.0	* 26	5.0	* 34
Max Q Clear Time (g_c+I1), s	8.0	9.3	9.0	30.2	8.0	6.8	3.2	32.8
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	1.3	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	490	120	270	230	60	230	1620	310	80	1840	100
Future Volume (veh/h)	160	490	120	270	230	60	230	1620	310	80	1840	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.94	1.00		0.94	1.00		0.98	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	168	516	69	284	242	32	242	1705	274	84	1937	60
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	423	931	477	269	856	111	223	2044	746	183	1896	682
Arrive On Green	0.07	0.26	0.26	0.08	0.27	0.27	0.03	0.13	0.13	0.05	0.37	0.37
Sat Flow, veh/h	1781	3554	1485	3456	3135	408	1781	5106	1555	1781	5106	1553
Grp Volume(v), veh/h	168	516	69	284	135	139	242	1705	274	84	1937	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1485	1728	1777	1766	1781	1702	1555	1781	1702	1553
Q Serve(g_s), s	6.0	11.3	3.0	7.0	5.4	5.6	7.0	29.3	12.7	2.6	33.4	2.0
Cycle Q Clear(g_c), s	6.0	11.3	3.0	7.0	5.4	5.6	7.0	29.3	12.7	2.6	33.4	2.0
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	423	931	477	269	485	482	223	2044	746	183	1896	682
V/C Ratio(X)	0.40	0.55	0.14	1.06	0.28	0.29	1.08	0.83	0.37	0.46	1.02	0.09
Avail Cap(c_a), veh/h	423	1027	517	269	533	530	223	2044	746	195	1896	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.34	0.34	0.34	0.33	0.33	0.33
Uniform Delay (d), s/veh	22.7	28.7	22.0	41.5	25.7	25.8	24.7	36.1	22.5	21.4	28.3	14.8
Incr Delay (d2), s/veh	0.6	0.5	0.1	70.6	0.3	0.3	59.9	1.5	0.5	0.6	17.9	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(95%),veh/ln	4.7	8.3	1.8	9.5	4.0	4.1	9.5	17.0	7.5	1.9	19.9	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	29.2	22.1	112.1	26.0	26.1	84.6	37.6	23.0	22.0	46.1	14.9
LnGrp LOS	C	C	C	F	C	C	F	D	C	C	F	B
Approach Vol, veh/h		753			558			2221			2081	
Approach Delay, s/veh		27.2			69.9			40.9			44.3	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	30.6	11.0	38.4	11.0	29.6	8.4	41.0
Change Period (Y+Rc), s	4.0	* 6	* 6	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	6.0	* 27	* 5	* 31	7.0	* 26	5.0	* 33
Max Q Clear Time (g_c+I1), s	8.0	7.6	9.0	35.4	9.0	13.3	4.6	31.3
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	2.9	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	43.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	360	100	210	740	320	180	2010	30	160	1880	30
Future Volume (veh/h)	10	360	100	210	740	320	180	2010	30	160	1880	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	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	10	371	73	216	763	274	186	2072	15	165	1938	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	725	141	326	764	274	228	2207	786	188	2207	700
Arrive On Green	0.01	0.25	0.25	0.07	0.30	0.30	0.06	0.43	0.43	0.11	0.86	0.86
Sat Flow, veh/h	1781	2953	574	1781	2546	914	1781	5106	1574	1781	5106	1574
Grp Volume(v), veh/h	10	222	222	216	532	505	186	2072	15	165	1938	13
Grp Sat Flow(s),veh/h/ln	1781	1777	1750	1781	1777	1684	1781	1702	1574	1781	1702	1574
Q Serve(g_s), s	0.4	9.7	9.9	6.0	26.9	27.0	5.0	34.9	0.4	4.9	19.2	0.1
Cycle Q Clear(g_c), s	0.4	9.7	9.9	6.0	26.9	27.0	5.0	34.9	0.4	4.9	19.2	0.1
Prop In Lane	1.00		0.33	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	102	436	430	326	533	505	228	2207	786	188	2207	700
V/C Ratio(X)	0.10	0.51	0.52	0.66	1.00	1.00	0.81	0.94	0.02	0.88	0.88	0.02
Avail Cap(c_a), veh/h	179	513	506	326	533	505	228	2207	786	188	2207	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.46	0.46	0.46
Uniform Delay (d), s/veh	27.6	29.3	29.3	26.8	31.5	31.5	20.4	24.4	11.4	20.1	4.8	3.3
Incr Delay (d2), s/veh	0.4	0.9	1.0	4.9	38.6	39.8	19.9	9.4	0.0	19.2	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	7.5	7.5	3.1	23.1	22.3	5.9	21.1	0.3	4.5	4.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	30.2	30.3	31.7	70.1	71.3	40.2	33.8	11.5	39.3	7.4	3.3
LnGrp LOS	C	C	C	C	E	E	D	C	B	D	A	A
Approach Vol, veh/h		454			1253			2273			2116	
Approach Delay, s/veh		30.2			64.0			34.2			9.8	
Approach LOS		C			E			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	43.9	5.1	32.0	9.0	43.9	10.0	27.1
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5	4.0	* 5	4.0	* 5
Max Green Setting (Gmax), s	5.0	* 35	5.0	* 27	5.0	* 35	6.0	* 26
Max Q Clear Time (g_c+I1), s	7.0	21.2	2.4	29.0	6.9	36.9	8.0	11.9
Green Ext Time (p_c), s	0.0	10.5	0.0	0.0	0.0	0.0	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	350	100	210	430	240	150	1910	50	270	2000	70
Future Volume (veh/h)	100	350	100	210	430	240	150	1910	50	270	2000	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.98	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	102	357	70	214	439	153	153	1949	23	276	2041	34
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	251	725	140	312	631	217	223	2094	726	248	2264	779
Arrive On Green	0.06	0.25	0.25	0.06	0.25	0.25	0.06	0.41	0.41	0.18	0.89	0.89
Sat Flow, veh/h	1781	2952	571	1781	2569	886	1781	5106	1556	1781	5106	1558
Grp Volume(v), veh/h	102	213	214	214	302	290	153	1949	23	276	2041	34
Grp Sat Flow(s),veh/h/ln	1781	1777	1746	1781	1777	1678	1781	1702	1556	1781	1702	1558
Q Serve(g_s), s	3.8	9.3	9.5	5.0	13.9	14.2	4.5	32.8	0.7	8.0	20.3	0.2
Cycle Q Clear(g_c), s	3.8	9.3	9.5	5.0	13.9	14.2	4.5	32.8	0.7	8.0	20.3	0.2
Prop In Lane	1.00		0.33	1.00		0.53	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	436	429	312	436	412	223	2094	726	248	2264	779
V/C Ratio(X)	0.41	0.49	0.50	0.69	0.69	0.70	0.69	0.93	0.03	1.11	0.90	0.04
Avail Cap(c_a), veh/h	251	513	504	312	513	485	223	2094	726	248	2264	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.34	0.34	0.34
Uniform Delay (d), s/veh	24.6	29.1	29.2	29.8	30.9	31.0	18.8	25.3	13.0	19.5	4.0	2.3
Incr Delay (d2), s/veh	1.1	0.8	0.9	6.1	3.2	3.7	8.6	9.0	0.1	67.9	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	7.0	7.0	4.2	10.1	9.8	4.0	20.1	0.4	10.1	3.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	30.0	30.1	36.0	34.1	34.7	27.4	34.3	13.1	87.4	6.3	2.3
LnGrp LOS	C	C	C	D	C	C	C	C	B	F	A	A
Approach Vol, veh/h		529			806			2125			2351	
Approach Delay, s/veh		29.2			34.8			33.6			15.8	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	44.9	9.0	27.1	12.0	41.9	9.0	27.1
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5	4.0	* 5	4.0	* 5
Max Green Setting (Gmax), s	5.0	* 36	5.0	* 26	8.0	* 33	5.0	* 26
Max Q Clear Time (g_c+I1), s	6.5	22.3	5.8	16.2	10.0	34.8	7.0	11.5
Green Ext Time (p_c), s	0.0	10.9	0.0	2.4	0.0	0.0	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	2570	1870	0	2250	10
Future Volume (veh/h)	0	2570	1870	0	2250	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	2677	1948	0	2344	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	0	2542	0	0	
Arrive On Green	0.00	0.00	0.39	0.00	0.00	0.00
Sat Flow, veh/h	0		6484	1948	0	
Grp Volume(v), veh/h	0.0		1948	24.5	0.0	
Grp Sat Flow(s),veh/h/ln			1621	C		
Q Serve(g_s), s			23.5			
Cycle Q Clear(g_c), s			23.5			
Prop In Lane			1.00			
Lane Grp Cap(c), veh/h			2542			
V/C Ratio(X)			0.77			
Avail Cap(c_a), veh/h			3458			
HCM Platoon Ratio			1.00			
Upstream Filter(I)			1.00			
Uniform Delay (d), s/veh			23.8			
Incr Delay (d2), s/veh			0.7			
Initial Q Delay(d3),s/veh			0.0			
%ile BackOfQ(95%),veh/ln			13.4			
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			24.5			
LnGrp LOS			C			
Approach Vol, veh/h						
Approach Delay, s/veh						
Approach LOS						

Timer - Assigned Phs			3
Phs Duration (G+Y+Rc), s			41.3
Change Period (Y+Rc), s			* 6
Max Green Setting (Gmax), s			* 48
Max Q Clear Time (g_c+I1), s			25.5
Green Ext Time (p_c), s			9.8

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

Notes
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	2770	1730	0	2340	20
Future Volume (veh/h)	0	2770	1730	0	2340	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	2827	1765	0	2388	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	0	2320	0	0	
Arrive On Green	0.00	0.00	0.36	0.00	0.00	0.00
Sat Flow, veh/h	0		6484	1765	0	
Grp Volume(v), veh/h	0.0		1765	26.1	0.0	
Grp Sat Flow(s),veh/h/ln			1621	C		
Q Serve(g_s), s			21.6			
Cycle Q Clear(g_c), s			21.6			
Prop In Lane			1.00			
Lane Grp Cap(c), veh/h			2320			
V/C Ratio(X)			0.76			
Avail Cap(c_a), veh/h			3444			
HCM Platoon Ratio			1.00			
Upstream Filter(I)			1.00			
Uniform Delay (d), s/veh			25.5			
Incr Delay (d2), s/veh			0.6			
Initial Q Delay(d3),s/veh			0.0			
%ile BackOfQ(95%),veh/ln			12.6			
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			26.1			
LnGrp LOS			C			
Approach Vol, veh/h						
Approach Delay, s/veh						
Approach LOS						

Timer - Assigned Phs	3
Phs Duration (G+Y+Rc), s	38.4
Change Period (Y+Rc), s	* 6
Max Green Setting (Gmax), s	* 48
Max Q Clear Time (g_c+I1), s	23.6
Green Ext Time (p_c), s	8.8

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	450	3830	260	120	2640
Future Volume (vph)	0	450	3830	260	120	2640
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		1.00	0.86	1.00	0.97	0.86
Frpb, ped/bikes		1.00	1.00	0.95	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1611	6408	1512	3433	6408
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1611	6408	1512	3433	6408
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	469	3990	271	125	2750
RTOR Reduction (vph)	0	0	0	77	0	0
Lane Group Flow (vph)	0	469	3990	194	125	2750
Confl. Peds. (#/hr)				15		
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		35.0	76.0	76.0	35.0	120.0
Effective Green, g (s)		35.0	76.0	76.0	35.0	120.0
Actuated g/C Ratio		0.29	0.63	0.63	0.29	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		469	4058	957	1001	6408
v/s Ratio Prot		c0.29	c0.62		0.04	0.43
v/s Ratio Perm				0.13		
v/c Ratio		1.00	0.98	0.20	0.12	0.43
Uniform Delay, d1		42.5	21.4	9.3	31.2	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		41.6	10.7	0.5	0.1	0.2
Delay (s)		84.1	32.1	9.7	31.3	0.2
Level of Service		F	C	A	C	A
Approach Delay (s)	84.1		30.7			1.6
Approach LOS	F		C			A

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	550	3750	300	60	2650
Future Volume (vph)	0	550	3750	300	60	2650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	4.0
Lane Util. Factor		1.00	0.86	1.00	0.97	0.86
Frpb, ped/bikes		1.00	1.00	0.92	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1611	6408	1460	3433	6408
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1611	6408	1460	3433	6408
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	567	3866	309	62	2732
RTOR Reduction (vph)	0	0	0	91	0	0
Lane Group Flow (vph)	0	567	3866	218	62	2732
Confl. Peds. (#/hr)				30		
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases				2		
Actuated Green, G (s)		41.0	70.0	70.0	41.0	120.0
Effective Green, g (s)		41.0	70.0	70.0	41.0	120.0
Actuated g/C Ratio		0.34	0.58	0.58	0.34	1.00
Clearance Time (s)		4.0	5.0	5.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		550	3738	851	1172	6408
v/s Ratio Prot		c0.35	c0.60		0.02	0.43
v/s Ratio Perm				0.15		
v/c Ratio		1.03	1.03	0.26	0.05	0.43
Uniform Delay, d1		39.5	25.0	12.2	26.5	0.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		46.5	24.5	0.7	0.0	0.2
Delay (s)		86.0	49.5	13.0	26.5	0.2
Level of Service		F	D	B	C	A
Approach Delay (s)	86.0		46.8			0.8
Approach LOS	F		D			A

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	400	540	3700	90	0	2640
Future Volume (vph)	400	540	3700	90	0	2640
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.0			5.0
Lane Util. Factor	0.97	0.88	0.86			0.86
Frpb, ped/bikes	1.00	0.92	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2552	6385			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2552	6385			6408
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	417	562	3854	94	0	2750
RTOR Reduction (vph)	0	0	2	0	0	0
Lane Group Flow (vph)	417	563	3946	0	0	2750
Confl. Peds. (#/hr)		80				
Turn Type	Perm	Perm	NA			NA
Protected Phases			2			2
Permitted Phases	4	4				
Actuated Green, G (s)	32.3	32.3	76.6			76.6
Effective Green, g (s)	32.3	32.3	76.6			76.6
Actuated g/C Ratio	0.27	0.27	0.64			0.64
Clearance Time (s)	6.1	6.1	5.0			5.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	924	686	4075			4090
v/s Ratio Prot			c0.62			0.43
v/s Ratio Perm	0.12	c0.22				
v/c Ratio	0.45	0.82	0.97			0.67
Uniform Delay, d1	36.5	41.1	20.6			13.7
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.4	7.8	8.5			0.9
Delay (s)	36.8	48.9	29.0			14.6
Level of Service	D	D	C			B
Approach Delay (s)	43.8		29.0			14.6
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	590	320	3720	30	0	2650
Future Volume (vph)	590	320	3720	30	0	2650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.0			5.0
Lane Util. Factor	0.97	0.88	0.86			0.86
Frpb, ped/bikes	1.00	0.91	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2526	6400			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2526	6400			6408
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	615	333	3875	31	0	2760
RTOR Reduction (vph)	0	0	1	0	0	0
Lane Group Flow (vph)	615	333	3905	0	0	2760
Confl. Peds. (#/hr)		90				
Turn Type	Perm	Perm	NA			NA
Protected Phases			2			2
Permitted Phases	4	4				
Actuated Green, G (s)	27.9	27.9	81.0			81.0
Effective Green, g (s)	27.9	27.9	81.0			81.0
Actuated g/C Ratio	0.23	0.23	0.68			0.68
Clearance Time (s)	6.1	6.1	5.0			5.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	798	587	4320			4325
v/s Ratio Prot			c0.61			0.43
v/s Ratio Perm	c0.18	0.13				
v/c Ratio	0.77	0.57	0.90			0.64
Uniform Delay, d1	43.1	40.7	16.3			11.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	4.6	1.3	3.6			0.7
Delay (s)	47.7	42.0	19.9			11.9
Level of Service	D	D	B			B
Approach Delay (s)	45.7		19.9			11.9
Approach LOS	D		B			B

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2610	2390	0	0	3290
Future Volume (vph)	0	2610	2390	0	0	3290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0			4.0
Lane Util. Factor		0.76	0.91			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		3610	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		3610	5085			3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2747	2516	0	0	3463
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2747	2516	0	0	3463
Turn Type		Perm	NA			NA
Protected Phases			2			
Permitted Phases		8				2 8
Actuated Green, G (s)		49.0	34.0			90.0
Effective Green, g (s)		49.0	34.0			87.0
Actuated g/C Ratio		0.54	0.38			0.97
Clearance Time (s)		3.0	4.0			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		1965	1921			3421
v/s Ratio Prot			c0.49			
v/s Ratio Perm		c0.76				0.98
v/c Ratio		1.40	1.31			1.01
Uniform Delay, d1		20.5	28.0			1.5
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		182.2	143.2			18.5
Delay (s)		202.7	171.2			20.0
Level of Service		F	F			B
Approach Delay (s)	202.7		171.2			20.0
Approach LOS	F		F			B

Intersection Summary			
HCM 2000 Control Delay	121.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2290	2780	0	0	3010
Future Volume (vph)	0	2290	2780	0	0	3010
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0
Lane Util. Factor		0.76	0.91			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		3610	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		3610	5085			3539
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	2436	2957	0	0	3202
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2436	2957	0	0	3202
Turn Type		Perm	NA			NA
Protected Phases			2			
Permitted Phases		8				2 8
Actuated Green, G (s)		44.0	39.0			90.0
Effective Green, g (s)		43.0	39.0			87.0
Actuated g/C Ratio		0.48	0.43			0.97
Clearance Time (s)		3.0	4.0			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		1724	2203			3421
v/s Ratio Prot			c0.58			
v/s Ratio Perm		c0.67				0.90
v/c Ratio		1.41	1.34			0.94
Uniform Delay, d1		23.5	25.5			0.5
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		189.4	157.2			5.7
Delay (s)		212.9	182.7			6.2
Level of Service		F	F			A
Approach Delay (s)	212.9		182.7			6.2
Approach LOS	F		F			A

Intersection Summary			
HCM 2000 Control Delay	125.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	360	220	210	200	400	200	1740	600	600	2680	10
Future Volume (veh/h)	250	360	220	210	200	400	200	1740	600	600	2680	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	272	391	27	228	217	393	217	1891	365	652	2913	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	269	863	268	299	908	581	218	1929	1054	653	2964	10
Arrive On Green	0.08	0.17	0.17	0.09	0.18	0.18	0.12	0.38	0.38	0.19	0.44	0.44
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	5106	2790	3456	6669	23
Grp Volume(v), veh/h	272	391	27	228	217	393	217	1891	365	652	2107	816
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1702	1395	1728	1609	1866
Q Serve(g_s), s	7.0	6.2	1.3	5.8	3.3	16.0	11.0	32.9	8.4	17.0	38.8	38.8
Cycle Q Clear(g_c), s	7.0	6.2	1.3	5.8	3.3	16.0	11.0	32.9	8.4	17.0	38.8	38.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	269	863	268	299	908	581	218	1929	1054	653	2145	829
V/C Ratio(X)	1.01	0.45	0.10	0.76	0.24	0.68	1.00	0.98	0.35	1.00	0.98	0.98
Avail Cap(c_a), veh/h	269	863	268	307	908	581	218	1929	1054	653	2145	829
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	41.5	33.7	31.6	40.2	31.8	24.0	39.5	27.7	20.0	36.5	24.7	24.7
Incr Delay (d2), s/veh	58.0	0.4	0.2	10.4	0.1	3.1	60.0	16.3	0.9	34.9	15.8	27.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.7	4.5	0.9	5.1	2.4	11.4	13.0	21.8	4.9	15.3	23.2	29.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.5	34.0	31.8	50.6	31.9	27.1	99.5	44.0	20.9	71.4	40.4	52.1
LnGrp LOS	F	C	C	D	C	C	F	D	C	E	D	D
Approach Vol, veh/h		690			838			2473			3575	
Approach Delay, s/veh		59.7			34.8			45.5			48.7	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	38.0	11.8	19.2	15.0	44.0	11.0	20.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	17.0	34.0	8.0	15.0	11.0	40.0	7.0	16.0				
Max Q Clear Time (g_c+I1), s	19.0	34.9	7.8	8.2	13.0	40.8	9.0	18.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			47.1									
HCM 6th LOS			D									
Notes												

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	340	170	340	390	600	290	1960	960	560	2420	30
Future Volume (veh/h)	220	340	170	340	390	600	290	1960	960	560	2420	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	229	354	19	354	406	583	302	2042	713	583	2521	29
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	300	898	276	307	908	544	297	1996	1078	576	2582	30
Arrive On Green	0.09	0.18	0.18	0.09	0.18	0.18	0.17	0.39	0.39	0.17	0.39	0.39
Sat Flow, veh/h	3456	5106	1572	3456	5106	1572	1781	5106	2758	3456	6605	76
Grp Volume(v), veh/h	229	354	19	354	406	583	302	2042	713	583	1841	709
Grp Sat Flow(s),veh/h/ln	1728	1702	1572	1728	1702	1572	1781	1702	1379	1728	1609	1856
Q Serve(g_s), s	5.8	5.5	0.9	8.0	6.4	16.0	15.0	35.2	19.1	15.0	33.8	33.9
Cycle Q Clear(g_c), s	5.8	5.5	0.9	8.0	6.4	16.0	15.0	35.2	19.1	15.0	33.8	33.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	300	898	276	307	908	544	297	1996	1078	576	1886	725
V/C Ratio(X)	0.76	0.39	0.07	1.15	0.45	1.07	1.02	1.02	0.66	1.01	0.98	0.98
Avail Cap(c_a), veh/h	307	908	279	307	908	544	297	1996	1078	576	1886	725
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	40.2	32.8	30.9	41.0	33.1	29.5	37.5	27.4	22.5	37.5	27.0	27.0
Incr Delay (d2), s/veh	10.5	0.3	0.1	99.2	0.3	59.5	56.7	26.2	3.2	40.6	15.8	28.2
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(95%),veh/ln	5.1	4.0	0.6	12.6	4.6	28.1	16.6	25.5	10.3	14.5	21.1	26.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	33.1	31.0	140.2	33.4	89.0	94.2	53.6	25.7	78.1	42.8	55.3
LnGrp LOS	D	C	C	F	C	F	F	F	C	F	D	E
Approach Vol, veh/h		602			1343			3057			3133	
Approach Delay, s/veh		39.8			85.7			51.1			52.2	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	39.2	12.0	19.8	19.0	39.2	11.8	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	35.0	8.0	16.0	15.0	35.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	17.0	37.2	10.0	7.5	17.0	35.9	7.8	18.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0

Intersection Summary			
HCM 6th Ctrl Delay			56.4
HCM 6th LOS			E

Notes
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	650	300	30	1310	30	370	20	100	40	10	10
Future Volume (veh/h)	50	650	300	30	1310	30	370	20	100	40	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	0.96		0.95
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	670	263	31	1351	30	381	21	71	41	10	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	1257	493	327	2060	46	396	620	568	161	211	21
Arrive On Green	0.51	0.51	0.51	0.03	0.58	0.58	0.22	0.33	0.33	0.06	0.06	0.06
Sat Flow, veh/h	392	2488	977	1781	3554	79	1781	1870	1571	1251	3253	318
Grp Volume(v), veh/h	52	478	455	31	675	706	381	21	71	41	5	6
Grp Sat Flow(s),veh/h/ln	392	1777	1688	1781	1777	1856	1781	1870	1571	1251	1777	1795
Q Serve(g_s), s	9.3	16.4	16.4	0.7	23.2	23.2	19.0	0.7	2.7	2.9	0.3	0.3
Cycle Q Clear(g_c), s	25.9	16.4	16.4	0.7	23.2	23.2	19.0	0.7	2.7	2.9	0.3	0.3
Prop In Lane	1.00		0.58	1.00		0.04	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	206	898	853	327	1030	1076	396	620	568	161	115	116
V/C Ratio(X)	0.25	0.53	0.53	0.09	0.66	0.66	0.96	0.03	0.12	0.25	0.05	0.05
Avail Cap(c_a), veh/h	206	898	853	373	1030	1076	396	956	850	386	434	439
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	23.9	15.1	15.1	11.0	12.8	12.8	34.6	20.3	19.2	40.7	39.5	39.5
Incr Delay (d2), s/veh	2.9	2.3	2.4	0.1	3.3	3.1	35.4	0.0	0.1	0.8	0.2	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(95%),veh/ln	1.8	10.7	10.3	0.5	13.6	14.1	17.6	0.5	1.8	1.6	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	17.3	17.5	11.1	16.1	16.0	70.1	20.4	19.3	41.5	39.6	39.6
LnGrp LOS	C	B	B	B	B	B	E	C	B	D	D	D
Approach Vol, veh/h		985			1412			473			52	
Approach Delay, s/veh		17.9			15.9			60.2			41.1	
Approach LOS		B			B			E			D	

Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		56.2	24.0	9.8	6.7	49.5		33.8				
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s		36.0	20.0	22.0	5.0	27.0		46.0				
Max Q Clear Time (g_c+I1), s		25.2	21.0	4.9	2.7	27.9		4.7				
Green Ext Time (p_c), s		6.3	0.0	0.1	0.0	0.0		0.3				

Intersection Summary			
HCM 6th Ctrl Delay			24.2
HCM 6th LOS			C

Notes

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

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	400	300	60	1000	30	690	20	240	120	30	40
Future Volume (veh/h)	50	400	300	60	1000	30	690	20	240	120	30	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	0.98		0.97
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	412	164	62	1031	29	711	21	195	124	31	19
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	871	342	342	1550	44	495	883	810	251	327	180
Arrive On Green	0.35	0.35	0.35	0.04	0.44	0.44	0.28	0.47	0.47	0.15	0.15	0.15
Sat Flow, veh/h	532	2481	976	1781	3529	99	1781	1870	1570	1139	2184	1202
Grp Volume(v), veh/h	52	294	282	62	519	541	711	21	195	124	25	25
Grp Sat Flow(s),veh/h/ln	532	1777	1680	1781	1777	1851	1781	1870	1570	1139	1777	1610
Q Serve(g_s), s	7.7	11.6	11.8	1.9	20.8	20.8	25.0	0.5	6.2	9.3	1.1	1.2
Cycle Q Clear(g_c), s	20.6	11.6	11.8	1.9	20.8	20.8	25.0	0.5	6.2	9.3	1.1	1.2
Prop In Lane	1.00		0.58	1.00		0.05	1.00		1.00	1.00		0.75
Lane Grp Cap(c), veh/h	190	624	590	342	780	813	495	883	810	251	266	241
V/C Ratio(X)	0.27	0.47	0.48	0.18	0.67	0.67	1.44	0.02	0.24	0.49	0.09	0.11
Avail Cap(c_a), veh/h	190	624	590	363	780	813	495	1060	959	359	434	394
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	31.3	22.7	22.8	17.0	20.0	20.0	32.5	12.7	12.1	36.5	33.0	33.1
Incr Delay (d2), s/veh	3.5	2.5	2.8	0.3	4.5	4.3	207.9	0.0	0.2	1.5	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(95%),veh/ln	2.0	8.6	8.4	1.3	13.6	14.1	59.3	0.4	3.7	4.8	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	25.2	25.6	17.2	24.4	24.3	240.4	12.7	12.2	38.0	33.1	33.2
LnGrp LOS	C	C	C	B	C	C	F	B	B	D	C	C
Approach Vol, veh/h		628			1122			927			174	
Approach Delay, s/veh		26.2			24.0			187.3			36.6	
Approach LOS		C			C			F			D	
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		43.5	29.0	17.5	7.9	35.6		46.5				
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s		31.0	25.0	22.0	5.0	22.0		51.0				
Max Q Clear Time (g_c+I1), s		22.8	27.0	11.3	3.9	22.6		8.2				
Green Ext Time (p_c), s		4.0	0.0	0.5	0.0	0.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			78.3									
HCM 6th LOS			E									

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	500	1900	2300	50	0	230
Future Volume (vph)	500	1900	2300	50	0	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	12	12	12
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.86	0.86			0.88
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3204	5981	5947			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3204	5981	5947			2787
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	510	1939	2347	51	0	235
RTOR Reduction (vph)	0	0	2	0	0	7
Lane Group Flow (vph)	510	1939	2396	0	0	228
Confl. Peds. (#/hr)				60		
Turn Type	Prot	NA	NA			Over
Protected Phases	1	Free	2			1
Permitted Phases						
Actuated Green, G (s)	22.6	106.8	76.2			22.6
Effective Green, g (s)	22.6	106.8	76.2			22.6
Actuated g/C Ratio	0.21	1.00	0.71			0.21
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	678	5981	4243			589
v/s Ratio Prot	c0.16	0.32	c0.40			0.08
v/s Ratio Perm						
v/c Ratio	0.75	0.32	0.56			0.39
Uniform Delay, d1	39.5	0.0	7.3			36.2
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	4.7	0.1	0.5			0.4
Delay (s)	44.2	0.1	7.9			36.6
Level of Service	D	A	A			D
Approach Delay (s)		9.3	7.9		36.6	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	106.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	700	2100	1470	50	0	430
Future Volume (vph)	700	2100	1470	50	0	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	12	12	12
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.86	0.86			0.88
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3204	5981	5926			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3204	5981	5926			2787
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	714	2143	1500	51	0	439
RTOR Reduction (vph)	0	0	3	0	0	13
Lane Group Flow (vph)	714	2143	1548	0	0	426
Confl. Peds. (#/hr)	75			75		
Turn Type	Prot	NA	NA			Over
Protected Phases	1	Free	2			1
Permitted Phases						
Actuated Green, G (s)	27.5	93.7	58.2			27.5
Effective Green, g (s)	27.5	93.7	58.2			27.5
Actuated g/C Ratio	0.29	1.00	0.62			0.29
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	940	5981	3680			817
v/s Ratio Prot	c0.22	0.36	c0.26			0.15
v/s Ratio Perm						
v/c Ratio	0.76	0.36	0.42			0.52
Uniform Delay, d1	30.1	0.0	9.1			27.6
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	3.6	0.2	0.4			0.6
Delay (s)	33.7	0.2	9.5			28.2
Level of Service	C	A	A			C
Approach Delay (s)		8.5	9.5		28.2	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	93.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	420	180	220	1250	270	210	1090	130	130	610	130
Future Volume (veh/h)	160	420	180	220	1250	270	210	1090	130	130	610	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	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	163	429	108	224	1276	173	214	1112	41	133	622	48
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	181	1114	628	455	1287	565	384	1145	506	186	1475	541
Arrive On Green	0.06	0.31	0.31	0.10	0.36	0.36	0.09	0.32	0.32	0.06	0.29	0.29
Sat Flow, veh/h	1781	3554	1555	1781	3554	1559	1781	3554	1570	1781	5106	1569
Grp Volume(v), veh/h	163	429	108	224	1276	173	214	1112	41	133	622	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1555	1781	1777	1559	1781	1777	1570	1781	1702	1569
Q Serve(g_s), s	5.0	8.5	4.0	7.2	32.2	7.2	7.5	27.8	1.6	4.8	8.9	1.9
Cycle Q Clear(g_c), s	5.0	8.5	4.0	7.2	32.2	7.2	7.5	27.8	1.6	4.8	8.9	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	1114	628	455	1287	565	384	1145	506	186	1475	541
V/C Ratio(X)	0.90	0.39	0.17	0.49	0.99	0.31	0.56	0.97	0.08	0.72	0.42	0.09
Avail Cap(c_a), veh/h	181	1114	628	507	1287	565	384	1145	506	186	1475	541
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	26.3	24.1	17.3	17.0	28.6	20.6	19.9	30.1	21.2	24.6	25.9	19.9
Incr Delay (d2), s/veh	40.4	1.0	0.6	0.8	23.1	1.4	1.8	20.5	0.3	12.4	0.9	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(95%),veh/ln	7.6	6.4	2.6	5.2	23.6	4.8	5.7	20.7	1.1	4.6	6.4	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	25.1	17.9	17.8	51.6	22.0	21.6	50.6	21.5	37.1	26.8	20.3
LnGrp LOS	E	C	B	B	D	C	C	D	C	D	C	C
Approach Vol, veh/h		700			1673			1367			803	
Approach Delay, s/veh		33.7			44.0			45.2			28.1	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	31.0	9.0	38.0	9.0	34.0	13.4	33.6
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5.4	4.0	* 5	4.0	* 5.4
Max Green Setting (Gmax), s	8.0	* 26	5.0	* 33	5.0	* 29	12.0	* 26
Max Q Clear Time (g_c+I1), s	9.5	10.9	7.0	34.2	6.8	29.8	9.2	10.5
Green Ext Time (p_c), s	0.0	3.8	0.0	0.0	0.0	0.0	0.2	2.6

Intersection Summary	
HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

Notes

* HCM 6th 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)	180	690	230	170	1010	210	260	940	390	190	680	120
Future Volume (veh/h)	180	690	230	170	1010	210	260	940	390	190	680	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	188	719	195	177	1052	103	271	979	272	198	708	74
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	221	1129	657	307	1169	541	387	1185	541	234	1532	576
Arrive On Green	0.07	0.32	0.32	0.08	0.33	0.34	0.10	0.33	0.34	0.07	0.30	0.30
Sat Flow, veh/h	1781	3554	1570	1781	3554	1571	1781	3554	1571	1781	5106	1569
Grp Volume(v), veh/h	188	719	195	177	1052	103	271	979	272	198	708	74
Grp Sat Flow(s),veh/h/ln	1781	1777	1570	1781	1777	1571	1781	1777	1571	1781	1702	1569
Q Serve(g_s), s	6.0	15.6	7.4	6.0	25.4	4.1	9.0	22.8	12.4	6.0	10.1	2.8
Cycle Q Clear(g_c), s	6.0	15.6	7.4	6.0	25.4	4.1	9.0	22.8	12.4	6.0	10.1	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	1129	657	307	1169	541	387	1185	541	234	1532	576
V/C Ratio(X)	0.85	0.64	0.30	0.58	0.90	0.19	0.70	0.83	0.50	0.85	0.46	0.13
Avail Cap(c_a), veh/h	221	1129	657	307	1169	541	387	1185	541	234	1532	576
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	24.8	26.3	17.4	20.2	28.8	20.7	20.1	27.6	23.4	26.4	25.6	18.9
Incr Delay (d2), s/veh	25.4	2.7	1.2	2.7	11.1	0.8	5.5	6.7	3.3	23.7	1.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.4	10.8	4.9	4.6	17.7	2.8	7.7	15.5	8.4	7.8	7.3	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	29.0	18.6	22.8	39.9	21.5	25.6	34.3	26.7	50.1	26.6	19.4
LnGrp LOS	D	C	B	C	D	C	C	C	C	D	C	B
Approach Vol, veh/h		1102			1332			1522			980	
Approach Delay, s/veh		30.8			36.2			31.4			30.8	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	32.0	10.0	35.0	10.0	35.0	11.0	34.0
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5.4	4.0	* 5	4.0	* 5.4
Max Green Setting (Gmax), s	9.0	* 27	6.0	* 30	6.0	* 30	7.0	* 29
Max Q Clear Time (g_c+I1), s	11.0	12.1	8.0	27.4	8.0	24.8	8.0	17.6
Green Ext Time (p_c), s	0.0	4.4	0.0	1.5	0.0	3.2	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

* HCM 6th 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 (vph)	150	210	450	100	0	140	0	1160	100	280	700	0
Future Volume (vph)	150	210	450	100	0	140	0	1160	100	280	700	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.6		4.0		5.3	5.3	4.0	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00		1.00		0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	0.91	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1750		1583		5085	1441	1768	5085	
Flt Permitted	0.95	1.00	1.00	0.22		1.00		1.00	1.00	0.15	1.00	
Satd. Flow (perm)	1770	1863	1583	401		1583		5085	1441	274	5085	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	155	216	464	103	0	144	0	1196	103	289	722	0
RTOR Reduction (vph)	0	0	130	0	0	75	0	0	78	0	0	0
Lane Group Flow (vph)	155	216	334	103	0	69	0	1196	25	289	722	0
Confl. Peds. (#/hr)			20	20			20		30	30		20
Turn Type	Split	NA	Prot	Perm		pm+ov		NA	Perm	pm+pt	NA	
Protected Phases	4	4	4			5		6		5	2	
Permitted Phases				3		3			6	2		
Actuated Green, G (s)	19.3	19.3	19.3	18.4		28.4		21.9	21.9	37.2	35.9	
Effective Green, g (s)	19.3	19.3	19.3	18.4		28.4		21.9	21.9	37.2	35.9	
Actuated g/C Ratio	0.21	0.21	0.21	0.20		0.32		0.24	0.24	0.41	0.40	
Clearance Time (s)	5.5	5.5	5.5	5.6		4.0		5.3	5.3	4.0	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		5.0	5.0	3.0	5.4	
Lane Grp Cap (vph)	379	399	339	81		569		1237	350	279	2028	
v/s Ratio Prot	0.09	0.12	c0.21			0.01		0.24		c0.11	0.14	
v/s Ratio Perm				c0.26		0.03			0.02	c0.31		
v/c Ratio	0.41	0.54	0.98	1.27		0.12		0.97	0.07	1.04	0.36	
Uniform Delay, d1	30.4	31.4	35.2	35.8		21.9		33.7	26.2	33.9	19.0	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	1.5	44.3	189.4		0.1		18.8	0.4	63.5	0.5	
Delay (s)	31.2	32.9	79.5	225.2		22.0		52.5	26.6	97.4	19.4	
Level of Service	C	C	E	F		C		D	C	F	B	
Approach Delay (s)		58.5			106.7			50.4			41.7	
Approach LOS		E			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	380	390	510	50	0	230	0	990	130	220	840	0
Future Volume (vph)	380	390	510	50	0	230	0	990	130	220	840	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.5	4.0	4.0		4.0		5.3	4.0	4.0	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00		1.00		0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	0.83	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.96		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1705		1583		5085	1313	1766	5085	
Flt Permitted	0.95	1.00	1.00	0.43		1.00		1.00	1.00	0.14	1.00	
Satd. Flow (perm)	1770	1863	1583	764		1583		5085	1313	252	5085	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	396	406	531	52	0	240	0	1031	135	229	875	0
RTOR Reduction (vph)	0	0	99	0	0	76	0	0	95	0	0	0
Lane Group Flow (vph)	396	406	432	52	0	164	0	1031	40	229	875	0
Confl. Peds. (#/hr)			45	45			35		65	65		35
Turn Type	Split	NA	Prot	Perm		pm+ov		NA	Perm	pm+pt	NA	
Protected Phases	4	4	4			5		6		5	2	
Permitted Phases				3		3			6	2		
Actuated Green, G (s)	26.5	26.5	26.5	7.8		17.6		25.5	25.5	39.3	39.3	
Effective Green, g (s)	28.0	26.5	28.0	9.4		17.6		25.5	26.8	39.3	39.3	
Actuated g/C Ratio	0.31	0.29	0.31	0.10		0.20		0.28	0.30	0.44	0.44	
Clearance Time (s)	5.5	5.5	5.5	5.6		4.0		5.3	5.3	4.0	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		5.0	5.0	3.0	5.4	
Lane Grp Cap (vph)	550	548	492	79		309		1440	390	274	2220	
v/s Ratio Prot	0.22	0.22	c0.27			0.06		0.20		c0.09	0.17	
v/s Ratio Perm				c0.07		0.05			0.03	c0.27		
v/c Ratio	0.72	0.74	0.88	0.66		0.53		0.72	0.10	0.84	0.39	
Uniform Delay, d1	27.5	28.7	29.4	38.8		32.5		29.0	22.9	18.8	17.2	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.5	5.4	16.1	18.1		1.6		3.1	0.5	19.3	0.5	
Delay (s)	32.0	34.0	45.5	56.8		34.1		32.1	23.4	38.1	17.8	
Level of Service	C	C	D	E		C		C	C	D	B	
Approach Delay (s)		38.0			38.2			31.1			22.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	670	1150	20	30	1780	770	30	40	60	310	30	530
Future Volume (vph)	670	1150	20	30	1780	770	30	40	60	310	30	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4		4.0	5.4	6.2	6.2	6.2	6.2	6.2	6.2	4.0
Lane Util. Factor	0.97	0.81		1.00	0.86	1.00	1.00	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (prot)	3204	7021		1652	5981	1537	1770	3539	1583	3044	3085	1572
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (perm)	3204	7021		1652	5981	1537	1770	3539	1583	3044	3085	1572
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	691	1186	21	31	1835	794	31	41	62	320	31	546
RTOR Reduction (vph)	0	2	0	0	0	56	0	0	59	0	0	66
Lane Group Flow (vph)	691	1205	0	31	1835	738	31	41	3	214	137	480
Confl. Peds. (#/hr)	25		5	5		25	5					5
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	5	2		1	6	3	4	4		3	3	5
Permitted Phases						6			4			3
Actuated Green, G (s)	27.6	64.9		3.6	40.9	64.7	5.9	5.9	5.9	23.8	23.8	51.4
Effective Green, g (s)	27.6	64.9		3.6	40.9	64.7	5.9	5.9	5.9	23.8	23.8	51.4
Actuated g/C Ratio	0.23	0.54		0.03	0.34	0.54	0.05	0.05	0.05	0.20	0.20	0.43
Clearance Time (s)	4.0	5.4		4.0	5.4	6.2	6.2	6.2	6.2	6.2	6.2	4.0
Vehicle Extension (s)	3.0	5.5		3.0	5.1	5.0	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	736	3797		49	2038	828	87	174	77	603	611	725
v/s Ratio Prot	c0.22	0.17		0.02	c0.31	c0.18	c0.02	0.01		0.07	0.04	0.15
v/s Ratio Perm						0.30			0.00			0.15
v/c Ratio	0.94	0.32		0.63	0.90	0.89	0.36	0.24	0.04	0.35	0.22	0.66
Uniform Delay, d1	45.4	15.3		57.5	37.6	24.5	55.2	54.9	54.4	41.5	40.4	27.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.5	0.2		23.7	6.9	12.6	2.5	0.7	0.2	0.8	0.4	2.3
Delay (s)	64.9	15.5		81.2	44.5	37.1	57.7	55.6	54.6	42.2	40.7	29.7
Level of Service	E	B		F	D	D	E	E	D	D	D	C
Approach Delay (s)		33.5			42.7			55.6			34.4	
Approach LOS		C			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	600	1470	30	70	1310	500	20	40	40	620	40	600
Future Volume (vph)	600	1470	30	70	1310	500	20	40	40	620	40	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4		4.0	5.4	4.0	4.0	6.2	4.0	4.0	6.2	4.0
Lane Util. Factor	0.97	0.81		1.00	0.86	1.00	1.00	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (prot)	3204	7017		1652	5981	1501	1770	3539	1583	3044	3075	1570
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (perm)	3204	7017		1652	5981	1501	1770	3539	1583	3044	3075	1570
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	612	1500	31	71	1337	510	20	41	41	633	41	612
RTOR Reduction (vph)	0	2	0	0	0	58	0	0	38	0	0	64
Lane Group Flow (vph)	612	1529	0	71	1337	452	20	41	3	424	250	548
Confl. Peds. (#/hr)	50		5	5		50	15					15
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	5	2		1	6	3	4	4		3	3	5
Permitted Phases						6			4			3
Actuated Green, G (s)	33.5	64.4		8.3	39.2	59.0	5.7	5.7	5.7	19.8	19.8	53.3
Effective Green, g (s)	33.5	64.4		8.3	39.2	63.4	7.9	5.7	7.9	22.0	19.8	53.3
Actuated g/C Ratio	0.28	0.54		0.07	0.33	0.53	0.07	0.05	0.07	0.18	0.17	0.44
Clearance Time (s)	4.0	5.4		4.0	5.4	6.2	6.2	6.2	6.2	6.2	6.2	4.0
Vehicle Extension (s)	3.0	5.5		3.0	5.1	5.0	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	894	3765		114	1953	793	116	168	104	558	507	749
v/s Ratio Prot	0.19	0.22		0.04	c0.22	0.10	0.01	c0.01		c0.14	0.08	c0.20
v/s Ratio Perm						0.20			0.00			0.14
v/c Ratio	0.68	0.41		0.62	0.68	0.57	0.17	0.24	0.03	0.76	0.49	0.73
Uniform Delay, d1	38.5	16.5		54.3	35.0	19.1	53.0	55.1	52.4	46.5	45.5	27.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.3		10.1	2.0	1.5	0.7	0.8	0.1	7.0	1.6	3.7
Delay (s)	40.7	16.8		64.5	37.0	20.6	53.7	55.8	52.6	53.5	47.1	31.2
Level of Service	D	B		E	D	C	D	E	D	D	D	C
Approach Delay (s)		23.6			33.7			54.1			41.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1280	410	210	2120	380	700	990	120	170	490	250
Future Volume (veh/h)	100	1280	410	210	2120	380	700	990	120	170	490	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	1471	471	241	2437	437	805	1138	129	195	563	171
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	2818	694	199	1941	342	783	992	112	259	577	578
Arrive On Green	0.20	0.44	0.44	0.11	0.35	0.35	0.23	0.31	0.31	0.07	0.16	0.16
Sat Flow, veh/h	1781	6434	1585	1781	5545	976	3456	3218	364	3456	3554	1585
Grp Volume(v), veh/h	115	1471	471	241	2115	759	805	628	639	195	563	171
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1781	1609	1695	1728	1777	1805	1728	1777	1585
Q Serve(g_s), s	6.6	20.0	18.8	13.4	42.0	42.0	27.2	37.0	37.0	6.6	18.9	0.0
Cycle Q Clear(g_c), s	6.6	20.0	18.8	13.4	42.0	42.0	27.2	37.0	37.0	6.6	18.9	0.0
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	360	2818	694	199	1689	593	783	548	556	259	577	578
V/C Ratio(X)	0.32	0.52	0.68	1.21	1.25	1.28	1.03	1.15	1.15	0.75	0.97	0.30
Avail Cap(c_a), veh/h	360	2818	694	199	1689	593	783	548	556	259	577	578
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	40.8	24.6	11.7	53.3	39.0	39.0	46.4	41.5	41.5	54.4	50.0	27.2
Incr Delay (d2), s/veh	0.5	0.7	5.3	132.5	118.6	138.4	39.6	85.3	86.4	10.6	31.0	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	12.1	11.4	20.7	50.8	58.2	22.5	40.7	41.5	5.8	16.1	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	25.3	17.0	185.8	157.6	177.4	86.0	126.8	127.9	65.0	81.0	27.4
LnGrp LOS	D	C	B	F	F	F	F	F	F	E	F	C
Approach Vol, veh/h		2057			3115			2072			929	
Approach Delay, s/veh		24.3			164.6			111.3			67.8	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	58.8	33.7	25.5	30.5	47.3	15.7	43.5
Change Period (Y+Rc), s	5.6	* 5.8	* 6.5	6.0	5.8	* 5.3	* 6.7	* 6.5
Max Green Setting (Gmax), s	13.4	* 37	* 27	19.5	8.2	* 42	* 9	* 37
Max Q Clear Time (g_c+I1), s	15.4	22.0	29.2	20.9	8.6	44.0	8.6	39.0
Green Ext Time (p_c), s	0.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	104.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	2290	570	240	1420	250	660	1030	160	230	850	170
Future Volume (veh/h)	230	2290	570	240	1420	250	660	1030	160	230	850	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	242	2411	600	253	1495	263	695	1084	157	242	895	97
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	748	3801	936	223	1664	293	562	994	144	337	918	1072
Arrive On Green	0.42	0.59	0.59	0.13	0.30	0.29	0.16	0.32	0.30	0.10	0.26	0.26
Sat Flow, veh/h	1781	6434	1585	1781	5546	975	3456	3116	450	3456	3554	1585
Grp Volume(v), veh/h	242	2411	600	253	1301	457	695	617	624	242	895	97
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1781	1609	1695	1728	1777	1789	1728	1777	1585
Q Serve(g_s), s	10.9	29.4	31.3	15.0	31.0	31.1	19.5	38.3	38.3	8.2	30.0	0.0
Cycle Q Clear(g_c), s	10.9	29.4	31.3	15.0	31.0	31.1	19.5	38.3	38.3	8.2	30.0	0.0
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	748	3801	936	223	1448	509	562	567	571	337	918	1072
V/C Ratio(X)	0.32	0.63	0.64	1.14	0.90	0.90	1.24	1.09	1.09	0.72	0.97	0.09
Avail Cap(c_a), veh/h	748	3801	936	223	1460	513	562	567	571	337	918	1072
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	23.4	16.1	17.7	52.5	40.2	40.6	50.3	40.8	41.1	52.6	44.1	6.7
Incr Delay (d2), s/veh	0.2	0.8	3.4	101.9	9.1	21.4	121.6	64.1	65.2	6.3	23.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	15.7	17.0	19.9	19.2	22.3	27.1	36.6	37.1	6.8	22.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	16.9	21.1	154.4	49.4	62.0	171.9	104.9	106.3	58.8	67.8	6.7
LnGrp LOS	C	B	C	F	D	E	F	F	F	E	E	A
Approach Vol, veh/h		3253			2011			1936			1234	
Approach Delay, s/veh		18.2			65.5			129.4			61.2	
Approach LOS		B			E			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	76.2	23.5	35.0	55.2	40.0	15.7	42.8				
Change Period (Y+Rc), s	5.6	* 5.8	* 6.5	6.0	5.8	* 5.3	* 6.7	* 6.5				
Max Green Setting (Gmax), s	13.4	* 38	* 17	29.0	15.9	* 35	* 9	* 36				
Max Q Clear Time (g_c+I1), s	17.0	33.3	21.5	32.0	12.9	33.1	10.2	40.3				
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.2	1.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			61.3									
HCM 6th LOS			E									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	660	360	530	1250	1060	390	910	220	330	460	290
Future Volume (veh/h)	110	660	360	530	1250	1060	390	910	220	330	460	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	673	300	541	1276	932	398	929	190	337	469	223
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	177	1240	557	569	2274	706	374	829	1332	391	846	443
Arrive On Green	0.04	0.24	0.24	0.24	0.45	0.45	0.11	0.23	0.23	0.11	0.24	0.24
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	112	673	300	541	1276	932	398	929	190	337	469	223
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	5.0	13.8	18.2	26.6	22.2	53.4	13.0	28.0	4.6	11.5	13.9	14.2
Cycle Q Clear(g_c), s	5.0	13.8	18.2	26.6	22.2	53.4	13.0	28.0	4.6	11.5	13.9	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	1240	557	569	2274	706	374	829	1332	391	846	443
V/C Ratio(X)	0.63	0.54	0.54	0.95	0.56	1.32	1.06	1.12	0.14	0.86	0.55	0.50
Avail Cap(c_a), veh/h	177	1240	557	609	2274	706	374	829	1332	403	859	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	39.6	31.2	25.3	24.6	33.3	53.5	46.0	17.6	52.3	40.1	36.2
Incr Delay (d2), s/veh	7.2	1.7	3.7	24.2	1.0	154.1	61.9	68.5	0.0	16.9	0.8	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(95%),veh/ln	5.1	9.9	11.8	20.8	13.8	73.1	13.7	28.6	2.6	9.8	10.1	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	41.3	34.9	49.5	25.6	187.4	115.4	114.5	17.6	69.2	40.9	37.1
LnGrp LOS	D	D	C	D	C	F	F	F	B	E	D	D
Approach Vol, veh/h		1085			2749			1517			1029	
Approach Delay, s/veh		39.5			85.2			102.6			49.3	
Approach LOS		D			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.3	35.1	17.0	34.6	9.0	59.4	17.6	34.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	* 6	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	32.0	26.0	13.0	* 29	5.0	53.0	14.0	* 28				
Max Q Clear Time (g_c+I1), s	28.6	20.2	15.0	16.2	7.0	55.4	13.5	30.0				
Green Ext Time (p_c), s	0.7	2.7	0.0	3.0	0.0	0.0	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			75.8									
HCM 6th LOS			E									

Notes

* HCM 6th 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)	240	1770	710	220	1040	340	220	580	670	740	950	390
Future Volume (veh/h)	240	1770	710	220	1040	340	220	580	670	740	950	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	255	1883	698	234	1106	95	234	617	612	787	1011	376
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	317	1729	648	223	1606	499	299	840	868	691	1243	712
Arrive On Green	0.12	0.34	0.32	0.09	0.31	0.31	0.09	0.24	0.22	0.20	0.35	0.33
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	255	1883	698	234	1106	95	234	617	612	787	1011	376
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	11.6	40.6	38.6	11.0	22.7	5.2	8.0	19.3	23.2	24.0	31.0	20.6
Cycle Q Clear(g_c), s	11.6	40.6	38.6	11.0	22.7	5.2	8.0	19.3	23.2	24.0	31.0	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	1729	648	223	1606	499	299	840	868	691	1243	712
V/C Ratio(X)	0.81	1.09	1.08	1.05	0.69	0.19	0.78	0.73	0.70	1.14	0.81	0.53
Avail Cap(c_a), veh/h	378	1729	648	223	1606	499	490	859	883	691	1243	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	39.7	35.5	33.3	36.0	30.0	53.7	42.3	36.5	48.0	35.4	23.9
Incr Delay (d2), s/veh	10.3	50.1	58.2	73.4	2.4	0.8	3.8	2.7	2.1	79.3	4.2	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(95%),veh/ln	9.6	34.6	39.1	14.4	14.7	3.8	6.4	12.9	12.2	26.3	19.8	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	89.8	93.7	106.7	38.4	30.8	57.5	45.0	38.6	127.3	39.7	24.6
LnGrp LOS	D	F	F	F	D	C	E	D	D	F	D	C
Approach Vol, veh/h		2836			1435			1463			2174	
Approach Delay, s/veh		86.1			49.1			44.3			68.8	
Approach LOS		F			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	44.6	14.4	46.0	17.9	41.7	28.0	32.4				
Change Period (Y+Rc), s	4.0	6.0	4.0	* 6	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	11.0	38.0	17.0	* 34	18.0	31.0	24.0	* 27				
Max Q Clear Time (g_c+I1), s	13.0	42.6	10.0	33.0	13.6	24.7	26.0	25.2				
Green Ext Time (p_c), s	0.0	0.0	0.4	0.7	0.3	3.8	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			66.9									
HCM 6th LOS			E									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	210	1260	50	600	750
Future Volume (vph)	0	210	1260	50	600	750
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	5.3		4.9	5.3
Lane Util. Factor		0.88	0.91		0.97	0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	5053		3433	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	5053		3433	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	210	1260	50	600	750
RTOR Reduction (vph)	0	80	7	0	0	0
Lane Group Flow (vph)	0	130	1303	0	600	750
Confl. Peds. (#/hr)				10		
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		8	
Permitted Phases		8				2 8
Actuated Green, G (s)		8.8	26.0		8.8	45.0
Effective Green, g (s)		8.8	26.0		8.8	40.1
Actuated g/C Ratio		0.20	0.58		0.20	0.89
Clearance Time (s)		4.9	5.3		4.9	
Vehicle Extension (s)		3.0	3.8		3.0	
Lane Grp Cap (vph)		545	2919		671	3153
v/s Ratio Prot			c0.26		c0.17	
v/s Ratio Perm		0.05				0.21
v/c Ratio		0.24	0.45		0.89	0.24
Uniform Delay, d1		15.3	5.4		17.6	0.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.2	0.5		14.4	0.0
Delay (s)		15.5	5.9		32.0	0.4
Level of Service		B	A		C	A
Approach Delay (s)	15.5		5.9			14.4
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	620	830	100	350	1530
Future Volume (vph)	0	620	830	100	350	1530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.98		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	4992		3433	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	4992		3433	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	674	902	109	380	1663
RTOR Reduction (vph)	0	198	33	0	0	0
Lane Group Flow (vph)	0	476	978	0	380	1663
Confl. Peds. (#/hr)				15		
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		8	
Permitted Phases		8				2 8
Actuated Green, G (s)		8.8	26.0		8.8	45.0
Effective Green, g (s)		9.7	27.3		9.7	41.4
Actuated g/C Ratio		0.22	0.61		0.22	0.92
Clearance Time (s)		4.9	5.3		4.9	
Vehicle Extension (s)		3.0	3.8		3.0	
Lane Grp Cap (vph)		600	3028		740	3255
v/s Ratio Prot			0.20		0.11	
v/s Ratio Perm		c0.17				c0.47
v/c Ratio		0.79	0.32		0.51	0.51
Uniform Delay, d1		16.7	4.3		15.6	0.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		7.1	0.3		0.6	0.1
Delay (s)		23.8	4.6		16.2	0.4
Level of Service		C	A		B	A
Approach Delay (s)	23.8		4.6			3.3
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	570	250	180	800	400	110	1890	70	200	1480	170
Future Volume (veh/h)	220	570	250	180	800	400	110	1890	70	200	1480	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	227	588	106	186	825	289	113	1948	33	206	1526	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	750	334	295	884	394	239	2013	809	216	2073	643
Arrive On Green	0.08	0.21	0.21	0.12	0.25	0.25	0.07	0.39	0.39	0.09	0.41	0.41
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	227	588	106	186	825	289	113	1948	33	206	1526	65
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	7.8	18.8	5.4	5.7	27.3	20.1	4.3	44.8	0.4	9.5	30.4	3.0
Cycle Q Clear(g_c), s	7.8	18.8	5.4	5.7	27.3	20.1	4.3	44.8	0.4	9.5	30.4	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	750	334	295	884	394	239	2013	809	216	2073	643
V/C Ratio(X)	0.88	0.78	0.32	0.63	0.93	0.73	0.47	0.97	0.04	0.96	0.74	0.10
Avail Cap(c_a), veh/h	259	882	394	295	888	396	244	2013	809	216	2073	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	44.8	25.4	47.7	44.1	41.4	23.6	35.6	5.4	33.6	30.2	22.1
Incr Delay (d2), s/veh	26.7	5.7	1.3	4.2	16.8	8.3	1.0	10.6	0.1	48.5	2.4	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(95%),veh/ln	7.7	13.5	4.8	9.2	19.8	13.4	3.3	25.9	0.4	11.1	18.4	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	50.5	26.7	51.9	60.9	49.7	24.6	46.2	5.5	82.1	32.6	22.4
LnGrp LOS	F	D	C	D	E	D	C	D	A	F	C	C
Approach Vol, veh/h		921			1300			2094			1797	
Approach Delay, s/veh		55.4			57.1			44.4			37.9	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	55.1	15.6	36.3	16.5	53.7	20.3	31.5
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 9.1	46.5	* 9	* 30	* 10	45.4	9.4	29.8
Max Q Clear Time (g_c+I1), s	6.3	32.4	9.8	29.3	11.5	46.8	7.7	20.8
Green Ext Time (p_c), s	0.1	8.9	0.0	0.6	0.0	0.0	0.1	4.5

Intersection Summary	
HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

Notes

* HCM 6th 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)	200	890	160	110	770	200	220	1570	110	370	1860	420
Future Volume (veh/h)	200	890	160	110	770	200	220	1570	110	370	1860	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	918	38	113	794	47	227	1619	40	381	1918	266
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	894	399	191	876	391	225	1545	596	349	1902	591
Arrive On Green	0.08	0.25	0.25	0.07	0.25	0.25	0.09	0.30	0.30	0.16	0.37	0.37
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	206	918	38	113	794	47	227	1619	40	381	1918	266
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	7.0	30.2	1.6	3.2	26.0	2.8	11.1	36.3	0.7	19.5	44.7	15.2
Cycle Q Clear(g_c), s	7.0	30.2	1.6	3.2	26.0	2.8	11.1	36.3	0.7	19.5	44.7	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	894	399	191	876	391	225	1545	596	349	1902	591
V/C Ratio(X)	0.79	1.03	0.10	0.59	0.91	0.12	1.01	1.05	0.07	1.09	1.01	0.45
Avail Cap(c_a), veh/h	259	894	399	194	888	396	225	1545	596	349	1902	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	44.9	18.7	52.2	43.9	35.1	33.6	41.8	8.5	37.9	37.6	28.4
Incr Delay (d2), s/veh	15.6	37.0	0.3	4.7	13.3	0.3	53.5	33.4	0.2	74.5	22.7	2.5
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(95%),veh/ln	6.4	24.8	1.6	6.2	18.6	2.0	12.1	26.8	0.6	25.6	30.1	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.2	81.9	19.0	56.8	57.2	35.4	87.1	75.3	8.7	112.4	60.3	30.9
LnGrp LOS	E	F	B	E	E	D	F	F	A	F	F	C
Approach Vol, veh/h		1162			954			1886			2565	
Approach Delay, s/veh		77.8			56.1			75.3			65.0	
Approach LOS		E			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	51.0	15.6	36.0	25.8	42.6	15.2	36.4				
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2				
Max Green Setting (Gmax), s	* 11	44.5	* 9	* 30	* 20	36.1	9.0	30.2				
Max Q Clear Time (g_c+I1), s	13.1	46.7	9.0	28.0	21.5	38.3	5.2	32.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			68.9									
HCM 6th LOS			E									

Notes

* HCM 6th 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)	170	220	100	320	290	50	310	1890	140	40	1790	80
Future Volume (veh/h)	170	220	100	320	290	50	310	1890	140	40	1790	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	1.00		0.96	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	173	224	48	327	296	33	316	1929	108	41	1827	43
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	333	824	512	230	745	82	286	2492	852	172	2163	750
Arrive On Green	0.07	0.23	0.23	0.07	0.23	0.21	0.07	0.33	0.32	0.04	0.42	0.41
Sat Flow, veh/h	1781	3554	1524	3456	3211	354	1781	5106	1565	1781	5106	1562
Grp Volume(v), veh/h	173	224	48	327	162	167	316	1929	108	41	1827	43
Grp Sat Flow(s),veh/h/ln	1781	1777	1524	1728	1777	1788	1781	1702	1565	1781	1702	1562
Q Serve(g_s), s	6.0	4.7	2.0	6.0	7.0	7.1	9.0	30.6	3.9	1.2	28.9	1.3
Cycle Q Clear(g_c), s	6.0	4.7	2.0	6.0	7.0	7.1	9.0	30.6	3.9	1.2	28.9	1.3
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	824	512	230	412	415	286	2492	852	172	2163	750
V/C Ratio(X)	0.52	0.27	0.09	1.42	0.39	0.40	1.11	0.77	0.13	0.24	0.84	0.06
Avail Cap(c_a), veh/h	333	1106	632	230	553	556	286	2492	852	207	2163	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.26	0.26	0.26	0.61	0.61	0.61
Uniform Delay (d), s/veh	27.4	28.3	20.7	42.0	29.2	29.5	24.8	25.8	13.3	18.3	23.3	12.6
Incr Delay (d2), s/veh	1.4	0.2	0.1	212.2	0.6	0.6	60.8	0.6	0.1	0.4	2.7	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(95%),veh/ln	5.3	3.5	1.2	15.7	5.2	5.4	11.4	15.8	2.2	0.8	15.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	28.5	20.8	254.2	29.8	30.1	85.5	26.5	13.4	18.7	25.9	12.6
LnGrp LOS	C	C	C	F	C	C	F	C	B	B	C	B
Approach Vol, veh/h		445			656			2353			1911	
Approach Delay, s/veh		27.8			141.8			33.8			25.5	
Approach LOS		C			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	24.9	13.0	42.1	10.0	24.9	7.2	47.9
Change Period (Y+Rc), s	4.0	* 6	* 6	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	6.0	* 26	* 7	* 30	6.0	* 26	5.0	* 34
Max Q Clear Time (g_c+I1), s	8.0	9.1	11.0	30.9	8.0	6.7	3.2	32.6
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	1.3	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	43.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	490	120	310	230	60	230	1530	310	80	1950	100
Future Volume (veh/h)	160	490	120	310	230	60	230	1530	310	80	1950	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.94	1.00		0.94	1.00		0.98	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	168	516	72	326	242	32	242	1611	270	84	2053	60
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	424	1007	546	269	923	120	221	2106	748	190	1958	684
Arrive On Green	0.07	0.28	0.28	0.08	0.29	0.27	0.03	0.14	0.13	0.05	0.38	0.37
Sat Flow, veh/h	1781	3554	1493	3456	3135	408	1781	5106	1555	1781	5106	1553
Grp Volume(v), veh/h	168	516	72	326	135	139	242	1611	270	84	2053	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1493	1728	1777	1766	1781	1702	1555	1781	1702	1553
Q Serve(g_s), s	6.0	11.0	2.9	7.0	5.2	5.4	7.0	27.4	12.5	2.6	34.5	2.0
Cycle Q Clear(g_c), s	6.0	11.0	2.9	7.0	5.2	5.4	7.0	27.4	12.5	2.6	34.5	2.0
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	1007	546	269	523	520	221	2106	748	190	1958	684
V/C Ratio(X)	0.40	0.51	0.13	1.21	0.26	0.27	1.10	0.76	0.36	0.44	1.05	0.09
Avail Cap(c_a), veh/h	424	1106	588	269	573	569	221	2106	748	202	1958	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.43	0.43	0.43	0.23	0.23	0.23
Uniform Delay (d), s/veh	22.8	27.0	19.3	41.5	24.3	24.5	25.1	34.7	22.4	20.8	27.7	14.7
Incr Delay (d2), s/veh	0.6	0.4	0.1	125.0	0.3	0.3	68.7	1.2	0.6	0.4	25.7	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(95%),veh/ln	4.6	7.9	1.8	12.8	3.8	4.0	10.4	16.4	7.7	1.8	21.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	27.5	19.4	166.5	24.5	24.8	93.8	35.9	23.0	21.2	53.5	14.8
LnGrp LOS	C	C	B	F	C	C	F	D	C	C	F	B
Approach Vol, veh/h		756			600			2123			2197	
Approach Delay, s/veh		25.8			101.7			40.8			51.2	
Approach LOS		C			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	30.5	11.0	38.5	11.0	29.5	8.4	41.1				
Change Period (Y+Rc), s	4.0	* 6	* 6	* 5	4.0	* 6	4.0	* 5				
Max Green Setting (Gmax), s	6.0	* 27	* 5	* 31	7.0	* 26	5.0	* 33				
Max Q Clear Time (g_c+I1), s	8.0	7.4	9.0	36.5	9.0	13.0	4.6	29.4				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	2.8	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay			49.3									
HCM 6th LOS			D									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	310	100	210	740	310	180	2070	30	160	1950	30
Future Volume (veh/h)	10	310	100	210	740	310	180	2070	30	160	1950	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	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	10	320	67	216	763	267	186	2134	15	165	2010	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	749	155	329	770	269	237	2320	786	189	2320	717
Arrive On Green	0.01	0.26	0.25	0.06	0.30	0.29	0.06	0.45	0.44	0.11	0.91	0.89
Sat Flow, veh/h	1781	2919	602	1781	2566	898	1781	5106	1574	1781	5106	1574
Grp Volume(v), veh/h	10	193	194	216	528	502	186	2134	15	165	2010	13
Grp Sat Flow(s),veh/h/ln	1781	1777	1744	1781	1777	1686	1781	1702	1574	1781	1702	1574
Q Serve(g_s), s	0.4	8.1	8.4	5.0	26.7	26.7	5.0	35.3	0.4	4.8	15.2	0.1
Cycle Q Clear(g_c), s	0.4	8.1	8.4	5.0	26.7	26.7	5.0	35.3	0.4	4.8	15.2	0.1
Prop In Lane	1.00		0.35	1.00		0.53	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	102	456	448	329	533	506	237	2320	786	189	2320	717
V/C Ratio(X)	0.10	0.42	0.43	0.66	0.99	0.99	0.79	0.92	0.02	0.88	0.87	0.02
Avail Cap(c_a), veh/h	179	533	523	329	533	506	237	2320	786	189	2320	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.46	0.46	0.46
Uniform Delay (d), s/veh	27.6	27.9	28.1	28.4	31.4	31.7	18.6	23.0	11.4	20.0	2.9	2.7
Incr Delay (d2), s/veh	0.4	0.6	0.7	4.7	36.6	37.7	15.9	7.4	0.0	18.6	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	6.2	6.4	4.2	23.0	22.3	5.4	20.7	0.3	4.4	3.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	28.5	28.8	33.1	68.0	69.4	34.5	30.4	11.5	38.6	5.2	2.7
LnGrp LOS	C	C	C	C	E	E	C	C	B	D	A	A
Approach Vol, veh/h		397			1246			2335			2188	
Approach Delay, s/veh		28.6			62.5			30.6			7.7	
Approach LOS		C			E			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	44.9	5.1	31.0	9.0	44.9	9.0	27.1				
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5	4.0	* 5	4.0	* 5				
Max Green Setting (Gmax), s	5.0	* 36	5.0	* 26	5.0	* 36	5.0	* 26				
Max Q Clear Time (g_c+I1), s	7.0	17.2	2.4	28.7	6.8	37.3	7.0	10.4				
Green Ext Time (p_c), s	0.0	13.9	0.0	0.0	0.0	0.0	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay			28.8									
HCM 6th LOS			C									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	340	100	210	380	160	150	1960	50	270	2100	70
Future Volume (veh/h)	100	340	100	210	380	160	150	1960	50	270	2100	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.98	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	102	347	68	214	388	106	153	2000	24	276	2143	36
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	269	707	137	299	658	177	235	2237	753	252	2408	806
Arrive On Green	0.06	0.24	0.23	0.06	0.24	0.23	0.06	0.44	0.43	0.18	0.94	0.92
Sat Flow, veh/h	1781	2951	571	1781	2745	740	1781	5106	1557	1781	5106	1559
Grp Volume(v), veh/h	102	207	208	214	249	245	153	2000	24	276	2143	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1745	1781	1777	1708	1781	1702	1557	1781	1702	1559
Q Serve(g_s), s	3.9	9.0	9.3	5.0	11.2	11.5	4.4	32.6	0.7	8.0	13.4	0.2
Cycle Q Clear(g_c), s	3.9	9.0	9.3	5.0	11.2	11.5	4.4	32.6	0.7	8.0	13.4	0.2
Prop In Lane	1.00		0.33	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	269	426	418	299	426	409	235	2237	753	252	2408	806
V/C Ratio(X)	0.38	0.49	0.50	0.72	0.59	0.60	0.65	0.89	0.03	1.09	0.89	0.04
Avail Cap(c_a), veh/h	269	533	523	299	533	512	235	2237	753	252	2408	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	0.25	0.25
Uniform Delay (d), s/veh	25.3	29.5	29.7	31.2	30.3	30.6	16.2	23.4	12.2	19.5	1.7	1.6
Incr Delay (d2), s/veh	0.9	0.9	0.9	7.9	1.3	1.4	6.2	6.0	0.1	57.9	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	6.8	6.9	4.6	8.2	8.2	3.7	19.2	0.4	8.9	2.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	30.3	30.6	39.1	31.5	32.0	22.4	29.4	12.3	77.4	3.2	1.6
LnGrp LOS	C	C	C	D	C	C	C	C	B	F	A	A
Approach Vol, veh/h		517			708			2177			2455	
Approach Delay, s/veh		29.6			34.0			28.7			11.5	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	46.4	9.0	25.6	12.0	43.4	9.0	25.6				
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5	4.0	* 5	4.0	* 5				
Max Green Setting (Gmax), s	5.0	* 36	5.0	* 26	8.0	* 33	5.0	* 26				
Max Q Clear Time (g_c+I1), s	6.4	15.4	5.9	13.5	10.0	34.6	7.0	11.3				
Green Ext Time (p_c), s	0.0	15.8	0.0	2.2	0.0	0.0	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay			22.2									
HCM 6th LOS			C									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	2660	1870	0	2300	10
Future Volume (veh/h)	0	2660	1870	0	2300	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	2771	1948	0	2396	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	0	2532	0	0	
Arrive On Green	0.00	0.00	0.39	0.00	0.00	0.00
Sat Flow, veh/h	0		6484	1948	0	
Grp Volume(v), veh/h	0.0		1948	24.7	0.0	
Grp Sat Flow(s),veh/h/ln			1621	C		
Q Serve(g_s), s			23.6			
Cycle Q Clear(g_c), s			23.6			
Prop In Lane			1.00			
Lane Grp Cap(c), veh/h			2532			
V/C Ratio(X)			0.77			
Avail Cap(c_a), veh/h			3444			
HCM Platoon Ratio			1.00			
Upstream Filter(I)			1.00			
Uniform Delay (d), s/veh			23.9			
Incr Delay (d2), s/veh			0.8			
Initial Q Delay(d3),s/veh			0.0			
%ile BackOfQ(95%),veh/ln			13.4			
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			24.7			
LnGrp LOS			C			
Approach Vol, veh/h						
Approach Delay, s/veh						
Approach LOS						

Timer - Assigned Phs	3
Phs Duration (G+Y+Rc), s	41.3
Change Period (Y+Rc), s	* 6
Max Green Setting (Gmax), s	* 48
Max Q Clear Time (g_c+I1), s	25.6
Green Ext Time (p_c), s	9.8

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	2860	1720	0	2400	20
Future Volume (veh/h)	0	2860	1720	0	2400	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	2918	1755	0	2449	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	0	2300	0	0	
Arrive On Green	0.00	0.00	0.35	0.00	0.00	0.00
Sat Flow, veh/h	0		6484	1755	0	
Grp Volume(v), veh/h	0.0		1755	26.3	0.0	
Grp Sat Flow(s),veh/h/ln			1621	C		
Q Serve(g_s), s			21.6			
Cycle Q Clear(g_c), s			21.6			
Prop In Lane			1.00			
Lane Grp Cap(c), veh/h			2300			
V/C Ratio(X)			0.76			
Avail Cap(c_a), veh/h			3444			
HCM Platoon Ratio			1.00			
Upstream Filter(I)			1.00			
Uniform Delay (d), s/veh			25.7			
Incr Delay (d2), s/veh			0.6			
Initial Q Delay(d3),s/veh			0.0			
%ile BackOfQ(95%),veh/ln			12.4			
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			26.3			
LnGrp LOS			C			
Approach Vol, veh/h						
Approach Delay, s/veh						
Approach LOS						

Timer - Assigned Phs			3			
Phs Duration (G+Y+Rc), s			38.1			
Change Period (Y+Rc), s			* 6			
Max Green Setting (Gmax), s			* 48			
Max Q Clear Time (g_c+I1), s			23.6			
Green Ext Time (p_c), s			8.6			

Intersection Summary			
HCM 6th Ctrl Delay			26.3
HCM 6th LOS			C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	950	3830	150	420	2710
Future Volume (vph)	0	950	3830	150	420	2710
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.91
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	5048		3433	5085
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	5048		3433	5085
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	990	3990	156	438	2823
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	0	990	4142	0	438	2823
Confl. Peds. (#/hr)				15	15	
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		34.0	77.0		34.0	120.0
Effective Green, g (s)		34.0	77.0		34.0	120.0
Actuated g/C Ratio		0.28	0.64		0.28	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		789	3239		972	5085
v/s Ratio Prot		c0.36	c0.82		0.13	0.56
v/s Ratio Perm						
v/c Ratio		1.25	1.28		0.45	0.56
Uniform Delay, d1		43.0	21.5		35.3	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		124.9	128.0		0.3	0.4
Delay (s)		167.9	149.5		35.7	0.4
Level of Service		F	F		D	A
Approach Delay (s)	167.9		149.5			5.2
Approach LOS	F		F			A

Intersection Summary			
HCM 2000 Control Delay	95.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	118.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	810	3750	280	290	2670
Future Volume (vph)	0	810	3750	280	290	2670
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	5005		3433	5085
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	5005		3433	5085
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	835	3866	289	299	2753
RTOR Reduction (vph)	0	0	7	0	0	0
Lane Group Flow (vph)	0	835	4148	0	299	2753
Confl. Peds. (#/hr)				30	30	
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		30.0	81.0		30.0	120.0
Effective Green, g (s)		30.0	81.0		30.0	120.0
Actuated g/C Ratio		0.25	0.68		0.25	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		696	3378		858	5085
v/s Ratio Prot		c0.30	c0.83		0.09	0.54
v/s Ratio Perm						
v/c Ratio		1.20	1.23		0.35	0.54
Uniform Delay, d1		45.0	19.5		37.0	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		103.4	105.4		0.2	0.4
Delay (s)		148.4	124.9		37.2	0.4
Level of Service		F	F		D	A
Approach Delay (s)	148.4		124.9			4.0
Approach LOS	F		F			A

Intersection Summary			
HCM 2000 Control Delay	81.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	390	540	4665	90	0	2710
Future Volume (vph)	390	540	4665	90	0	2710
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.0			5.0
Lane Util. Factor	0.97	0.88	0.86			0.91
Frpb, ped/bikes	1.00	0.92	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2552	6390			5085
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2552	6390			5085
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	406	562	4859	94	0	2823
RTOR Reduction (vph)	0	0	2	0	0	0
Lane Group Flow (vph)	406	563	4951	0	0	2823
Confl. Peds. (#/hr)		80				
Turn Type	Perm	Perm	NA			NA
Protected Phases			2			2
Permitted Phases	4	4				
Actuated Green, G (s)	32.3	32.3	76.6			76.6
Effective Green, g (s)	32.3	32.3	76.6			76.6
Actuated g/C Ratio	0.27	0.27	0.64			0.64
Clearance Time (s)	6.1	6.1	5.0			5.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	924	686	4078			3245
v/s Ratio Prot			c0.77			0.56
v/s Ratio Perm	0.12	c0.22				
v/c Ratio	0.44	0.82	1.21			0.87
Uniform Delay, d1	36.3	41.1	21.7			17.6
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	7.8	98.8			3.5
Delay (s)	36.7	48.9	120.5			21.2
Level of Service	D	D	F			C
Approach Delay (s)	43.8		120.5			21.2
Approach LOS	D		F			C

Intersection Summary			
HCM 2000 Control Delay	79.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	110.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	650	320	4840	30	0	2670
Future Volume (vph)	650	320	4840	30	0	2670
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.0			5.0
Lane Util. Factor	0.97	0.88	0.86			0.91
Frpb, ped/bikes	1.00	0.91	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2526	6402			5085
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2526	6402			5085
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	677	333	5042	31	0	2781
RTOR Reduction (vph)	0	0	1	0	0	0
Lane Group Flow (vph)	677	333	5072	0	0	2781
Confl. Peds. (#/hr)		90				
Turn Type	Perm	Perm	NA			NA
Protected Phases			2			2
Permitted Phases	4	4				
Actuated Green, G (s)	30.1	30.1	78.8			78.8
Effective Green, g (s)	30.1	30.1	78.8			78.8
Actuated g/C Ratio	0.25	0.25	0.66			0.66
Clearance Time (s)	6.1	6.1	5.0			5.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	861	633	4203			3339
v/s Ratio Prot			c0.79			0.55
v/s Ratio Perm	c0.20	0.13				
v/c Ratio	0.79	0.53	1.21			0.83
Uniform Delay, d1	41.9	38.8	20.6			15.6
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	4.8	0.8	95.5			2.6
Delay (s)	46.7	39.6	116.1			18.2
Level of Service	D	D	F			B
Approach Delay (s)	44.4		116.1			18.2
Approach LOS	D		F			B

Intersection Summary			
HCM 2000 Control Delay	77.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2510	2360	0	0	3330
Future Volume (vph)	0	2510	2360	0	0	3330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0
Lane Util. Factor		0.76	0.91			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		3610	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		3610	5085			3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2642	2484	0	0	3505
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2642	2484	0	0	3505
Turn Type		Perm	NA			NA
Protected Phases			2			
Permitted Phases		8				2 8
Actuated Green, G (s)		48.0	35.0			90.0
Effective Green, g (s)		47.0	35.0			87.0
Actuated g/C Ratio		0.52	0.39			0.97
Clearance Time (s)		3.0	4.0			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		1885	1977			3421
v/s Ratio Prot			c0.49			
v/s Ratio Perm		c0.73				0.99
v/c Ratio		1.40	1.26			1.02
Uniform Delay, d1		21.5	27.5			1.5
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		184.0	119.7			22.1
Delay (s)		205.5	147.2			23.6
Level of Service		F	F			C
Approach Delay (s)	205.5		147.2			23.6
Approach LOS	F		F			C

Intersection Summary			
HCM 2000 Control Delay	114.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2280	2780	0	0	3010
Future Volume (vph)	0	2280	2780	0	0	3010
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0
Lane Util. Factor		0.76	0.91			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		3610	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		3610	5085			3539
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	2426	2957	0	0	3202
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2426	2957	0	0	3202
Turn Type		Perm	NA			NA
Protected Phases			2			
Permitted Phases		8				2 8
Actuated Green, G (s)		44.0	39.0			90.0
Effective Green, g (s)		43.0	39.0			87.0
Actuated g/C Ratio		0.48	0.43			0.97
Clearance Time (s)		3.0	4.0			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		1724	2203			3421
v/s Ratio Prot			c0.58			
v/s Ratio Perm		c0.67				0.90
v/c Ratio		1.41	1.34			0.94
Uniform Delay, d1		23.5	25.5			0.5
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		186.8	157.2			5.7
Delay (s)		210.3	182.7			6.2
Level of Service		F	F			A
Approach Delay (s)	210.3		182.7			6.2
Approach LOS	F		F			A

Intersection Summary			
HCM 2000 Control Delay	124.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	113.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	360	220	210	200	400	200	1710	600	600	2720	10
Future Volume (veh/h)	250	360	220	210	200	400	200	1710	600	600	2720	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	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	272	391	29	228	217	393	217	1859	368	652	2957	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	269	908	279	269	908	579	218	1929	1037	653	2964	10
Arrive On Green	0.08	0.18	0.18	0.08	0.18	0.18	0.12	0.38	0.38	0.19	0.44	0.44
Sat Flow, veh/h	3456	5106	1572	3456	5106	1572	1781	5106	2745	3456	6669	23
Grp Volume(v), veh/h	272	391	29	228	217	393	217	1859	368	652	2139	828
Grp Sat Flow(s),veh/h/ln	1728	1702	1572	1728	1702	1572	1781	1702	1373	1728	1609	1866
Q Serve(g_s), s	7.0	6.1	1.4	5.9	3.3	16.0	11.0	32.1	8.7	17.0	39.8	39.9
Cycle Q Clear(g_c), s	7.0	6.1	1.4	5.9	3.3	16.0	11.0	32.1	8.7	17.0	39.8	39.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	269	908	279	269	908	579	218	1929	1037	653	2145	829
V/C Ratio(X)	1.01	0.43	0.10	0.85	0.24	0.68	1.00	0.96	0.35	1.00	1.00	1.00
Avail Cap(c_a), veh/h	269	908	279	269	908	579	218	1929	1037	653	2145	829
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	41.5	32.9	31.0	41.0	31.8	24.1	39.5	27.4	20.1	36.5	24.9	25.0
Incr Delay (d2), s/veh	58.0	0.3	0.2	21.7	0.1	3.2	60.0	13.5	1.0	34.9	18.8	30.8
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(95%),veh/ln	8.7	4.4	0.9	5.8	2.4	11.4	13.0	20.8	4.9	15.3	24.4	31.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.5	33.3	31.2	62.6	31.9	27.3	99.5	40.9	21.1	71.4	43.8	55.8
LnGrp LOS	F	C	C	E	C	C	F	D	C	E	D	E
Approach Vol, veh/h		692			838			2444			3619	
Approach Delay, s/veh		59.2			38.1			43.2			51.5	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	38.0	11.0	20.0	15.0	44.0	11.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	34.0	7.0	16.0	11.0	40.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	19.0	34.1	7.9	8.1	13.0	41.9	9.0	18.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	340	170	340	390	600	290	1960	960	560	2420	30
Future Volume (veh/h)	220	340	170	340	390	600	290	1960	960	560	2420	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	229	354	19	354	406	583	302	2042	713	583	2521	29
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	300	898	276	307	908	544	297	1996	1078	576	2582	30
Arrive On Green	0.09	0.18	0.18	0.09	0.18	0.18	0.17	0.39	0.39	0.17	0.39	0.39
Sat Flow, veh/h	3456	5106	1572	3456	5106	1572	1781	5106	2758	3456	6605	76
Grp Volume(v), veh/h	229	354	19	354	406	583	302	2042	713	583	1841	709
Grp Sat Flow(s),veh/h/ln	1728	1702	1572	1728	1702	1572	1781	1702	1379	1728	1609	1856
Q Serve(g_s), s	5.8	5.5	0.9	8.0	6.4	16.0	15.0	35.2	19.1	15.0	33.8	33.9
Cycle Q Clear(g_c), s	5.8	5.5	0.9	8.0	6.4	16.0	15.0	35.2	19.1	15.0	33.8	33.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	300	898	276	307	908	544	297	1996	1078	576	1886	725
V/C Ratio(X)	0.76	0.39	0.07	1.15	0.45	1.07	1.02	1.02	0.66	1.01	0.98	0.98
Avail Cap(c_a), veh/h	307	908	279	307	908	544	297	1996	1078	576	1886	725
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	40.2	32.8	30.9	41.0	33.1	29.5	37.5	27.4	22.5	37.5	27.0	27.0
Incr Delay (d2), s/veh	10.5	0.3	0.1	99.2	0.3	59.5	56.7	26.2	3.2	40.6	15.8	28.2
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(95%),veh/ln	5.1	4.0	0.6	12.6	4.6	28.1	16.6	25.5	10.3	14.5	21.1	26.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	33.1	31.0	140.2	33.4	89.0	94.2	53.6	25.7	78.1	42.8	55.3
LnGrp LOS	D	C	C	F	C	F	F	F	C	F	D	E
Approach Vol, veh/h		602			1343			3057			3133	
Approach Delay, s/veh		39.8			85.7			51.1			52.2	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	39.2	12.0	19.8	19.0	39.2	11.8	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	35.0	8.0	16.0	15.0	35.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	17.0	37.2	10.0	7.5	17.0	35.9	7.8	18.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.4
HCM 6th LOS	E

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	650	300	30	1310	30	360	20	100	40	10	10
Future Volume (veh/h)	50	650	300	30	1310	30	360	20	100	40	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	0.96		0.95
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	670	263	31	1351	30	371	21	67	41	10	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	1269	498	330	2075	46	391	614	563	160	210	21
Arrive On Green	0.51	0.51	0.51	0.03	0.58	0.58	0.22	0.33	0.33	0.06	0.06	0.06
Sat Flow, veh/h	392	2488	977	1781	3554	79	1781	1870	1571	1255	3253	318
Grp Volume(v), veh/h	52	478	455	31	675	706	371	21	67	41	5	6
Grp Sat Flow(s),veh/h/ln	392	1777	1688	1781	1777	1856	1781	1870	1571	1255	1777	1795
Q Serve(g_s), s	9.3	16.4	16.4	0.7	23.2	23.3	18.7	0.7	2.6	2.9	0.3	0.3
Cycle Q Clear(g_c), s	25.9	16.4	16.4	0.7	23.2	23.3	18.7	0.7	2.6	2.9	0.3	0.3
Prop In Lane	1.00		0.58	1.00		0.04	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	208	906	861	330	1037	1083	391	614	563	160	115	116
V/C Ratio(X)	0.25	0.53	0.53	0.09	0.65	0.65	0.95	0.03	0.12	0.26	0.05	0.05
Avail Cap(c_a), veh/h	208	906	861	375	1037	1083	391	945	841	383	430	434
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	23.7	15.0	15.0	10.9	12.7	12.7	35.0	20.8	19.6	41.2	39.9	39.9
Incr Delay (d2), s/veh	2.9	2.2	2.3	0.1	3.2	3.0	32.3	0.0	0.1	0.8	0.2	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(95%),veh/ln	1.8	10.6	10.3	0.5	13.6	14.1	16.9	0.5	1.7	1.7	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	17.2	17.3	11.0	15.9	15.8	67.2	20.8	19.7	42.0	40.1	40.1
LnGrp LOS	C	B	B	B	B	B	E	C	B	D	D	D
Approach Vol, veh/h		985			1412			459			52	
Approach Delay, s/veh		17.7			15.7			58.2			41.6	
Approach LOS		B			B			E			D	

Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		57.1	24.0	9.9	6.7	50.4		33.9				
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s		37.0	20.0	22.0	5.0	28.0		46.0				
Max Q Clear Time (g_c+I1), s		25.3	20.7	4.9	2.7	27.9		4.6				
Green Ext Time (p_c), s		6.7	0.0	0.1	0.0	0.1		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	400	320	60	1000	30	610	20	240	120	30	40
Future Volume (veh/h)	50	400	320	60	1000	30	610	20	240	120	30	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	0.98		0.97
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	412	185	62	1031	29	629	21	190	124	31	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	840	373	334	1555	44	495	880	808	250	454	71
Arrive On Green	0.35	0.35	0.35	0.04	0.44	0.44	0.28	0.47	0.47	0.15	0.15	0.15
Sat Flow, veh/h	532	2384	1057	1781	3529	99	1781	1870	1570	1144	3064	479
Grp Volume(v), veh/h	52	306	291	62	519	541	629	21	190	124	18	18
Grp Sat Flow(s),veh/h/ln	532	1777	1664	1781	1777	1851	1781	1870	1570	1144	1777	1766
Q Serve(g_s), s	7.7	12.1	12.4	1.9	20.8	20.8	25.0	0.5	6.0	9.3	0.8	0.8
Cycle Q Clear(g_c), s	20.6	12.1	12.4	1.9	20.8	20.8	25.0	0.5	6.0	9.3	0.8	0.8
Prop In Lane	1.00		0.64	1.00		0.05	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	191	626	586	334	783	816	495	880	808	250	263	262
V/C Ratio(X)	0.27	0.49	0.50	0.19	0.66	0.66	1.27	0.02	0.24	0.50	0.07	0.07
Avail Cap(c_a), veh/h	191	626	586	355	783	816	495	1060	959	360	434	432
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	31.2	22.8	22.9	17.0	19.9	19.9	32.5	12.8	12.1	36.6	33.0	33.0
Incr Delay (d2), s/veh	3.5	2.7	3.0	0.3	4.4	4.2	137.2	0.0	0.1	1.5	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(95%),veh/ln	2.0	9.0	8.7	1.3	13.6	14.0	43.5	0.4	3.7	4.8	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	25.5	25.9	17.3	24.3	24.1	169.7	12.8	12.2	38.1	33.1	33.1
LnGrp LOS	C	C	C	B	C	C	F	B	B	D	C	C
Approach Vol, veh/h		649			1122			840			160	
Approach Delay, s/veh		26.4			23.8			130.2			37.0	
Approach LOS		C			C			F			D	
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		43.7	29.0	17.3	7.9	35.7		46.3				
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s		31.0	25.0	22.0	5.0	22.0		51.0				
Max Q Clear Time (g_c+I1), s		22.8	27.0	11.3	3.9	22.6		8.0				
Green Ext Time (p_c), s		4.0	0.0	0.4	0.0	0.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			57.4									
HCM 6th LOS			E									
Notes												
User approved changes to right turn type.												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1890	170	130	2450	50	0	150	130	30	290	230
Future Volume (vph)	0	1890	170	130	2450	50	0	150	130	30	290	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	1.00	0.86			0.95	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00			1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5981	1583	1770	5947			3539	1583	1770	1863	1583
Flt Permitted		1.00	1.00	0.95	1.00			1.00	1.00	0.65	1.00	1.00
Satd. Flow (perm)		5981	1583	1770	5947			3539	1583	1219	1863	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1929	173	133	2500	51	0	153	133	31	296	235
RTOR Reduction (vph)	0	0	86	0	2	0	0	0	95	0	0	32
Lane Group Flow (vph)	0	1929	87	133	2549	0	0	153	38	31	296	203
Confl. Peds. (#/hr)						60						
Turn Type		NA	Perm	Prot	NA			NA	Perm	Perm	NA	Perm
Protected Phases		6		5	2			8			4	
Permitted Phases			6						8	4		4
Actuated Green, G (s)		60.1	60.1	13.9	78.0			34.0	34.0	34.0	34.0	34.0
Effective Green, g (s)		60.1	60.1	13.9	78.0			34.0	34.0	34.0	34.0	34.0
Actuated g/C Ratio		0.50	0.50	0.12	0.65			0.28	0.28	0.28	0.28	0.28
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2995	792	205	3865			1002	448	345	527	448
v/s Ratio Prot		0.32		0.08	c0.43			0.04			c0.16	
v/s Ratio Perm			0.05						0.02	0.03		0.13
v/c Ratio		0.64	0.11	0.65	0.66			0.15	0.08	0.09	0.56	0.45
Uniform Delay, d1		22.1	15.8	50.7	12.9			32.2	31.6	31.6	36.6	35.3
Progression Factor		1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.1	0.3	6.9	0.9			0.3	0.4	0.1	1.4	0.7
Delay (s)		23.1	16.1	57.6	13.8			32.5	31.9	31.7	38.0	36.1
Level of Service		C	B	E	B			C	C	C	D	D
Approach Delay (s)		22.6			15.9			32.3			36.9	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2030	190	140	1460	50	0	100	250	30	280	430
Future Volume (vph)	0	2030	190	140	1460	50	0	100	250	30	280	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	1.00	0.86			0.95	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00	0.99			1.00	0.82	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00	1.00	0.85	1.00	1.00
Frt		1.00	0.85	1.00	1.00			1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5981	1583	1770	5916			3539	1301	1509	1863	1583
Flt Permitted		1.00	1.00	0.95	1.00			1.00	1.00	0.69	1.00	1.00
Satd. Flow (perm)		5981	1583	1770	5916			3539	1301	1092	1863	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	2071	194	143	1490	51	0	102	255	31	286	439
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	166	0	0	29
Lane Group Flow (vph)	0	2071	194	143	1537	0	0	102	89	31	286	410
Confl. Peds. (#/hr)						85			85	85		
Turn Type		NA	Perm	Prot	NA			NA	Perm	Perm	NA	Perm
Protected Phases		6		5	2			8			4	
Permitted Phases			6						8	4		4
Actuated Green, G (s)		52.2	52.2	13.8	70.0			42.0	42.0	42.0	42.0	42.0
Effective Green, g (s)		52.2	52.2	13.8	70.0			42.0	42.0	42.0	42.0	42.0
Actuated g/C Ratio		0.44	0.44	0.12	0.58			0.35	0.35	0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2601	688	203	3451			1238	455	382	652	554
v/s Ratio Prot		c0.35		c0.08	0.26			0.03			0.15	
v/s Ratio Perm			0.12						0.07	0.03		c0.26
v/c Ratio		0.80	0.28	0.70	0.45			0.08	0.20	0.08	0.44	0.74
Uniform Delay, d1		29.3	21.8	51.1	14.1			26.1	27.2	26.1	29.9	34.2
Progression Factor		1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.6	1.0	10.6	0.4			0.1	1.0	0.1	0.5	5.1
Delay (s)		31.9	22.9	61.7	14.5			26.2	28.2	26.2	30.4	39.3
Level of Service		C	C	E	B			C	C	C	C	D
Approach Delay (s)		31.2			18.5			27.6			35.4	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	400	170	200	1420	270	210	1070	130	130	390	130
Future Volume (veh/h)	160	400	170	200	1420	270	210	1070	130	130	390	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		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	163	408	80	204	1449	179	214	1092	39	133	398	81
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	179	1235	647	482	1366	625	407	1066	488	179	1475	541
Arrive On Green	0.06	0.35	0.35	0.09	0.38	0.40	0.07	0.30	0.31	0.06	0.29	0.29
Sat Flow, veh/h	1781	3554	1558	1781	3554	1561	1781	3554	1570	1781	5106	1569
Grp Volume(v), veh/h	163	408	80	204	1449	179	214	1092	39	133	398	81
Grp Sat Flow(s),veh/h/ln	1781	1777	1558	1781	1777	1561	1781	1777	1570	1781	1702	1569
Q Serve(g_s), s	5.0	7.6	2.9	6.3	34.6	7.0	6.0	27.0	1.6	4.8	5.4	3.2
Cycle Q Clear(g_c), s	5.0	7.6	2.9	6.3	34.6	7.0	6.0	27.0	1.6	4.8	5.4	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	1235	647	482	1366	625	407	1066	488	179	1475	541
V/C Ratio(X)	0.91	0.33	0.12	0.42	1.06	0.29	0.53	1.02	0.08	0.74	0.27	0.15
Avail Cap(c_a), veh/h	179	1235	647	495	1366	625	407	1066	488	179	1475	541
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	24.5	21.7	16.3	15.7	27.7	18.3	22.7	31.5	21.9	24.7	24.7	20.4
Incr Delay (d2), s/veh	42.8	0.7	0.4	0.6	42.2	1.2	1.2	33.9	0.3	15.3	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(95%),veh/ln	7.6	5.6	1.8	4.5	30.5	4.6	1.4	22.9	1.1	4.8	3.9	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	22.4	16.7	16.3	69.9	19.5	24.0	65.4	22.2	40.0	25.1	21.0
LnGrp LOS	E	C	B	B	F	B	C	F	C	D	C	C
Approach Vol, veh/h		651			1832			1345			612	
Approach Delay, s/veh		32.9			59.0			57.6			27.8	
Approach LOS		C			E			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	31.0	9.0	40.0	9.0	32.0	12.3	36.7
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5.4	4.0	* 5	4.0	* 5.4
Max Green Setting (Gmax), s	6.0	* 26	5.0	* 35	5.0	* 27	9.0	* 31
Max Q Clear Time (g_c+I1), s	8.0	7.4	7.0	36.6	6.8	29.0	8.3	9.6
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	0.0	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

* HCM 6th 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)	180	730	190	170	1080	210	260	790	370	200	550	120
Future Volume (veh/h)	180	730	190	170	1080	210	260	790	370	200	550	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	188	760	152	177	1125	111	271	823	246	208	573	74
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	222	1181	645	324	1248	576	384	1027	471	278	1532	576
Arrive On Green	0.07	0.33	0.33	0.09	0.35	0.37	0.08	0.29	0.30	0.09	0.30	0.30
Sat Flow, veh/h	1781	3554	1571	1781	3554	1572	1781	3554	1569	1781	5106	1569
Grp Volume(v), veh/h	188	760	152	177	1125	111	271	823	246	208	573	74
Grp Sat Flow(s),veh/h/ln	1781	1777	1571	1781	1777	1572	1781	1777	1569	1781	1702	1569
Q Serve(g_s), s	6.0	16.3	5.7	5.8	27.1	4.3	7.0	19.3	11.7	7.4	8.0	2.8
Cycle Q Clear(g_c), s	6.0	16.3	5.7	5.8	27.1	4.3	7.0	19.3	11.7	7.4	8.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	1181	645	324	1248	576	384	1027	471	278	1532	576
V/C Ratio(X)	0.85	0.64	0.24	0.55	0.90	0.19	0.71	0.80	0.52	0.75	0.37	0.13
Avail Cap(c_a), veh/h	222	1181	645	330	1248	576	384	1027	471	278	1532	576
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	23.9	25.5	17.3	19.0	27.7	19.4	24.5	29.6	26.1	22.8	24.8	18.9
Incr Delay (d2), s/veh	25.3	2.7	0.9	1.8	10.7	0.7	5.8	6.6	4.1	10.7	0.7	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(95%),veh/ln	7.2	11.2	3.7	4.3	18.5	2.9	4.0	13.7	8.2	6.8	5.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	28.2	18.2	20.8	38.4	20.2	30.3	36.2	30.3	33.6	25.5	19.4
LnGrp LOS	D	C	B	C	D	C	C	D	C	C	C	B
Approach Vol, veh/h		1100			1413			1340			855	
Approach Delay, s/veh		30.4			34.8			33.9			27.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	32.0	10.0	37.0	12.0	31.0	11.7	35.3
Change Period (Y+Rc), s	4.0	* 5	4.0	* 5.4	4.0	* 5	4.0	* 5.4
Max Green Setting (Gmax), s	7.0	* 27	6.0	* 32	8.0	* 26	8.0	* 30
Max Q Clear Time (g_c+I1), s	9.0	10.0	8.0	29.1	9.4	21.3	7.8	18.3
Green Ext Time (p_c), s	0.0	3.7	0.0	1.8	0.0	2.6	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Notes

* HCM 6th 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 (vph)	240	210	450	100	0	140	0	1050	100	280	590	0
Future Volume (vph)	240	210	450	100	0	140	0	1050	100	280	590	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.5	4.0	4.0		4.0		5.3	4.0	4.0	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00		1.00		0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	0.91	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1755		1583		5085	1441	1768	5085	
Flt Permitted	0.95	1.00	1.00	0.17		1.00		1.00	1.00	0.15	1.00	
Satd. Flow (perm)	1770	1863	1583	308		1583		5085	1441	275	5085	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	247	216	464	103	0	144	0	1082	103	289	608	0
RTOR Reduction (vph)	0	0	195	0	0	61	0	0	77	0	0	0
Lane Group Flow (vph)	247	216	269	103	0	83	0	1082	26	289	608	0
Confl. Peds. (#/hr)			20	20			20		30	30		20
Turn Type	Split	NA	Prot	Perm		pm+ov		NA	Perm	pm+pt	NA	
Protected Phases	4	4	4			5		6		5	2	
Permitted Phases				3		3			6	2		
Actuated Green, G (s)	15.4	15.4	15.4	22.4		32.4		21.8	21.8	37.1	35.8	
Effective Green, g (s)	16.9	15.4	16.9	24.0		32.4		21.8	23.1	37.1	35.8	
Actuated g/C Ratio	0.19	0.17	0.19	0.27		0.36		0.24	0.26	0.41	0.40	
Clearance Time (s)	5.5	5.5	5.5	5.6		4.0		5.3	5.3	4.0	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		5.0	5.0	3.0	5.4	
Lane Grp Cap (vph)	332	318	297	82		640		1231	369	279	2022	
v/s Ratio Prot	0.14	0.12	c0.17			0.01		0.21		c0.12	0.12	
v/s Ratio Perm				c0.33		0.04			0.02	c0.31		
v/c Ratio	0.74	0.68	0.91	1.26		0.13		0.88	0.07	1.04	0.30	
Uniform Delay, d1	34.5	35.0	35.8	33.0		19.3		32.8	25.3	32.7	18.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.7	5.7	29.1	183.0		0.1		9.1	0.4	63.5	0.4	
Delay (s)	43.2	40.7	64.8	216.0		19.4		41.9	25.7	96.2	18.9	
Level of Service	D	D	E	F		B		D	C	F	B	
Approach Delay (s)		53.5			101.4			40.5			43.8	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	440	390	510	50	0	230	0	920	130	220	530	0
Future Volume (vph)	440	390	510	50	0	230	0	920	130	220	530	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.5	4.0	4.0		4.0		5.3	4.0	4.0	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00		1.00		0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	0.83	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.96		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1707		1583		5085	1313	1765	5085	
Flt Permitted	0.95	1.00	1.00	0.41		1.00		1.00	1.00	0.14	1.00	
Satd. Flow (perm)	1770	1863	1583	733		1583		5085	1313	264	5085	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	458	406	531	52	0	240	0	958	135	229	552	0
RTOR Reduction (vph)	0	0	107	0	0	75	0	0	97	0	0	0
Lane Group Flow (vph)	458	406	424	52	0	165	0	958	38	229	552	0
Confl. Peds. (#/hr)			45	45			35		65	65		35
Turn Type	Split	NA	Prot	Perm		pm+ov		NA	Perm	pm+pt	NA	
Protected Phases	4	4	4			5		6		5	2	
Permitted Phases				3		3			6	2		
Actuated Green, G (s)	26.6	26.6	26.6	8.2		18.8		24.2	24.2	38.8	38.8	
Effective Green, g (s)	28.1	26.6	28.1	9.8		18.8		24.2	25.5	38.8	38.8	
Actuated g/C Ratio	0.31	0.30	0.31	0.11		0.21		0.27	0.28	0.43	0.43	
Clearance Time (s)	5.5	5.5	5.5	5.6		4.0		5.3	5.3	4.0	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		5.0	5.0	3.0	5.4	
Lane Grp Cap (vph)	552	550	494	79		330		1367	372	290	2192	
v/s Ratio Prot	0.26	0.22	c0.27			0.06		0.19		c0.09	0.11	
v/s Ratio Perm				c0.07		0.05			0.03	c0.25		
v/c Ratio	0.83	0.74	0.86	0.66		0.50		0.70	0.10	0.79	0.25	
Uniform Delay, d1	28.7	28.6	29.1	38.5		31.4		29.6	23.8	18.8	16.3	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.0	5.1	13.9	18.1		1.2		3.0	0.6	13.3	0.3	
Delay (s)	38.7	33.7	42.9	56.6		32.6		32.7	24.4	32.1	16.6	
Level of Service	D	C	D	E		C		C	C	C	B	
Approach Delay (s)		38.9			36.9			31.6			21.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	670	1220	20	30	1910	720	30	40	60	300	30	510
Future Volume (vph)	670	1220	20	30	1910	720	30	40	60	300	30	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4		4.0	5.4	4.0	4.0	6.2	4.0	4.0	6.2	4.0
Lane Util. Factor	0.97	0.81		1.00	0.86	1.00	1.00	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (prot)	3204	7022		1652	5981	1533	1770	3539	1583	3044	3086	1573
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (perm)	3204	7022		1652	5981	1533	1770	3539	1583	3044	3086	1573
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	691	1258	21	31	1969	742	31	41	62	309	31	526
RTOR Reduction (vph)	0	2	0	0	0	52	0	0	58	0	0	70
Lane Group Flow (vph)	691	1277	0	31	1969	690	31	41	4	207	133	456
Confl. Peds. (#/hr)	25		5	5		25	5					5
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	5	2		1	6	3	4	4		3	3	5
Permitted Phases						6			4			3
Actuated Green, G (s)	28.6	69.9		3.6	44.9	63.7	5.9	5.9	5.9	18.8	18.8	47.4
Effective Green, g (s)	28.6	69.9		3.6	44.9	68.1	8.1	5.9	8.1	21.0	18.8	47.4
Actuated g/C Ratio	0.24	0.58		0.03	0.37	0.57	0.07	0.05	0.07	0.18	0.16	0.39
Clearance Time (s)	4.0	5.4		4.0	5.4	6.2	6.2	6.2	6.2	6.2	6.2	4.0
Vehicle Extension (s)	3.0	5.5		3.0	5.1	5.0	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	763	4090		49	2237	869	119	174	106	532	483	673
v/s Ratio Prot	c0.22	0.18		0.02	c0.33	c0.14	c0.02	0.01		0.07	0.04	0.16
v/s Ratio Perm						0.31			0.00			0.13
v/c Ratio	0.91	0.31		0.63	0.88	0.79	0.26	0.24	0.04	0.39	0.28	0.68
Uniform Delay, d1	44.4	12.8		57.5	35.0	20.4	53.1	54.9	52.3	43.8	44.6	30.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.2	0.2		23.7	5.4	5.8	1.2	0.7	0.2	1.0	0.7	2.7
Delay (s)	58.6	13.0		81.2	40.4	26.2	54.3	55.6	52.5	44.8	45.2	32.7
Level of Service	E	B		F	D	C	D	E	D	D	D	C
Approach Delay (s)		29.0			37.0			53.8			37.5	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	570	1520	30	70	1490	490	20	40	40	520	40	600
Future Volume (vph)	570	1520	30	70	1490	490	20	40	40	520	40	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4		4.0	5.4	4.0	4.0	6.2	4.0	4.0	6.2	4.0
Lane Util. Factor	0.97	0.81		1.00	0.86	1.00	1.00	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.76	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (prot)	3204	7018		1652	5981	1497	1770	3539	1211	3044	3079	1571
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00
Satd. Flow (perm)	3204	7018		1652	5981	1497	1770	3539	1211	3044	3079	1571
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	582	1551	31	71	1520	500	20	41	41	531	41	612
RTOR Reduction (vph)	0	2	0	0	0	37	0	0	38	0	0	66
Lane Group Flow (vph)	582	1580	0	71	1520	463	20	41	3	356	216	546
Confl. Peds. (#/hr)	50		5	5		50	15		50	50		15
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	5	2		1	6	3	4	4		3	3	5
Permitted Phases						6			4			3
Actuated Green, G (s)	33.4	66.4		8.3	41.3	59.1	5.7	5.7	5.7	17.8	17.8	51.2
Effective Green, g (s)	33.4	66.4		8.3	41.3	63.5	7.9	5.7	7.9	20.0	17.8	51.2
Actuated g/C Ratio	0.28	0.55		0.07	0.34	0.53	0.07	0.05	0.07	0.17	0.15	0.43
Clearance Time (s)	4.0	5.4		4.0	5.4	6.2	6.2	6.2	6.2	6.2	6.2	4.0
Vehicle Extension (s)	3.0	5.5		3.0	5.1	5.0	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	891	3883		114	2058	792	116	168	79	507	456	722
v/s Ratio Prot	0.18	0.23		0.04	c0.25	0.10	0.01	c0.01		0.12	0.07	c0.21
v/s Ratio Perm						0.21			0.00			0.14
v/c Ratio	0.65	0.41		0.62	0.74	0.58	0.17	0.24	0.03	0.70	0.47	0.76
Uniform Delay, d1	38.2	15.4		54.3	34.6	19.3	53.0	55.1	52.5	47.2	46.8	29.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.3		10.1	2.4	1.7	0.7	0.8	0.2	5.5	1.6	4.5
Delay (s)	39.9	15.8		64.5	37.0	21.0	53.7	55.8	52.7	52.7	48.4	33.7
Level of Service	D	B		E	D	C	D	E	D	D	D	C
Approach Delay (s)		22.3			34.1			54.1			42.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1370	410	210	2220	380	690	960	120	170	490	260
Future Volume (veh/h)	140	1370	410	210	2220	380	690	960	120	170	490	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	1575	471	241	2552	437	793	1103	129	195	563	184
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	2871	707	184	1910	320	797	988	115	259	563	585
Arrive On Green	0.21	0.45	0.45	0.10	0.34	0.34	0.23	0.31	0.31	0.07	0.16	0.16
Sat Flow, veh/h	1781	6434	1585	1781	5591	936	3456	3205	374	3456	3554	1585
Grp Volume(v), veh/h	161	1575	471	241	2194	795	793	611	621	195	563	184
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1781	1609	1702	1728	1777	1803	1728	1777	1585
Q Serve(g_s), s	9.4	21.5	18.2	12.4	41.0	41.0	27.5	37.0	37.0	6.6	19.0	0.0
Cycle Q Clear(g_c), s	9.4	21.5	18.2	12.4	41.0	41.0	27.5	37.0	37.0	6.6	19.0	0.0
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	375	2871	707	184	1649	581	797	548	556	259	563	585
V/C Ratio(X)	0.43	0.55	0.67	1.31	1.33	1.37	0.99	1.11	1.12	0.75	1.00	0.31
Avail Cap(c_a), veh/h	375	2871	707	184	1649	581	797	548	556	259	563	585
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	41.1	24.4	11.0	53.8	39.5	39.5	46.1	41.5	41.5	54.4	50.5	27.0
Incr Delay (d2), s/veh	0.8	0.8	4.9	172.6	153.2	175.7	30.5	73.9	74.7	10.6	38.1	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(95%),veh/ln	7.5	12.8	11.0	22.6	58.3	67.1	21.2	37.9	38.6	5.8	16.7	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	25.1	15.9	226.4	192.7	215.2	76.5	115.4	116.2	65.0	88.6	27.4
LnGrp LOS	D	C	B	F	F	F	E	F	F	E	F	C
Approach Vol, veh/h		2207			3230			2025			942	
Approach Delay, s/veh		24.4			200.8			100.4			71.7	
Approach LOS		C			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	59.8	34.2	25.0	31.5	46.3	15.7	43.5				
Change Period (Y+Rc), s	5.6	* 5.8	* 6.5	6.0	5.8	* 5.3	* 6.7	* 6.5				
Max Green Setting (Gmax), s	12.4	* 38	* 27	19.0	9.2	* 41	* 9	* 37				
Max Q Clear Time (g_c+I1), s	14.4	23.5	29.5	21.0	11.4	43.0	8.6	39.0				
Green Ext Time (p_c), s	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			115.8									
HCM 6th LOS			F									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	2270	610	240	1570	250	670	1030	160	230	820	190
Future Volume (veh/h)	260	2270	610	240	1570	250	670	1030	160	230	820	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	274	2389	642	253	1653	263	705	1084	157	242	863	111
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	696	3815	940	208	1821	290	665	994	144	337	811	979
Arrive On Green	0.39	0.59	0.59	0.12	0.32	0.31	0.19	0.32	0.30	0.10	0.23	0.23
Sat Flow, veh/h	1781	6434	1585	1781	5638	897	3456	3116	450	3456	3554	1585
Grp Volume(v), veh/h	274	2389	642	253	1415	501	705	617	624	242	863	111
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1781	1609	1709	1728	1777	1789	1728	1777	1585
Q Serve(g_s), s	13.3	28.9	31.9	14.0	33.7	33.7	23.1	38.3	38.3	8.2	27.4	0.0
Cycle Q Clear(g_c), s	13.3	28.9	31.9	14.0	33.7	33.7	23.1	38.3	38.3	8.2	27.4	0.0
Prop In Lane	1.00		1.00	1.00		0.52	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	696	3815	940	208	1559	552	665	567	571	337	811	979
V/C Ratio(X)	0.39	0.63	0.68	1.22	0.91	0.91	1.06	1.09	1.09	0.72	1.06	0.11
Avail Cap(c_a), veh/h	696	3815	940	208	1568	555	665	567	571	337	811	979
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	26.3	15.8	15.3	53.0	38.9	39.2	48.4	40.8	41.1	52.6	46.3	9.4
Incr Delay (d2), s/veh	0.4	0.8	4.0	133.4	9.3	21.2	51.8	64.1	65.2	6.3	49.9	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(95%),veh/ln	9.5	15.4	17.0	21.6	20.5	23.9	21.4	36.6	37.1	6.8	25.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	16.6	19.4	186.4	48.2	60.5	100.3	104.9	106.3	58.8	96.2	9.5
LnGrp LOS	C	B	B	F	D	E	F	F	F	E	F	A
Approach Vol, veh/h		3305			2169			1946			1216	
Approach Delay, s/veh		18.0			67.1			103.7			80.8	
Approach LOS		B			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	76.5	27.1	31.4	51.7	42.8	15.7	42.8
Change Period (Y+Rc), s	5.6	* 5.8	* 6.5	6.0	5.8	* 5.3	* 6.7	* 6.5
Max Green Setting (Gmax), s	12.4	* 39	* 20	25.4	13.2	* 38	* 9	* 36
Max Q Clear Time (g_c+I1), s	16.0	33.9	25.1	29.4	15.3	35.7	10.2	40.3
Green Ext Time (p_c), s	0.0	4.6	0.0	0.0	0.0	1.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	650	430	530	1360	960	390	910	220	330	470	290
Future Volume (veh/h)	110	650	430	530	1360	960	390	910	220	330	470	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	663	371	541	1388	819	398	929	191	337	480	223
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	176	1292	546	568	2340	726	374	948	1386	346	918	449
Arrive On Green	0.04	0.25	0.24	0.25	0.46	0.46	0.11	0.27	0.25	0.10	0.26	0.24
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	112	663	371	541	1388	819	398	929	191	337	480	223
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	5.0	13.4	24.0	27.0	24.3	55.0	13.0	31.1	4.4	11.7	13.9	14.1
Cycle Q Clear(g_c), s	5.0	13.4	24.0	27.0	24.3	55.0	13.0	31.1	4.4	11.7	13.9	14.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	1292	546	568	2340	726	374	948	1386	346	918	449
V/C Ratio(X)	0.64	0.51	0.68	0.95	0.59	1.13	1.06	0.98	0.14	0.98	0.52	0.50
Avail Cap(c_a), veh/h	176	1292	546	603	2340	726	374	948	1386	346	918	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	38.5	33.6	25.8	24.2	32.5	53.5	43.7	16.3	53.9	38.2	35.9
Incr Delay (d2), s/veh	7.4	1.5	6.7	24.7	1.1	74.2	62.1	23.1	0.0	41.6	0.5	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(95%),veh/ln	5.2	9.6	15.1	21.2	14.8	48.5	13.7	22.6	2.5	11.3	10.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	39.9	40.3	50.5	25.3	106.7	115.6	66.8	16.3	95.5	38.7	36.7
LnGrp LOS	D	D	D	D	C	F	F	E	B	F	D	D
Approach Vol, veh/h		1146			2748			1518			1040	
Approach Delay, s/veh		40.2			54.5			73.2			56.7	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.6	34.4	17.0	35.0	9.0	59.0	16.0	36.0
Change Period (Y+Rc), s	4.0	6.0	4.0	* 6	4.0	6.0	4.0	* 6
Max Green Setting (Gmax), s	32.0	26.0	13.0	* 29	5.0	53.0	12.0	* 30
Max Q Clear Time (g_c+I1), s	29.0	26.0	15.0	16.1	7.0	57.0	13.7	33.1
Green Ext Time (p_c), s	0.6	0.0	0.0	3.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.7
HCM 6th LOS	E

Notes

* HCM 6th 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)	240	1740	720	220	1140	330	220	580	670	790	960	400
Future Volume (veh/h)	240	1740	720	220	1140	330	220	580	670	790	960	400
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	255	1851	710	234	1213	96	234	617	610	840	1021	386
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	294	1765	659	194	1567	487	300	845	826	720	1277	723
Arrive On Green	0.11	0.35	0.33	0.08	0.31	0.31	0.09	0.24	0.22	0.21	0.36	0.34
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	255	1851	710	234	1213	96	234	617	610	840	1021	386
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	11.6	41.5	39.5	9.0	25.9	5.4	8.0	19.2	23.6	25.0	31.0	21.0
Cycle Q Clear(g_c), s	11.6	41.5	39.5	9.0	25.9	5.4	8.0	19.2	23.6	25.0	31.0	21.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	1765	659	194	1567	487	300	845	826	720	1277	723
V/C Ratio(X)	0.87	1.05	1.08	1.21	0.77	0.20	0.78	0.73	0.74	1.17	0.80	0.53
Avail Cap(c_a), veh/h	299	1765	659	194	1567	487	518	859	837	720	1277	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	39.3	35.1	32.9	37.8	30.7	53.7	42.2	38.1	47.5	34.6	23.4
Incr Delay (d2), s/veh	22.5	35.5	57.7	132.2	3.8	0.9	3.7	2.6	2.9	89.7	3.7	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(95%),veh/ln	10.9	31.4	39.5	17.5	16.6	3.8	6.4	12.9	12.5	28.9	19.6	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	74.8	92.8	165.0	41.6	31.6	57.4	44.8	40.9	137.2	38.3	24.2
LnGrp LOS	D	F	F	F	D	C	E	D	D	F	D	C
Approach Vol, veh/h		2816			1543			1461			2247	
Approach Delay, s/veh		77.2			59.7			45.2			72.8	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	45.5	14.4	47.1	17.6	40.8	29.0	32.5
Change Period (Y+Rc), s	4.0	6.0	4.0	* 6	4.0	6.0	4.0	* 6
Max Green Setting (Gmax), s	9.0	39.0	18.0	* 34	14.0	34.0	25.0	* 27
Max Q Clear Time (g_c+I1), s	11.0	43.5	10.0	33.0	13.6	27.9	27.0	25.6
Green Ext Time (p_c), s	0.0	0.0	0.5	0.7	0.0	3.9	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	66.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	210	1280	50	620	810
Future Volume (vph)	0	210	1280	50	620	810
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	5053		3433	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	5053		3433	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	210	1280	50	620	810
RTOR Reduction (vph)	0	86	9	0	0	0
Lane Group Flow (vph)	0	124	1321	0	620	810
Confl. Peds. (#/hr)				10	10	
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		8	
Permitted Phases		8				2 8
Actuated Green, G (s)		8.8	26.0		8.8	45.0
Effective Green, g (s)		9.7	27.3		9.7	41.4
Actuated g/C Ratio		0.22	0.61		0.22	0.92
Clearance Time (s)		4.9	5.3		4.9	
Vehicle Extension (s)		3.0	3.8		3.0	
Lane Grp Cap (vph)		600	3065		740	3255
v/s Ratio Prot			c0.26		c0.18	
v/s Ratio Perm		0.04				0.23
v/c Ratio		0.21	0.43		0.84	0.25
Uniform Delay, d1		14.5	4.7		16.9	0.2
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.2	0.4		8.2	0.0
Delay (s)		14.7	5.2		25.1	0.2
Level of Service		B	A		C	A
Approach Delay (s)	14.7		5.2			11.0
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	620	830	100	340	1560
Future Volume (vph)	0	620	830	100	340	1560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.98		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2787	4992		3433	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2787	4992		3433	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	674	902	109	370	1696
RTOR Reduction (vph)	0	198	33	0	0	0
Lane Group Flow (vph)	0	476	978	0	370	1696
Confl. Peds. (#/hr)				15	15	
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		8	
Permitted Phases		8				2 8
Actuated Green, G (s)		8.8	26.0		8.8	45.0
Effective Green, g (s)		9.7	27.3		9.7	41.4
Actuated g/C Ratio		0.22	0.61		0.22	0.92
Clearance Time (s)		4.9	5.3		4.9	
Vehicle Extension (s)		3.0	3.8		3.0	
Lane Grp Cap (vph)		600	3028		740	3255
v/s Ratio Prot			0.20		0.11	
v/s Ratio Perm		c0.17				c0.48
v/c Ratio		0.79	0.32		0.50	0.52
Uniform Delay, d1		16.7	4.3		15.5	0.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		7.1	0.3		0.5	0.2
Delay (s)		23.8	4.6		16.1	0.4
Level of Service		C	A		B	A
Approach Delay (s)	23.8		4.6			3.2
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix F: 2028 Conditions Synchro Queue Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	278		145	245		140	225		100	205		200
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		588			684			825			550	
Travel Time (s)		10.0			11.7			16.1			10.7	
Lane Group Flow (vph)	227	588	258	186	825	412	113	1928	72	206	1474	175
v/c Ratio	0.88	0.71	0.50	0.65	0.93	0.80	0.58	1.00	0.09	0.97	0.75	0.24
Control Delay	87.9	47.2	14.2	55.4	62.2	38.4	31.8	58.6	0.2	85.4	34.6	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	47.2	14.2	55.4	62.2	38.4	31.8	58.6	0.2	85.4	34.6	2.7
Queue Length 50th (ft)	91	216	40	122	330	191	44	~544	0	110	356	0
Queue Length 95th (ft)	#164	280	118	#196	#452	#350	95	#667	0	#266	415	29
Internal Link Dist (ft)		508			604			745			470	
Turn Bay Length (ft)	278		145	245		140	225		100	205		200
Base Capacity (vph)	257	878	538	288	884	515	196	1923	821	212	1972	739
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.67	0.48	0.65	0.93	0.80	0.58	1.00	0.09	0.97	0.75	0.24

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	278		145	245		140	225		100	205		200
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		588			684			825			550	
Travel Time (s)		10.0			11.7			16.1			10.7	
Lane Group Flow (vph)	206	918	165	113	794	206	227	1711	113	381	1804	433
v/c Ratio	0.80	1.03	0.33	0.58	0.90	0.41	0.98	1.07	0.16	1.18	0.97	0.58
Control Delay	77.5	82.6	9.8	59.4	57.7	14.4	87.5	81.8	1.4	140.4	51.6	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	82.6	9.8	59.4	57.7	14.4	87.5	81.8	1.4	140.4	51.6	15.0
Queue Length 50th (ft)	82	~401	12	71	314	36	126	~536	0	~303	497	102
Queue Length 95th (ft)	#143	#531	68	123	#424	104	#291	#633	11	#500	#610	208
Internal Link Dist (ft)		508			604			745			470	
Turn Bay Length (ft)	278		145	245		140	225		100	205		200
Base Capacity (vph)	257	890	506	194	884	506	231	1606	706	323	1868	745
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.03	0.33	0.58	0.90	0.41	0.98	1.07	0.16	1.18	0.97	0.58

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	200		0	160		100	230		100
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		597			453			968			825	
Travel Time (s)		10.2			7.7			18.9			16.1	
Lane Group Flow (vph)	173	224	102	327	347	0	316	1918	143	41	1776	82
v/c Ratio	0.66	0.41	0.25	1.43	0.63		1.46	0.68	0.14	0.22	0.75	0.09
Control Delay	39.2	36.1	10.1	252.1	38.4		235.8	24.4	10.7	10.9	22.5	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	36.1	10.1	252.1	38.4		235.8	24.4	10.7	10.9	22.5	2.4
Queue Length 50th (ft)	77	61	12	~130	92		~192	392	44	8	291	0
Queue Length 95th (ft)	125	91	45	#215	130		m#217	m423	m54	23	382	18
Internal Link Dist (ft)		517			373			888			745	
Turn Bay Length (ft)	70			200			160		100	230		100
Base Capacity (vph)	261	1022	412	228	1010		216	2810	998	183	2380	885
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.22	0.25	1.43	0.34		1.46	0.68	0.14	0.22	0.75	0.09

Intersection Summary

Area Type: Other

~ 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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	200		0	160		100	230		100
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			40			35			35	
Link Distance (ft)		597			453			968			825	
Travel Time (s)		11.6			7.7			18.9			16.1	
Lane Group Flow (vph)	168	516	126	284	305	0	242	1705	326	84	1937	105
v/c Ratio	0.47	0.69	0.28	1.06	0.39		1.12	0.72	0.37	0.46	0.90	0.13
Control Delay	25.3	37.5	11.0	114.7	26.8		100.4	29.0	19.5	19.4	32.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	37.5	11.0	114.7	26.8		100.4	29.0	19.5	19.4	32.6	4.3
Queue Length 50th (ft)	67	143	21	~92	67		~135	365	151	21	367	5
Queue Length 95th (ft)	104	182	54	#172	97		m#170	m420	m182	48	#540	32
Internal Link Dist (ft)		517			373			888			745	
Turn Bay Length (ft)	70			200			160		100	230		100
Base Capacity (vph)	359	1022	453	267	1046		217	2362	893	183	2148	810
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.50	0.28	1.06	0.29		1.12	0.72	0.37	0.46	0.90	0.13

Intersection Summary

Area Type: Other

~ 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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	90		0	175		0	240		100	140		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35			35	
Link Distance (ft)		592			452			615			968	
Travel Time (s)		13.5			7.7			12.0			18.9	
Lane Group Flow (vph)	10	474	0	216	1093	0	186	2072	31	165	1938	31
v/c Ratio	0.06	0.54		0.75	1.03		1.00	0.95	0.04	0.89	0.89	0.04
Control Delay	16.6	28.6		38.9	65.9		87.1	37.5	0.3	47.8	17.4	1.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	28.6		38.9	65.9		87.1	37.5	0.3	47.8	17.4	1.0
Queue Length 50th (ft)	3	105		80	~336		~65	~474	0	30	376	0
Queue Length 95th (ft)	13	153		#152	#465		#199	#569	2	m#86	m#410	m1
Internal Link Dist (ft)		512			372			535			888	
Turn Bay Length (ft)	90			175			240		100	140		60
Base Capacity (vph)	179	1010		289	1061		186	2181	820	186	2181	803
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.47		0.75	1.03		1.00	0.95	0.04	0.89	0.89	0.04

Intersection Summary

Area Type: Other

~ 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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	90		0	175		0	240		100	140		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		592			452			615			968	
Travel Time (s)		10.1			7.7			12.0			18.9	
Lane Group Flow (vph)	102	459	0	214	684	0	153	1949	51	276	2041	71
v/c Ratio	0.55	0.56		0.83	0.74		0.83	0.90	0.07	1.14	0.88	0.08
Control Delay	31.2	29.7		51.3	30.6		51.7	33.1	2.0	111.2	14.9	1.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	29.7		51.3	30.6		51.7	33.1	2.0	111.2	14.9	1.3
Queue Length 50th (ft)	39	108		88	158		39	376	0	~126	405	4
Queue Length 95th (ft)	69	147		#162	208		#155	#540	12	m#172	m#534	m4
Internal Link Dist (ft)		512			372			535			888	
Turn Bay Length (ft)	90			175			240		100	140		60
Base Capacity (vph)	185	1010		258	1039		184	2156	783	243	2325	840
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.45		0.83	0.66		0.83	0.90	0.07	1.14	0.88	0.08

Intersection Summary

Area Type: Other

~ 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	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	4	4			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			35	35	
Link Distance (ft)	251			195	286	
Travel Time (s)	4.3			3.8	5.6	
Lane Group Flow (vph)	0	2677	1948	0	2344	10
v/c Ratio		1.24	0.57		1.12	0.01
Control Delay		134.6	14.9		91.1	0.0
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		134.6	14.9		91.1	0.0
Queue Length 50th (ft)		~745	192		~450	0
Queue Length 95th (ft)		#846	224		#526	0
Internal Link Dist (ft)	171			115	206	
Turn Bay Length (ft)						
Base Capacity (vph)		2161	3435		2093	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		1.24	0.57		1.12	0.01

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	4	4			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			35	35	
Link Distance (ft)	251			195	286	
Travel Time (s)	4.3			3.8	5.6	
Lane Group Flow (vph)	0	2827	1765	0	2388	20
v/c Ratio		1.31	0.52		1.15	0.01
Control Delay		167.7	14.3		102.9	0.0
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		167.7	14.3		102.9	0.0
Queue Length 50th (ft)		~817	168		~468	0
Queue Length 95th (ft)		#917	198		#544	0
Internal Link Dist (ft)	171			115	206	
Turn Bay Length (ft)						
Base Capacity (vph)		2152	3420		2079	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		1.31	0.52		1.15	0.01

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	300	
Storage Lanes	0	1		1	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		35			35
Link Distance (ft)	410		338			520
Travel Time (s)	9.3		6.6			10.1
Lane Group Flow (vph)	0	469	3990	271	125	2750
v/c Ratio		1.00	0.98	0.26	0.12	0.43
Control Delay		84.6	32.4	3.0	31.7	0.2
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		84.6	32.4	3.0	31.7	0.2
Queue Length 50th (ft)		363	812	17	36	0
Queue Length 95th (ft)		#585	#903	50	60	0
Internal Link Dist (ft)	330		258			440
Turn Bay Length (ft)					300	
Base Capacity (vph)		469	4058	1034	1001	6408
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		1.00	0.98	0.26	0.12	0.43

Intersection Summary

Area Type: Other

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	300	
Storage Lanes	0	1		1	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		35			35
Link Distance (ft)	410		338			520
Travel Time (s)	9.3		6.6			10.1
Lane Group Flow (vph)	0	567	3866	309	62	2732
v/c Ratio		1.03	1.03	0.33	0.05	0.43
Control Delay		85.8	49.9	4.7	26.7	0.2
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		85.8	49.9	4.7	26.7	0.2
Queue Length 50th (ft)		~470	~935	30	16	0
Queue Length 95th (ft)		#691	#990	74	32	0
Internal Link Dist (ft)	330		258			440
Turn Bay Length (ft)					300	
Base Capacity (vph)		550	3738	942	1172	6408
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		1.03	1.03	0.33	0.05	0.43

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	230		175	0	
Storage Lanes	2	0		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	35		35			35
Link Distance (ft)	620		550			520
Travel Time (s)	12.1		10.7			10.1
Lane Group Flow (vph)	417	563	3948	0	0	2750
v/c Ratio	0.45	0.82	0.97			0.67
Control Delay	37.3	51.1	30.2			15.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	37.3	51.1	30.2			15.5
Queue Length 50th (ft)	138	231	787			366
Queue Length 95th (ft)	172	284	#1035			472
Internal Link Dist (ft)	540		470			440
Turn Bay Length (ft)	200	230				
Base Capacity (vph)	1118	831	4073			4088
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.37	0.68	0.97			0.67

Intersection Summary

Area Type: Other

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	230		175	0	
Storage Lanes	2	0		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	35		35			35
Link Distance (ft)	620		550			520
Travel Time (s)	12.1		10.7			10.1
Lane Group Flow (vph)	615	333	3906	0	0	2760
v/c Ratio	0.77	0.57	0.90			0.64
Control Delay	49.7	44.0	21.0			12.6
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	49.7	44.0	21.0			12.6
Queue Length 50th (ft)	231	130	666			322
Queue Length 95th (ft)	275	170	#894			425
Internal Link Dist (ft)	540		470			440
Turn Bay Length (ft)	200	230				
Base Capacity (vph)	1118	823	4322			4326
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.55	0.40	0.90			0.64

Intersection Summary

Area Type: Other

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	3		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	50		35			35
Link Distance (ft)	820		237			230
Travel Time (s)	11.2		4.6			4.5
Lane Group Flow (vph)	0	2747	2516	0	0	3463
v/c Ratio		1.40	1.31			0.98
Control Delay		204.9	170.4			12.7
Queue Delay		0.0	0.0			0.0
Total Delay		204.9	170.4			12.7
Queue Length 50th (ft)		~925	~680			0
Queue Length 95th (ft)		#1038	#776			#81
Internal Link Dist (ft)	740		157			150
Turn Bay Length (ft)						
Base Capacity (vph)		1965	1921			3539
Starvation Cap Reductn		0	0			0
Spillback Cap Reductn		0	0			0
Storage Cap Reductn		0	0			0
Reduced v/c Ratio		1.40	1.31			0.98

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	3		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	50		35			40
Link Distance (ft)	820		237			230
Travel Time (s)	11.2		4.6			3.9
Lane Group Flow (vph)	0	2436	2957	0	0	3202
v/c Ratio		1.41	1.34			0.90
Control Delay		213.5	182.7			4.8
Queue Delay		0.0	0.0			0.0
Total Delay		213.5	182.7			4.8
Queue Length 50th (ft)		~825	~812			0
Queue Length 95th (ft)		#939	#905			0
Internal Link Dist (ft)	740		157			150
Turn Bay Length (ft)						
Base Capacity (vph)		1724	2203			3539
Starvation Cap Reductn		0	0			0
Spillback Cap Reductn		0	0			0
Storage Cap Reductn		0	0			0
Reduced v/c Ratio		1.41	1.34			0.90

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	240		120	270		350	240		70	220		80
Storage Lanes	2		1	2		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		538			1042			676			375	
Travel Time (s)		9.2			17.8			13.2			7.3	
Lane Group Flow (vph)	272	391	239	228	217	435	217	1891	652	652	2924	0
v/c Ratio	1.02	0.55	0.57	0.75	0.28	0.63	0.83	0.98	0.50	0.89	1.03	
Control Delay	103.1	38.6	11.6	56.4	34.2	23.0	66.4	45.7	8.3	51.3	50.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.1	38.6	11.6	56.4	34.2	23.0	66.4	45.7	8.3	51.3	50.1	
Queue Length 50th (ft)	~82	76	6	66	40	165	122	383	48	187	~522	
Queue Length 95th (ft)	#164	105	70	#119	61	269	#269	#502	98	#309	#598	
Internal Link Dist (ft)		458			962			596			295	
Turn Bay Length (ft)	240		120	270		350	240		70	220		
Base Capacity (vph)	267	847	453	305	904	686	261	1922	1317	735	2846	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.02	0.46	0.53	0.75	0.24	0.63	0.83	0.98	0.50	0.89	1.03	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	240		120	270		350	240		70	220		80
Storage Lanes	2		1	2		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		538			1042			676			385	
Travel Time (s)		9.2			17.8			13.2			7.5	
Lane Group Flow (vph)	229	354	177	354	406	625	302	2042	1000	583	2552	0
v/c Ratio	0.75	0.50	0.48	1.16	0.57	0.96	0.84	1.03	0.74	0.83	1.03	
Control Delay	56.6	37.9	10.1	140.9	39.1	52.4	57.1	57.5	16.1	47.2	53.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.6	37.9	10.1	140.9	39.1	52.4	57.1	57.5	16.1	47.2	53.3	
Queue Length 50th (ft)	67	69	0	~124	80	313	166	~461	148	164	~454	
Queue Length 95th (ft)	#119	94	54	#210	107	#543	#344	#557	234	#286	#532	
Internal Link Dist (ft)		458			962			596			305	
Turn Bay Length (ft)	240		120	270		350	240		70	220		
Base Capacity (vph)	305	904	421	305	904	652	361	1977	1359	701	2487	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.75	0.39	0.42	1.16	0.45	0.96	0.84	1.03	0.74	0.83	1.03	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	300		0	227		0	140		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		979			902			867			372	
Travel Time (s)		16.7			15.4			19.7			8.5	
Lane Group Flow (vph)	52	979	0	31	1382	0	381	21	103	41	20	0
v/c Ratio	0.40	0.57		0.10	0.65		0.97	0.06	0.26	0.33	0.07	
Control Delay	31.8	18.1		10.4	15.2		75.1	22.6	11.7	44.5	25.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	31.8	18.1		10.4	15.2		75.1	22.6	11.7	44.5	25.3	
Queue Length 50th (ft)	21	212		8	282		216	11	28	22	2	
Queue Length 95th (ft)	#75	296		22	396		#394	22	38	53	13	
Internal Link Dist (ft)		899			822			787			292	
Turn Bay Length (ft)	140			300			227			140		
Base Capacity (vph)	131	1714		301	2110		393	952	396	334	800	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.40	0.57		0.10	0.65		0.97	0.02	0.26	0.12	0.03	

Intersection Summary

Area Type: Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	300		0	227		0	140		0
Storage Lanes	2		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		979			902			867			372	
Travel Time (s)		16.7			15.4			19.7			8.5	
Lane Group Flow (vph)	52	721	0	62	1062	0	711	21	247	124	72	0
v/c Ratio	0.45	0.65		0.22	0.69		1.45	0.05	0.44	0.61	0.14	
Control Delay	44.2	23.8		18.4	23.9		241.2	17.2	11.1	47.8	22.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.2	23.8		18.4	23.9		241.2	17.2	11.1	47.8	22.6	
Queue Length 50th (ft)	26	145		20	246		~556	11	70	67	12	
Queue Length 95th (ft)	#79	212		49	359		#769	16	50	116	29	
Internal Link Dist (ft)		899			822			787			292	
Turn Bay Length (ft)	140			300			227			140		
Base Capacity (vph)	115	1114		283	1549		491	1055	558	332	796	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.45	0.65		0.22	0.69		1.45	0.02	0.44	0.37	0.09	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	188			0	0	0
Storage Lanes	2			0	0	2
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		607	472		678	
Travel Time (s)		11.8	9.2		15.4	
Lane Group Flow (vph)	510	1939	2398	0	0	235
v/c Ratio	0.75	0.32	0.57			0.39
Control Delay	46.8	0.1	8.5			36.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	46.8	0.1	8.5			36.3
Queue Length 50th (ft)	169	0	200			75
Queue Length 95th (ft)	226	0	293			115
Internal Link Dist (ft)		527	392		598	
Turn Bay Length (ft)	188					
Base Capacity (vph)	1082	5981	4241			947
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.47	0.32	0.57			0.25

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	188			0	0	0
Storage Lanes	2			0	0	2
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		607	472		678	
Travel Time (s)		11.8	9.2		15.4	
Lane Group Flow (vph)	714	2143	1551	0	0	439
v/c Ratio	0.76	0.36	0.42			0.53
Control Delay	35.7	0.2	10.1			28.6
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	35.7	0.2	10.1			28.6
Queue Length 50th (ft)	197	0	122			117
Queue Length 95th (ft)	260	0	189			167
Internal Link Dist (ft)		527	392		598	
Turn Bay Length (ft)	188					
Base Capacity (vph)	1852	5981	3679			1619
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.39	0.36	0.42			0.27

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	195		0	250		150	130		0	270		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		703			815			468			490	
Travel Time (s)		12.0			15.9			9.1			9.5	
Lane Group Flow (vph)	163	429	184	224	1276	276	214	1112	133	133	622	133
v/c Ratio	0.88	0.41	0.27	0.49	1.00	0.42	0.62	0.98	0.22	0.72	0.42	0.21
Control Delay	62.4	27.2	7.2	18.0	54.1	11.2	25.8	52.7	2.5	41.8	27.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	27.2	7.2	18.0	54.1	11.2	25.8	52.7	2.5	41.8	27.0	4.7
Queue Length 50th (ft)	51	104	21	73	375	45	76	326	0	45	104	2
Queue Length 95th (ft)	#154	147	60	121	#529	109	126	#467	21	#108	138	36
Internal Link Dist (ft)		623			735			388			410	
Turn Bay Length (ft)	195			250		150	130			270		150
Base Capacity (vph)	185	1045	688	474	1281	662	344	1140	615	184	1469	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.41	0.27	0.47	1.00	0.42	0.62	0.98	0.22	0.72	0.42	0.21

Intersection Summary

Area Type: Other

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

Future (2028) Baseline Conditions - PM Peak Hour
11: Airport Bl & Westchester Pkwy/Arbor Vitae St

01/22/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	195		0	250		150	130		0	270		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		703			815			468			490	
Travel Time (s)		12.0			15.9			9.1			9.5	
Lane Group Flow (vph)	188	719	240	177	1052	219	271	979	406	198	708	125
v/c Ratio	0.92	0.64	0.34	0.63	0.90	0.34	0.78	0.83	0.62	0.98	0.46	0.20
Control Delay	67.0	29.4	11.3	26.4	41.2	7.7	34.7	35.1	16.8	80.0	26.8	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	29.4	11.3	26.4	41.2	7.7	34.7	35.1	16.8	80.0	26.8	7.9
Queue Length 50th (ft)	63	182	53	59	297	19	96	267	93	67	119	16
Queue Length 95th (ft)	#182	243	102	#102	#420	70	#163	347	192	#198	155	49
Internal Link Dist (ft)		623			735			388			410	
Turn Bay Length (ft)	195			250		150	130			270		150
Base Capacity (vph)	204	1124	715	282	1163	643	346	1179	660	203	1525	635
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.64	0.34	0.63	0.90	0.34	0.78	0.83	0.62	0.98	0.46	0.20

Intersection Summary

Area Type: Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		0	243		0	0		100	175		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		807			562			431			476	
Travel Time (s)		18.3			12.8			8.4			9.3	
Lane Group Flow (vph)	155	216	464	103	0	144	0	1196	103	289	722	0
v/c Ratio	0.41	0.54	0.99	1.27		0.22		0.97	0.22	1.04	0.36	
Control Delay	34.3	37.3	63.7	223.9		7.0		53.5	2.2	100.8	19.6	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	34.3	37.3	63.7	223.9		7.0		53.5	2.2	100.8	19.6	
Queue Length 50th (ft)	76	110	180	~74		12		247	0	~128	102	
Queue Length 95th (ft)	135	182	#382	#176		50		#342	11	#287	134	
Internal Link Dist (ft)		727			482			351			396	
Turn Bay Length (ft)	205			243					100	175		
Base Capacity (vph)	379	399	469	81		665		1237	473	278	2028	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.41	0.54	0.99	1.27		0.22		0.97	0.22	1.04	0.36	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		0	243		0	0		100	175		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		807			562			431			476	
Travel Time (s)		18.3			12.8			8.4			9.3	
Lane Group Flow (vph)	396	406	531	52	0	240	0	1031	135	229	875	0
v/c Ratio	0.72	0.74	0.90	0.54		0.59		0.69	0.27	0.82	0.38	
Control Delay	35.7	37.7	41.4	59.5		15.7		32.5	5.5	43.5	18.4	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	35.7	37.7	41.4	59.5		15.7		32.5	5.5	43.5	18.4	
Queue Length 50th (ft)	195	204	214	28		34		203	0	85	128	
Queue Length 95th (ft)	299	310	#408	#78		69		254	37	#206	163	
Internal Link Dist (ft)		727			482			351			396	
Turn Bay Length (ft)	205			243					100	175		
Base Capacity (vph)	570	569	607	97		410		1500	507	283	2279	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.69	0.71	0.87	0.54		0.59		0.69	0.27	0.81	0.38	

Intersection Summary	
Area Type:	Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	10	10	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		1000	280		200	120		120	290		260
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1173			806			632			681	
Travel Time (s)		22.9			15.7			12.3			13.3	
Lane Group Flow (vph)	691	1207	0	31	1835	794	31	41	62	214	137	546
v/c Ratio	1.00	0.30		0.38	0.84	0.87	0.30	0.20	0.25	0.35	0.22	0.73
Control Delay	80.3	15.1		69.2	40.1	26.4	61.5	55.7	2.4	43.4	41.5	26.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	15.1		69.2	40.1	26.4	61.5	55.7	2.4	43.4	41.5	26.7
Queue Length 50th (ft)	277	132		24	390	273	23	16	0	83	52	258
Queue Length 95th (ft)	#405	155		57	444	#560	56	35	0	126	85	392
Internal Link Dist (ft)		1093			726			552			601	
Turn Bay Length (ft)	300			280		200	120		120	290		260
Base Capacity (vph)	694	3963		82	2180	908	115	230	256	603	611	745
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.30		0.38	0.84	0.87	0.27	0.18	0.24	0.35	0.22	0.73

Intersection Summary

Area Type: Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	10	10	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		1000	280		200	120		120	290		260
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1173			806			632			681	
Travel Time (s)		22.9			15.7			12.3			13.3	
Lane Group Flow (vph)	612	1531	0	71	1337	510	20	41	41	424	250	612
v/c Ratio	0.70	0.39		0.54	0.65	0.59	0.15	0.20	0.15	0.76	0.49	0.79
Control Delay	43.8	16.9		68.3	36.5	12.4	54.2	56.1	1.2	56.3	49.3	27.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	16.9		68.3	36.5	12.4	54.2	56.1	1.2	56.3	49.3	27.8
Queue Length 50th (ft)	213	177		53	269	139	15	16	0	183	103	290
Queue Length 95th (ft)	277	207		103	316	216	40	35	0	248	151	438
Internal Link Dist (ft)		1093			726			552			601	
Turn Bay Length (ft)	300			280		200	120		120	290		260
Base Capacity (vph)	934	3890		151	2057	865	147	230	282	558	507	793
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.39		0.47	0.65	0.59	0.14	0.18	0.15	0.76	0.49	0.77

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	12	12	12	10	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	235		0	141		0	332		0	144		197
Storage Lanes	1		1	1		0	2		0	2		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		442			865			583			502	
Travel Time (s)		8.6			16.9			9.9			8.6	
Lane Group Flow (vph)	115	1471	471	241	2874	0	805	1276	0	195	563	287
v/c Ratio	1.03	0.80	1.04	1.31	1.36		1.06	1.18		0.76	0.98	0.53
Control Delay	147.3	42.0	92.7	214.7	196.6		93.0	128.1		73.6	83.0	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	147.3	42.0	92.7	214.7	196.6		93.0	128.1		73.6	83.0	23.3
Queue Length 50th (ft)	~93	303	~392	~240	~850		~351	~623		77	231	100
Queue Length 95th (ft)	#206	334	#568	#385	#872		#449	#721		#124	#329	178
Internal Link Dist (ft)		362			785			503			422	
Turn Bay Length (ft)	235			141			332			144		197
Base Capacity (vph)	112	1844	455	184	2118		763	1081		257	575	538
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	1.03	0.80	1.04	1.31	1.36		1.06	1.18		0.76	0.98	0.53

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	12	12	12	10	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	235		0	141		0	332		0	144		197
Storage Lanes	1		1	1		0	2		0	2		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		442			865			583			502	
Travel Time (s)		8.6			16.9			9.9			8.6	
Lane Group Flow (vph)	242	2411	600	253	1758	0	695	1252	0	242	895	179
v/c Ratio	1.00	1.24	1.25	1.23	0.96		1.28	1.12		0.72	0.98	0.23
Control Delay	108.2	148.6	164.4	181.7	54.8		180.7	104.5		65.8	69.6	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	108.2	148.6	164.4	181.7	54.8		180.7	104.5		65.8	69.6	7.2
Queue Length 50th (ft)	190	~674	~580	~241	388		~351	~585		95	363	21
Queue Length 95th (ft)	#358	#747	#804	#407	#471		#472	#725		#146	#502	65
Internal Link Dist (ft)		362			785			503			422	
Turn Bay Length (ft)	235			141			332			144		197
Base Capacity (vph)	243	1943	480	206	1832		543	1117		334	914	768
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	1.00	1.24	1.25	1.23	0.96		1.28	1.12		0.72	0.98	0.23

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	175		0	160		80	405		120
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		1163			923			812			788	
Travel Time (s)		22.7			18.0			13.8			13.4	
Lane Group Flow (vph)	112	673	367	541	1276	1082	398	929	224	337	469	296
v/c Ratio	0.67	0.58	0.54	0.95	0.57	1.24	1.07	1.13	0.15	0.85	0.55	0.50
Control Delay	41.6	43.9	24.2	51.9	26.1	139.9	117.8	114.3	9.7	72.5	42.8	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	43.9	24.2	51.9	26.1	139.9	117.8	114.3	9.7	72.5	42.8	24.0
Queue Length 50th (ft)	42	173	161	307	264	~901	~176	~437	32	134	167	119
Queue Length 95th (ft)	#91	217	261	#525	310	#1160	#277	#569	53	#209	223	206
Internal Link Dist (ft)		1083			843			732			708	
Turn Bay Length (ft)	225			175			160		80	405		120
Base Capacity (vph)	168	1165	674	586	2252	875	371	825	1561	400	855	592
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.58	0.54	0.92	0.57	1.24	1.07	1.13	0.14	0.84	0.55	0.50

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	175		0	160		80	405		120
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		1163			923			812			784	
Travel Time (s)		22.7			18.0			13.8			13.4	
Lane Group Flow (vph)	255	1883	755	234	1106	362	234	617	713	787	1011	415
v/c Ratio	0.85	1.06	0.89	1.03	0.71	0.49	0.54	0.77	0.67	1.15	0.95	0.54
Control Delay	54.1	77.8	36.7	98.7	40.7	6.0	53.7	50.6	29.5	125.8	59.7	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	77.8	36.7	98.7	40.7	6.0	53.7	50.6	29.5	125.8	59.7	21.5
Queue Length 50th (ft)	141	~611	453	~150	291	0	87	232	210	~368	403	182
Queue Length 95th (ft)	#269	#708	#728	#316	346	74	128	299	284	#492	#539	276
Internal Link Dist (ft)		1083			843			732			704	
Turn Bay Length (ft)	225			175			160		80	405		120
Base Capacity (vph)	327	1775	876	228	1562	737	486	855	1066	686	1062	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	1.06	0.86	1.03	0.71	0.49	0.48	0.72	0.67	1.15	0.95	0.52

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	450	
Storage Lanes	0	2		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			40
Link Distance (ft)	300		312			812
Travel Time (s)	6.8		7.1			13.8
Lane Group Flow (vph)	0	210	1310	0	600	750
v/c Ratio		0.34	0.45		0.89	0.21
Control Delay		10.6	5.9		37.9	0.1
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		10.6	5.9		37.9	0.1
Queue Length 50th (ft)		13	57		78	0
Queue Length 95th (ft)		37	80		#155	0
Internal Link Dist (ft)	220		232			732
Turn Bay Length (ft)					450	
Base Capacity (vph)		624	2925		671	3539
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.34	0.45		0.89	0.21

Intersection Summary	
Area Type:	Other

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	450	
Storage Lanes	0	2		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			40
Link Distance (ft)	300		312			812
Travel Time (s)	6.8		7.1			13.8
Lane Group Flow (vph)	0	674	1011	0	380	1663
v/c Ratio		0.84	0.33		0.51	0.47
Control Delay		23.3	4.3		18.4	0.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		23.3	4.3		18.4	0.5
Queue Length 50th (ft)		57	34		44	0
Queue Length 95th (ft)		#145	49		76	0
Internal Link Dist (ft)	220		232			732
Turn Bay Length (ft)					450	
Base Capacity (vph)		799	3062		740	3539
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.84	0.33		0.51	0.47

Intersection Summary	
Area Type:	Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	278		145	245		140	225		100	205		200
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		588			684			825			550	
Travel Time (s)		10.0			11.7			16.1			10.7	
Lane Group Flow (vph)	227	588	258	186	825	412	113	1948	72	206	1526	175
v/c Ratio	0.88	0.71	0.50	0.65	0.93	0.80	0.58	1.01	0.09	0.97	0.77	0.24
Control Delay	87.9	47.2	14.4	55.4	62.2	38.4	31.8	61.0	0.2	85.4	35.5	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	47.2	14.4	55.4	62.2	38.4	31.8	61.0	0.2	85.4	35.5	2.7
Queue Length 50th (ft)	91	216	40	122	330	191	44	~562	0	110	374	0
Queue Length 95th (ft)	#164	280	119	#196	#452	#350	95	#678	0	#266	434	29
Internal Link Dist (ft)		508			604			745			470	
Turn Bay Length (ft)	278		145	245		140	225		100	205		200
Base Capacity (vph)	257	878	537	288	884	515	196	1923	821	212	1972	739
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.67	0.48	0.65	0.93	0.80	0.58	1.01	0.09	0.97	0.77	0.24

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	278		145	245		140	225		100	205		200
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		588			684			825			550	
Travel Time (s)		10.0			11.7			18.8			12.5	
Lane Group Flow (vph)	206	918	165	113	794	206	227	1619	113	381	1918	433
v/c Ratio	0.80	1.03	0.30	0.58	0.90	0.38	1.01	1.06	0.16	1.09	1.02	0.58
Control Delay	77.5	82.6	3.6	59.4	57.7	7.0	95.2	81.0	0.5	108.8	62.8	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	82.6	3.6	59.4	57.7	7.0	95.2	81.0	0.5	108.8	62.8	14.9
Queue Length 50th (ft)	82	~401	0	71	314	1	~128	~504	0	~282	~559	102
Queue Length 95th (ft)	#143	#531	30	123	#424	60	#296	#601	0	#479	#672	207
Internal Link Dist (ft)		508			604			745			470	
Turn Bay Length (ft)	278		145	245		140	225		100	205		200
Base Capacity (vph)	257	890	550	194	884	549	225	1529	721	349	1885	749
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.03	0.30	0.58	0.90	0.38	1.01	1.06	0.16	1.09	1.02	0.58

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	200		0	160		100	230		100
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		597			453			968			825	
Travel Time (s)		10.2			7.7			18.9			16.1	
Lane Group Flow (vph)	173	224	102	327	347	0	316	1929	143	41	1827	82
v/c Ratio	0.73	0.36	0.21	1.43	0.56		1.22	0.67	0.14	0.22	0.75	0.09
Control Delay	44.7	33.6	9.1	252.1	34.7		132.3	23.9	10.1	10.9	22.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	33.6	9.1	252.1	34.7		132.3	23.9	10.1	10.9	22.0	2.4
Queue Length 50th (ft)	77	59	11	~130	89		~165	395	41	8	297	0
Queue Length 95th (ft)	#132	88	43	#215	126		m#197	m435	m52	23	389	18
Internal Link Dist (ft)		517			373			888			745	
Turn Bay Length (ft)	70			200			160		100	230		100
Base Capacity (vph)	238	1101	478	228	1086		258	2866	998	183	2437	885
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.20	0.21	1.43	0.32		1.22	0.67	0.14	0.22	0.75	0.09

Intersection Summary

Area Type: Other

~ 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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	200		0	160		100	230		100
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		597			453			968			825	
Travel Time (s)		10.2			7.7			18.9			16.1	
Lane Group Flow (vph)	168	516	126	326	305	0	242	1611	326	84	2053	105
v/c Ratio	0.50	0.64	0.25	1.22	0.36		1.12	0.66	0.36	0.46	0.92	0.13
Control Delay	26.7	34.6	10.1	165.7	25.2		105.6	29.8	20.1	19.2	33.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	34.6	10.1	165.7	25.2		105.6	29.8	20.1	19.2	33.5	4.2
Queue Length 50th (ft)	68	140	20	~118	66		~139	350	151	20	389	5
Queue Length 95th (ft)	106	178	53	#203	95		m#175	409	m194	47	#569	31
Internal Link Dist (ft)		517			373			888			745	
Turn Bay Length (ft)	70			200			160		100	230		100
Base Capacity (vph)	334	1101	512	267	1122		216	2437	902	182	2222	815
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.47	0.25	1.22	0.27		1.12	0.66	0.36	0.46	0.92	0.13

Intersection Summary

Area Type: Other

~ 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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	90		0	175		0	240		100	140		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		592			452			615			968	
Travel Time (s)		13.5			10.3			12.0			18.9	
Lane Group Flow (vph)	10	423	0	216	1083	0	186	2134	31	165	2010	31
v/c Ratio	0.06	0.46		0.76	1.02		1.00	0.93	0.04	0.89	0.88	0.04
Control Delay	17.1	25.7		41.5	63.9		86.8	33.5	0.3	48.1	16.8	1.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	25.7		41.5	63.9		86.8	33.5	0.3	48.1	16.8	1.0
Queue Length 50th (ft)	3	87		82	~319		~65	~455	0	30	391	0
Queue Length 95th (ft)	13	130		#158	#460		#199	#572	2	m#86	m#416	m0
Internal Link Dist (ft)		512			372			535			888	
Turn Bay Length (ft)	90			175			240		100	140		60
Base Capacity (vph)	179	1048		285	1059		186	2294	820	186	2294	820
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.40		0.76	1.02		1.00	0.93	0.04	0.89	0.88	0.04

Intersection Summary

Area Type: Other

~ 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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	90		0	175		0	240		100	140		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		592			452			615			968	
Travel Time (s)		10.1			7.7			12.0			18.9	
Lane Group Flow (vph)	102	449	0	214	551	0	153	2000	51	276	2143	71
v/c Ratio	0.50	0.58		0.94	0.65		0.83	0.86	0.06	1.14	0.86	0.08
Control Delay	30.1	30.7		74.3	30.2		51.4	27.7	1.9	109.3	11.4	0.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	30.7		74.3	30.2		51.4	27.7	1.9	109.3	11.4	0.9
Queue Length 50th (ft)	41	107		93	131		36	362	0	~125	404	2
Queue Length 95th (ft)	71	143		#182	171		#157	#537	11	m#160	m#530	m3
Internal Link Dist (ft)		512			372			535			888	
Turn Bay Length (ft)	90			175			240		100	140		60
Base Capacity (vph)	202	1048		228	1054		184	2335	817	243	2505	876
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.43		0.94	0.52		0.83	0.86	0.06	1.14	0.86	0.08

Intersection Summary

Area Type: Other

~ 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	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	4	4			1
Taper Length (ft)	25		25			
Right Turn on Red		No				Yes
Link Speed (mph)	40			35	35	
Link Distance (ft)	251			195	286	
Travel Time (s)	4.3			3.8	5.6	
Lane Group Flow (vph)	0	2771	1948	0	2396	10
v/c Ratio		1.29	0.57		1.15	0.01
Control Delay		156.2	15.0		104.5	0.0
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		156.2	15.0		104.5	0.0
Queue Length 50th (ft)		~791	192		~471	0
Queue Length 95th (ft)		#892	225		#547	0
Internal Link Dist (ft)	171			115	206	
Turn Bay Length (ft)						
Base Capacity (vph)		2152	3420		2079	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		1.29	0.57		1.15	0.01

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	4	4			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			40	35	
Link Distance (ft)	251			195	286	
Travel Time (s)	4.3			3.3	5.6	
Lane Group Flow (vph)	0	2918	1755	0	2449	20
v/c Ratio		1.36	0.51		1.18	0.01
Control Delay		186.4	14.3		115.1	0.0
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		186.4	14.3		115.1	0.0
Queue Length 50th (ft)		~859	167		~489	0
Queue Length 95th (ft)		#959	196		#565	0
Internal Link Dist (ft)	171			115	206	
Turn Bay Length (ft)						
Base Capacity (vph)		2152	3420		2079	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		1.36	0.51		1.18	0.01

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	300	
Storage Lanes	0	2		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		35			35
Link Distance (ft)	410		338			534
Travel Time (s)	9.3		6.6			10.4
Lane Group Flow (vph)	0	990	4146	0	438	2823
v/c Ratio		1.25	1.28		0.45	0.56
Control Delay		161.9	151.5		37.1	0.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		161.9	151.5		37.1	0.4
Queue Length 50th (ft)		~544	~1498		143	0
Queue Length 95th (ft)		#688	#1563		193	0
Internal Link Dist (ft)	330		258			454
Turn Bay Length (ft)					300	
Base Capacity (vph)		789	3241		972	5085
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		1.25	1.28		0.45	0.56

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	300	
Storage Lanes	0	2		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		35			35
Link Distance (ft)	410		338			534
Travel Time (s)	9.3		6.6			10.4
Lane Group Flow (vph)	0	835	4155	0	299	2753
v/c Ratio		1.20	1.23		0.35	0.54
Control Delay		143.0	126.9		38.4	0.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		143.0	126.9		38.4	0.4
Queue Length 50th (ft)		~445	~1458		98	0
Queue Length 95th (ft)		#584	#1523		140	0
Internal Link Dist (ft)	330		258			454
Turn Bay Length (ft)					300	
Base Capacity (vph)		696	3386		858	5085
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		1.20	1.23		0.35	0.54

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	230		175	0	
Storage Lanes	2	0		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	35		35			35
Link Distance (ft)	620		550			520
Travel Time (s)	12.1		10.7			10.1
Lane Group Flow (vph)	406	563	4953	0	0	2823
v/c Ratio	0.44	0.82	1.21			0.87
Control Delay	37.1	51.2	122.1			22.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	37.1	51.2	122.1			22.5
Queue Length 50th (ft)	134	231	~1375			609
Queue Length 95th (ft)	168	285	#1493			#809
Internal Link Dist (ft)	540		470			440
Turn Bay Length (ft)	200	230				
Base Capacity (vph)	1115	829	4080			3246
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.36	0.68	1.21			0.87

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	230		175	0	
Storage Lanes	2	0		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	35		35			35
Link Distance (ft)	620		550			520
Travel Time (s)	12.1		10.7			10.1
Lane Group Flow (vph)	677	333	5073	0	0	2781
v/c Ratio	0.79	0.53	1.21			0.83
Control Delay	48.7	41.2	117.9			19.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	48.7	41.2	117.9			19.5
Queue Length 50th (ft)	253	127	~1396			546
Queue Length 95th (ft)	295	164	#1524			744
Internal Link Dist (ft)	540		470			440
Turn Bay Length (ft)	200	230				
Base Capacity (vph)	1115	820	4205			3340
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.61	0.41	1.21			0.83

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	3		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	50		35			35
Link Distance (ft)	820		237			230
Travel Time (s)	11.2		4.6			4.5
Lane Group Flow (vph)	0	2642	2484	0	0	3505
v/c Ratio		1.40	1.26			0.99
Control Delay		207.2	146.8			15.1
Queue Delay		0.0	0.0			0.0
Total Delay		207.2	146.8			15.1
Queue Length 50th (ft)		~890	~654			0
Queue Length 95th (ft)		#1004	#750			#106
Internal Link Dist (ft)	740		157			150
Turn Bay Length (ft)						
Base Capacity (vph)		1885	1977			3539
Starvation Cap Reductn		0	0			0
Spillback Cap Reductn		0	0			0
Storage Cap Reductn		0	0			0
Reduced v/c Ratio		1.40	1.26			0.99

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	3		0	0	
Taper Length (ft)	25				25	
Right Turn on Red		No		Yes		
Link Speed (mph)	50		35			35
Link Distance (ft)	820		246			230
Travel Time (s)	11.2		4.8			4.5
Lane Group Flow (vph)	0	2426	2957	0	0	3202
v/c Ratio		1.41	1.34			0.90
Control Delay		211.0	182.7			4.8
Queue Delay		0.0	0.0			0.0
Total Delay		211.0	182.7			4.8
Queue Length 50th (ft)		~819	~812			0
Queue Length 95th (ft)		#933	#905			0
Internal Link Dist (ft)	740		166			150
Turn Bay Length (ft)						
Base Capacity (vph)		1724	2203			3539
Starvation Cap Reductn		0	0			0
Spillback Cap Reductn		0	0			0
Storage Cap Reductn		0	0			0
Reduced v/c Ratio		1.41	1.34			0.90

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	240		120	270		350	240		70	220		80
Storage Lanes	2		1	2		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		538			1042			676			375	
Travel Time (s)		9.2			17.8			13.2			7.3	
Lane Group Flow (vph)	272	391	239	228	217	435	217	1859	652	652	2968	0
v/c Ratio	1.02	0.54	0.58	0.85	0.30	0.64	0.80	0.96	0.49	0.86	1.04	
Control Delay	103.1	38.1	11.8	70.3	34.9	23.1	61.2	41.4	8.5	48.0	53.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.1	38.1	11.8	70.3	34.9	23.1	61.2	41.4	8.5	48.0	53.3	
Queue Length 50th (ft)	~82	76	7	67	41	165	121	372	50	184	~537	
Queue Length 95th (ft)	#164	104	71	#131	61	269	#269	#488	99	#309	#613	
Internal Link Dist (ft)		458			962			596			295	
Turn Bay Length (ft)	240		120	270		350	240		70	220		
Base Capacity (vph)	267	904	460	267	904	682	272	1933	1320	757	2861	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.02	0.43	0.52	0.85	0.24	0.64	0.80	0.96	0.49	0.86	1.04	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	240		120	270		350	240		70	220		80
Storage Lanes	2		1	2		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		538			1042			676			375	
Travel Time (s)		9.2			17.8			13.2			7.3	
Lane Group Flow (vph)	229	354	177	354	406	625	302	2042	1000	583	2552	0
v/c Ratio	0.75	0.50	0.48	1.16	0.57	0.96	0.84	1.03	0.74	0.83	1.03	
Control Delay	56.6	37.9	10.1	140.9	39.1	52.4	57.1	57.5	16.1	47.2	53.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.6	37.9	10.1	140.9	39.1	52.4	57.1	57.5	16.1	47.2	53.3	
Queue Length 50th (ft)	67	69	0	~124	80	313	166	~461	148	164	~454	
Queue Length 95th (ft)	#119	94	54	#210	107	#543	#344	#557	234	#286	#532	
Internal Link Dist (ft)		458			962			596			295	
Turn Bay Length (ft)	240		120	270		350	240		70	220		
Base Capacity (vph)	305	904	421	305	904	652	361	1977	1359	701	2487	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.75	0.39	0.42	1.16	0.45	0.96	0.84	1.03	0.74	0.83	1.03	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	300		0	227		0	140		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		979			902			867			372	
Travel Time (s)		16.7			15.4			19.7			8.5	
Lane Group Flow (vph)	52	979	0	31	1382	0	371	21	103	41	20	0
v/c Ratio	0.39	0.56		0.10	0.65		0.95	0.06	0.26	0.33	0.07	
Control Delay	30.9	17.8		10.4	15.0		72.4	23.1	10.9	45.1	25.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	30.9	17.8		10.4	15.0		72.4	23.1	10.9	45.1	25.6	
Queue Length 50th (ft)	21	211		8	282		212	12	25	23	2	
Queue Length 95th (ft)	#74	295		22	396		#385	22	38	53	13	
Internal Link Dist (ft)		899			822			787			292	
Turn Bay Length (ft)	140			300			227			140		
Base Capacity (vph)	133	1734		303	2124		389	941	396	330	791	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.39	0.56		0.10	0.65		0.95	0.02	0.26	0.12	0.03	

Intersection Summary

Area Type: Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	300		0	227		0	140		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		979			902			867			372	
Travel Time (s)		16.7			15.4			19.7			8.5	
Lane Group Flow (vph)	52	742	0	62	1062	0	629	21	247	124	72	0
v/c Ratio	0.45	0.59		0.26	0.69		1.28	0.05	0.50	0.61	0.14	
Control Delay	41.9	20.1		19.4	23.9		171.8	17.2	14.4	47.8	19.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	41.9	20.1		19.4	23.9		171.8	17.2	14.4	47.8	19.3	
Queue Length 50th (ft)	23	127		20	246		~458	11	~109	67	10	
Queue Length 95th (ft)	#80	206		49	359		#664	16	56	116	26	
Internal Link Dist (ft)		899			822			787			292	
Turn Bay Length (ft)	140			300			227			140		
Base Capacity (vph)	115	1261		236	1549		491	1055	492	332	803	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.45	0.59		0.26	0.69		1.28	0.02	0.50	0.37	0.09	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		0	0		0	200		0
Storage Lanes	0		1	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		214			472			385			678	
Travel Time (s)		4.2			9.2			8.8			15.4	
Lane Group Flow (vph)	0	1929	173	133	2551	0	0	153	133	31	296	235
v/c Ratio		0.64	0.20	0.65	0.66			0.15	0.24	0.09	0.56	0.49
Control Delay		23.8	3.2	64.9	13.9			32.7	6.6	32.7	41.6	32.7
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0
Total Delay		23.8	3.2	64.9	13.9			32.7	6.6	32.7	41.6	32.7
Queue Length 50th (ft)		312	0	100	323			46	0	18	196	122
Queue Length 95th (ft)		377	38	162	360			74	47	43	288	203
Internal Link Dist (ft)		134			392			305			598	
Turn Bay Length (ft)				150						200		
Base Capacity (vph)		2993	878	265	3867			1002	543	345	527	480
Starvation Cap Reductn		0	0	0	0			0	0	0	0	0
Spillback Cap Reductn		0	0	0	0			0	0	0	0	0
Storage Cap Reductn		0	0	0	0			0	0	0	0	0
Reduced v/c Ratio		0.64	0.20	0.50	0.66			0.15	0.24	0.09	0.56	0.49

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		0	0		0	200		0
Storage Lanes	0		1	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		214			472			385			678	
Travel Time (s)		4.2			9.2			8.8			15.4	
Lane Group Flow (vph)	0	2071	194	143	1541	0	0	102	255	31	286	439
v/c Ratio		0.80	0.28	0.70	0.45			0.08	0.41	0.08	0.44	0.75
Control Delay		32.5	23.9	69.4	14.5			26.4	5.5	27.0	32.6	40.2
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0
Total Delay		32.5	23.9	69.4	14.5			26.4	5.5	27.0	32.6	40.2
Queue Length 50th (ft)		402	97	107	184			27	0	16	169	270
Queue Length 95th (ft)		461	156	176	211			48	57	39	250	402
Internal Link Dist (ft)		134			392			305			598	
Turn Bay Length (ft)				150						200		
Base Capacity (vph)		2601	688	236	3454			1238	621	382	652	583
Starvation Cap Reductn		0	0	0	0			0	0	0	0	0
Spillback Cap Reductn		0	0	0	0			0	0	0	0	0
Storage Cap Reductn		0	0	0	0			0	0	0	0	0
Reduced v/c Ratio		0.80	0.28	0.61	0.45			0.08	0.41	0.08	0.44	0.75

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	195		0	250		150	130		0	270		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		703			815			468			490	
Travel Time (s)		12.0			15.9			9.1			9.5	
Lane Group Flow (vph)	163	408	173	204	1449	276	214	1092	133	133	398	133
v/c Ratio	0.88	0.34	0.23	0.43	1.07	0.39	0.54	1.03	0.23	0.72	0.27	0.22
Control Delay	61.1	23.0	4.1	15.8	72.4	9.8	24.9	67.8	5.4	42.8	25.3	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	23.0	4.1	15.8	72.4	9.8	24.9	67.8	5.4	42.8	25.3	9.2
Queue Length 50th (ft)	49	90	6	62	~483	43	79	~353	0	47	63	19
Queue Length 95th (ft)	#156	128	40	105	#616	102	132	#478	39	#108	90	55
Internal Link Dist (ft)		623			735			388			410	
Turn Bay Length (ft)	195			250		150	130			270		150
Base Capacity (vph)	185	1212	741	484	1360	714	393	1061	571	184	1469	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.34	0.23	0.42	1.07	0.39	0.54	1.03	0.23	0.72	0.27	0.22

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	195		0	250		150	130		0	270		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		703			815			468			490	
Travel Time (s)		12.0			15.9			9.1			9.5	
Lane Group Flow (vph)	188	760	198	177	1125	219	271	823	385	208	573	125
v/c Ratio	0.92	0.65	0.28	0.60	0.91	0.33	0.77	0.81	0.65	0.86	0.38	0.20
Control Delay	65.6	28.9	10.1	23.0	39.7	7.5	36.1	37.0	19.2	51.4	25.7	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	28.9	10.1	23.0	39.7	7.5	36.1	37.0	19.2	51.4	25.7	7.9
Queue Length 50th (ft)	60	192	39	56	315	20	100	227	92	74	93	16
Queue Length 95th (ft)	#183	255	82	96	#443	69	#192	299	193	#188	125	49
Internal Link Dist (ft)		623			735			388			410	
Turn Bay Length (ft)	195			250		150	130			270		150
Base Capacity (vph)	204	1168	700	297	1242	671	353	1022	595	242	1525	635
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.65	0.28	0.60	0.91	0.33	0.77	0.81	0.65	0.86	0.38	0.20

Intersection Summary

Area Type: Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰		↱		↑↑↑	↱	↰	↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		0	243		0	0		100	175		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		807			562			431			476	
Travel Time (s)		18.3			12.8			8.4			9.3	
Lane Group Flow (vph)	247	216	464	103	0	144	0	1082	103	289	608	0
v/c Ratio	0.74	0.68	0.94	1.26		0.20		0.88	0.21	1.04	0.30	
Control Delay	49.7	47.0	47.9	216.3		7.2		42.5	2.1	100.4	19.1	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	49.7	47.0	47.9	216.3		7.2		42.5	2.1	100.4	19.1	
Queue Length 50th (ft)	134	116	133	~74		16		217	0	~128	84	
Queue Length 95th (ft)	#242	#205	#327	#176		52		#293	11	#287	113	
Internal Link Dist (ft)		727			482			351			396	
Turn Bay Length (ft)	205			243					100	175		
Base Capacity (vph)	334	320	493	82		723		1232	489	278	2023	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.74	0.68	0.94	1.26		0.20		0.88	0.21	1.04	0.30	

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		0	243		0	0		100	175		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		807			562			431			476	
Travel Time (s)		18.3			12.8			8.4			9.3	
Lane Group Flow (vph)	458	406	531	52	0	240	0	958	135	229	552	0
v/c Ratio	0.83	0.74	0.89	0.55		0.56		0.67	0.27	0.77	0.24	
Control Delay	43.1	37.5	38.9	60.3		14.5		33.1	5.8	38.0	17.2	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	43.1	37.5	38.9	60.3		14.5		33.1	5.8	38.0	17.2	
Queue Length 50th (ft)	236	204	207	28		34		189	0	86	75	
Queue Length 95th (ft)	#392	310	#398	#78		69		239	38	#195	101	
Internal Link Dist (ft)		727			482			351			396	
Turn Bay Length (ft)	205			243					100	175		
Base Capacity (vph)	570	569	615	96		432		1433	492	303	2258	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.80	0.71	0.86	0.54		0.56		0.67	0.27	0.76	0.24	

Intersection Summary

Area Type: Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	10	10	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		1000	280		200	120		120	290		260
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1173			806			632			681	
Travel Time (s)		22.9			15.7			12.3			13.3	
Lane Group Flow (vph)	691	1279	0	31	1969	742	31	41	62	207	133	526
v/c Ratio	0.96	0.30		0.38	0.83	0.79	0.23	0.20	0.23	0.39	0.28	0.75
Control Delay	71.3	12.6		69.2	36.9	18.8	56.0	55.7	1.9	46.3	46.3	29.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.3	12.6		69.2	36.9	18.8	56.0	55.7	1.9	46.3	46.3	29.7
Queue Length 50th (ft)	274	128		24	409	227	23	16	0	83	53	258
Queue Length 95th (ft)	#394	149		57	464	341	55	35	0	126	87	395
Internal Link Dist (ft)		1093			726			552			601	
Turn Bay Length (ft)	300			280		200	120		120	290		260
Base Capacity (vph)	720	4260		82	2379	945	147	230	282	532	483	697
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.30		0.38	0.83	0.79	0.21	0.18	0.22	0.39	0.28	0.75

Intersection Summary	
Area Type:	Other

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	10	10	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		1000	280		200	120		120	290		260
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1173			806			632			681	
Travel Time (s)		22.9			15.7			12.3			13.3	
Lane Group Flow (vph)	582	1582	0	71	1520	500	20	41	41	356	216	612
v/c Ratio	0.67	0.39		0.54	0.70	0.59	0.15	0.20	0.17	0.70	0.47	0.81
Control Delay	43.0	15.9		68.3	36.1	13.7	54.2	56.1	1.4	55.5	50.7	31.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	15.9		68.3	36.1	13.7	54.2	56.1	1.4	55.5	50.7	31.0
Queue Length 50th (ft)	203	177		53	306	150	15	16	0	152	90	307
Queue Length 95th (ft)	265	207		103	357	225	40	35	0	212	135	463
Internal Link Dist (ft)		1093			726			552			601	
Turn Bay Length (ft)	300			280		200	120		120	290		260
Base Capacity (vph)	907	4007		151	2163	843	147	230	257	507	456	762
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.39		0.47	0.70	0.59	0.14	0.18	0.16	0.70	0.47	0.80

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	12	12	12	10	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	235		0	141		0	332		0	144		197
Storage Lanes	1		1	1		0	2		0	2		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		442			865			583			502	
Travel Time (s)		8.6			16.9			9.9			8.6	
Lane Group Flow (vph)	161	1575	471	241	2989	0	793	1241	0	195	563	299
v/c Ratio	1.28	0.83	1.01	1.42	1.44		1.02	1.15		0.76	1.01	0.55
Control Delay	216.8	42.7	84.6	258.1	234.6		83.1	116.0		73.6	89.8	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	216.8	42.7	84.6	258.1	234.6		83.1	116.0		73.6	89.8	24.1
Queue Length 50th (ft)	~157	328	~369	~251	~915		~335	~593		77	~234	108
Queue Length 95th (ft)	#283	359	#558	#396	#934		#433	#691		#124	#335	189
Internal Link Dist (ft)		362			785			503			422	
Turn Bay Length (ft)	235			141			332			144		197
Base Capacity (vph)	126	1893	468	170	2069		778	1080		257	560	544
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	1.28	0.83	1.01	1.42	1.44		1.02	1.15		0.76	1.01	0.55

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	12	12	12	10	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	235		0	141		0	332		0	144		197
Storage Lanes	1		1	1		0	2		0	2		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		442			865			583			502	
Travel Time (s)		8.6			16.9			9.9			8.6	
Lane Group Flow (vph)	274	2389	642	253	1916	0	705	1252	0	242	863	200
v/c Ratio	1.33	1.20	1.30	1.32	0.97		1.09	1.12		0.72	1.07	0.29
Control Delay	218.8	130.7	185.6	216.3	54.9		108.4	104.5		65.8	95.7	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	218.8	130.7	185.6	216.3	54.9		108.4	104.5		65.8	95.7	10.3
Queue Length 50th (ft)	~275	~652	~638	~253	424		~317	~585		95	~389	34
Queue Length 95th (ft)	#448	#725	#865	#418	#512		#437	#725		#146	#518	87
Internal Link Dist (ft)		362			785			503			422	
Turn Bay Length (ft)	235			141			332			144		197
Base Capacity (vph)	206	1993	492	192	1970		646	1117		334	808	692
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	1.33	1.20	1.30	1.32	0.97		1.09	1.12		0.72	1.07	0.29

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	175		0	160		80	405		120
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		1163			923			812			788	
Travel Time (s)		22.7			18.0			13.8			13.4	
Lane Group Flow (vph)	112	663	439	541	1388	980	398	929	224	337	480	296
v/c Ratio	0.72	0.54	0.66	0.96	0.60	1.11	1.07	0.99	0.14	0.98	0.53	0.50
Control Delay	47.6	41.8	28.9	56.1	25.5	88.3	117.8	70.0	9.0	98.5	40.7	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	41.8	28.9	56.1	25.5	88.3	117.8	70.0	9.0	98.5	40.7	23.9
Queue Length 50th (ft)	42	166	219	318	286	~739	~176	377	30	136	168	119
Queue Length 95th (ft)	#100	209	340	#540	335	#995	#277	#519	51	#232	223	206
Internal Link Dist (ft)		1083			843			732			708	
Turn Bay Length (ft)	225			175			160		80	405		120
Base Capacity (vph)	156	1232	669	576	2330	883	371	943	1607	343	914	594
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.54	0.66	0.94	0.60	1.11	1.07	0.99	0.14	0.98	0.53	0.50

Intersection Summary

Area Type: Other

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	175		0	160		80	405		120
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		1163			923			812			788	
Travel Time (s)		22.7			18.0			13.8			13.4	
Lane Group Flow (vph)	255	1851	766	234	1213	351	234	617	713	840	1021	426
v/c Ratio	0.94	1.02	0.88	1.19	0.76	0.47	0.53	0.77	0.70	1.17	0.94	0.56
Control Delay	72.3	64.6	35.4	151.0	41.0	5.6	52.9	50.6	31.5	135.0	57.8	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.3	64.6	35.4	151.0	41.0	5.6	52.9	50.6	31.5	135.0	57.8	23.6
Queue Length 50th (ft)	147	~579	449	~169	316	0	86	232	216	~401	408	203
Queue Length 95th (ft)	#313	#676	#727	#335	373	69	127	299	292	#526	#548	307
Internal Link Dist (ft)		1083			843			732			708	
Turn Bay Length (ft)	225			175			160		80	405		120
Base Capacity (vph)	271	1817	901	197	1605	739	514	855	1022	715	1082	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	1.02	0.85	1.19	0.76	0.47	0.46	0.72	0.70	1.17	0.94	0.56

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	450	
Storage Lanes	0	2		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			40
Link Distance (ft)	300		312			812
Travel Time (s)	6.8		7.1			13.8
Lane Group Flow (vph)	0	210	1330	0	620	810
v/c Ratio		0.31	0.43		0.84	0.23
Control Delay		9.3	5.2		30.2	0.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.3	5.2		30.2	0.2
Queue Length 50th (ft)		11	52		79	0
Queue Length 95th (ft)		34	73		#152	0
Internal Link Dist (ft)	220		232			732
Turn Bay Length (ft)					450	
Base Capacity (vph)		686	3073		740	3539
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.31	0.43		0.84	0.23

Intersection Summary

Area Type: Other

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	450	
Storage Lanes	0	2		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			40
Link Distance (ft)	300		312			812
Travel Time (s)	6.8		7.1			13.8
Lane Group Flow (vph)	0	674	1011	0	370	1696
v/c Ratio		0.84	0.33		0.50	0.48
Control Delay		23.3	4.3		18.3	0.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		23.3	4.3		18.3	0.5
Queue Length 50th (ft)		57	34		43	0
Queue Length 95th (ft)		#145	49		74	0
Internal Link Dist (ft)	220		232			732
Turn Bay Length (ft)					450	
Base Capacity (vph)		799	3062		740	3539
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.84	0.33		0.50	0.48

Intersection Summary

Area Type: Other

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

Appendix G: Corrective Actions LOS and Queueing Worksheets

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	950	3830	150	420	2710
Future Volume (vph)	0	950	3830	150	420	2710
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.76	0.86		0.97	0.91
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3610	6361		3433	5085
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3610	6361		3433	5085
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	990	3990	156	438	2823
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	0	990	4142	0	438	2823
Confl. Peds. (#/hr)				15	15	
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		34.0	77.0		34.0	120.0
Effective Green, g (s)		34.0	77.0		34.0	120.0
Actuated g/C Ratio		0.28	0.64		0.28	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1022	4081		972	5085
v/s Ratio Prot		c0.27	c0.65		0.13	0.56
v/s Ratio Perm						
v/c Ratio		0.97	1.01		0.45	0.56
Uniform Delay, d1		42.5	21.5		35.3	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		20.7	17.9		0.3	0.4
Delay (s)		63.1	39.4		35.7	0.4
Level of Service		E	D		D	A
Approach Delay (s)	63.1		39.4			5.2
Approach LOS	E		D			A

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	810	3750	280	290	2670
Future Volume (vph)	0	810	3750	280	290	2670
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0		4.0	4.0
Lane Util. Factor		0.76	0.86		0.97	0.91
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	0.99		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3610	6307		3433	5085
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3610	6307		3433	5085
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	835	3866	289	299	2753
RTOR Reduction (vph)	0	1	9	0	0	0
Lane Group Flow (vph)	0	834	4146	0	299	2753
Confl. Peds. (#/hr)				30	30	
Turn Type		Over	NA		Prot	NA
Protected Phases		1	2		1	Free
Permitted Phases						
Actuated Green, G (s)		29.7	81.3		29.7	120.0
Effective Green, g (s)		29.7	81.3		29.7	120.0
Actuated g/C Ratio		0.25	0.68		0.25	1.00
Clearance Time (s)		4.0	5.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		893	4272		849	5085
v/s Ratio Prot		c0.23	c0.66		0.09	0.54
v/s Ratio Perm						
v/c Ratio		0.93	0.97		0.35	0.54
Uniform Delay, d1		44.2	18.2		37.2	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		16.4	8.5		0.3	0.4
Delay (s)		60.6	26.7		37.5	0.4
Level of Service		E	C		D	A
Approach Delay (s)	60.6		26.7			4.0
Approach LOS	E		C			A

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	300	
Storage Lanes	0	3		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		35			35
Link Distance (ft)	410		338			534
Travel Time (s)	9.3		6.6			10.4
Lane Group Flow (vph)	0	990	4146	0	438	2823
v/c Ratio		0.97	1.02		0.45	0.56
Control Delay		64.3	39.9		37.1	0.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		64.3	39.9		37.1	0.4
Queue Length 50th (ft)		332	~931		143	0
Queue Length 95th (ft)		#448	#1036		193	0
Internal Link Dist (ft)	330		258			454
Turn Bay Length (ft)					300	
Base Capacity (vph)		1022	4084		972	5085
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.97	1.02		0.45	0.56

Intersection Summary

Area Type: Other

~ 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.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	300	
Storage Lanes	0	3		0	2	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		35			35
Link Distance (ft)	410		338			534
Travel Time (s)	9.3		6.6			10.4
Lane Group Flow (vph)	0	835	4155	0	299	2753
v/c Ratio		0.93	0.97		0.35	0.54
Control Delay		62.2	26.9		38.5	0.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		62.2	26.9		38.5	0.4
Queue Length 50th (ft)		277	805		98	0
Queue Length 95th (ft)		#378	869		140	0
Internal Link Dist (ft)	330		258			454
Turn Bay Length (ft)					300	
Base Capacity (vph)		903	4284		858	5085
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.92	0.97		0.35	0.54

Intersection Summary

Area Type: Other

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