ATTACHMENT NO. 6
TO JULY 13, 2022
8631 HAYDEN PLACE AGENDA ITEM

Attachment A

Transportation Study

ESA

TRANSPORTATION STUDY FOR 8631 HAYDEN PLACE

CULVER CITY, CALIFORNIA

MARCH 2022

PREPARED FOR

HCP 8631 HAYDEN, LLC

PREPARED BY

Gibson transportation consulting, inc.

TRANSPORTATION STUDY
FOR
8631 HAYDEN PLACE

CULVER CITY, CALIFORNIA

March 2022

Prepared for:

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Chapter 1
Introduction

This study presents the transportation study for the proposed development of an office project (Project) at 8631 Hayden Place (Project Site) in the City of Culver City, California (City). The methodology and base assumptions used in the analysis were established in conjunction with the Culver City Public Works Department (CCPWD) Mobility and Traffic Engineering Division.

PROJECT DESCRIPTION

The Project proposes the development of a three-story office building with 245,000 square feet (sf) of office space. The Project would replace the existing 56,480 sf of studio uses and 8,000 sf of office uses as well as the existing surface parking lot along Hayden Place. Full buildout of the Project is anticipated in Year 2025.

Parking for the Project would be provided on-site within three levels of subterranean parking. Existing driveways along Higuera Street and Hayden Place would be maintained with the Project. For the purposes of this transportation study, the Project was analyzed with two access schemes: (1) with limited access provided from Higuera Street and Hayden Place (Limited Higuera Street Access, and (2) with access provided from Hayden Place only (Hayden Place Access Only). Pedestrian access to the Project Site would be provided via the entrance along Hayden Place. The Project also proposes the installation of a passenger loading area along Hayden Place at the main building entrance.

The conceptual Project site plan is illustrated in Figure 1.

PROJECT LOCATION

As shown in Figure 2, the Project Site is bounded by the Higuera Street to the north, office uses to the east, Hayden Place to the south, and industrial / warehouse uses to the west. The surrounding area is urbanized with a mixture of residential, industrial, and commercial uses.

The Project is located approximately 0.70 miles south of the Santa Monica Freeway (I-10), which provides regional transportation between downtown Los Angeles and Santa Monica, and approximately 2.0 miles east of the San Diego Freeway (I-405), which provides regional transportation between Los Angeles County and Orange County. The Project Site is primarily served by National Boulevard, Washington Boulevard, Jefferson Boulevard, and Higuera Street.

Nearby transit service is provided along National Boulevard, Washington Boulevard, Higuera Street, and Jefferson Boulevard. Additionally, the Project Site is located within 0.50 miles of the Los Angeles County Metropolitan Transportation Authority (Metro) E (Expo) Line Culver City Station, approximately 0.30 miles west of the Ballona Creek Bicycle Path, and 0.35 miles south of the Exposition Corridor Bicycle Path.

STUDY SCOPE

The scope of analysis for this study was developed in consultation with the City and is consistent with *Culver City Transportation Study Criteria and Guidelines* (CCPWD, July 2020) (Guidelines) and *Transportation Assessment Guidelines* (Los Angeles Department Of Transportation [LADOT], July 2020) (TAG) and is in compliance with the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Section 15000 and following). The base assumptions and technical methodologies (i.e., trip generation, study locations, analysis methodology, etc.) were identified as part of the study approach and were outlined in a Memorandum of Understanding (MOU) that was reviewed and approved by CCPWD in February 2022 and is provided in Appendix A.

ORGANIZATION OF REPORT

This report is divided into six chapters, including this introduction. Chapter 2 describes the transportation network including the existing and future circulation system, traffic volumes, and traffic conditions in the Project area. Chapter 3 provides the Project traffic and trip distribution. Chapter 4 presents the CEQA analysis of transportation impacts. Chapter 5 details the non-CEQA transportation analyses. Chapter 6 summarizes the analyses and study conclusions. The appendices contain supporting documentation, including the signed MOU that outlines the study scope and assumptions and additional details supporting the technical analyses.

Source: Gensler, December, 2021.

PROJECT SITE PLAN

FIGURE 1

PROJECT SITE LOCATION

FIGURE 2

Chapter 2
Transportation Network Review

A comprehensive data collection effort was undertaken to develop a detailed description of existing and future conditions in the Project area.

The Existing Conditions analysis includes an assessment of the existing transportation infrastructure and conditions including freeway and street systems, and transit service, as well as pedestrian and bicycle circulation, at the time the MOU was approved in February 2022. Fieldwork (lane configurations, signal phasing, parking restrictions, etc.) for the analyzed intersections was collected in Year 2022.

In addition, this Chapter contains a discussion of the Future Conditions assumptions used to develop the Future without Project Conditions in Year 2025, which corresponds to projected occupancy of the Project, and Cumulative without Project Conditions in Year 2045, which corresponds to the horizon year of the *Culver City General Plan* (City of Culver City, May 1995) (General Plan) update.

STUDY AREA

The Project's transportation analysis Study Area, shown in Figure 3, includes intersections along National Boulevard, Washington Boulevard, Higuera Street, and Hayden Avenue/Hayden Place. This Study Area was established in consultation with CCPWD based on existing intersection and corridor operations, as well as the anticipated distribution and operational effects of Project traffic.

A total of seven intersections, listed in Table 1, were identified for detailed analysis during the MOU process. The existing lane configurations at the analyzed intersections are provided in Figure 4.

The list of study intersections was reviewed and approved by the City.

EXISTING TRANSPORTATION CONDITIONS

Existing Street System

The existing street system in the Study Area consists of a regional roadway system including arterials and local streets that provide regional, sub-regional, or local access and circulation. These transportation facilities generally provide two to four travel lanes and usually allow parking on one or both sides of the street. Typically, the speed limits range between 25 and 35 miles per hour (mph) on the streets and 55 mph on the freeways.

Street classifications for City roadways are designated in *Culver City General Plan Circulation Element* (City of Culver City, adopted May 24, 2004) (Circulation Element). The Circulation Element defines specific street standards in an effort to effectively link and serve local and regional transportation systems. Per the Circulation Element, street classifications are defined as follows:

- Freeways are specialized arteries with limited access and are grade-separated from the City's street system. Their primary function is to carry large volumes of traffic at high speed throughout the region.
- Primary Arteries are major cross-town thoroughfares with desired right-of-way (ROW) widths of 95 feet or more. Traffic flow on Primary Arteries is characterized as high volume and fast-moving. Direct access onto Primary Arteries from private driveways should be limited or prohibited. Where private driveways are prohibited, Primary Arteries are designed as controlled access streets.
- Secondary Arteries provide links between Collectors and Primary Arteries and have desired ROW widths of 80 to 94 feet.
- Collectors provide a means for the movement of traffic from Local Streets to larger streets and have desired ROW widths of 60 to 79 feet.
- Neighborhood Feeders are generally located within residential neighborhoods and provide direct routes between Local Streets and the adjacent arterials.
- Local Streets provide access for vehicles to travel between private parking and driveways to larger, non-Local Streets. Generally, Local Streets do not exceed 60 feet of ROW widths and are mostly in residential neighborhoods.

Street classifications for streets within the City of Los Angeles are designated in *Mobility Plan 2035, An Element of the General Plan* (Los Angeles Department of City Planning, September

2016) (Mobility Plan). The Mobility Plan defines specific street standards in an effort to provide an enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. The Mobility Plan defines street classifications are defined as follows:

- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
    - Boulevards represent the widest Arterial Streets that typically provide regional access to major destinations and include two categories:
        - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph, and generally includes a ROW width of 136 feet and pavement width of 100 feet.
        - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph, with ROW widths varying from 100-110 feet, and pavement widths from 70-80 feet.
    - Avenues are typically narrower Arterial Streets that pass through both residential and commercial areas and include three categories:
        - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph, with a ROW width of 100 feet and pavement width of 70 feet.
        - Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph, with a ROW width of 86 feet and pavement width of 56 feet.
        - Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph, with a ROW width of 72 feet and pavement width of 46 feet.
- Collector Streets are generally located in residential neighborhoods and provide access to and from Arterial Streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with operating speed of 25 mph, with a ROW width of 66 feet and pavement width of 40 feet.

  Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Pavement widths may vary between 30-36 feet within a ROW width of 50-60 feet.

Primary regional access to the Project Site is provided by I-10 and I-405. In proximity to the Project Site, the Study Area is served by arterial streets such as National Boulevard. The following is a

brief description of the roadways in the Study Area, including their classifications under the Circulation Element and Mobility Plan:

Freeways

- I-10 – I-10 generally runs in the east-west direction and is located 0.70 miles north of the Project Site. In the vicinity of the Project Site, I-10 provides four travel lanes in each direction. Access to and from I-10 is available via interchanges at Robertson Boulevard and National Boulevard.

- I-405 – I-405 generally runs in the northwest-southeast direction and is located approximately 2.0 miles west of the Project Site. Access to and from I-405 is provided via interchanges at Culver Boulevard, Sawtelle Boulevard, and Sepulveda Boulevard, which are located outside the Study Area.

Roadways

- National Boulevard – National Boulevard is a designated Secondary Artery in the Circulation Element that runs in the east-west direction and is located north of the Project Site. National Boulevard terminates to the east at Jefferson Boulevard. It provides four travel lanes, two in each direction. Metered on-street parking is generally provided on the south side of the street within the Study Area. Travel lanes are typically 10 feet wide and the total paved width is generally 60 feet.

- Higuera Street – Higuera Street is a designated Neighborhood Feeder west of Hayden Avenue/Hayden Place and a designated Secondary Artery east of Hayden Avenue/Hayden Place in the Circulation Element. It runs in the east-west direction adjacent to the northern boundary of the Project Site. Higuera Street connects to Obama Boulevard east of Jefferson Boulevard. It provides two travel lanes, one in each direction, west of Hayden Avenue/Hayden Place and four travel lanes, two in each direction, east of Hayden Avenue/Hayden Place. Between Eastham Drive and Jefferson Boulevard, it provides two eastbound travel lanes and one westbound travel lane. Unmetered on-street parking is generally provided on the north side of the street within the Study Area. The total paved width is generally 50 feet.

- Obama Boulevard – Obama Boulevard is a designated Avenue I east of Jefferson Boulevard and a Modified Avenue I west of Jefferson Boulevard in the Mobility Plan that runs in the east-west direction and is located east of the Project Site. Obama Boulevard connects to Higuera Street east of Jefferson Boulevard. It provides four to six travel lanes, two to three in each direction. On-street parking is generally not provided on either side of the street within the Study Area. Travel lanes are typically 10-11 feet wide and the total paved width is generally 75 feet.

- Washington Boulevard – Washington Boulevard is a designated Primary Arterial in the Circulation Element and a Modified Avenue I in the Mobility Plan. It travels in the northeast-southwest direction and is located northwest of the Project Site. It provides one travel lane, a bus-only lane, and a bicycle lane in each direction, along with left-turn lanes at intersections. On-street parking is generally unavailable within the Study Area. Inside lane widths are typically 10 feet wide and the total paved width is typically 76 feet.
- Eastham Drive – Eastham Drive is a designated Local Street in the Circulation Element. It travels in the north-south direction and is located east of the Project Site. It provides two travel lanes, one in each direction. On-street parking is not available on the street within the Study Area. The total paved width of the street is typically 30 feet.

- Jefferson Boulevard – Jefferson Boulevard is a designated Primary Artery in the Circulation Element and a designated Avenue II south of Obama Boulevard and Modified Avenue II north of Obama Boulevard in the Mobility Plan. It runs in the north-south direction south of National Boulevard and in the east-west direction east of National Boulevard and is located south and northeast of the Project Site. It provides four travel lanes, one in each direction, with left-turn lanes at most intersections. Bicycle lanes are provided on both sides of the street within the Study Area. Unmetered on-street parking is generally provided on both sides of the street west of Holdrege Avenue within the Study Area. Travel lanes are typically 10-11 feet wide and the total paved width is generally 70 to 82 feet.

- Hayden Avenue – Hayden Avenue is a designated Secondary Artery in the Circulation Element that runs in the north-south direction between National Boulevard and Higuera Street and is located east of the Project Site. Hayden Avenue connects to Hayden Place at Higuera Street. It provides two travel lanes, one in each direction. Unmetered on-street parking is generally provided on both sides of the street within the Study Area. The total paved width is generally 50 feet.

- Hayden Place – Hayden Place is a designated Local Street in the Circulation Element that runs in the east-west direction and is located adjacent to the southern boundary of the Project Site. Hayden Place connects to Hayden Avenue at Higuera Street. It provides two travel lanes, one in each direction. Unmetered on-street parking is generally provided on both sides of the street within the Study Area. The total paved width is generally 50 feet.

The existing intersection mobility facilities at the study intersections are shown in Figure 5.

Existing Transit System

Figure 6 illustrates the existing public transit service in the Study Area, which is served by transit lines operated by Metro, LADOT, and Culver CityBus.

Table 2 summarizes the existing transit service operating in the Study Area for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and frequency of service. The average headways during the peak hour were estimated using detailed trip data from

Year 2022 provided by Metro, LADOT, and Culver CityBus. Ridership data was provided in Year 2019 and reflects ridership conditions prior to COVID-19 and implementation of the Metro NextGen Bus Plan.

Tables 3A and 3B summarize the total capacity of the Metro and Culver CityBus transit stops within the Study Area during the morning and afternoon peak hours. The total capacity is based on the frequency of service of each line, detailed ridership data provided by Metro and Culver CityBus, and the maximum seated and standing capacity of each bus or train. No data was readily available for the LADOT Commuter Express Route 437A. As shown in Tables 3A and 3B, the transit stops located within the Study Area currently provide additional capacity for 3,569 transit trips during the morning peak hour and 3,348 transit trips during the afternoon peak hour.

Existing Bicycle System

The City adopted *Culver City Bicycle & Pedestrian Action Plan* (CCPWD, June 2020), which supersedes *Culver City Bicycle and Pedestrian Master Plan* (Alta Planning and Design, November 2010). As shown in the *Culver City Bicycle & Pedestrian Action Plan*, the existing bicycle system in the Study Area consists of a variety of bicycle facilities.

Culver City Bicycle & Pedestrian Action Plan is comprised of a network of streets that prioritize bicyclists and provide Class I Shared-Use Paths, Class II Bicycle Lanes, Class III Bicycle Routes and Bike Boulevards, which provide sharrows and signage, and Class IV Separated Bikeways.

Within the Study Area, a Class I Shared Use Path is provided along the Exposition Corridor Bike Path and the Ballona Creek Bike Path, Class II bike lanes are provided on Jefferson Boulevard and Washington Boulevard, and Class III bicycle sharrows are provided on Wesley Street and Higuera Street, as shown in Figure 5.

Existing Pedestrian Facilities

Per *Culver City Bicycle & Pedestrian Action Plan*, most streets in the City have existing sidewalks in good condition. Marked crosswalks, including traverse lines and continental crosswalks, are provided at most major intersections throughout the City.

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile.

Sidewalks along Hayden Place west of the Project driveway provide pedestrian routes to the Project Site. The sidewalks provide connectivity to pedestrian crossings at signalized intersections within the Study Area. Pedestrian crossing phases are also provided at the signalized study intersections. No paved pedestrian facility is provided along the south side of Higuera Street between the Project driveway and Hayden Place. Pedestrian facilities, such as curb ramps and crosswalk striping, at the study intersections are shown in Figure 5.

Vision Zero

The City adopted the Vision Zero initiative in Year 2016 [1]. Vision Zero is a traffic safety policy that promotes strategies, including modifying the design of streets, to eliminate collisions that result in severe injury or death and increase safety for the most vulnerable road users. Vision Zero has identified the High Injury Network (HIN), a network of streets based on the collision data from *Culver City Bicycle & Pedestrian Action Plan* between Years 2014-2019, where strategic investments would have the biggest impact in reducing death and severe injury. Higuera Street adjacent to the Project Site is identified as part of the HIN. In addition, National Boulevard, Washington Boulevard, and Jefferson Boulevard within the Study Area have also been identified as part of the HIN.

[1] The Vision Zero initiative was adopted by the City Council in 2016. (https://www.culvercity.org/files/assets/public/documents/city-manager/160912__reso2016r082suppor.pdf)

Existing Traffic Volumes

Traffic count data collection is generally conducted during times with typical travel demand patterns (i.e., when local schools are in session, businesses in full operation, weeks without holidays, etc.) However, due to the current traffic conditions related to the State of California and City response to COVID-19, CCPWD has directed transportation studies to utilize traffic counts collected prior to March 2020. Given the uncertainty of the return to typical traffic conditions, CCPWD is allowing the use of historical traffic count data with application of an adjustment factor.

This study utilized weekday peak hour traffic data from May 2018 for the intersection of Jefferson Boulevard & Obama Boulevard/Higuera Street (Intersection #7) and from September 2018 for the intersections of Hayden Avenue & National Boulevard (Intersection #2), Eastham Drive & National Boulevard (Intersection #3), Hayden Place & Higuera Street (Intersection #5), and Eastham Drive & Higuera Street (Intersection #6). Based on a review of historical traffic growth, all count data was adjusted using a conservative ambient growth rate of 1% per year to simulate Existing Year 2022 traffic conditions.

Due to the recent implementation of mobility improvements as part of the Move Culver City project, which resulted in reduced vehicle capacity along Washington Boulevard, weekday peak hour traffic data collected in February 2022 at the intersections of Washington Boulevard & National Boulevard (Intersection #1) and Washington Boulevard & Robertson Boulevard/Higuera Street (Intersection #4) was utilized based on discussions with CCDPW to reflect current traffic operations under Existing Conditions in Year 2022.

The intersection peak hour traffic volumes, representing Existing Conditions in Year 2022, are illustrated in Figure 7. Traffic volume data is provided in Appendix B.

FUTURE AND CUMULATIVE TRANSPORTATION CONDITIONS

The forecast of Future without Project Conditions (Year 2025) and Cumulative without Project Conditions (Year 2045) was prepared in accordance with procedures outlined in the Guidelines. Specifically, two requirements are provided for developing the cumulative traffic volume forecast: (1) projected future volumes and (2) Related Projects.

The ambient growth factor discussed below likely includes some traffic increases resulting from the Related Projects. Therefore, through some inherent double-counting of vehicles, the traffic analysis provides a highly conservative estimate of Future without Project and Cumulative without Project traffic volumes.

The forecast base year traffic volumes, therefore, include ambient growth, which reflects increases in traffic due to regional growth and development outside the Study Area, as well as traffic generated by ongoing or entitled projects near or within the Study Area.

Ambient Traffic Growth

Existing traffic levels have historically been projected to increase as a result of regional growth and development; however, the implications of COVID-19 may influence those future rate projections. Nevertheless, to provide a conservative estimate of future background conditions, this analysis used the 1% annual growth precedent as approved in the MOU to simulate anticipated buildout for both Year 2025 and Year 2045 traffic volumes. The total adjustment applied over the three-year and 23-year periods were 3% and 23%, respectively. These growth factors account for increases in traffic due to potential projects not yet proposed and projects located outside the Study Area.

Related Projects

In accordance with the Guidelines, this study also considered the effects of the Project in relation to the Related Projects. Including this analysis step, the potential impact of the Project was evaluated within the context of past, present, and probable future developments capable of producing cumulative impacts. The list of Related Projects is based on information provided by the City and the City of Los Angeles in November 2021, as well as recent studies of development projects in the area. Related Projects within 0.50 miles of the Project Site were considered in the analysis and represent development projects most likely to add traffic to the study intersections. The Related Projects are detailed in Table 4 and their approximate locations are shown in Figure 8.

Though the buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this study and conservatively assumed to be completed by the Project buildout year of 2025 and General Plan horizon year of 2045. The traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the area that would likely occur prior to Project buildout years. With the addition of the 1% per year ambient growth factor previously discussed, the Future without Project Year 2025 and Cumulative without Project Year 2045 Conditions are even more conservative.

Using these conservative assumptions, the potential traffic operations of the Project were evaluated. The development of estimated traffic volumes added to the study intersections as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation. Trip generation estimates for the Related Projects were calculated using a combination of previous study findings and the trip generation rates contained in the latest Institute of Transportation Engineers (ITE) Trip Generation Manual or were provided by the respective jurisdiction. The Related Projects trip generation estimates summarized in Table 4 are conservative in that they do not in every case account for either the trips generated by the existing uses to be removed or the likely use of other travel modes (e.g., transit, bus, bicycling, walking, carpool, etc.) Further, they do not account for the internal capture trips within a multi-use development or for the interaction of trips between multiple Related Projects, in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees / residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors were considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Traffic Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 9 shows the peak hour traffic volumes associated with these Related Projects at the study intersections.

Future without Project Traffic Volumes

The Related Projects volumes were then added to the existing traffic volumes after adjustment for ambient growth through the projected Project completion year of 2025. As discussed above, this is a conservative approach as many of the Related Projects may be reflected in the ambient growth rate. These volumes represent the Future without Project Conditions (i.e., ambient traffic growth and Related Project traffic added to existing traffic volumes) for Year 2025 at the study intersections and are shown in Figure 10.

Cumulative without Project Traffic Volumes

Similar to the Future without Project Conditions traffic volumes, the Related Projects volumes were added to the existing traffic volumes after adjustment for ambient growth through the projected General Plan horizon year of 2045. These volumes represent the Cumulative without Project Conditions (Year 2045) at the study intersections and are shown in Figure 11.

Future Improvements

The analysis of Future Conditions considered transportation improvements that are funded and expected to be implemented prior to the buildout of the Project. These improvements could result in changes to the physical configuration at the study intersections. Other proposed improvement projects that are not funded and traffic / trip reduction strategies such as Transportation Demand Management (TDM) programs for individual buildings and developments were conservatively omitted from the Future and Cumulative Conditions analyses. A summary of future improvements is provided below.

Bicycle and Pedestrian Action Plan. *Culver City Bicycle & Pedestrian Action Plan* identifies key recommended improvements for corridors throughout the City. The goal of this plan is to improve active forms of transportation by providing accessible, safe, and comfortable environments for all road users. The following summarizes the recommended network upgrades, depicted in Figure 12, planned on corridors within 0.25 miles of the Project Site:

- Recommended Bicycle Facilities: New Class III bikeways on Higuera Street and Class IV bike lanes on Jefferson Boulevard south of Higuera Street have been recommended for installation. A new bicycle path entrance to the existing Balboa Creek Bike Path has also been recommended at Jefferson Boulevard & Higuera Street/Obama Boulevard (Intersection #7).

- Recommended Pedestrian Facilities: New continental crosswalk striping have been recommended for installation at National Boulevard & Hayden Avenue (Intersection #2), Higuera Street & Hayden Place (Intersection #5), Stellar Drive & Eastham Drive, Warner Drive & Eastham Drive, and Higuera Street & Eastham Drive (Intersection #6).

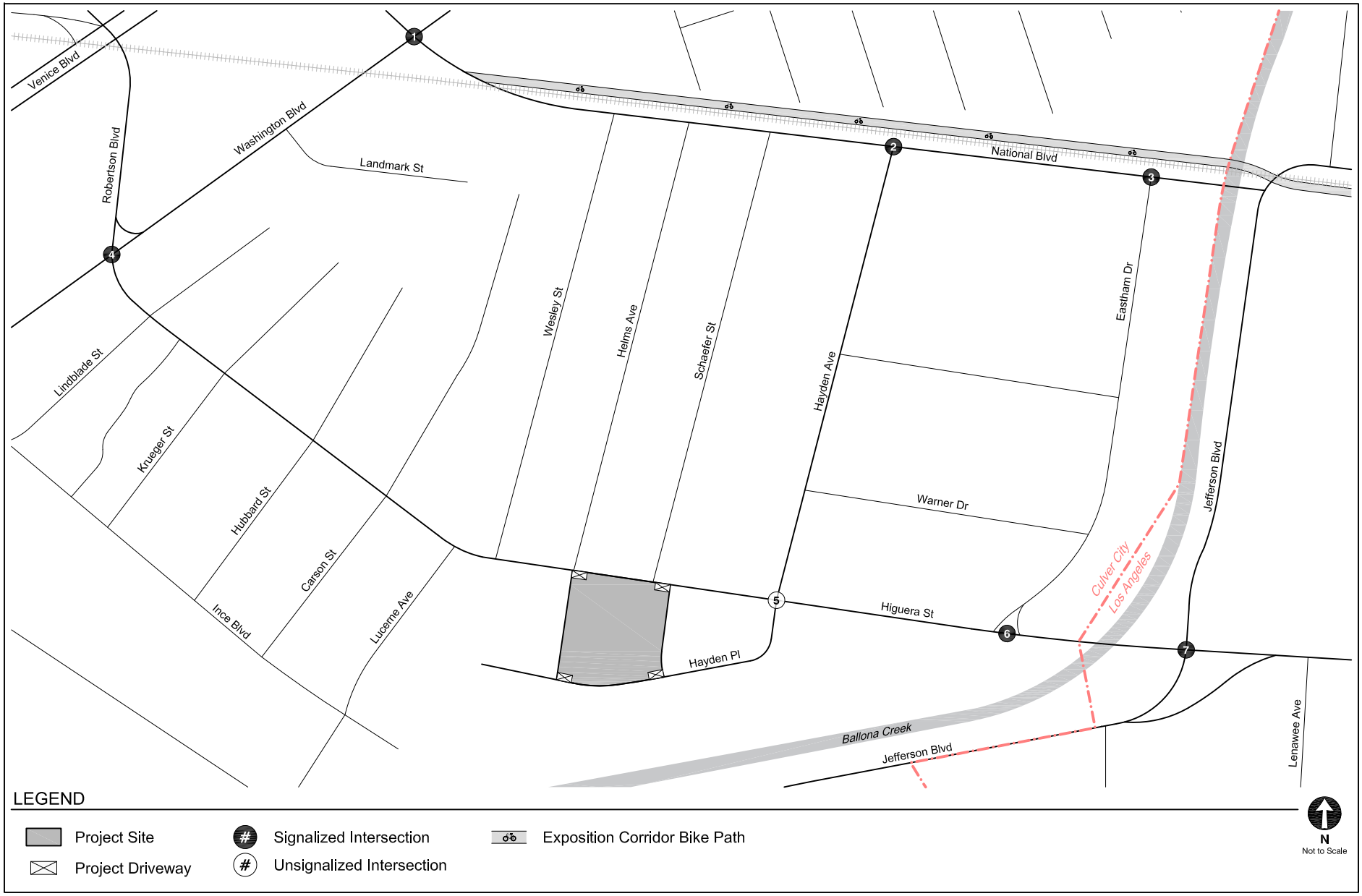
- Opportunity Corridors: Three Opportunity Corridors consisting of "planning-level projects" for additional improvements for bicycling and walking included the Downtown Core, Overland Avenue, and Farragut Drive. None of these Opportunity Corridors are located within 0.25 miles of the Project Site.

The specific timeline for implementation of these recommendations has not been identified; therefore, no changes to intersection lane configurations were made as a result of *Culver City Bicycle & Pedestrian Action Plan*.

Higuera Street Bridge Replacement Project. The Higuera Street Bridge Replacement Project is currently under construction. In addition to a new, wider bridge, a new bicycle ramp connection to the Ballona Creek Bicycle Path, new bicycle lanes with lane buffers, traffic signal upgrades at Jefferson Boulevard, and an additional westbound through lane between Jefferson Boulevard and Eastham Drive would be provided as part of the improvement project. Completion of the Higuera Street Bridge replacement is anticipated in December 2022 and, therefore, the associated improvements were incorporated in the Future and Cumulative Conditions analyses.

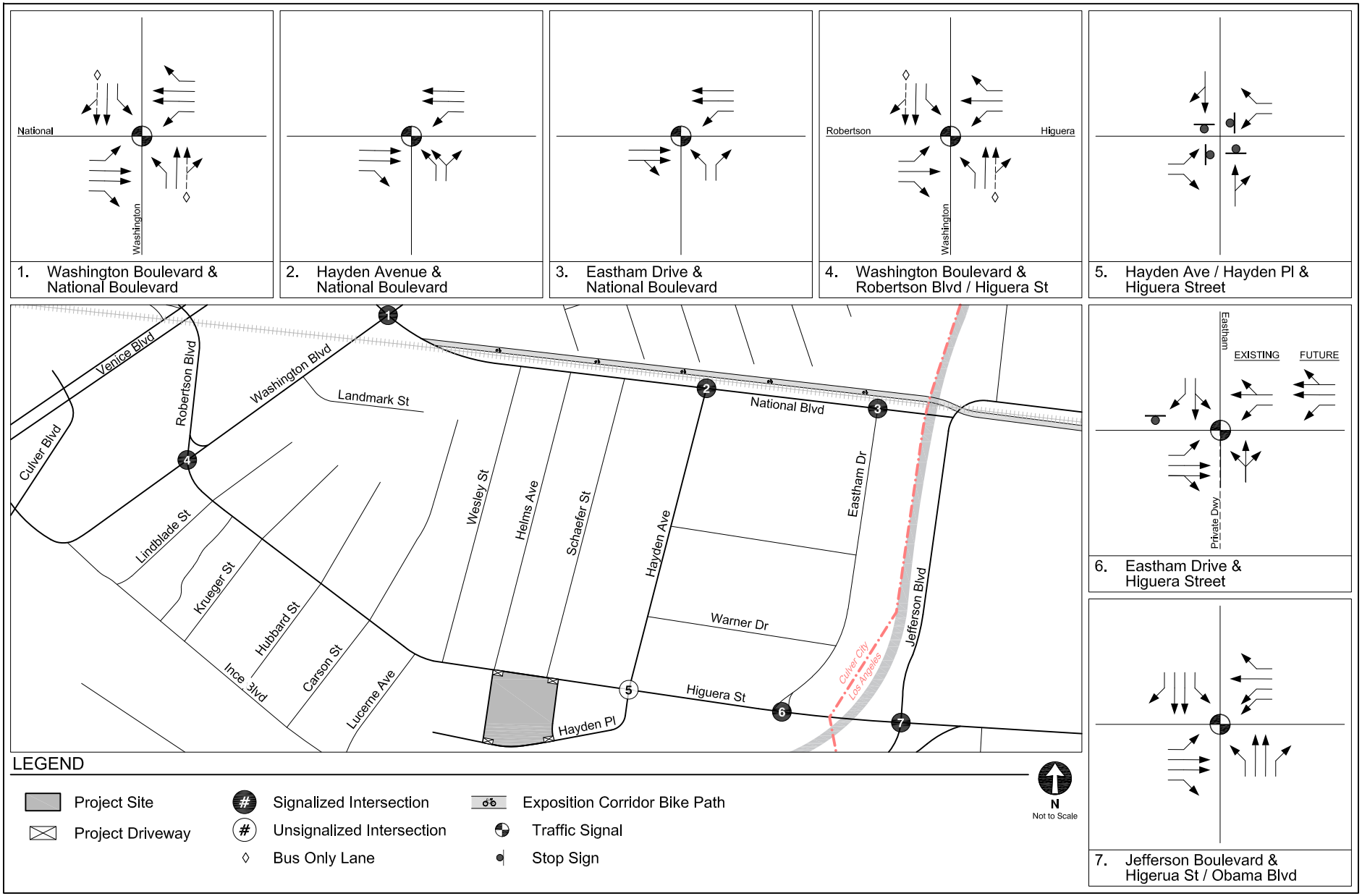
Rancho Higuera Neighborhood Traffic Management Plan (NTMP). The Rancho Higuera NTMP would install a variety of traffic reduction and calming measures to improve traffic flow and safety within the neighborhood. Phase 1 of the Rancho Higuera NTMP was recently implemented and none of the study intersections were affected by the installed improvements. Although the improvement and implementation plans for Phase 2 of the Rancho Higuera NTMP have yet to be

finalized and adopted, the potential installation of a cul-de-sac along Higuera Avenue east of Schafer Street would not preclude access to commercial developments along Higuera Street for City emergency, general service, or other services deemed necessary by the City (such as trash, recycling, transit, and mobility).



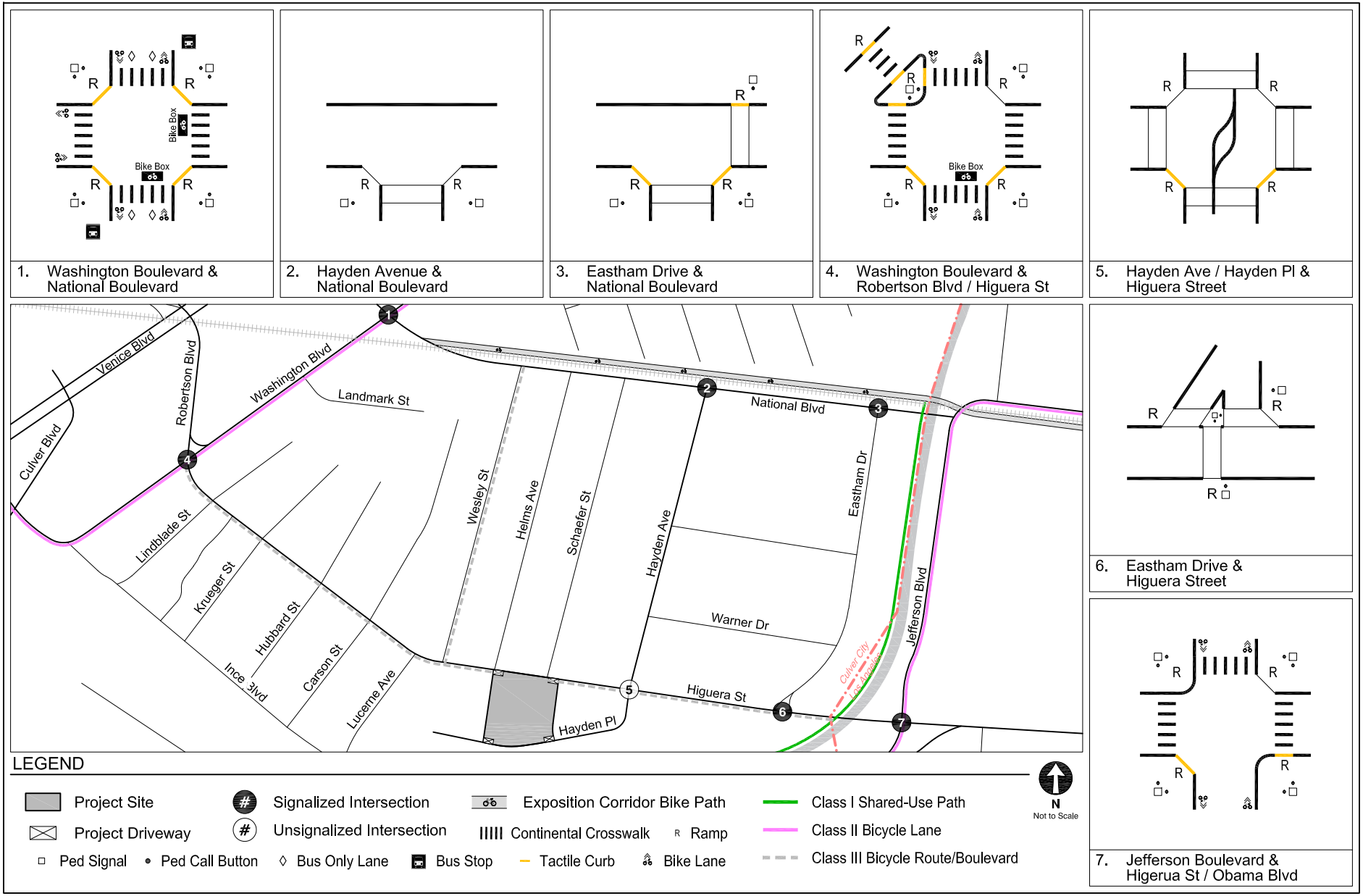
STUDY AREA AND ANALYZED INTERSECTIONS

FIGURE 3



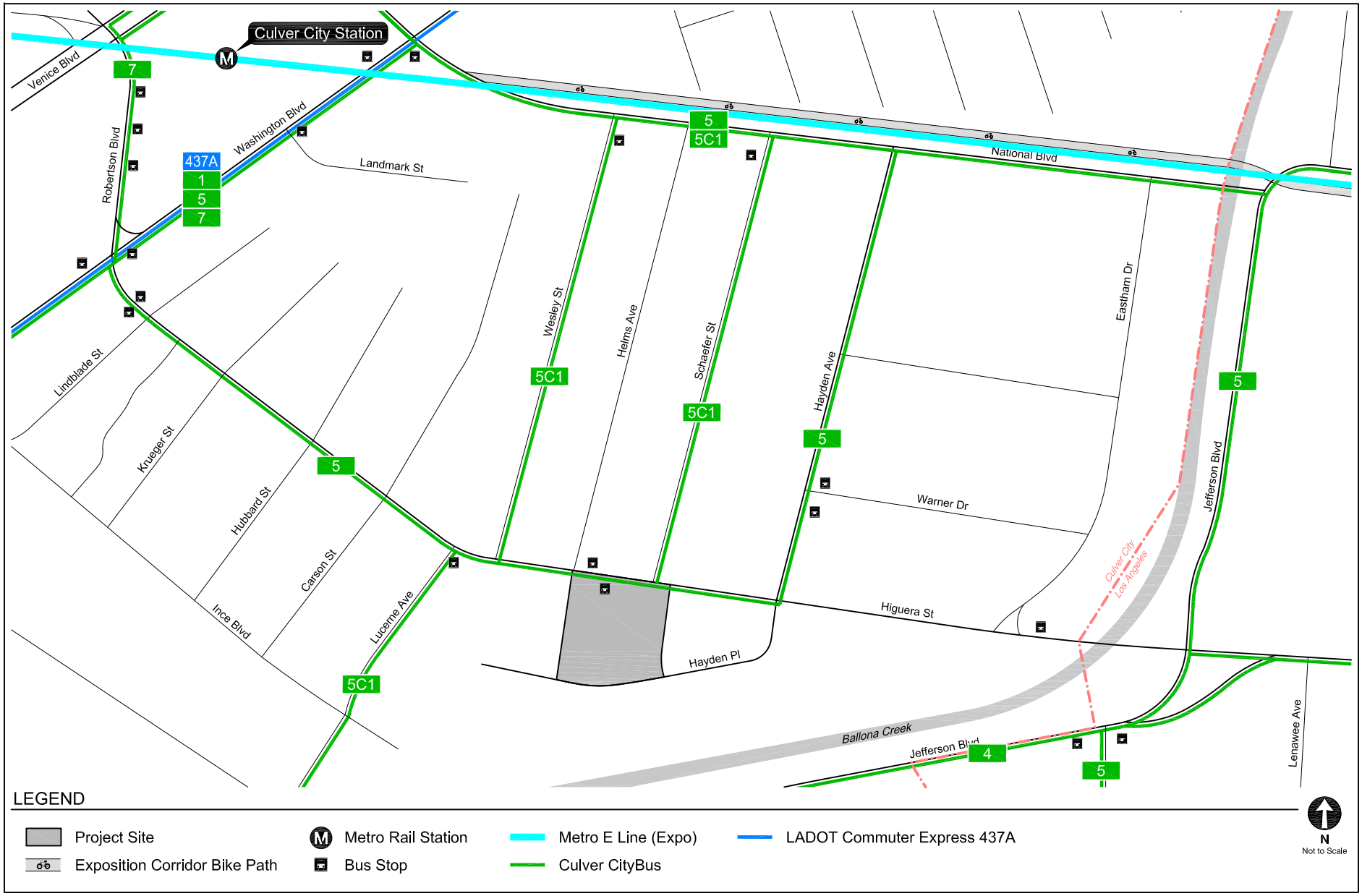
INTERSECTION LANE CONFIGURATIONS

FIGURE 4



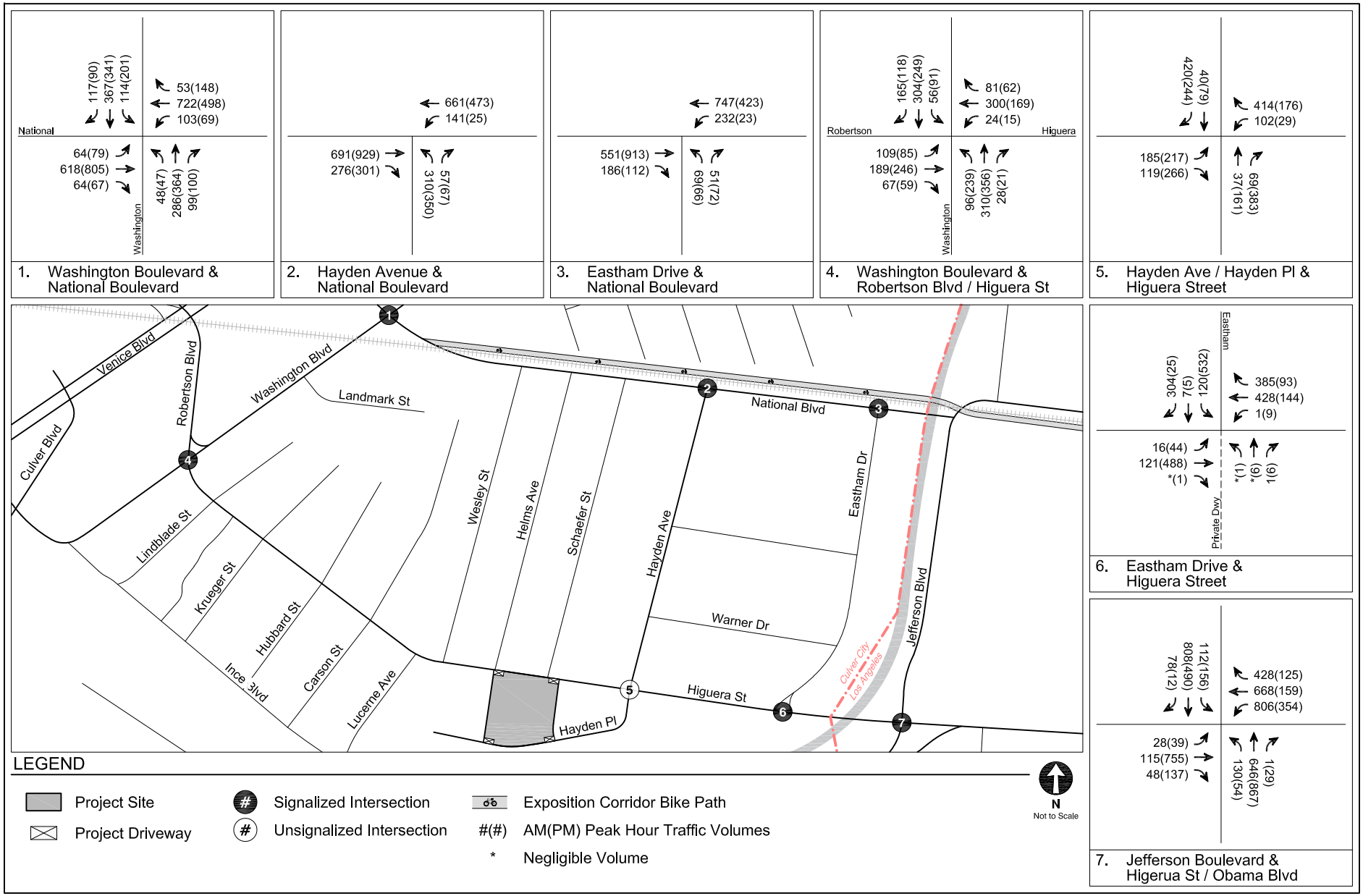
EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE 5



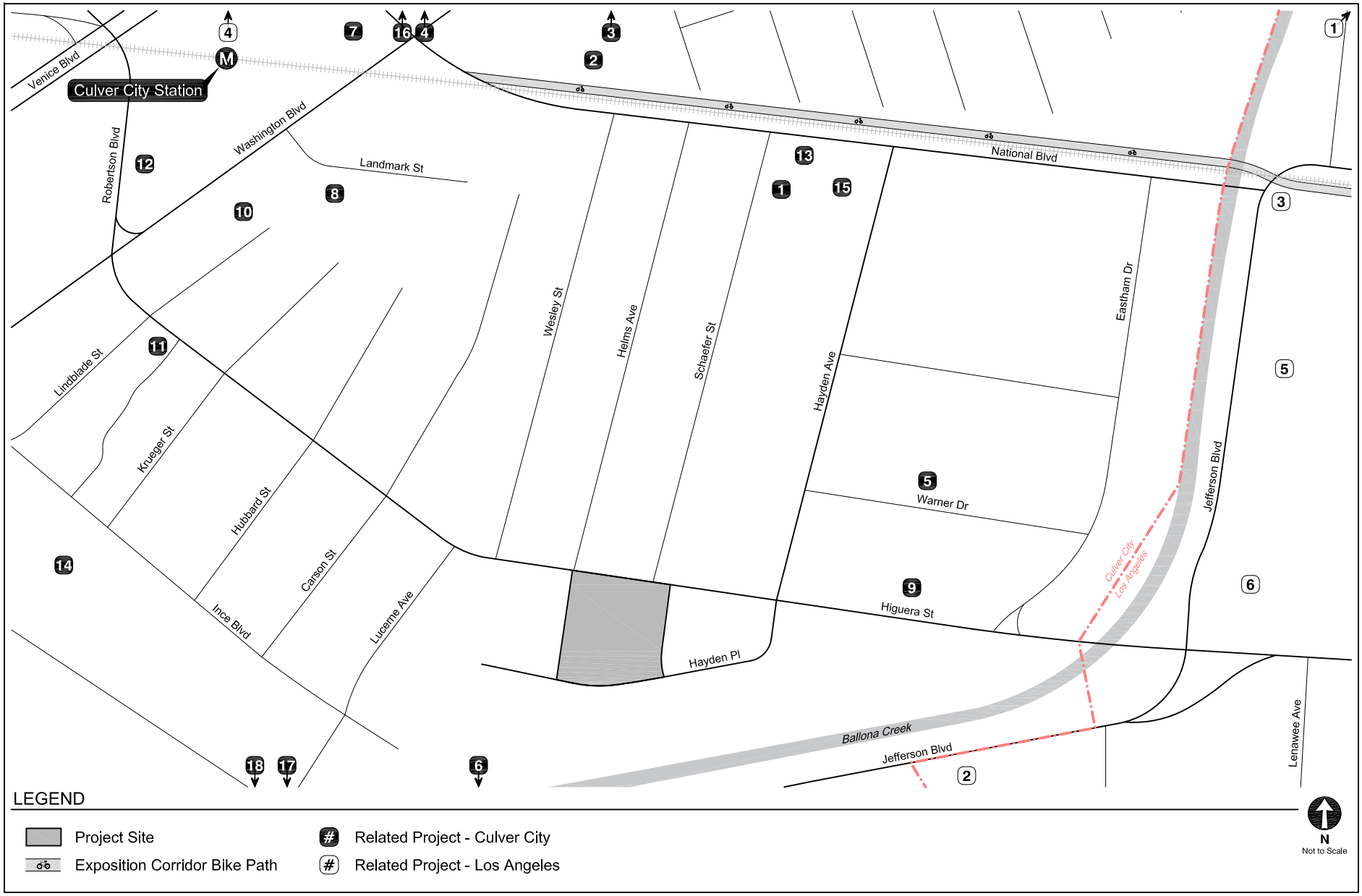
EXISTING TRANSIT SERVICE

FIGURE 6



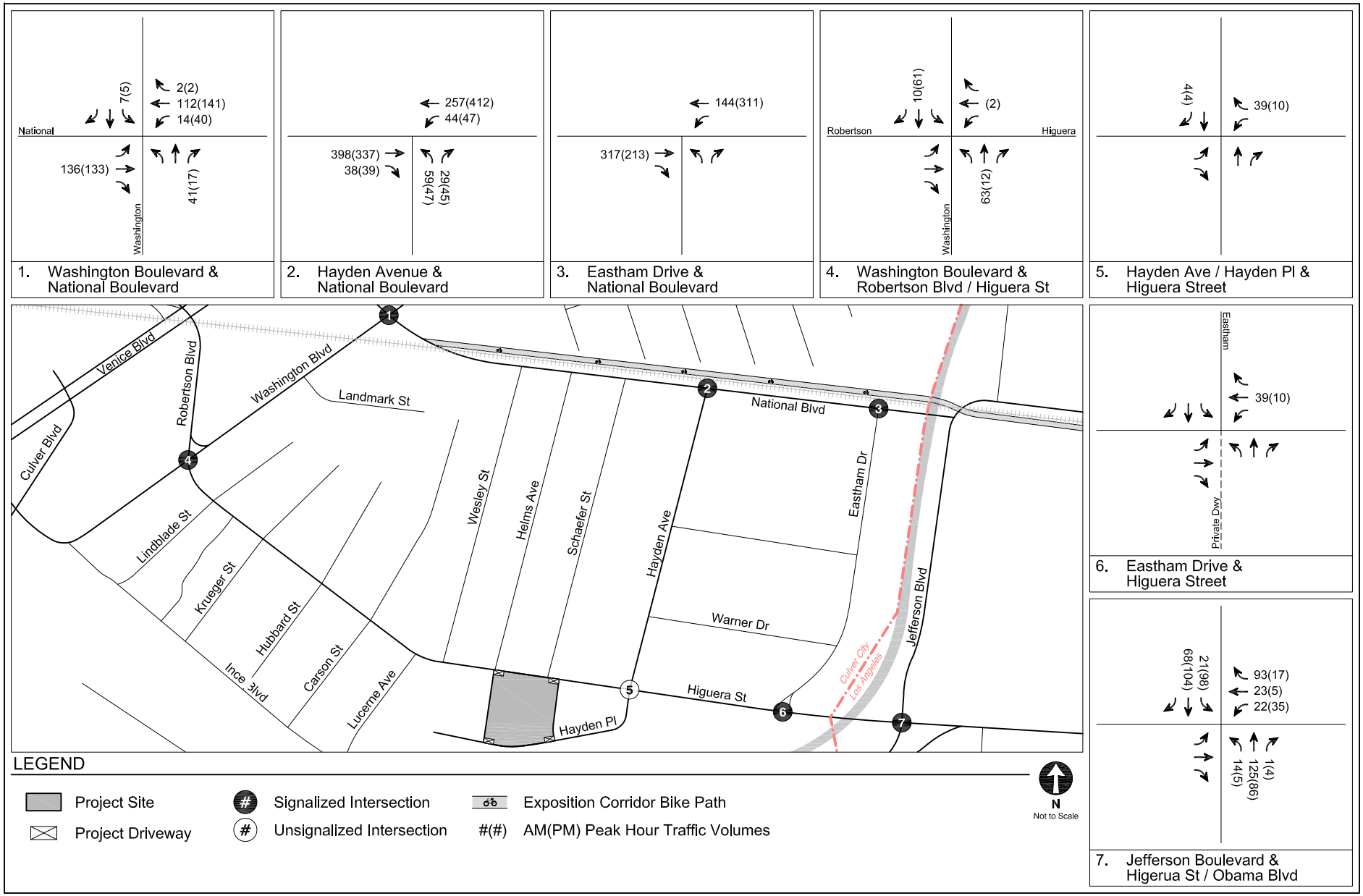
EXISTING CONDITIONS (YEAR 2022)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 7



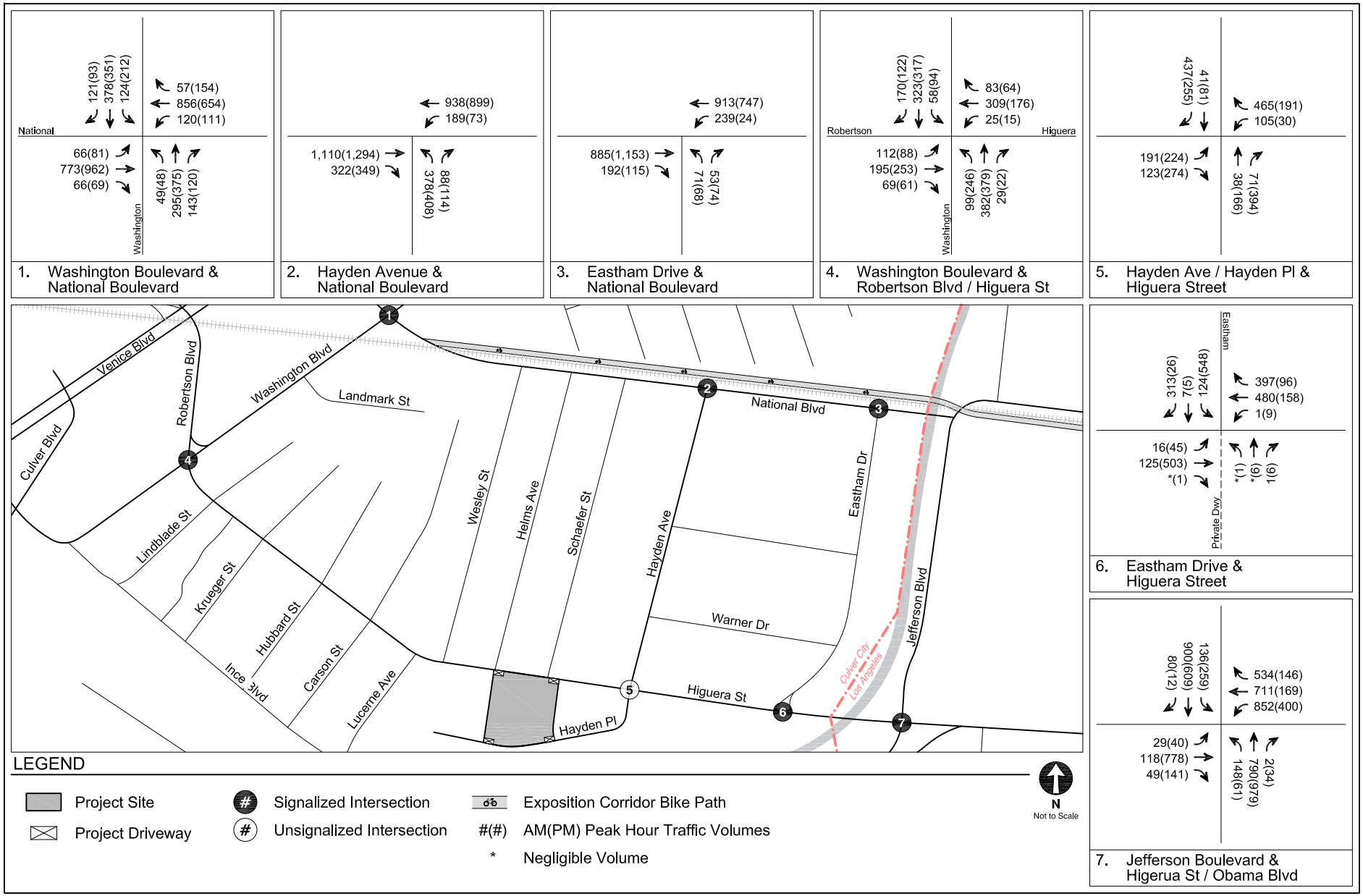
LOCATIONS OF RELATED PROJECTS

FIGURE 8



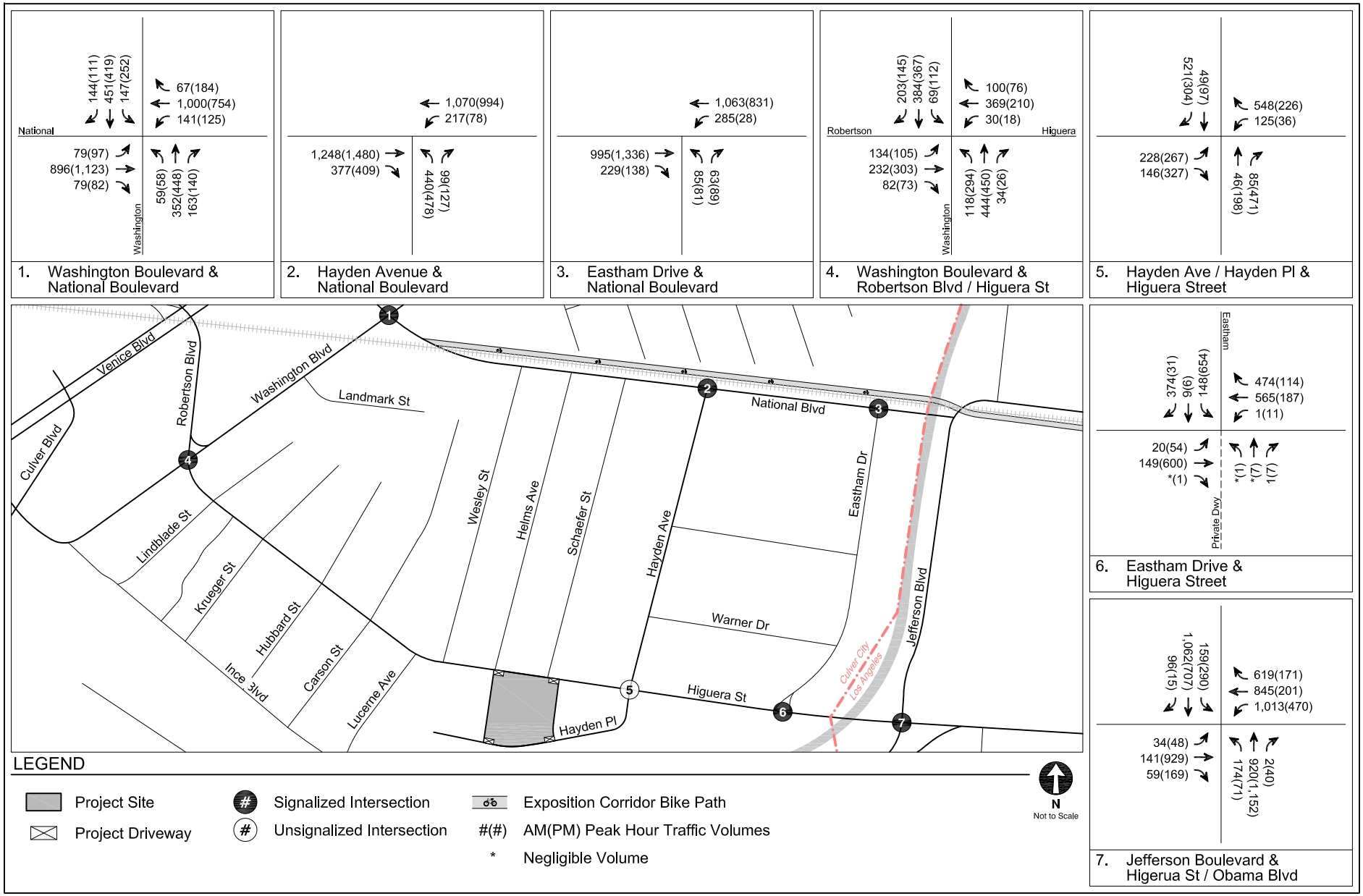
RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
9



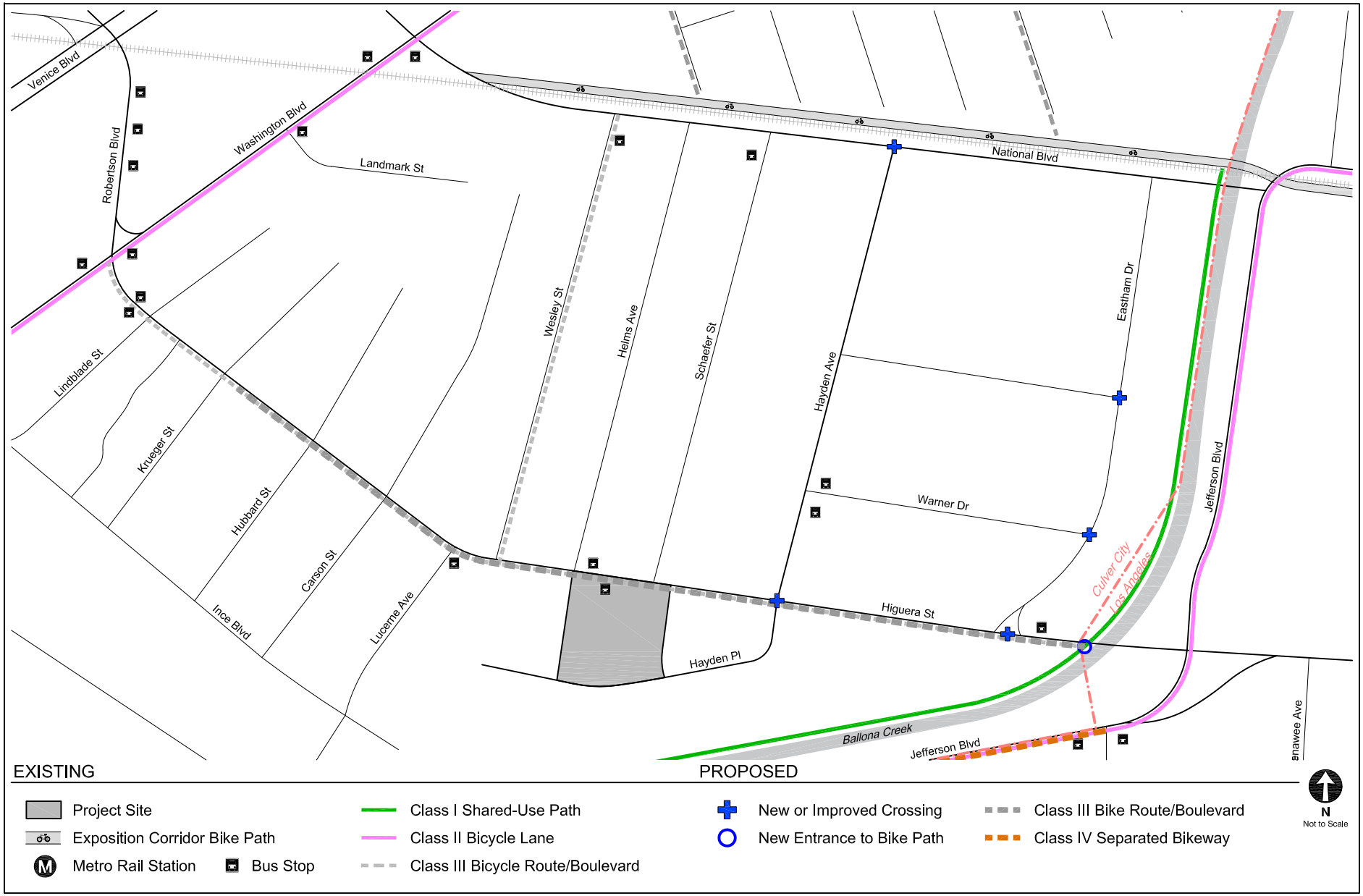
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 10



CUMULATIVE WITHOUT PROJECT CONDITIONS (YEAR 2045)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 11



TRANSPORTATION CIRCULATION SYSTEM

FIGURE 12

TABLE 1
STUDY INTERSECTIONS

No	North/South Street	East/West Street	Existing Traffic Control	Jurisdiction
1.	Washington Boulevard	National Boulevard	Signalized	City of Culver City
2.	Hayden Avenue	National Boulevard	Signalized	City of Culver City
3.	Eastham Drive	National Boulevard	Signalized	City of Culver City
4.	Washington Boulevard	Higuera Street / Robertson Boulevard	Signalized	City of Culver City
5.	Hayden Avenue / Hayden Place	Higuera Street	All-Way Stop Controlled	City of Culver City
6.	Eastham Drive	Higuera Street	Signalized	City of Culver City
7.	Jefferson Boulevard	Higuera Street/Obama Boulevard	Signalized	City of Los Angeles

TABLE 2
EXISTING TRANSIT SERVICE

Provider, Route, and Service Area		Service Type	Hours of Operation [a]	Average Headway (minutes)			
				Morning Peak Period		Afternoon Peak Period	
Culver City Bus				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
1	Culver City - Venice	Local	6:00 A.M. - 1:00 P.M.	22	16	16	16
4	Culver City - Playa Vista	Local	6:30 A.M. - 8:30 P.M.	60	48	60	60
5	Culver City - Mar Vista	Local	[b]	N/A	N/A	N/A	N/A
5C1	Braddock Drive - Arts District/Helms	Local	[b]	N/A	N/A	N/A	N/A
7	Culver City - Playa Del Rey	Local	7:00 A.M. - 7:00 P.M.	80	48	60	48
LADOT Commuter Express				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
437A	Venice - Downtown Los Angeles	Express	5:00 A.M. - 1:00 A.M.	25	N/A	N/A	30
Metro Rail Service				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
Expo (E)	Downtown Los Angeles - Santa Monica	Rail	4:30 A.M. - 2:00 A.M.	10	10	10	10

Notes

Metro: Los Angeles County Metropolitan Transportation Authority

LADOT: Los Angeles Department of Transportation

AM Peak from 6 AM - 10 AM

PM Peak from 3 PM - 7 PM

[a] Service routes and frequencies are current as of January 2022, including recent changes based on the Metro Next Gen Bus Plan.

[b] Route only serves on school days with one morning and two afternoon trips.

TABLE 3A
TRANSIT SYSTEM CAPACITY IN STUDY AREA - MORNING PEAK HOUR

Provider, Route, and Stop Location		Capacity per Trip [a]	Peak Hour Ridership [b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		Average Load					
			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Culver City Bus										
1	Culver City Station	50	N/A	N/A	5	16	45	34	124	128
4	Jefferson / Obama	50	N/A	N/A	5	29	45	21	45	26
5	Higuera / Helms	50	*Limited Service Provided*							
5C1	Higuera / Helms	50	*Limited Service Provided*							
7	Culver City Station	50	N/A	N/A	4	9	46	41	35	51
LADOT Commuter Express										
437A	Washington / National	50	*No Data Available*							
Metro Rail										
Expo	Culver City Station	400	N/A	N/A	78	182	322	218	1,852	1,308
								Total Transit Residual Capacity in Peak Hour	**3,569**	

Notes:
[a] Capacity assumptions:
Metro Regular Bus - 40 seated / 50 standing.
Culver City Bus - 40 seated / 50 standing
LADOT Commuter Express - 40 seated / 50 standing
Metro Expo Line - 76 seated / 133 standing (175% of seated capacity) per car x 3 cars per train = 400 patrons.
[b] Ridership capacity based on data from Metro for April 2019, the most recent available prior to the COVID-19 Pandemic and Next Gen Bus Plan updates in June 2021 and September 2021. Transit ridership data for Culver City Bus based on data from 2019.

TABLE 3B
TRANSIT SYSTEM CAPACITY IN STUDY AREA - AFTERNOON PEAK HOUR

Provider, Route, and Stop Location		Capacity per Trip [a]	Peak Hour Ridership [b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		Average Load					
			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Culver City Bus										
1	Culver City Station	50	N/A	N/A	10	11	40	39	150	146
4	Jefferson / Obama	50	N/A	N/A	26	17	24	33	24	33
5	Higuera / Helms	50	*Limited Service Provided*							
5C1	Higuera / Helms	50	*Limited Service Provided*							
7	Culver City Station	50	N/A	N/A	7	7	43	43	43	54
LADOT Commuter Express										
437A	Washington / National	50	*No Data Available*							
Metro Rail										
Expo	Culver City Station	400	N/A	N/A	207	89	193	311	1,110	1,788
								Total Transit Residual Capacity in Peak Hour	**3,348**	

Notes:
[a] Capacity assumptions:
Metro Regular Bus - 40 seated / 50 standing.
Culver City Bus - 40 seated / 50 standing
LADOT Commuter Express - 40 seated / 50 standing
Metro Expo Line - 76 seated / 133 standing (175% of seated capacity) per car x 3 cars per train = 400 patrons.
[b] Ridership capacity based on data from Metro for April 2019, the most recent available prior to the COVID-19 Pandemic and Next Gen Bus Plan updates in June 2021 and September 2021. Transit ridership data for Culver City Bus based on data from 2019.

TABLE 4
RELATED PROJECTS LIST

No.	Project	Address	Use	Trip Generation						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
City of Culver City [a]										
1.	Schaefer II	3516 Schaefer St	9,847 sf creative office expansion	96	9	2	11	2	9	11
2.	Lorcan O'Herlihy Architects	3434 Wesley St	15 apartments, 14,237 sf office	257	21	9	30	10	20	30
3.	ECF Site	8700-8750 Washington Blvd	199 apartment units, 17,250 sf live/work, 5,000 restaurant, 17,750 sf retail	608	28	16	44	23	38	61
4.	Surfas Site	8777 Washington Blvd	128,000 sf office, 4,500 sf retail/restaurant	1,984	203	46	249	58	177	235
5.	Warner Parking Structure	8511 Warner Dr	51,520 retail/restaurant	3,112	94	76	170	116	109	225
6.	Office	9401-9449 Jefferson Blvd	88,000 sf office	707	71	9	80	9	68	77
7.	Ivy Station	8824 National Blvd	148 hotel rooms, 57,742 sf retail, 196,333 sf office, 200 apartment units	4,124	173	83	256	127	174	301
8.	Park Century School	3939 Landmark St	50 students enrollment and 20 staff increase	90	18	14	32	5	6	11
9.	Willows School	8509 Higuera St and 8476 Warner Dr	Addition of 100 students	185	15	3	18	11	7	18
10.	Synapse Office and Retail/Restaurant (ICC site)	8888 Washington Blvd	56,559 sf office, 5,972 sf retail	1,132	97	26	123	36	88	124
11.	Office and Retail	3961 Higuera St	36,614 sf office	289	27	4	31	7	27	34
12.	3710 & 3750 S. Robertson Blvd Mixed-Use	3710 and 3750 S. Robertson Blvd	141 apartment units, 64,200 sf creative office, 30,042 sf retail/restaurant	1,805	16	6	22	62	31	93
13.	8570 National Blvd	8570 National Blvd	23,285 sf office, 7,699 sf restaurant	609	39	20	59	27	32	59
14.	Culver Studios Innovation Plan Comprehensive Plan	9336 Washington Boulevard	345,007 production office	4,557	567	77	644	105	511	616
15.	Creative Office	3505 Hayden Ave	9,000 sf additional creative office	88	9	1	10	2	8	10
16.	Culver Crossings (Apple)	8825 National Blvd	Demolition of two existing buildings totaling 18,821 sf to construct 167,000 sf office building	1,627	135	22	157	31	161	192
17.	Campus Studios	9930 and 9940 Jefferson Blvd	84,475 sf sound stages and support	147	11	3	14	4	12	16
18.	Creative Office Development	9925 Jefferson Blvd	51,178 sf creative office building	498	51	8	59	9	50	59

Notes:
[a] Related project information provided by the City of Culver City Department of Planning from November 2021. Related projects include developments within 0.5 miles from the Project Site.

TABLE 4 (CONTINUED)
RELATED PROJECTS LIST

No.	Project	Address	Use	Trip Generation						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
City of Los Angeles [a]										
1.	Cumulus Mixed Use Project	3221 S La Cienega Blvd	1,218 apartments, 200,000 sf of office, 50,000 of supermarket, 30,000 of retail	10,136	319	467	737	467	382	849
2.	Coffee Bean & Tea Leaf Headquarters	6024 W Jefferson Blvd	123,527 sf of office, 64,206 sf manufacturing, 2,200 sf coffee shop with drive thru	2,177	194	68	262	55	168	223
3.	Wrapper Office Building	5790 W Jefferson Blvd (at National Blvd)	137,687 sf of office	1,519	142	20	162	26	128	154
4.	Venice & National Hotel	8900 National Blvd	180 hotel rooms, 16,456 sf retail, 7,330 sf restaurant	1,589	67	47	114	57	60	117
5.	Jefferson Office	5860 W Jefferson Blvd	345,000 sf office	2,856	292	48	340	54	283	337
6.	Jefferson & Obama Office	5870-5890 W Jefferson Blvd	362,718 sf of office	2,947	326	53	379	60	315	375

Notes:
[a] Related project information based on available information from November 2021 provided by LADOT and Department of City Planning and recent studies. Related projects include developments within 0.5 miles from the Project Site.

Chapter 3
Project Traffic

Trip generation estimates, trip distribution patterns, and trip assignments were prepared for the Project. These components form the basis of the Project's non-CEQA traffic analysis.

PROJECT TRIP GENERATION

The number of vehicle trips expected to be generated by the Project was estimated using rates published for the general office building land use in *Trip Generation Manual, 11th Edition* (ITE, 2021). These rates are based on surveys of similar land uses at sites around the country and are utilized to calculate the number of vehicle trips traveling to and from the Project Site during the morning and afternoon peak hours relative to the size of development.

Appropriate trip reductions were applied in consultation with CCPWD to account for public transit usage, internal capture, and pass-by trips. The Project is located within 0.50 miles walking distance of the Expo Line Culver City Station and the Exposition Corridor Bike Path. Therefore, in consultation with CCPWD, a 10% transit / walk-in reduction was applied to the office trip generation estimates to account for transit usage and walking arrivals from the surrounding neighborhoods and adjacent commercial developments.

The number of trips currently generated by the existing studio and office uses to be removed with development of the Project was also estimated using published rates in *Trip Generation Manual, 11th Edition*. Based on a review of current operations, it was determined that the traffic generation and patterns of the existing studio uses are similar to a warehouse use. Therefore, *Trip Generation, 11th Edition* trip rates for the warehousing land use were utilized. The existing use trip estimates also account for trip reductions consistent with the Project.

As shown in Table 5, after accounting for the reductions above and the removal of existing uses, the Project is expected to generate 2,225 net new daily trips, including 314 net new morning peak

hour trips (277 inbound trips, 37 outbound trips) and 298 net new afternoon peak hour trips (49 inbound trips, 249 outbound trips).

PROJECT TRIP DISTRIBUTION

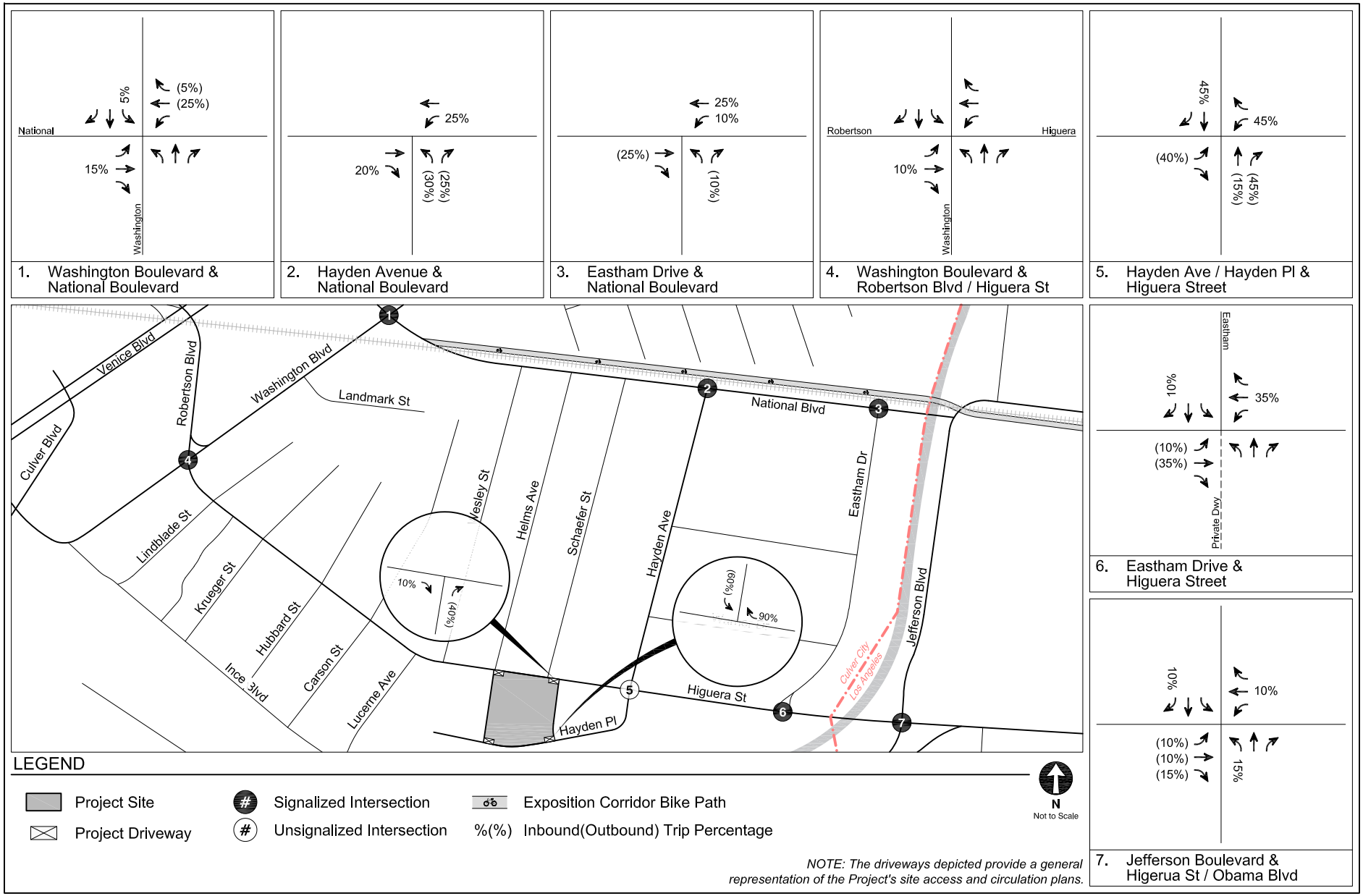
The geographic distribution of trips generated by the Project is dependent on the location of residential and commercial centers to and from which employees and visitors of the Project would be drawn, characteristics of the street system serving the Project Site, the location of the Project driveways, existing traffic patterns, as well as input from CCPWD staff.

The intersection-level trip distribution patterns for Project traffic with Limited Higuera Street Access and with Hayden Place Access Only at the study intersections are shown in Figures 13A and 13B, respectively. Generally, the regional pattern for both driveway access scenarios is as follows:

- 25% to/from the north
- 25% to/from the east
- 25% to/from the south
- 25% to/from the west

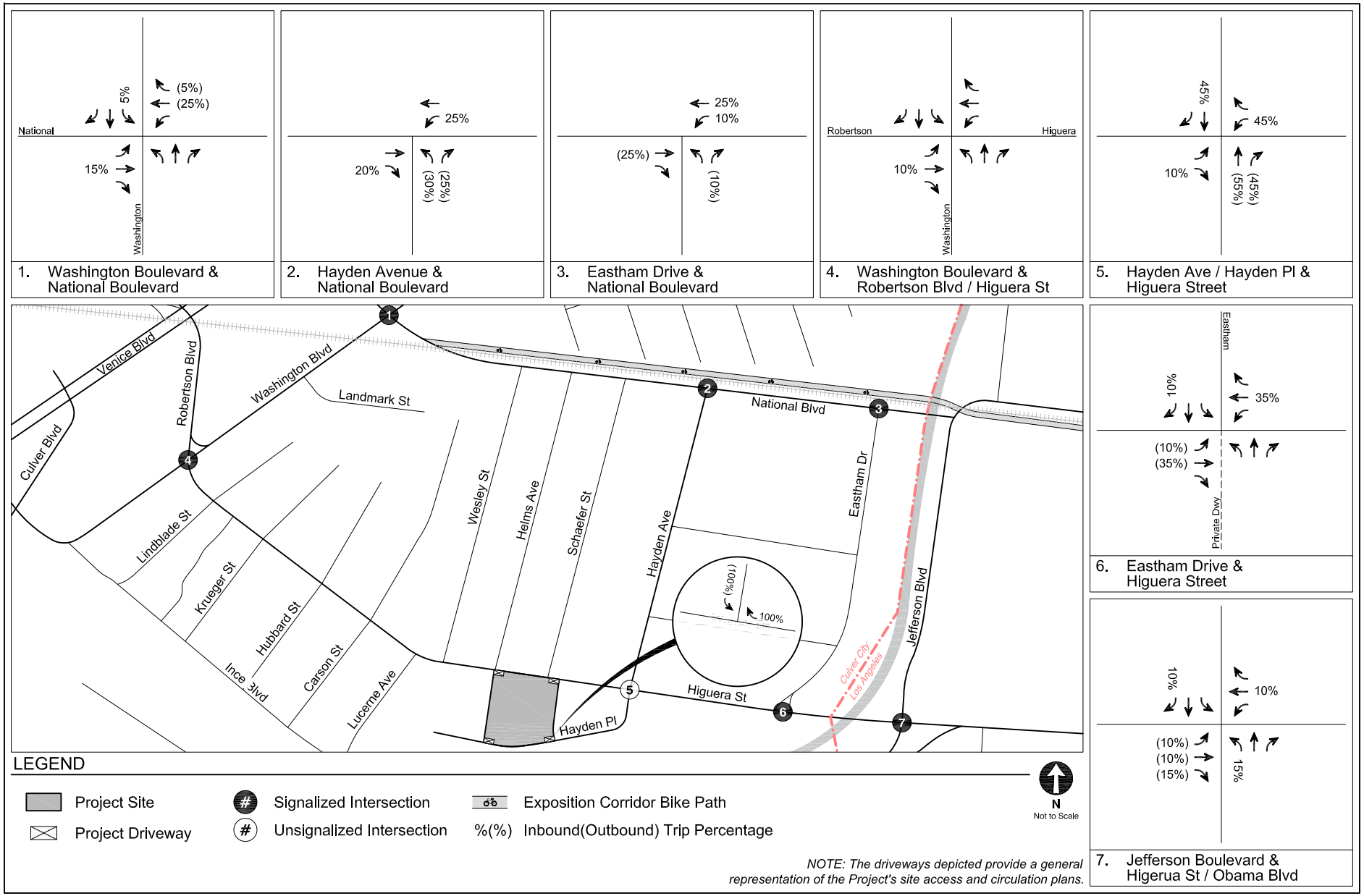
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 5 and the trip distribution patterns shown in Figures 13A and 13B were used to assign the Project-generated traffic through the study intersections. Figures 14A-B and Figures 15A-B illustrate the net new Project-only traffic volumes and proposed Project-only traffic volumes at the study intersections during typical weekday morning and afternoon peak hours with Limited Higuera Street Access and with Hayden Place Access Only, respectively. Peak hour trips generated by the existing uses are illustrated in Figure 16.



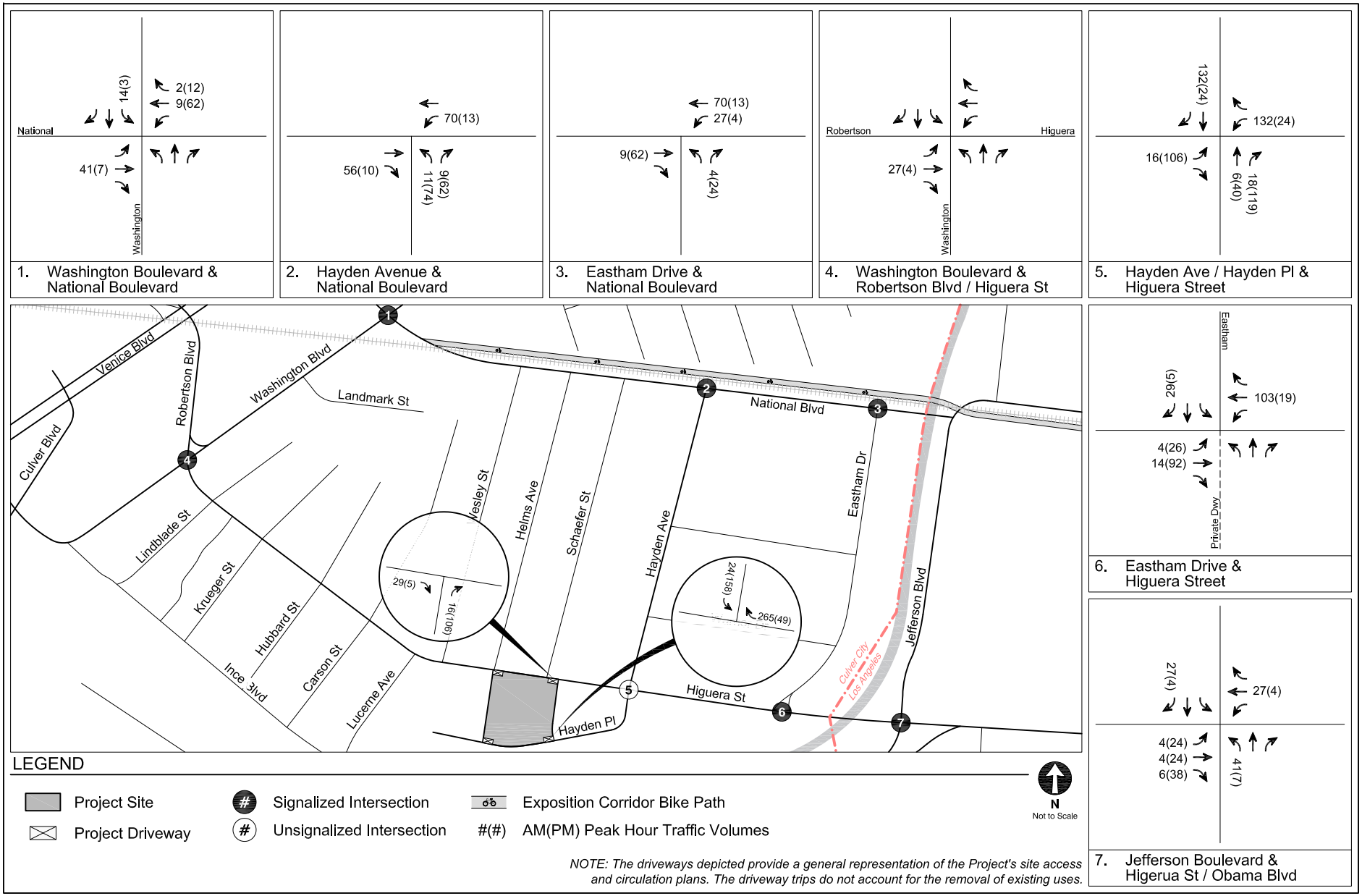
PROJECT TRIP DISTRIBUTION
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
13A



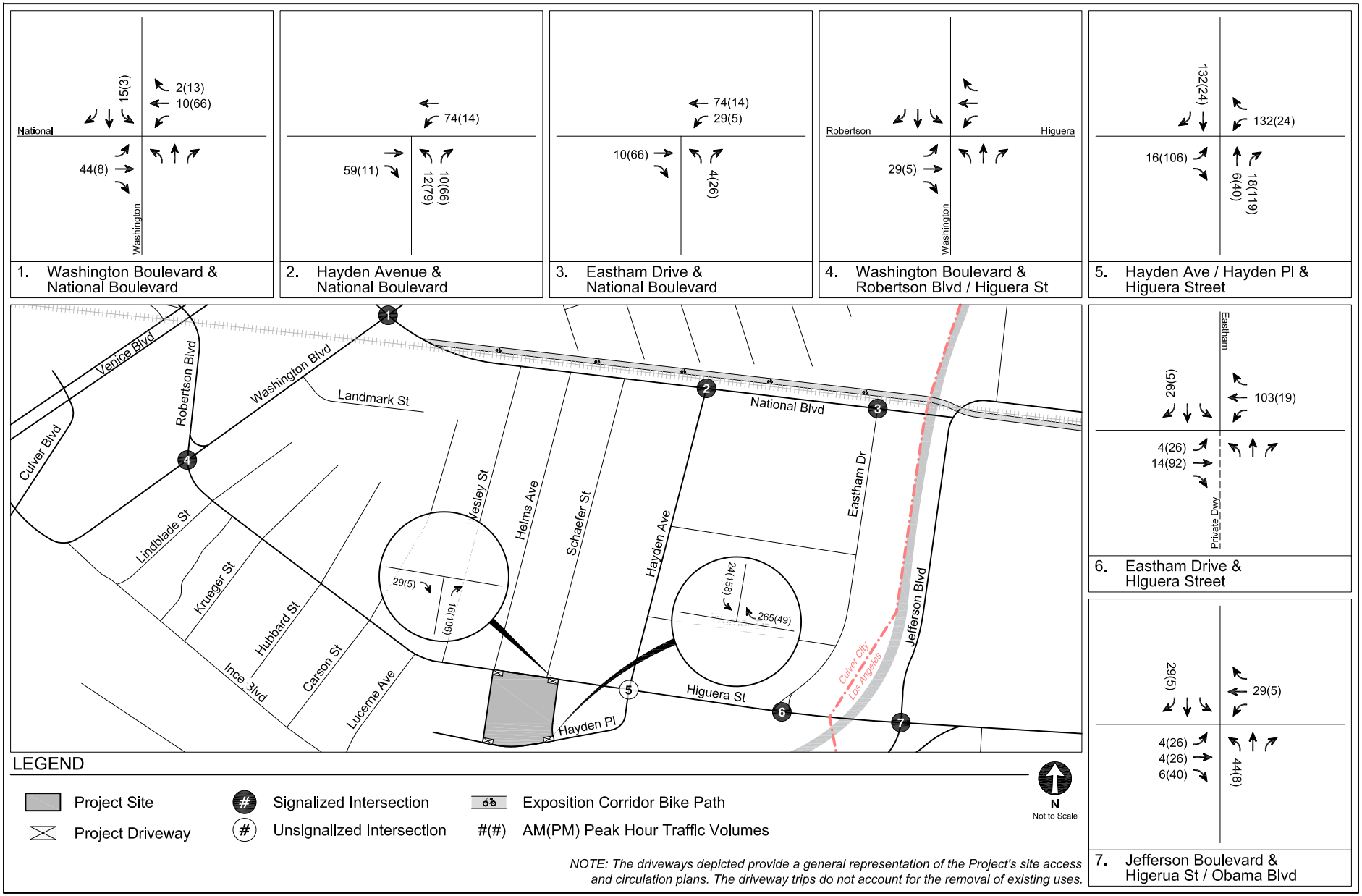
PROJECT TRIP DISTRIBUTION
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
13B



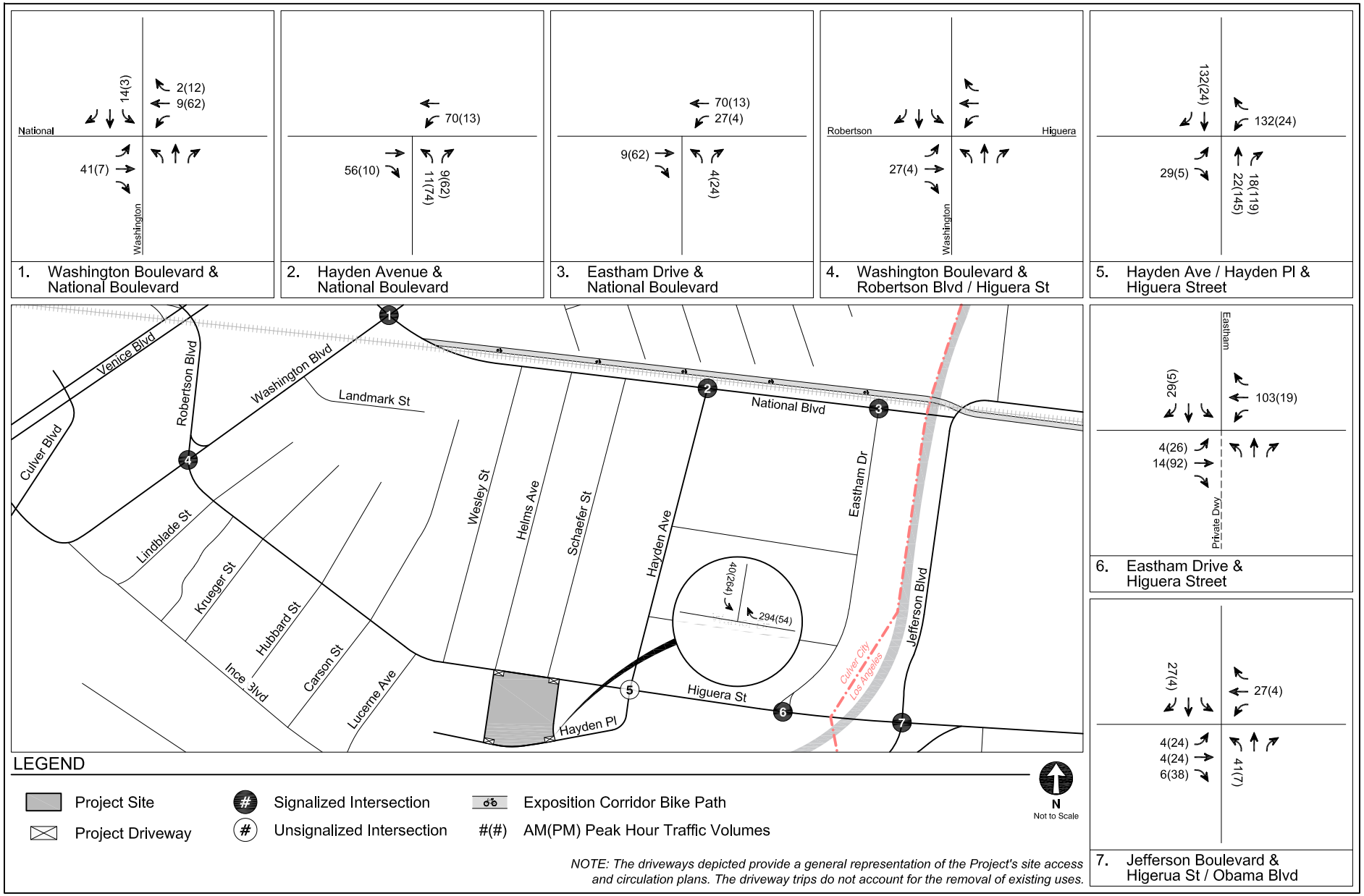
NET NEW PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
14A



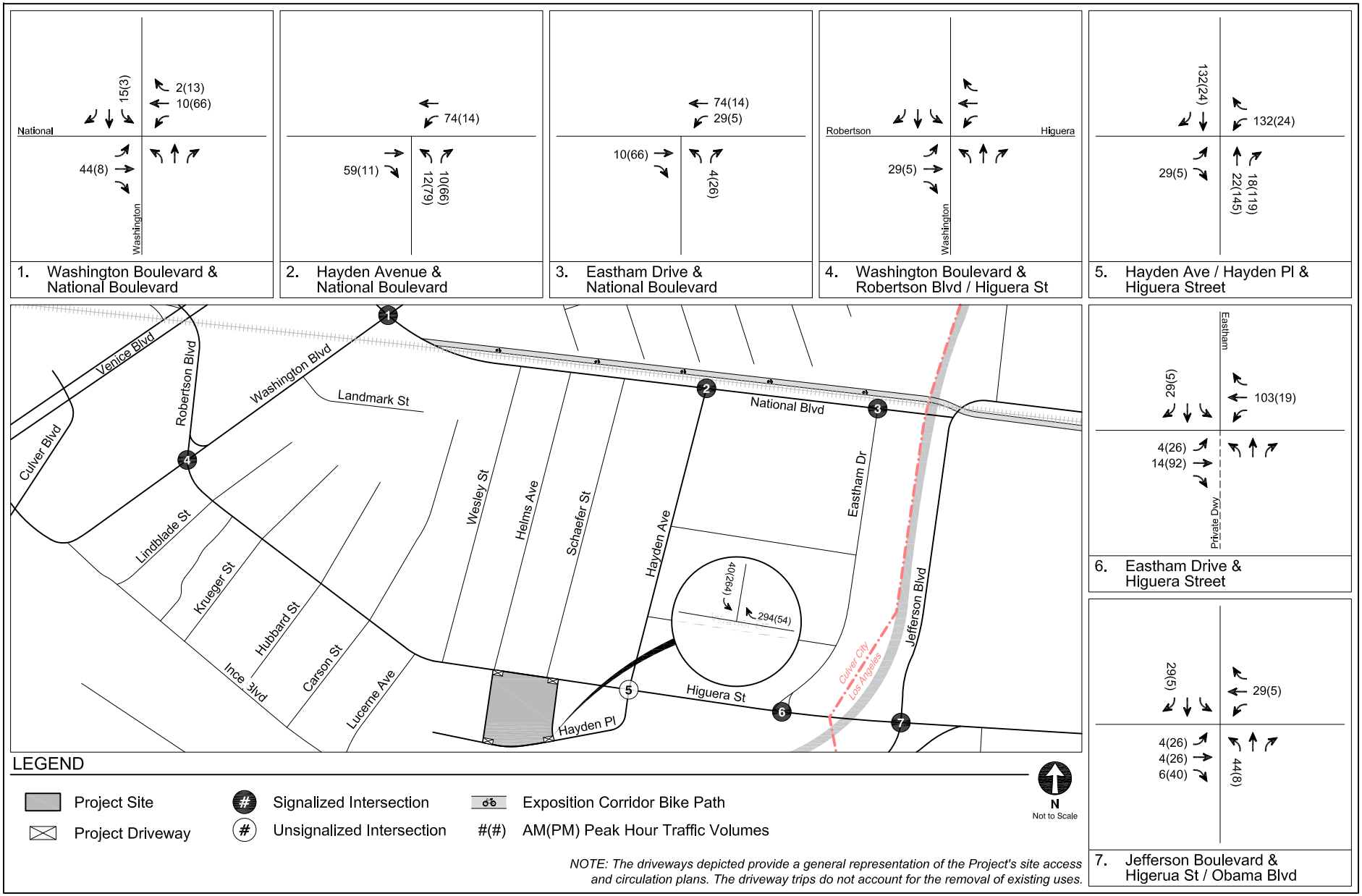
PROPOSED PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
14B



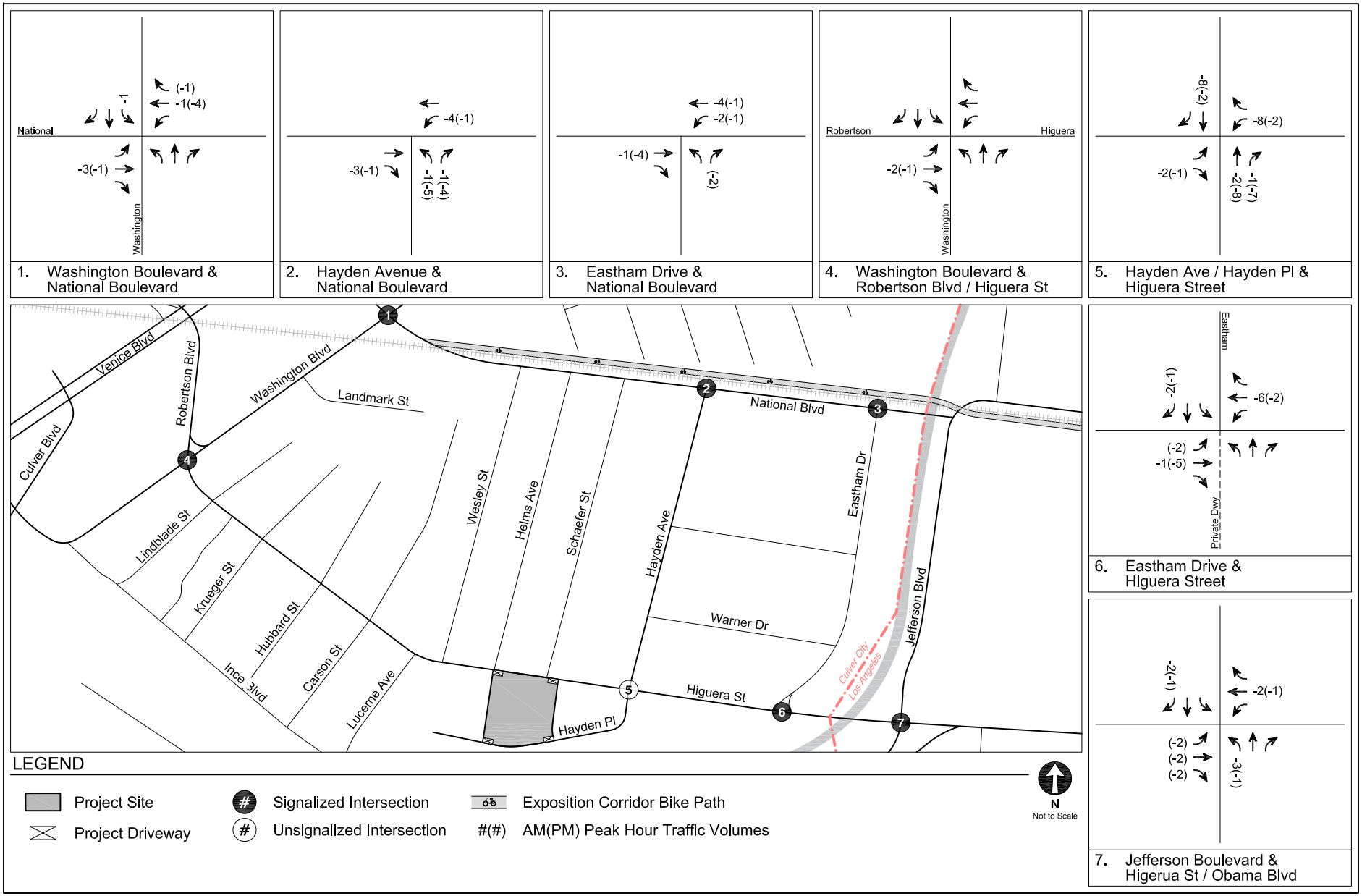
NET NEW PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
15A



PROPOSED PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
15B



EXISTING USES TO BE REMOVED
PEAK HOUR TRAFFIC VOLUMES

FIGURE
16

TABLE 5
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Size	Daily	Morning Peak Hour			Afternoon Peak Hour		
				In	Out	Total	In	Out	Total
Trip Generation Rates [a]									
Warehousing	150	per ksf	1.71	77%	23%	0.17	28%	72%	0.18
General Office Building	710	per ksf	10.84	88%	12%	1.52	17%	83%	1.44
Proposed Project									
General Office Building	710	245.00 ksf	2,656	327	45	372	60	293	353
Transit/Walk-In Reduction - 10% [b]			*(266)*	*(33)*	*(5)*	*Iver c*	*(6)*	*(29)*	*(35)*
Total Project Trips			**2,390**	**294**	**40**	**372**	**54**	**264**	**318**
Existing Land Uses									
Sound Stage [c]	150	56.48 ksf	97	8	2	10	3	7	10
Transit/Walk-In Reduction - 10% [b]			*(10)*	*(1)*	*0*	*(1)*	*0*	*(1)*	*(1)*
General Office Building	710	8.00 ksf	87	11	1	12	2	10	12
Transit/Walk-In Reduction - 10% [b]			*(9)*	*(1)*	*0*	*(1)*	*0*	*(1)*	*(1)*
Total Existing Trips to be Removed			**165**	**17**	**3**	**20**	**5**	**15**	**20**
TOTAL - NET NEW PROJECT TRIPS			**2,225**	**277**	**37**	**352**	**49**	**249**	**298**

Notes:
ksf: 1,000 square feet
[a] Source: *Trip Generation, 11th Edition,* Institute of Transportation Engineers, 2021.
[b] The Project Site is located less than 1/2 mile from the Metro E Line (Expo) Culver City Station, therefore a 10% reduction was applied to account for transit/walk-in trips.
[c] Based on a review of the current operations, the trip generation estimates for the existing 56,480 sf sound stage were calculated using the trip generation rates for Warehousing land use (ITE Land Use 150).

Chapter 4
CEQA Analysis of Transportation Impacts

This chapter presents an analysis of potential CEQA-related transportation impacts. The analysis also discusses the consistency of the Project with adopted City plans and policies and the improvements, if necessary, associated with the results of a vehicle miles traveled (VMT) analysis compliant with State requirements under *State of California Senate Bill 743* (Steinberg, 2013) (SB 743).

METHODOLOGY

SB 743 required the Governor's Office of Planning and Research to change the CEQA Guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifted from vehicular delay (level of service [LOS]) to VMT, with the intent of reducing greenhouse gas emissions, creating multimodal networks, and promoting mixed-use developments.

Section 4 of the Guidelines defines the required CEQA methodology of analyzing a project's transportation impacts in accordance with SB 743. Per the Guidelines, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- Threshold A: Programs, Plans, Ordinances, and Policies
- Threshold B: VMT – Land Use Projects
- Threshold C: VMT – Transportation Projects
- Threshold D: Geometric Design Hazards

These thresholds were reviewed and analyzed, as detailed in the following Sections 4A-4D.

Section 4A:
Programs, Plans, Ordinances, and Policies

Threshold A states that a project would result in an impact if it conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

Table 1 of the Guidelines identifies the City programs, plans, ordinances, and policies relevant in determining project consistency. As discussed below, the Project is consistent and does not conflict with the City's adopted programs, plans, ordinances, and policies listed in Table 1 of the Guidelines; therefore, the Project would not result in a significant impact under Threshold 4A. Detailed discussion of the plans, programs, ordinances, or policies related is provided below.

Traffic Code, Chapter 7.05: Motor Vehicle Air Quality Management

Chapter 7.05 of the *Culver City Municipal Code* (City of Culver City) (CCMC) establishes transportation demand and trip reduction measures to reduce vehicular emissions of new developments in excess of 25,000 sf. The Project is greater than 25,000 sf and would implement a comprehensive TDM program that adheres to the TDM requirements of the CCMC and would include strategies action plans such as a transportation coordinator, bicycle hub/share, transit subsidies, telecommuting, marketing program, carpool/vanpool incentives, and bicycling/walking incentives.

Circulation Element

The purpose of the Circulation Element is to effectively link both local and regional transportation systems in order to protect and serve the City's residents and businesses. As specified in Chapter 2, the Circulation Element consists of a series of roadway and bikeway classifications, as well as circulation goals, objectives and policies. The Project would support bicycle travel by providing short-term and long-term bicycle parking facilities, in accordance with the CCMC requirement and consistent with Policy 3.G, to encourage large businesses, commercial centers, and industrial parks to include bicycle lockers or other secure bicycle storage and related facilities to support bicycle commuting by employees. Consistent with Policy 4.C to provide safe and attractive pedestrian walkways/sidewalks that link streets and parking areas to the entrances of major developments and Policy 4.D to enhance the aesthetic qualities of pedestrian access routes by increasing amenities, such as trees, awnings, lighting, street furniture, and drinking fountains, etc., the Project would provide exclusive pedestrian access along Hayden Place that would connect to public sidewalk facilities. The Project would also provide street trees and landscaping along Hayden Place to promote a pedestrian-friendly environment and improve walkability and connectivity for pedestrian access between the Project and nearby destinations. The Project would also provide off-street parking spaces to accommodate the parking needs of the Project, consistent with Policy 6.B, reduce pressure on on-street parking through provision of private and public off-street parking facilities, and Policy 6.C, establish appropriate parking requirements to provide adequate but not excessive parking, particularly in areas with transit orientation, pedestrian access, and ridesharing programs. Furthermore, the Project does not propose to modify or make any modifications to the street classifications, nor would it preclude the City from making improvements to the transportation network.

The City is currently working on a General Plan Update that is anticipated to be released to the public in the summer of Year 2022.

General Plan Land Use Element

The purpose of the *Culver City General Plan Land Use Element* (City, adopted May 24, 2004) (Land Use Element) is to provide for the physical, social, and economic needs of the City and its people. The Project is located within the Focused Special Study Area of the Hayden Industrial

Tract. Industrial destinations are established to strengthen and protect successful existing uses while encouraging desirable and creative new developments. These new developments can include commercial and office development, as specified in the Land Use Element. Thus, the office uses of the Project would be compatible with the existing land uses in the area and are consistent with the designation of the Hayden Industrial Tract.

As noted, the City is currently working on a General Plan Update that is anticipated to be released to the public in the summer of Year 2022.

Neighborhood Traffic Management Program

The City adopted a series of procedures for the implementation of NTMPs defined in its *Neighborhood Traffic Management Program (NTMP) Procedures Manual* (November 22, 2004). The program requires a series of actions by the neighborhood and City Engineering Division to determine the traffic issues, study them, develop a plan, test proposed improvements, and finalize the plan. As later detailed in Section 5A, Higuera Street and Hayden Place would not be considered significantly affected with the addition of Project-related traffic. Furthermore, the Project is not projected to lead to trip diversion along residential Local Streets, nor is the Project projected to add a substantial amount of automobile traffic to congested Arterial Streets that could potentially cause a shift to residential Local Streets. Therefore, the Project would not be required to propose an NTMP for the surrounding residential neighborhoods.

Gateway Neighborhood Design Guidelines

The City's *Multi-Family Neighborhood Residential Design Guidelines – Gateway Neighborhood* (Adopted March 24, 2010) is intended to encourage new residential projects to be compatible with, maintain the integrity of, and preserve the unique character and best features of the Gateway Neighborhood by promoting desirable design qualities, guiding change in ways that are compatible with the existing neighborhood development pattern, and respecting the diversity and vitality of the neighborhood. The Project is not located within the Gateway Neighborhood and, therefore, *Multi-Family Neighborhood Residential Design Guidelines – Gateway Neighborhood* would not apply to the Project.

Gateway Adjacent Neighborhood Design Guidelines

The City's *Multi-Family Neighborhood Residential Design Guidelines – Gateway Adjacent Neighborhood* (July 13, 2011) is intended to encourage new residential projects to be compatible with, maintain the integrity of, and preserve the unique character and best features of the Gateway Adjacent Neighborhood by promoting desirable design qualities, guiding change in ways that are compatible with the existing neighborhood development pattern, and respecting the diversity and vitality of the neighborhood. The Project is not located within the Gateway Adjacent Neighborhood and, therefore, *Multi-Family Neighborhood Residential Design Guidelines – Gateway Adjacent Neighborhood* would not apply to the Project.

Residential Parkway Guidelines

The City's *Culver City Residential Parkway Guidelines* (2016) informs the general public about parkway regulations and provides guidance on planning, creating, and maintaining a parkway landscape. Property owners are expected to maintain the parkway space adjacent to their properties, with the exception of street trees, which are maintained by the City. Sidewalk access and step-out strips are to be installed and maintained along all residential parkways in the City. The Project is not a residential project nor is the Project located along a residential parkway. Therefore, *Culver City Residential Parkway Guidelines* would not apply to the Project. Nevertheless, the Project will maintain the surrounding landscaping and sidewalks adjacent to the Project Site.

Upper Culver Crest Hillside Design Standards

Culver Crest: Recommendations for R-1 Neighborhood Hillside Development Standards (John Kaliski Architects, PlaceWorks, and RMA GeoScience, January 4, 2017) specifies a zoning code overlay for the Culver Crest residential community to ensure that the unique planning and development concerns of this hillside neighborhood are addressed. The Project is not located within the Upper Culver Crest community and, therefore, *Culver Crest: Recommendations for R-1 Neighborhood Hillside Development Standards* would not apply to the Project.

Short-Range Transit Plan

Short-Range Transit Plan (Culver CityBus, March 2020) provides a strategic blueprint designed to maintain a forward-thinking focus on improved mobility services with a continued dedication to customer service and fiscal responsibility. The plan provides an overview of the City's existing mobility services and policies that further improve mobility in the City, such as transit-oriented development and complete streets projects. Further, the plan proposes a variety of measures to improve mobility services, implement physical changes to transit facilities and roadways, and upgrade existing buses with fully electric vehicles. The Project would not conflict with any of the proposed changes in *Short-Range Transit Plan*, and improvements made in the plan would likely enhance transit alternatives for employees and visitors to the site.

Bicycle and Pedestrian Action Plan

Culver City Bicycle & Pedestrian Action Plan seeks to promote a long-term vision for the City that would "ensure comfortable, safe, and attractive places to bike and walk so that these forms of active transportation become first choices for travelling around our city." As previously discussed, new Class III bikeways and continental crosswalk striping have been recommended for installation on Higuera Street and at Higuera Street & Hayden Place (Intersection #2), respectively. Nevertheless, the Project would not interfere with any improvements proposed as part of *Culver City Bicycle & Pedestrian Action Plan*. Further, the Project would support active modes of transportation by providing bicycle parking.

Complete Streets Policy

The City's *City of Culver City Complete Streets Policy* (Adopted January 13, 2020) intends to "promote healthy and sustainable mobility for Culver City residents and visitors by providing safe, convenient, and comfortable access to destinations throughout the City by walking, bicycling, transit, and autos." The policy sets a variety of goals and standards in the application of complete streets principles including improving mobility for all road users, enhancing safety, and creating a standard set of criteria applicable to all city departments and private developers who construct

within the public ROW. The Project would incorporate the complete streets principles into the Project design to encourage multi-modal transportation options within the community.

Local Road Safety Plan

Culver City Local Road Safety Plan Final Report (TJKM Transportation Consultants, November 3, 2021) (LRSP) enables the City to determine potential traffic safety improvement projects. In an effort to eliminate fatal and severe injury collisions, the City conducted a comprehensive collisions analysis through the LRSP to identify high-risk corridors and intersections with the highest collision frequency and severity. Washington Boulevard and Higuera Street have been identified as high-risk roadways; however, there are no future improvements planned within the Study Area. Nevertheless, the Project would not preclude the City from implementing improvements to eliminate fatal and severe injury collisions as part of the LRSP.

Vision Zero

The City adopted the Vision Zero initiative in 2016 and has incorporated policies and infrastructure improvements into *Culver City Bicycle & Pedestrian Action Plan*.

As discussed in Chapter 2, the Project Site is located adjacent to Higuera Street, a street identified in the City HIN. Adjacent to the Project Site and included in the *Culver City Bicycle & Pedestrian Action Plan*, new Class III bikeways and continental crosswalk striping have been recommended for installation on Higuera Street and at Higuera Street & Hayden Place (Intersection #5), respectively. Nevertheless, the Project would not preclude future Vision Zero Safety Improvements by the City. Thus, the Project does not conflict with Vision Zero.

Section 4B:
VMT Analysis – Land Use Projects

Threshold B of the Guidelines analyzes whether a project causes substantial VMT and is generally applied to land use projects. Specifically, Threshold 4B inquires whether a project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1), which states that (for land use projects) "vehicle miles travelled exceeding an applicable threshold of significance may indicate a significant impact." This subdivision also states that a lead agency has discretion to choose the most appropriate method to evaluate a project's VMT.

Per the Guidelines, a "no impact" determination can be made for a project if any of the following screening criteria are met:

1. *Small projects that result in less than 250 daily or 25 peak hour trips*
2. *Projects within 0.50 miles from these key Transit Priority Areas (TPAs): Metro E (Expo) Line Culver City Station, Metro E (Expo) Line La Cienega Station, Westfield-Culver City Transit Center or Sepulveda/Venice Boulevard intersection may be screened*
3. *Projects located within any TPA where at least 15% of the on-site residential units are affordable*
4. *Affordable housing projects where 100% of the dwelling units are affordable*
5. *Local serving retail projects having less than 50,000 sf in size at a single store*

If none of the above screening criteria are met, the Guidelines provide guidance for the further analysis of VMT, as discussed in the following section.

PROJECT VMT ANALYSIS

The latest *Culver City VMT Tool* (October 2021) (VMT Tool) was used to conduct the VMT screening evaluation. Based on guidance from the City, the VMT Tool was modeled for the

Project's land uses and density as the primary input. The detailed screening output from the VMT Tool is provided in Appendix C.

The Project is located within 0.50 miles of the Expo Line Culver City Station, a key TPA as identified in the Guidelines. As shown in Appendix C, the VMT Tool report shows no further VMT analysis is required and the Project is presumed to result in a less than significant VMT impact. As such, no mitigation measures are required to address VMT. Nonetheless, as previously detailed, the Project would implement strategies and action plans as part of a comprehensive TDM program in compliance with the requirements set forth in CCMC Section 07.05.015 to reduce single occupancy vehicle trips while promoting the use of alternative transportation modes, thereby reducing Project VMT.

Section 4C:
VMT Analysis – Transportation Projects

The intent of Threshold C is to assess whether a transportation project would induce substantial VMT by increasing vehicular capacity on the roadway network, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

The Project is not a transportation project that would induce automobile travel. Therefore, the Project would not result in a significant impact under Threshold C and further evaluation is not required.

Section 4D:
Geometric Design Hazards Analysis

Section 4D of the Guidelines requires that potential on-street hazards be reviewed for all projects. This analysis focuses on the off-site conditions affected by the Project.

The analysis involved the review of existing vehicle-vehicle, vehicle-bicycle, and vehicle-pedestrian interactions on transportation infrastructure adjacent to the Project Site and the potential impacts and hazards of the Project on those interactions based on the following factors in Threshold D:

- Bicycle, pedestrian, auto and public transit network and facilities surrounding the Project Site and crossing project driveways
- Relative bicycle, pedestrian, auto, and public transit activity levels
- Existing environment and roadway conditions, such as slopes, curves, connectivity, proximity to intersections, and barriers
- Safety of vehicles accessing the Project driveways
- Sight lines at the driveways and surrounding the site
- Safety of pedestrians and bicyclists when crossing Project driveways
- Proximity of incompatible uses that could cause a transportation hazard

DRIVEWAY DESIGN FEATURES

Vehicular access to the Project Site would be provided via existing driveways. With the Limited Higuera Street Access, two full access driveways along Hayden Place and two right-turn only ingress and egress driveways along Higuera Street would provide access to the Project Site. With the Hayden Place Access Only, vehicular access to the Project Site would only be provided via the driveways along Hayden Place. The Project does not propose the installation of any new curb cuts. Pedestrian access to the Project would be provided via the entrance along Hayden Place.

Adjacent to the Project driveways, Hayden Place provides two travel lanes, one in each direction, and unmetered street parking on both sides of the street, and Higuera Street provides two travel lanes, one in each direction, a center median (preventing left-turn ingress and egress movements into and out of the Project driveways), and unmetered street parking on the north side of the street. Sidewalks are provided on Hayden Place and Higuera Street (west of the Project's eastern boundary) adjacent to the Project Site. No existing bicycle facilities are provided adjacent to the Project Site; however, the City has proposed new Class III bikeways along Higuera Street in *Culver City Bicycle & Pedestrian Action Plan*. However, the Project driveways would not conflict with the future bikeway improvements along Higuera Street. No exceptional horizontal or vertical curvatures exist along this section of roadway that would create sight distance issues for Project traffic utilizing the proposed driveways.

No unusual or new obstacles are presented in the Project design that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians. The Project driveways would be improved to remain clear of hardscapes, vegetation, or signage that would impede sight lines. All driveway improvements will be subject to design review by the City Engineering Division.

Pedestrian, Bicycle, and Transit Activity

Adequate sight distance would be provided at the Project driveways to ensure safety for all road users, including pedestrians and bicyclists.

Minimal pedestrian and bicycle traffic was observed on Hayden Place and Higuera Street adjacent to the Project Site. Existing pedestrian/bicycle activity adjacent to the Project is detailed in Appendix B and shows a maximum of 28 pedestrians and bicyclists on Higuera Street and eight pedestrians and bicyclists on Hayden Place during the peak hour. Based on the trip generation estimates detailed in Table 5, the Project would generate fewer than four vehicles per minute at any driveway. Thus, pedestrians and bicyclists would have adequate gaps in vehicular traffic at the Project driveways to safely cross and the Project is unlikely to result an increase in vehicle-pedestrian and vehicle-bicycle conflicts. Furthermore, per *Culver City Bicycle & Pedestrian Action Plan*, the City would install continental crosswalk striping at Hayden Place & Higuera Street (Intersection #4) to provide safer pedestrian crossings.

The Culver CityBus Line 5 transit stop is located immediately adjacent to the Project Site, approximately 80 feet east of Helms Avenue, on Higuera Street. As shown in Tables 3A and 3B, Culver CityBus Line 5 provides limited service with only one trip during the morning peak hour and two trips during the afternoon peak hour in the vicinity of the Project Site. Thus, the Project is not anticipated to affect the current transit activity adjacent to the Project Site.

Physical Terrain

The Project Site is located on a flat parcel with little to no change in vertical elevation. Therefore, no line-of-sight issues would be caused by changes in elevation, and drivers would be able to safely identify approaching vehicles, pedestrians, and bicycles at the Project driveways under both access schemes. The driveways intersect the public ROW at right angles, with adequate building setback to allow pedestrians and bicyclists to observe vehicles within the driveways.

Incompatible Uses

The Project would be compatible with the surrounding commercial and industrial uses. Furthermore, no elements of the Project's uses or design would be considered incompatible.

Summary

Based on the site plan review and design, the Project does not present any geometric design features that would substantially increase hazards related to traffic movement, mobility, or pedestrian accessibility and, thus, Project impacts are considered less than significant.

Chapter 5
Supplemental Transportation Analysis

This chapter summarizes the supplemental transportation analysis of the Project, including Project traffic, access, safety, and circulation, as well as the Project's effect on nearby pedestrian, bicycle, and transit facilities. This chapter also summarizes the evaluation of the Project's operational conditions, parking supply and requirements, and potential effects due to Project construction.

Section 5 of the Guidelines identifies the following supplemental transportation analyses for reviewing potential transportation deficiencies that may result from a development project:

- Traffic Operations
- Transit Operations
- Driveways
- Parking
- Curb Space Allocation
- Safety Analysis

The supplemental transportation analyses are detailed in Sections 5A-5F. In addition, a review of the construction activities of the Project is provided in Section 5G.

Section 5A
Traffic Operations

This section assesses the ability of the circulation system to accommodate the addition of vehicular traffic generated by the Project and Related Projects.

OPERATIONAL ANALYSIS METHODOLOGY

Intersection peak hour operations were evaluated for typical weekday morning (7:00 AM to 9:00 AM) and afternoon (4:00 PM to 6:00 PM) periods. A total of seven intersections in the vicinity of the Project Site, shown in Figure 3, were selected for detailed transportation analysis.

The following traffic conditions were developed and analyzed as part of this study:

- Existing with Project Conditions (Year 2022): This analysis condition projects the potential intersection operating conditions that could be expected if the Project were built under Existing Conditions.
- Future with Project Conditions (Year 2025): This analysis condition projects the potential intersection operating conditions that could be expected if the Project were occupied in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions in Year 2025.
- Cumulative with Project Conditions (Year 2045): This analysis condition projects the potential intersection operating conditions that could be expected if the Project were occupied in the horizon year of the General Plan. In this analysis, the Project-generated traffic is added to Cumulative without Project Conditions in Year 2045.

Both Project access schemes (Limited Higuera Street Access and Hayden Place Access Only) were analyzed under the traffic scenarios above.

Operational Evaluation

In accordance with the Guidelines and TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology, which was implemented using Synchro software and signal timing worksheets from the agency of jurisdiction to analyze intersection operating conditions. The HCM signalized and unsignalized all-way stop control methodology calculates the average delay, in seconds, for each vehicle passing through the intersections. Table 6 presents a description of the LOS categories, which range from excellent, nearly free-flow traffic at LOS A to stop-and-go conditions at LOS F, for signalized and unsignalized intersections. The queue lengths were estimated using Synchro, which reports the 95th percentile queue length, in vehicles for each approach lane, which can be converted to linear feet by multiplying by 25 feet per vehicle. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology.

LOS and queuing worksheets for each scenario are provided in Appendix D.

LOS ANALYSIS

The intersection analysis was conducted based on the HCM methodologies to identify delay and LOS at each of the study intersections with development of the Project. Detailed LOS calculation worksheets are provided in Appendix D.

Existing with Project Conditions

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 14A, were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 7. The resulting volumes are illustrated in Figure 17A and represent Existing with Project Conditions (Limited Higuera Street Access), assuming Project operation under Existing Conditions.

The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 15A, were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 7. The resulting volumes are illustrated in Figure 17B and represent Existing with Project Conditions (Hayden Place Access Only), assuming Project operation under Existing Conditions.

Intersection LOS. Table 7 summarizes the weekday morning and afternoon peak hour LOS results for each of the study intersections under Existing Conditions, Existing with Project Conditions (Limited Higuera Street Access), and Existing with Project Conditions (Hayden Place Access Only).

As shown in Table 7, six of the seven study intersections would operate at LOS D or better during both the morning and afternoon peak hours under Existing Conditions and Existing with Project Conditions (Limited Higuera Street Access). The remaining study intersection at Eastham Drive & Higuera Street (Intersection #6) would operate at LOS C in the morning peak hour and at LOS E during the afternoon peak hour under Existing Conditions and Existing with Project Conditions (Limited Higuera Street Access).

As shown in Table 7, five of the seven study intersections would operate at LOS D or better during both the morning and afternoon peak hours under Existing with Project Conditions (Hayden Place Access Only). The remaining two study intersections, Hayden Avenue/Hayden Place & Higuera Street (Intersection #5) and Eastham Drive & Higuera Street (Intersection #6), would operate at LOS E during the afternoon peak hour under Existing with Project Conditions (Hayden Place Access Only). The intersection of Eastham Drive & Higuera Street (Intersection #6) operates at LOS E during the afternoon peak hour prior to the addition of Project traffic.

Future with Project Conditions

All future cumulative traffic growth (i.e., ambient and Related Project traffic growth) and transportation infrastructure improvements through Year 2025 described in Chapter 2 were incorporated into this analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 14A, were added to the Future without Project Conditions (Year 2025) morning and afternoon peak hour traffic volumes shown in Figure 10. The resulting volumes are illustrated in Figure 18A and represent Future with Project Conditions (Limited Higuera Street Access) after development of the Project in Year 2025.

The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 15A, were added to the Future without Project Conditions (Year 2025) morning and afternoon peak hour traffic volumes shown in Figure 10. The resulting volumes are illustrated in Figure 18B and represent Future with Project Conditions (Hayden Place Access Only) after development of the Project in Year 2025.

Intersection LOS. Table 8 summarizes the results of the Future without Project Conditions (Year 2025), Future with Project Conditions (Limited Higuera Street Access), and Future with Project Conditions (Hayden Place Access Only) during the weekday morning and afternoon peak hours for the study intersections.

As shown in Table 8, six of the seven study intersections would operate at LOS D or better during both the morning and afternoon peak hours under both Future without Project Conditions and Future with Project Conditions (Limited Higuera Street Access). The remaining study intersection at Eastham Drive & Higuera Street (Intersection #6) would operate at LOS B in the morning peak hour and at LOS E during the afternoon peak hour under both Future without Project Conditions and Future with Project Conditions (Limited Higuera Street Access).

As shown in Table 8, five of the seven study intersections would operate at LOS D or better during both the morning and afternoon peak hours under Future with Project Conditions (With Hayden Place Access Only). The remaining two intersections of Hayden Avenue/Hayden Place & Higuera Street (Intersection #5) and Eastham Drive & Higuera Street (Intersection #6) are projected to operate at LOS E or F during either the morning or afternoon peak hours under Future with Project Conditions (Hayden Place Access Only). The intersection of Eastham Drive & Higuera Street (Intersection #6) is projected to operate at LOS E during the afternoon peak hour prior to the addition of Project traffic.

Cumulative with Project Conditions

All future cumulative traffic growth (i.e., ambient and Related Project traffic growth) and transportation infrastructure improvements through the General Plan horizon year of 2045 were incorporated into this analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 14A, were added to the Cumulative without Project Conditions (Year 2045) morning and afternoon peak hour traffic volumes shown in Figure 11. The resulting volumes are illustrated in Figure 19A and represent Cumulative with Project Conditions (Limited Higuera Street Access) after development of the Project in Year 2045.

The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 15A, were added to the Cumulative without Project Conditions (Year 2045) morning and afternoon peak hour traffic volumes shown in Figure 11. The resulting volumes are illustrated in Figure 19B and represent Cumulative with Project Conditions (Hayden Place Access Only) after development of the Project in Year 2045.

Intersection LOS. Table 9 summarizes the results of the Cumulative without Project Conditions (Year 2045), Cumulative with Project Conditions (Limited Higuera Street Access), and Cumulative with Project Conditions (Hayden Access Only) during the weekday morning and afternoon peak hours for the study intersections.

As shown in Table 9, four of the seven study intersections would operate at LOS D or better during both the morning and afternoon peak hours under Cumulative with Project Conditions (Limited Higuera Street Access). The remaining intersections of Washington Boulevard & National Boulevard (Intersection #1), Hayden Avenue/Hayden Place & Higuera Street (Intersection #5), and Eastham Drive & Higuera Street (Intersection #6) are projected to operate at LOS E or F during either the morning or afternoon peak hours under Cumulative with Project Conditions (Limited Higuera Street Access).

As shown in Table 9, four of the seven study intersections would operate at LOS D or better during both the morning and afternoon peak hours under Cumulative with Project Conditions (Hayden Place Access Only). The remaining intersections of Washington Boulevard & National Boulevard

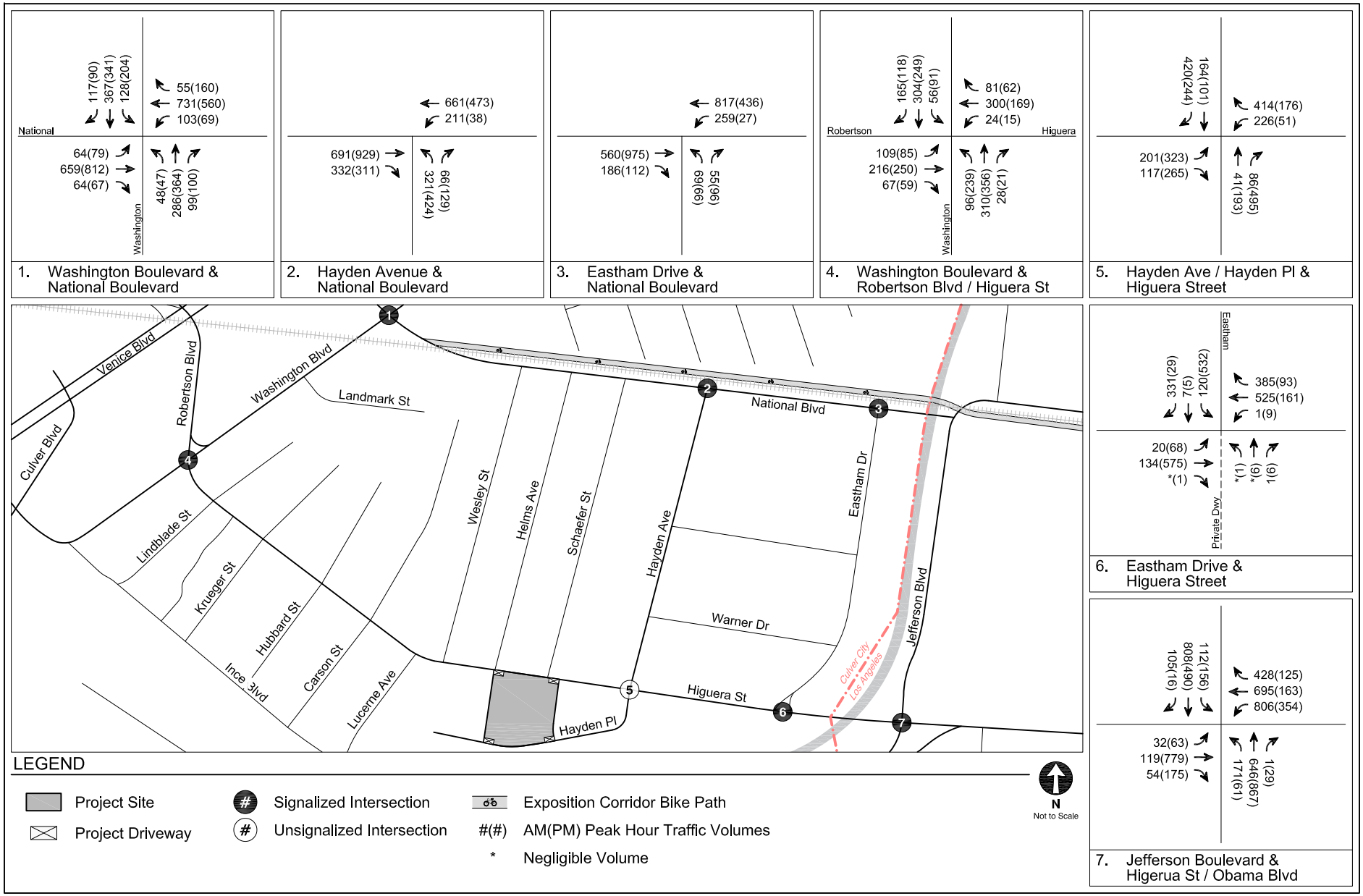
(Intersection #1), Hayden Avenue/Hayden Place & Higuera Street (Intersection #5), and Eastham Drive & Higuera Street (Intersection #6) are projected to operate at LOS E or F during either the morning or afternoon peak hours under Cumulative with Project Conditions (Hayden Place Access Only). The intersections of Washington Boulevard & National Boulevard (Intersection #1) and Eastham Drive & Higuera Street (Intersection #6) are projected to operate at LOS E or F during either the morning or afternoon peak hours prior to the addition of Project traffic.

INTERSECTION QUEUING ANALYSIS

The study intersections were also analyzed to determine whether the lengths of intersection turning lanes could accommodate vehicle queue lengths. The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology. Detailed queuing analysis worksheets are provided in Appendix D.

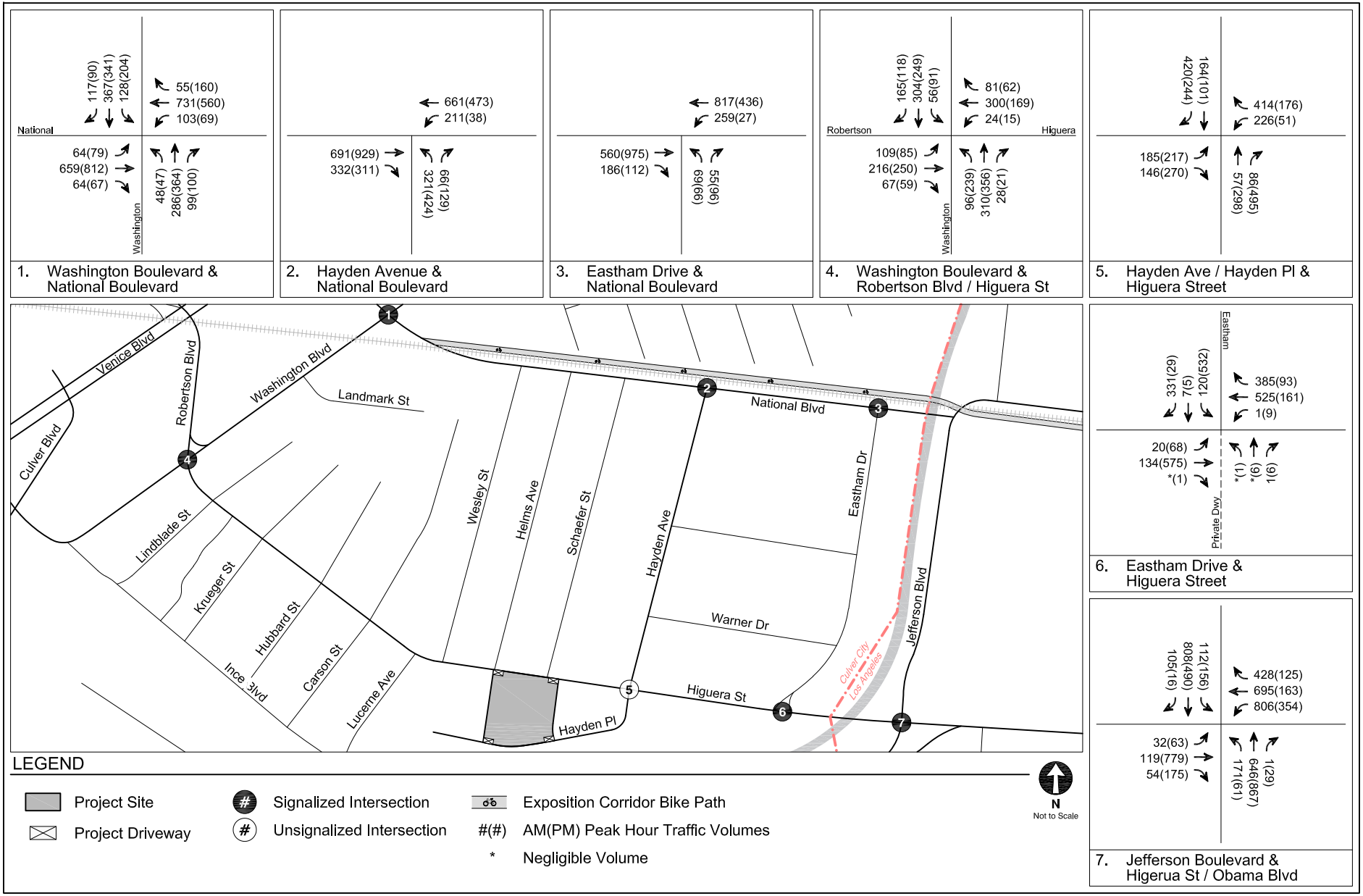
DRIVEWAY ANALYSIS

Utilizing the same methodology for the intersection analyses, a driveway queuing analysis was conducted for the Project with Limited Higuera Access and with Hayden Place Access Only to determine whether the driveways and adjacent streets could accommodate vehicle queue lengths. The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length for each approach lane. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology. Detailed queuing analysis worksheets are provided in Appendix D.



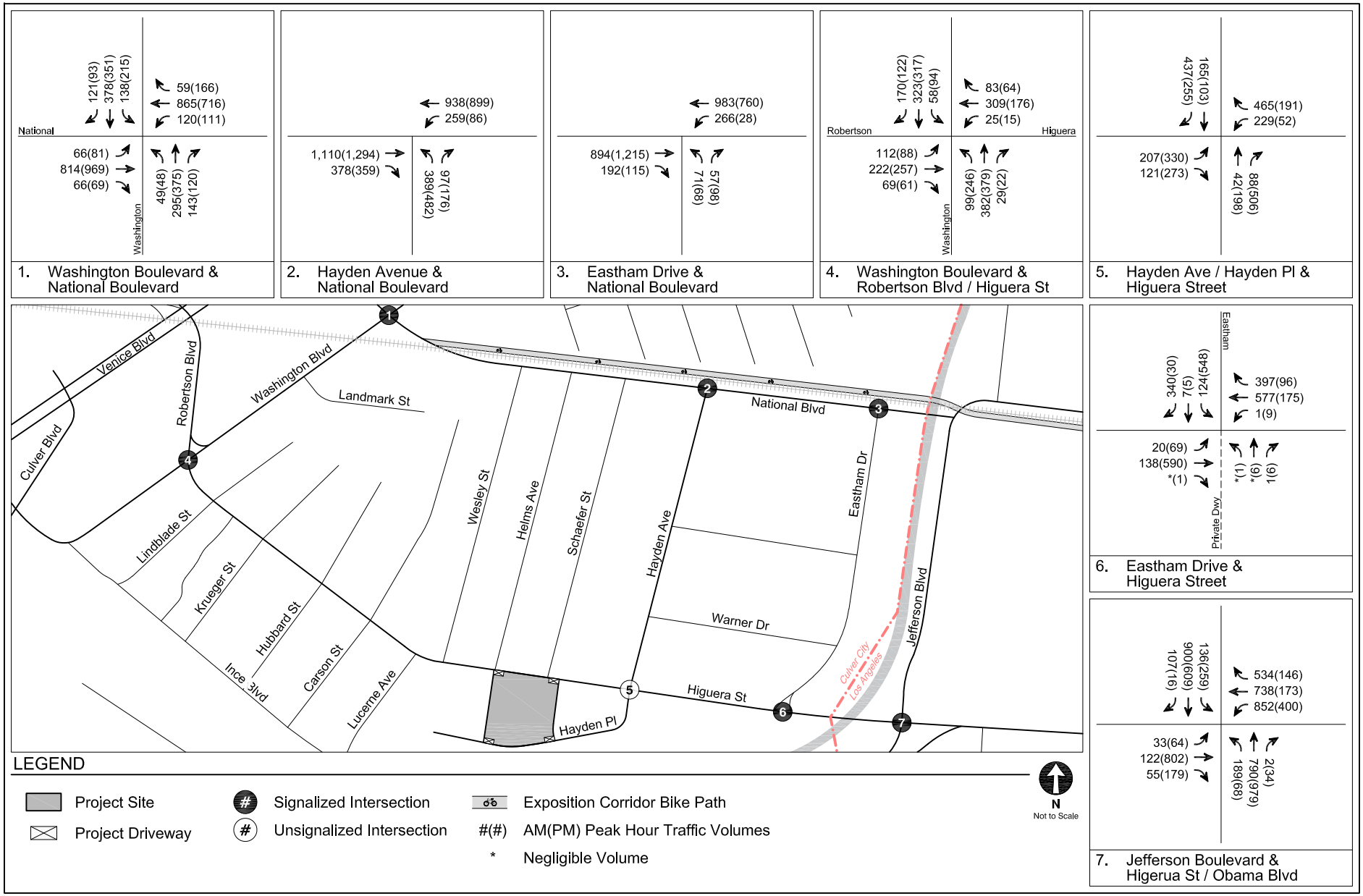
EXISTING WITH PROJECT CONDITIONS (YEAR 2022) PEAK HOUR TRAFFIC VOLUMES
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
17A



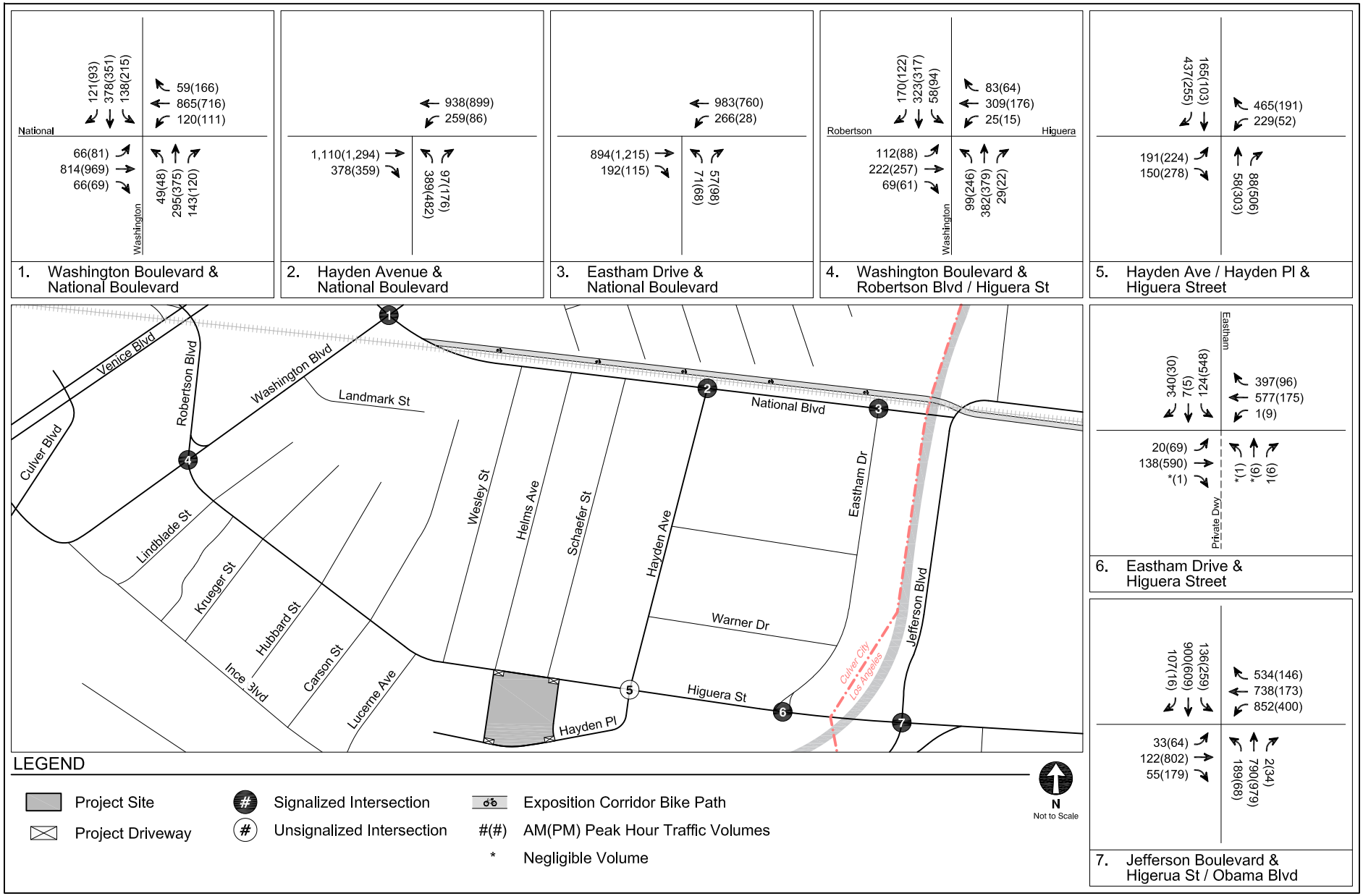
EXISTING WITH PROJECT CONDITIONS (YEAR 2022) PEAK HOUR TRAFFIC VOLUMES
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
17B



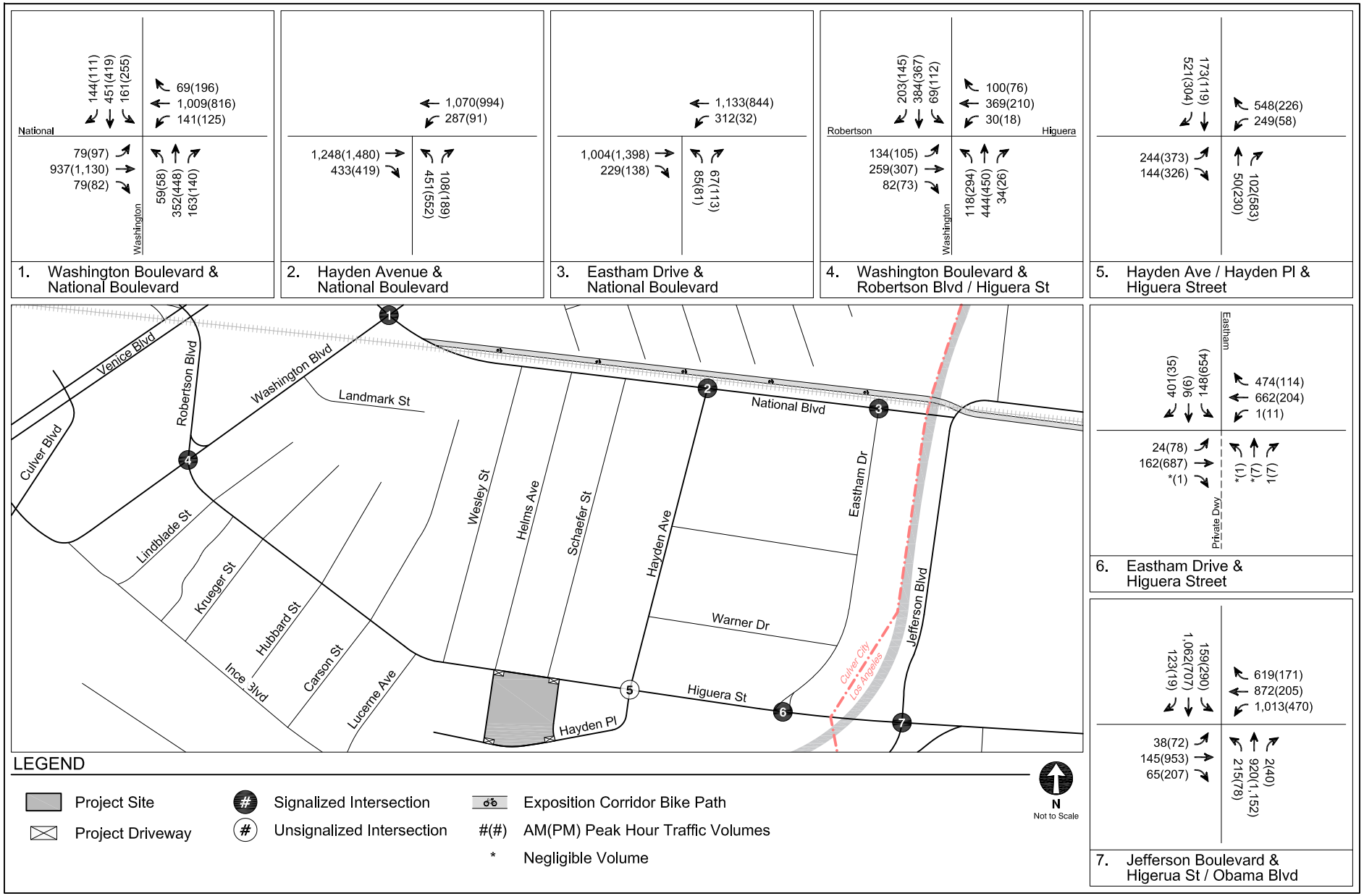
FUTURE WITH PROJECT CONDITIONS (YEAR 2025) PEAK HOUR TRAFFIC VOLUMES
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
18A



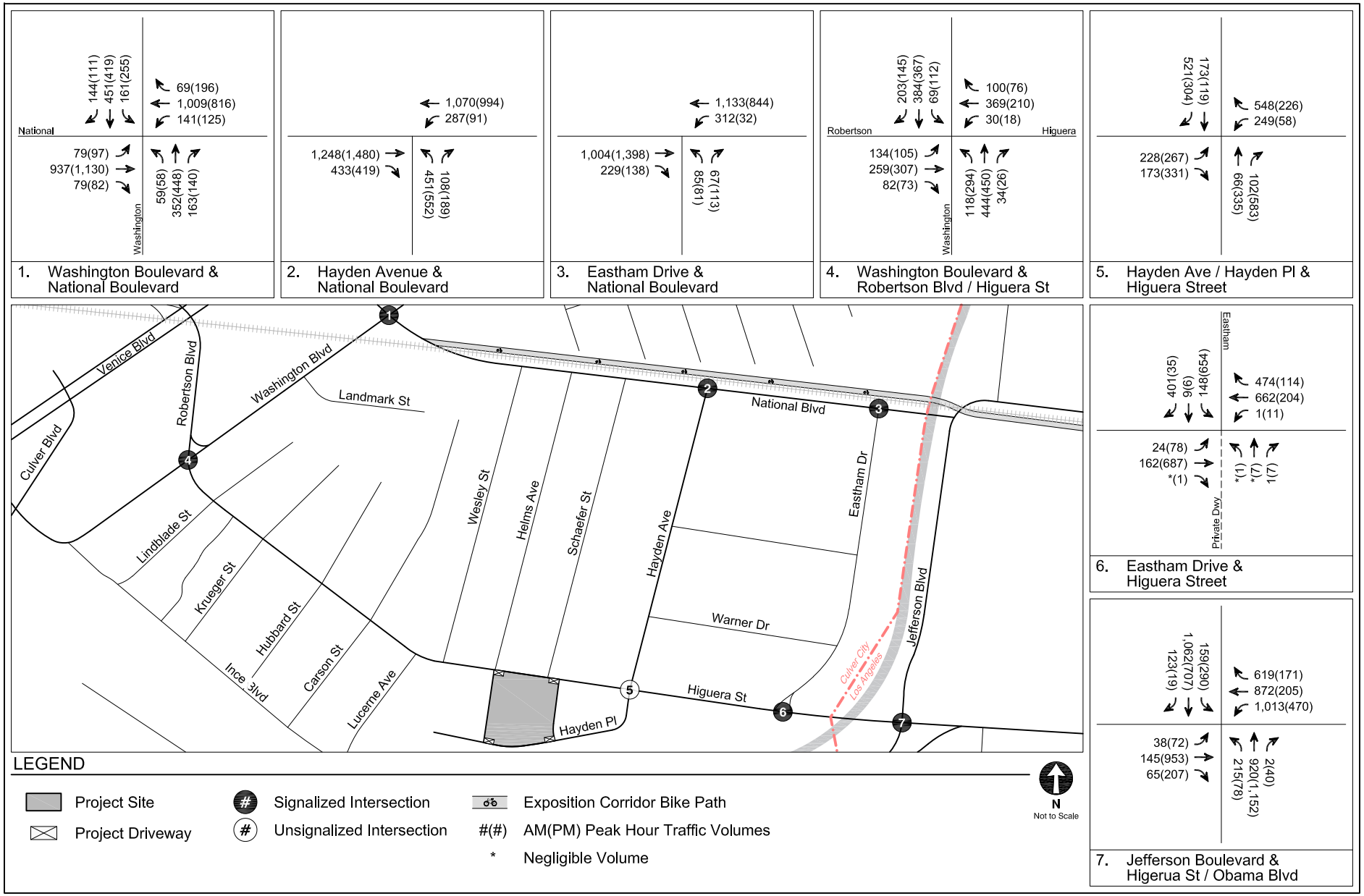
FUTURE WITH PROJECT CONDITIONS (YEAR 2025) PEAK HOUR TRAFFIC VOLUMES
WITH HAYDEN PLACE ACCESS ONLY

FIGURE 18B



CUMULATIVE WITH PROJECT CONDITIONS (YEAR 2045) PEAK HOUR TRAFFIC VOLUMES
WITH LIMITED HIGUERA STREET ACCESS

FIGURE 19A



CUMULATIVE WITH PROJECT CONDITIONS (YEAR 2045) PEAK HOUR TRAFFIC VOLUMES
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
19B

TABLE 6
LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

Level of Service	Definition	Delay [a]	
		Signalized Intersections	Unsignalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	0.0 - 10.0	0.0 - 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 - 20.0	10.1 - 15.0
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	20.1 - 35.0	15.1 - 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 - 55.0	25.1 - 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 - 80.0	35.1 - 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

Source: *Highway Capacity Manual, 6th Edition (* Transportation Research Board, 2016).

[a] Measured in seconds.

TABLE 7
EXISTING WITH PROJECT CONDITIONS (YEAR 2022)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Exisiting Conditions		Existing with Project Conditions (with Limited Higuera Street Access) [a]		Existing with Project Conditions (with Hayden Place Access Only) [b]	
			Delay	LOS	Delay	LOS	Delay	LOS
1. [c]	Washington Boulevard & National Boulevard	AM PM	39.1 41.5	D D	39.7 41.3	D D	39.7 41.3	D D
2. [c]	Hayden Avenue & National Boulevard	AM PM	7.1 7.7	A A	7.4 11.7	A B	7.4 11.7	A B
3. [c]	Eastham Drive & National Boulevard	AM PM	6.4 22.4	A C	6.7 20.7	A C	6.7 20.7	A C
4. [c]	Washington Boulevard & Robertson Boulevard/Higuera Street	AM PM	35.6 27.6	D C	36.0 27.7	D C	36.0 27.7	D C
5A. [d]	Hayden Avenue / Hayden Place & Higuera Street (East)	AM PM	10.2 13.6	B B	10.9 23.3	B C	11.1 45.7	B E
5B. [d]	Hayden Avenue / Hayden Place & Higuera Street (West)	AM PM	10.2 11.3	B B	13.7 13.6	B B	14.1 11.6	B B
6. [c]	Eastham Drive & Higuera Street	AM PM	22.8 59.8	C E	25.7 57.1	C E	25.7 57.1	C E
7. [c]	Jefferson Boulevard & Higuera Street/Obama Boulevard	AM PM	25.5 19.9	C B	27.4 20.8	C C	27.4 20.8	C C

Notes

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 11 (HCM 6th Edition Methodology)

[a] The Existing with Project Conditions (with Limited Higuera Street Access) reflects right-turn only inbound and outbound access via Higuera Street driveways and full access via the Hayden Place driveways.

[b] The Existing with Project Conditions (with Hayden Place Access Only) reflects full access via the Hayden Place driveways only.

[c] Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[d] Intersection analysis based on HCM 6th Edition Unsignalized All-Way Stop-Control methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection. The intersection was analyzed in two parts due to the current configuration and operation that limits eastbound and westbound through movements along Higuera Street and thus reduces the conflicting approaches at the intersection.

TABLE 8
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions (with Limited Higuera Street Access) [a]		Future with Project Conditions (with Hayden Place Access Only) [b]	
			Delay	LOS	Delay	LOS	Delay	LOS
1. [c]	Washington Boulevard & National Boulevard	AM PM	46.1 51.5	D D	47.5 51.8	D D	47.5 51.8	D D
2. [c]	Hayden Avenue & National Boulevard	AM PM	7.9 8.4	A A	8.3 11.7	A B	8.3 11.7	A B
3. [c]	Eastham Drive & National Boulevard	AM PM	6.5 18.1	A B	7.1 17.4	A B	7.1 17.4	A B
4. [c]	Washington Boulevard & Robertson Boulevard/Higuera Street	AM PM	35.6 27.4	D C	35.8 27.4	D C	35.8 27.4	D C
5A. [d]	Hayden Avenue / Hayden Place & Higuera Street (East)	AM PM	11.3 14.4	B B	11.8 26.2	B D	12.0 52.8	B F
5B. [d]	Hayden Avenue / Hayden Place & Higuera Street (West)	AM PM	10.5 11.6	B B	14.3 14.1	B B	14.9 12.0	B B
6. [c] [e]	Eastham Drive & Higuera Street	AM PM	16.1 64.1	B E	16.0 61.0	B E	16.0 61.0	B E
7. [c]	Jefferson Boulevard & Higuera Street/Obama Boulevard	AM PM	25.5 21.0	C C	27.3 22.9	C C	27.3 22.9	C C

Notes

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 11 (HCM 6th Edition Methodology)

[a] The Future with Project Conditions (with Limited Higuera Street Access) reflects right-turn only inbound and outbound access via Higuera Street driveways and full access via the Hayden Place driveways.

[b] The Future with Project Conditions (with Hayden Place Access Only) reflects full access via the Hayden Place driveways only.

[c] Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[d] Intersection analysis based on HCM 6th Edition Unsignalized All-Way Stop-Control methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection. The intersection was analyzed in two parts due to the current configuration and operation that limits eastbound and westbound through movements along Higuera Street and thus reduces the conflicting approaches at the intersection.

[e] Under Future Conditions, an additional westbound through lane is provided as part of the Higuera Street Bridge Replacement Project.

TABLE 9
CUMULATIVE WITH PROJECT CONDITIONS (YEAR 2045)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Cumulative without Project Conditions		Cumulative with Project Conditions (with Limited Higuera Street Access) [a]		Cumulative with Project Conditions (with Hayden Place Access Only) [b]	
			Delay	LOS	Delay	LOS	Delay	LOS
1. [c]	Washington Boulevard & National Boulevard	AM PM	66.8 74.2	E E	70.1 74.8	E E	70.1 74.8	E E
2. [c]	Hayden Avenue & National Boulevard	AM PM	7.6 9.2	A A	9.7 13.9	A B	9.7 13.9	A B
3. [c]	Eastham Drive & National Boulevard	AM PM	9.1 22.5	A C	11.1 17.5	B B	11.1 17.5	B B
4. [c]	Washington Boulevard & Robertson Boulevard/Higuera Street	AM PM	44.8 22.5	D C	45.0 29.5	D C	45.0 29.5	D C
5A. [d]	Hayden Avenue / Hayden Place & Higuera Street (East)	AM PM	13.8 23.2	B C	14.3 56.1	B F	14.5 102.3	B F
5B. [d]	Hayden Avenue / Hayden Place & Higuera Street (West)	AM PM	12.9 14.0	B B	20.1 17.9	C C	21.4 14.7	C B
6. [c] [e]	Eastham Drive & Higuera Street	AM PM	17.0 101.5	B F	17.2 96.3	B F	17.2 96.3	B F
7. [c]	Jefferson Boulevard & Higuera Street/Obama Boulevard	AM PM	41.6 46.6	D D	45.5 50.1	D D	45.5 50.1	D D

Notes

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 11 (HCM 6th Edition Methodology)

[a] The Cumulative with Project Conditions (with Limited Higuera Street Access) reflects right-turn only inbound and outbound access via Higuera Street driveways and full access via the Hayden Place driveways.

[b] The Cumulative with Project Conditions (with Hayden Place Access Only) reflects full access via the Hayden Place driveways only.

[c] Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[d] Intersection analysis based on HCM 6th Edition Unsignalized All-Way Stop-Control methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection. The intersection was analyzed in two parts due to the current configuration and operation that limits eastbound and westbound through movements along Higuera Street and thus reduces the conflicting approaches at the intersection.

[e] Under Cumulative Conditions, an additional westbound through lane is provided as part of the Higuera Street Bridge Replacement Project.

Section 5B
Transit Operations

This section reviews the Project's potential effect on existing transit capacity of transit routes and stops that serve the Project area.

TRAVEL DEMAND ANALYSIS

Although the Project (and other Related Projects) will cumulatively add transit ridership, as detailed in Table 2, the Project Site and the Study Area are served by multiple bus lines along National Boulevard, Washington Boulevard, Jefferson Boulevard, and Robertson Boulevard. As shown in Tables 3A and 3B, the total residual capacity of the bus and rail lines within the Study Area during the morning and afternoon peak hours is approximately 3,569 and 3,348 transit trips, respectively.

Based on the assumptions in the trip generation estimates shown in Table 5, a transit/walk-in reduction of up to 10% was applied to account for the use of non-auto travel modes (e.g., rail, light-rail, bus, bicycle, walk, etc.) For the purposes of this analysis, all the transit/walk-in trip estimates from Table 5 were conservatively assumed to travel via public transit.

As shown in Table 5, prior to transit/walk-in reductions, the Project is anticipated to generate approximately 372 morning peak hour trips and 353 afternoon peak hour trips. Based on the average vehicle occupancy factor of 1.55 for all trip purposes in Los Angeles County as identified in *SCAG Regional Travel Demand Model and 2012 Model Validation* (Southern California Association of Governments, March 2016), the Project vehicle trips result in an estimated equivalence of 577 person trips during the morning peak hour and 547 person trips during the afternoon peak hour. Using the 10% mode split, the Project would generate approximately 58 new transit trips in the morning peak hour and 55 new transit trips in the afternoon peak hour. As such, the adjacent transit capacity of 3,569 and 3,348 transit trips in the morning and afternoon

peak hour, respectively, within the Study Area can accommodate the intensification of transit usage attributable to the Project without significantly absorbing excess capacity.

Section 5C
Driveways

This section provides a qualitative evaluation of the Project vehicle, pedestrian, and bicycle access.

VEHICLES

Vehicular access to the Project Site with Limited Higuera Street Access would be provided via existing driveways, including two full access driveways on Hayden Place and two driveways on Higuera Street accommodating right-turn only ingress and egress movements. Vehicular access to the Project Site with Hayden Place Access Only would only be provided via the existing full access driveways along Hayden Place. Pedestrian access to the Project would be provided via the entrance along Hayden Place. The driveways would be designed to safely accommodate all anticipated vehicle types generated by the Project. Adequate internal circulation and queuing area would be provided on-site to limit spillover into the public ROW.

PEDESTRIANS AND BICYCLES

Pedestrian and bicycle access to the Project Site would be provided separately from the vehicular driveways via separate entrances along Hayden Place to reduce potential vehicle-pedestrian and vehicle-bicycle conflicts.

Section 5D
Parking

This section provides an analysis of the proposed parking and the potential parking impacts of the Project.

PARKING SUPPLY

The Project would provide vehicle and bicycle parking spaces within three levels of subterranean parking. The Project would require the conversion of on-street parking spaces along Hayden Place adjacent to the Project Site to accommodate the proposed passenger loading area.

VEHICLE PARKING CODE REQUIREMENTS

The parking requirements for the Project are calculated by applying the office parking rate, which is one space per 350 sf, from Section 17.320.020 of the CCMC. As shown in Table 10, the Project would require a total of 657 parking spaces.

BICYCLE PARKING CODE REQUIREMENTS

CCMC Section 17.320.045 details the bicycle parking requirements for new developments, which require non-residential uses to provide bicycle parking spaces equal to a minimum of 5% of the required vehicle spaces. As shown in Table 11, based on CCMC Section 12.320.045, the Project would be required to provide a minimum of 33 bicycle parking spaces. The Project would, however, provide secure bicycle parking for up to 69 bicycles, including 46 long-term bicycle parking spaces and 23 short-term parking positions, pursuant to comments received from CCPWD.

TABLE 10
VEHICLE PARKING CODE REQUIREMENTS

Land Use	Size	Code Parking Rate	Parking Required
Office	245,000 sf	1.0 space(s) / 350 sf	700 spaces
		Total Parking Required	**700 spaces**

Notes
sf: square feet
Parking requirements per City of Culver City Municipal Code Chapter 17.320

TABLE 11
BICYCLE PARKING CODE REQUIREMENTS

Land Use	**Size**	**Code Bicycle Parking Rate** [a]	**Requirement**
Office	245,000 sf	5% of 700 vehicle parking spaces	35 sp
		Total Bicycle Parking Requirements	35 sp

Notes
sp: bicycle parking spaces
sf: square feet
[a] Bicycle parking requirements per City of Culver City Municipal Code Chapter 17.320. Non-residential uses must provide 5% of the total required vehicles spaces for bicycle parking.

Section 5E
Curb Space Allocation

This section details our review of the management of curb space adjacent to the Project Site between passenger and commercial loading and parking areas, bus stop facilities, and bicycle and other alternative transportation mode parking while maintaining visibility at driveways.

ON-STREET PARKING

As previously detailed, on-street unmetered parking spaces provided along Hayden Place serve the parking needs of the adjacent properties. The Project would utilize existing driveways and, therefore, Project access would not affect the on-street parking spaces along Hayden Place. However, the Project proposes to provide a passenger loading area at the Project's entry courtyard and on-street unmetered parking spaces along Hayden Place would be converted to accommodate the passenger loading area. As previously detailed, parking for the Project would be fully accommodated within the on-site parking garage. Thus, the conversion of the on-street parking spaces to accommodate the proposed passenger loading zone would not affect the parking needs of the adjacent property (i.e., the Project).

PASSENGER AND COMMERCIAL LOADING

All passenger loading would be provided at the proposed passenger loading area along Hayden Place. The passenger loading area would be designed and operated in accordance with City standards to ensure adequate loading operations. All commercial loading would be provided on-site with access provided north of the vehicular parking garage access.

TRANSIT FACILITIES

The Culver CityBus Line 5 bus stop is located immediately adjacent to the Project Site on Higuera Street. As previously discussed, under either access scheme, the Project would utilize existing curb cuts along both Higuera Street and Hayden Place; therefore, the Project would not require the removal or relocation of the existing bus stop and visibility at the Project driveways would not be affected. In addition, as previously discussed in Section 4B, the transit service in the Project area could accommodate the potential intensification of transit usage attributable to the Project.

BICYCLE PARKING FACILITIES

There are currently no existing or proposed public bicycle parking facilities adjacent to the Project Site along Higuera Street or Hayden Place. In addition, the Project does not propose the installation of bicycle parking within the public ROW. With no bicycle parking facilities anticipated to be installed at adjacent curb spaces, there is no effect on visibility at the Project driveways.

Section 5F
Safety Analysis

This section details the Project's potential effects on corridors within the HIN identified in *Culver City Bicycle & Pedestrian Action Plan*, as well as the Project's proximity to high-risk corridors and intersections where pedestrian and bicycle involved collisions have been recorded by the City as part of the LRSP.

VEHICULAR SAFETY

The Project Site is located adjacent to Higuera Street, which has been identified as part of the HIN in *Culver City Bicycle & Pedestrian Action Plan*. However, as previously discussed, the Project with Limited Higuera Street Access would utilize the existing curb cuts along Higuera Street. The existing driveways would be maintained with the Project and would continue to maximize sight lines and limit potential vehicle-vehicle, vehicle-pedestrian, and vehicle-bicycle conflicts. In addition, the Project driveways along Higuera Street would continue to accommodate right-turn only ingress and egress movements to reduce any potential conflicts or queuing at the Project driveways.

PEDESTRIAN AND BICYCLE SAFETY

As previously detailed, Higuera Street is identified as part of the HIN and identified as a high-risk roadway in the LRSP; however, there are no future improvements planned within the Study Area. Nevertheless, the Project would not preclude the City from implementing improvements to eliminate fatal and severe injury collisions as part of the LRSP.

Section 5G
Construction Impact Analysis

This section summarizes the construction schedule and construction activities associated with the Project. The quantities for trucks and worker activity are preliminary estimates and these values may change once the construction program is finalized.

PROPOSED CONSTRUCTION SCHEDULE

The Project is anticipated to be constructed over an approximately 18-month period, with completion anticipated in Year 2025. Peak haul truck activity occurs during the grading/excavation phase and peak worker activity occurs during the structure exterior and interior construction phase. These two phases of construction were studied in greater detail.

GRADING / EXCAVATION SUBPHASE

With the implementation of the Construction Management Plan, which is described in more detail below, it is anticipated that almost all haul truck activity to and from the Project Site would occur outside of the morning and afternoon peak hours. In addition, as discussed in more detail in the following section, worker trips to and from the Project Site would also occur outside of the peak hours to the extent feasible. Therefore, no peak hour construction traffic constraints are expected during the grading and excavation phase of construction.

Haul trucks would travel on approved truck routes designated within the City and take the most direct route to the appropriate freeway ramps. The haul route will be reviewed and approved by the City.

Grading / Excavation Phase Trip Generation

Based on projections compiled for the Project, approximately 171,000 cubic yards (CY) of material would be excavated and removed from the Project Site. It is anticipated that a maximum of 200 haul truckloads per workday, based on an anticipated haul truck capacity of 16 CY, would be required during this phase. Thus, up to 400 daily truck trips (200 inbound, 200 outbound) are forecasted to occur during the grading and excavation period, with approximately 66 trips per hour (33 inbound, 33 outbound) uniformly over a typical six-hour off-peak hauling period.

In addition, a maximum of 10 daily construction worker trips are anticipated during the grading/excavation period. The 10 construction worker trips would result in 20 one-way vehicle trips (10 inbound, 10 outbound) to and from the Project Site on a daily basis. It is anticipated that the majority of workers would arrive on-site prior to the weekday morning commuter peak hour and leave prior to or after the afternoon commuter peak hour. Construction-related peak hour trip generation from trucks and workers would be substantially less than the Project trip generation estimates in Table 5. Therefore, no peak hour construction traffic constraints are expected during the grading/excavation subphase of construction.

STRUCTURE EXTERIOR / INTERIOR CONSTRUCTION PHASE

During the structure exterior/interior construction phase, parking for construction workers would generally be provided on-site or in local public parking facilities. Restrictions against workers parking in the public ROW in the vicinity of (or adjacent to) the Project Site would be identified as part of the Construction Management Plan. Construction materials storage and truck staging would generally be contained on-site within Project boundaries and on the sidewalk and parking lane along the Project frontage on Hayden Place.

The traffic constraints associated with construction workers depends on the number of construction workers employed during various phases of construction, as well as the travel mode and travel time of the workers. In general, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before or after the afternoon commuter peak period (i.e., arrive at the site prior to 7:00 AM and depart before

4:00 PM or after 6:00 PM). Therefore, most, if not all, construction worker trips would occur outside of the typical weekday commuter peak periods to the extent feasible.

According to construction projections prepared for the Project, the structure exterior/interior construction phase would employ the most construction workers, with a maximum of 165 workers per day. The estimated number of daily vehicle trips associated with the construction workers is approximately 330 one-way trips (165 inbound, 165 outbound), but nearly all of those trips would occur outside of the peak hours to the extent feasible, as described above. As such, the structure exterior/interior construction phase of Project construction is not expected to cause traffic constraints at any of the study intersections.

In addition, it is anticipated that approximately 76 daily haul truck trips (38 inbound, 38 outbound) would occur during the structure exterior/interior construction phase, with approximately 14 truck trips per hour (seven inbound, seven outbound) uniformly over a typical six-hour off-peak hauling period. As part of the Construction Management Plan, these trips would occur during off-peak hours and are not anticipated to affect peak hour traffic conditions.

POTENTIAL CONSTRAINTS ON ACCESS, TRANSIT, AND PARKING

Project construction is not expected to create hazards for roadway travelers, bus riders, or parkers, so long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk closures, etc.) have been incorporated into the Construction Management Plan.

Access

Construction activities are expected to be primarily contained within the Project Site boundaries. However, it is expected that construction fences may encroach into the public ROW (e.g., sidewalks and roadways) adjacent to the Project Site. The adjacent sidewalk and parking lane on Hayden Place may be temporarily closed throughout the construction period, however, two-way operations would be maintained. Temporary traffic controls would be provided to direct traffic

around any closures as required in the Construction Management Plan and emergency access would not be impeded.

The use of the public ROW would require temporary re-routing of pedestrian and bicycle traffic. The Construction Management Plan would include measures to ensure pedestrian and bicycle safety along the affected sidewalks, bicycle facilities, and temporary walkways (e.g., use of light-duty barriers and cones, use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering).

Transit

Although there is an existing bus stop located along Higuera Street serving Culver CityBus Line 5, construction activities are not expected to occur along Higuera Street. Thus, no temporary relocation of any bus stop is anticipated due to the construction of the Project.

Parking

The adjacent parking lane along Hayden Place is anticipated to be used for staging during construction. Thus, construction activities would potentially result in the temporary loss of up to 14 unmetered parking spaces along Hayden Place.

CONSTRUCTION MANAGEMENT PLAN

A detailed Construction Management Plan, including street closure information, a detour plan, haul routes, and a staging plan would be prepared and submitted to the City Engineering Division for review and approval prior to commencing construction. The Construction Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements, as appropriate:

- Advance bilingual notification of and outreach to adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.

- Ongoing contact with the administrator of nearby schools during construction to guarantee that safe and convenient pedestrian and bus routes to the schools will be maintained.

- Temporary pedestrian, bicycle, and vehicular traffic controls during all construction activities on Hayden Place to ensure traffic safety on the public ROW.

- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets.

- Spacing of trucks so as to discourage a convoy effect.

- Containment of construction activity within the Project Site boundaries to the extent feasible.

- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.

- Scheduling of construction-related deliveries, haul trips, etc., to occur outside the commuter peak hours.

- Maintenance of a log, available on the job site at all times, documenting the dates of hauling and the number of trips (i.e., trucks) per day.

- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested party during site preparation, grading, and construction.

It is likely that construction management plans would also be submitted for approval to the lead agency by the Related Projects prior to the start of construction activities. As part of the City's established review process of construction management plans, potential overlapping construction activities and proposed haul routes would be reviewed to minimize the impacts of cumulative construction activities on any particular roadway.

Chapter 6
Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the office development Project at 8631 Hayden Place. The following summarizes the results of this analysis:

- The Project proposes the development of a three-story office building with 245,000 sf of office space. The Project would replace the existing 56,480 sf of studio uses and 8,000 sf of office uses. The Project is anticipated to be complete in Year 2025.

- The Project is estimated to generate 2,225 net new daily trips, including 314 net new morning peak hour trips (277 inbound trips, 37 outbound trips) and 298 net new afternoon peak hour trips (49 inbound trips, 249 outbound trips).

- The Project is consistent with the City plans, programs, ordinances, and policies and would not result in geometric design hazard impacts.

- The Project is located within 0.50 miles of the Expo Line Culver City Station, a major transit stop and, thus, would not meet the screening thresholds for further VMT analysis. Therefore, the Project is not anticipated to result in a significant VMT impact and no mitigation measures would be required.

- The Project provides adequate internal circulation to accommodate vehicular, pedestrian, and bicycle traffic without impeding through traffic movements on City streets.

- The design of Project driveways does not introduce safety hazards for pedestrians, bicyclists, or motorists.

- The Project will incorporate pedestrian and bicycle-friendly designs, such as bicycle parking and enhanced landscaping.

- All construction activities would occur outside of the commuter morning and afternoon peak hours to the extent feasible and will not result in significant traffic impacts. A Construction Management Plan will ensure that construction impacts are less than significant.

- The Project's proposed parking supply would satisfy the CCMC vehicle and bicycle parking requirements.

References

California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Section 15000 and following).

City of Culver City Complete Streets Policy, City of Culver City, Adopted January 13, 2020.

Culver City Bicycle & Pedestrian Action Plan, Culver City Public Works Department, June 2020.

Culver City Bicycle and Pedestrian Master Plan, Alta Planning and Design, November 2010.

Culver City General Plan, City of Culver City, May 1995.

Culver City General Plan Circulation Element, City of Culver City, adopted May 24, 2004.

Culver City General Plan Land Use Element, City of Culver City, adopted May 24, 2004.

Culver City Local Road Safety Plan Final Report, TJKM Transportation Consultants, November 2021.

Culver City Municipal Code, City of Culver City, May 1995.

Culver City Residential Parkway Guidelines, City of Culver City, 2016.

Culver City Transportation Study Criteria and Guidelines, Culver City Public Works Department, July 2020.

Culver City VMT Tool, October 2021.

Culver Crest: Recommendations for R-1 Neighborhood Hillside Development Standards, John Kaliski Architects PlaceWorks, and RMA GeoScience, January 4, 2017.

Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

Mobility Plan 2035, An Element of the General Plan, Los Angeles Department of City Planning, September 2016.

Multi-Family Neighborhood Residential Design Guidelines – Gateway Adjacent Neighborhood, City of Culver City, July 13, 2011.

Multi-Family Neighborhood Residential Design Guidelines Gateway Neighborhood, City of Culver City, Adopted March 24, 2010.

Neighborhood Traffic Management Program (NTMP) Procedures Manual, City of Culver City, November 22, 2004.

References, cont.

SCAG Regional Travel Demand Model and 2012 Model Validation, Southern California Association of Governments, March 2016.

Short-Range Transit Plan, Culver CityBus, March 2020.

State of California Senate Bill 743, Steinberg, 2013.

Transportation Assessment Guidelines, Los Angeles Department of Transportation, July 2020.

Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

Appendix A

Memorandum of Understanding

Memorandum of Understanding for Transportation Study

This Memorandum of Understanding (MOU) acknowledges and agrees to all the City of Culver City requirements and fees for the review of a transportation study for the following project.

Date Submitted: 2-8-2022 **MOU Version #** 1

Project Name: 8631 Hayden Place

Project Address: 8631 Hayden Place

Project Description: Construction of 245,000 sf of office uses to replace the existing 57,000 sf of studio and 8,000 sf of office uses.

Land Use	Gross Floor Area (sq. ft.) *Defined per latest ITE publication*	Residential Units (#)
General Office Building	245,000	

Project Horizon Year: 2025 **Ambient Growth Rate (% per year):** 1%

Directional Distribution (%): N: 25 S: 25 E: 25 W: 25

Trip Generation Rates: Show AM, PM and daily trip generation rates for each land use and attach total daily trips generation calculations. Indicate ITE Latest Edition/Other ITE 11th Ed

Land Use	ITE Code#	AM Trips		PM Trips		Daily Totals	
		In	Out	In	Out	In	Out
See Table 2							

Study Intersections: Show all study intersections, intersections subject to capacity analysis credit for advanced traffic signal control synchronization, whether intersections are signalized or non-signalized, and use the same numbering system for all lists of intersections and figures in the study.

No.	Intersection	Signalized/Non-Signalized	Jurisdiction
	See Table 3		

Residential Streets: Show all residential streets to be studied.

No.	Street Name	Limits	Jurisdiction
	N/A		

Trip Credits: Indicate trip credits to be requested (subject to City approval)

	Trip Credits	Yes/No
Existing Uses	Existing studio and office uses	Yes
Pass-By Trips		No
Internal Trip Capture		No
Transit-Oriented Development (TOD)	10% - Project Site within 0.5 miles of Metro E Line (Expo) Culver City Station	Yes
Transportation Demand Management (TDM)		No

Related Projects: Before the start of any proposed project analysis, consultants shall:

1. Obtain a list of related projects from the Culver City Current Planning Division and other affected jurisdictions.
2. Prepare a draft list of "related projects specific to the proposed project."
3. Obtain written approval from the City of the "related projects specific to the proposed project."

Maps: The following maps shall be attached to the MOU:

1. A map showing the study intersections and street segments to be analyzed, including City limit lines where applicable.
2. A map showing the project's trip distribution percentages for each land use (inbound and outbound) on the area's road network.
3. A map showing the project's trip assignments at the study intersections and project driveways, as well as road segments when applicable.
4. A site plan of the project showing property lines, alleys, project's driveways and nearby driveways and intersections on both sides of the street including dimensions.

Proposed Mitigation and Transportation Improvements: Any proposed transportation improvement(s) or mitigation measure(s) shall be listed and accompanied by plans of the existing and proposed improvements, including city limit lines and existing and proposed property lines. The City may initially accept conceptual plans to be included in the Transportation Study. Detailed design of such improvements will be part of the project's plans submittals.

Post-Occupancy Traffic Counts: By signing below, the Property Owner/ Developer/Applicant hereby agrees to pay for and submit to the City a post-occupancy traffic count analysis of the development to the satisfaction of the City. The analysis shall determine the amount of actual traffic (motor vehicle, bicycle, and pedestrian) generated by the development compared to the ITE trip generation rates. The analysis shall include a traffic count of all onsite driveways taken upon reaching eighty-five percent (85%) occupancy of the total building gross floor area or within one (1) year of the issuance of the first Temporary Certificate of Occupancy (TCO), as determined by the City. The data shall be used to confirm the findings in the approved study and not result in any additional traffic mitigation measures and/or conditions of approval on the subject project.

Fees: Payment of a fee to the City's PWD for the City's processing of the MOU shall be required before the City approves the MOU. Payment for review of the Transportation Study shall be paid before the City's PWD completes its review of the Transportation Study. Said fees shall be per the most recent Fee Schedule as approved by the City Council.

Applicant Information:

	Property Owner/Applicant	Developer/Applicant	Traffic Consultant
Name			Emily Wong
Title			Senior Associate
Company		HCP 8631 Hayden, LLC	Gibson Transportation Consulting, Inc.
Street Address		4060 Ince Boulevard	555 W 5th Street #3375
City, State, Zip		Culver City, CA 90232	Los Angeles, CA 90013
Office			213-683-0088
Cell			
Fax			
Email			ewong@gibsontrans.com

Public Agency Information: If any of the intersection(s) to be studied as part of this study are located within the City of Los Angeles, the unincorporated areas of Los Angeles County and/or impact any other public agency (i.e., Caltrans), then this MOU shall also be approved by the reviewing staff representative from each agency:

	City of Los Angeles	County of Los Angeles	Other Public Agency
Name			
Title			
Company			
Street Address			
City, State, Zip			
Office			
Cell			
Fax			
Email			

Signatures/Expiration: This MOU shall become valid as of the date of the City's signature and expire one year thereafter. If the administrative draft of the study has not been filed with the City by the expiration date, the MOU shall expire and a new MOU filing, fee, review, and approval process shall be required.

Approved By:	Date:
Property Owner/Applicant	
Developer/Applicant	
Traffic Consultant	02-08-2022
City of Culver City	2-24-22

Andrew Maximous
Mobility & Traffic Engineer

TABLE 1
CULVER CITY TRANSPORTATION STUDY SCREENING REVIEW

Analysis [a]	Required?	Analysis to be Provided in Transportation Study
Transportation Study Contents		
Site Plan Review	Yes	A site plan will be provided which provides existing and proposed on-site and off-site Project details and improvements as specified in the Traffic Study Guidelines.
Existing Transportation Network Review	Yes	The existing transportation network review will establish the bicycle, pedestrian, transit, and auto traffic conditions in which the project is proposed, which shall be illustrated in the following maps: ▪ Study Area Circulation Map ▪ Traffic Routes Map ▪ Base Year Traffic Volumes Map ▪ Project Trip Generation and Future Traffic Volumes Map ▪ Site Vicinity Map ▪ Lane Configurations Map
Existing Transit Network Review	Yes	For transit analysis, the study will provide an analysisof weekday transit service and stops/stations within a quarter mile of the project site, including: ▪ Confirmation of transit features listed in the Project Description and Existing Transportation Network Review ▪ Any existing operational conflicts or hazards to transit operations in the study area, especially along travel lanes where transit vehicles operate and at transit stop/station locations
CEQA Transportation Analysis and Mitigations		
Programs, Plans, Ordinances, and Policies	Yes	The Transportation study will review the City's programs, plans, ordinances and policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, as specified in Table 1 of the Culver City Transportation Study Criteria and Guidelines.
VMT - Land Use Projects	No	The proposed development project does not meet the screening thresholds for a VMT analysis. The Project is located within 1/2 mile from the Metro E Line (Expo) Culver City Station. The study will discuss the VMT screening thresholds and the Project's consistency with the guidelines.
VMT - Transportation Projects	No	The proposed development is not considered a "Transportation Project" and therefore, it is not conflicting or inconsistent with CEQA Guideline Section 15064.3(b)(2).
Geometric Design Hazards	Yes	The study will provide a review of potentially hazardous conditions due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., oversized vehicles).

TABLE 1 (CONTINUED)
CULVER CITY TRANSPORTATION STUDY SCREENING REVIEW

Analysis [a]	Required?	Analysis to be Provided in Transportation Study
Supplemental Transportation Analysis Requirements		
Traffic Operations	Yes	The study will assess the ability of the circulation system to accommodate the addition of vehicular traffic generated by the related projects and the subject project, including: ▪ Intersection LOS and queuing including trip generation, distribution under Existing, Existing with Project, Future without Project, Future with Project, Cumulative without Project, and Cumulative with Project Conditions ▪ Driveway LOS and queuing including potential vehicular conflicts and motorists' visibility at project driveways, potential conflicts with pedestrians and bicyclists, and the ability of left- and right-turn lanes to accommodate additional project generated traffic ▪ Ability to conduct loading operations on the site and maneuver into parking stalls ▪ The potential increase in average daily traffic on the adjacent street segments The existing development on-site currently limits access along Higuera Street to emergency vehicles only. Therefore, the study will evaluate the operational traffic conditions both with and without Project vehicle access via Higuera Street.
Transit Operations	Yes	The study will identify regional and local fixed-route transit operators providing service to the project and obtain relevant ridership data. The study will document potential project trip impact on transit demand and capacity for routes servicing the project.
Driveways	Yes	The study will provide a review of the Project driveways and consult with the City Mobility & Traffic Engineering and Current Planning Divisions to determine if vehicle access is limited on certain streets where the City is focusing on efforts to enhance the pedestrian-oriented environment. A pedestrian and bicyclist access assessmnet would also be included to ensure the project avoids unsafe conflicts between pedestrians, cyclists, and autos.
Parking	Yes	The study will review the Project's effect on the on-street parking conditions adjacent to the Project Site and ensure compliance with PWD's guidelines.
Curb Space Allocation	Yes	The study will review the proposed curb space allocation to ensure that the curb space is managed appropriately between passenger and commercial loading and parking, bus stop facilities, and bike and other alternative transportation mode parking while maintaining visibility at driveways.
Safety Analysis	Yes	The Project is located on the high injury network (HIN) (Higuera Street), as identified in the Local Road Safety Plan (LRSP) or other analysis. The study will evaluate the adverse effect of the project and associated measures to enhance safety conditions. If it is determined that the project would have an adverse effect on a HIN corridor including intersections and road segments, the applicant shall work with the City's PWD to improve roadway safety at impacted locations for all users, including the design and construction of engineering measures and possibly safety education measures. The applicant shall also work with the City to confirm that the project does not inhibit future implementation of projects identified by the City in the LRSP. The LRSP will also be reviewed to determine if the project is located near a hot spot of collisions that involve people walking and bicycling. If this is the case, the applicant shall demonstrate how project features will not worsen the issue per the LRSP.

Notes:
[a] Based on *Culver City Transportation Study Criteria and Guidelines* , City of Culver City, June 2020.

TABLE 2
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Size	Daily	Morning Peak Hour			Afternoon Peak Hour		
				In	Out	Total	In	Out	Total
Trip Generation Rates [a]									
Warehousing	150	per ksf	1.71	77%	23%	0.17	28%	72%	0.18
General Office Building	710	per ksf	10.84	88%	12%	1.52	17%	83%	1.44
Proposed Project									
General Office Building	710	245 ksf	2,656	327	45	372	60	293	353
Transit/Walk-In Reduction - 10% [b]			*(266)*	*(33)*	*(5)*	*(38)*	*(6)*	*(29)*	*(35)*
Total Project Trips			**2,390**	**294**	**40**	**334**	**54**	**264**	**318**
Existing Land Uses									
Sound Stage [c]	150	57 ksf	97	8	2	10	3	7	10
Transit/Walk-In Reduction - 10% [b]			*(10)*	*(1)*	*0*	*(1)*	*0*	*(1)*	*(1)*
General Office Building	710	8 ksf	87	11	1	12	2	10	12
Transit/Walk-In Reduction - 10% [b]			*(9)*	*(1)*	*0*	*(1)*	*0*	*(1)*	*(1)*
Total Existing Trips to be Removed			**165**	**17**	**3**	**20**	**5**	**15**	**20**
TOTAL - NET NEW PROJECT TRIPS			**2,225**	**277**	**37**	**314**	**49**	**249**	**298**

Notes:
ksf: 1,000 square feet
[a] Source: *Trip Generation, 11th Edition,* Institute of Transportation Engineers, 2021.
[b] The Project Site is located less than 1/2 mile from the Metro E Line (Expo) Culver City Station, therefore a 10% reduction was applied to account for transit/walk-in trips.
[c] Based on a review of the current operations, the trip generation estimates for the existing 57,000 sf sound stage were calculated using the trip generation rates for Warehousing land use (ITE Land Use 150).

TABLE 3
STUDY INTERSECTIONS

No	North/South Street	East/West Street	Existing Traffic Control	Jurisdiction
1.	Washington Boulevard	National Boulevard	Signalized	City of Culver City
2.	Hayden Avenue	National Boulevard	Signalized	City of Culver City
3.	Eastham Drive	National Boulevard	Signalized	City of Culver City
4.	Washington Boulevard	Higuera Street / Robertson Boulevard	Signalized	City of Culver City
5.	Hayden Avenue / Hayden Place	Higuera Street	All-Way Stop Controlled	City of Culver City
6.	Eastham Drive	Higuera Street	Signalized	City of Culver City
7.	Jefferson Boulevard	Higuera Street/Obama Boulevard	Signalized	City of Los Angeles

TABLE 4
RELATED PROJECTS LIST

No.	Project	Address	Use	Trip Generation						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
City of Culver City [a]										
1.	Schaefer II	3516 Schaefer St	9,847 sf creative office expansion	96	9	2	11	2	9	11
2.	Lorcan O'Herlihy Architects	3434 Wesley St	15 apartments, 14,237 sf office	257	21	9	30	10	20	30
3.	ECF Site	8700-8750 Washington Blvd	199 apartment units, 17,250 sf live/work, 5,000 restaurant, 17,750 sf retail	608	28	16	44	23	38	61
4.	Surfas Site	8777 Washington Blvd	128,000 sf office, 4,500 sf retail/restaurant	1,984	203	46	249	58	177	235
5.	Warner Parking Structure	8511 Warner Dr	51,520 retail/restaurant	3,112	94	76	170	116	109	225
6.	Office	9401-9449 Jefferson Blvd	88,000 sf office	707	71	9	80	9	68	77
7.	Ivy Station	8824 National Blvd	148 hotel rooms, 57,742 sf retail, 196,333 sf office, 200 apartment units	4,124	173	83	256	127	174	301
8.	Park Century School	3939 Landmark St	50 students enrollment and 20 staff increase	90	18	14	32	5	6	11
9.	Willows School	8509 Higuera St and 8476 Warner Dr	Addition of 100 students	185	15	3	18	11	7	18
10.	Synapse Office and Retail/Restaurant (ICC site)	8888 Washington Blvd	56,559 sf office, 5,972 sf retail	1,132	97	26	123	36	88	124
11.	Office and Retail	3961 Higuera St	36,614 sf office	289	27	4	31	7	27	34
12.	3710 & 3750 S. Robertson Blvd Mixed-Use	3710 and 3750 S. Robertson Blvd	141 apartment units, 64,200 sf creative office, 30,042 sf retail/restaurant	1,805	16	6	22	62	31	93
13.	8570 National Blvd	8570 National Blvd	23,285 sf office, 7,699 sf restaurant	609	39	20	59	27	32	59
14.	Culver Studios Innovation Plan Comprehensive Plan	9336 Washington Boulevard	345,007 production office	4,557	567	77	644	105	511	616
15.	Creative Office	3505 Hayden Ave	9,000 sf additional creative office	88	9	1	10	2	8	10
16.	Culver Crossings (Apple)	8825 National Blvd	Demolition of two existing buildings totaling 18,821 sf to construct 167,000 sf office building	1,627	135	22	157	31	161	192
17.	Campus Studios	9930 and 9940 Jefferson Blvd	84,475 sf sound stages and support	147	11	3	14	4	12	16
18.	Creative Office Development	9925 Jefferson Blvd	51,178 sf creative office building	498	51	8	59	9	50	59

Notes:
[a] Related project information provided by the City of Culver City Department of Planning from November 2021. Related projects include developments within 0.5 miles from the Project Site.

TABLE 4 (CONTINUED)
RELATED PROJECTS LIST

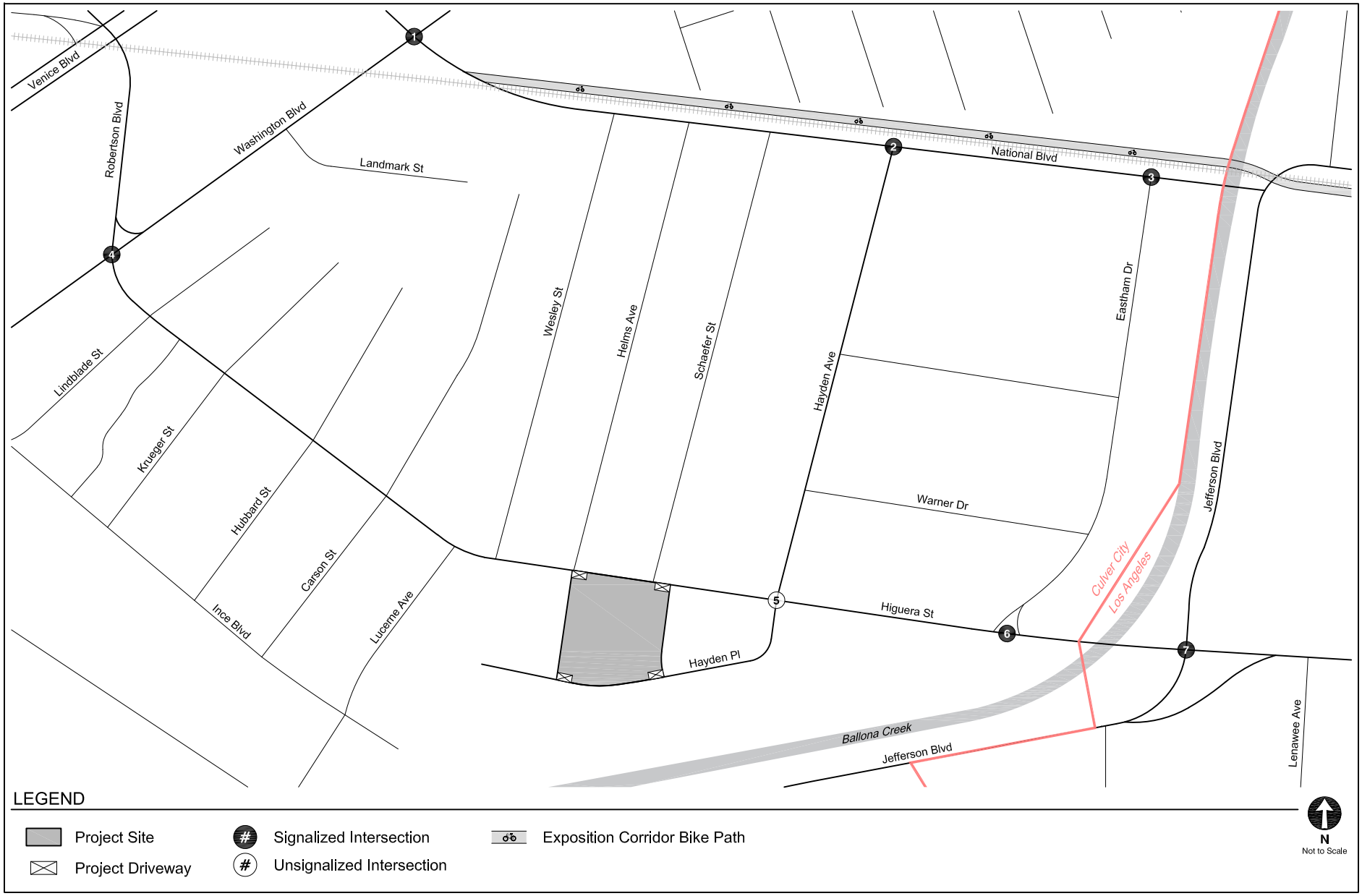
No.	Project	Address	Use	Trip Generation						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
City of Los Angeles [a]										
1.	Cumulus Mixed Use Project	3221 S La Cienega Blvd	1,218 apartments, 200,000 sf of office, 50,000 of supermarket, 30,000 of retail	10,136	319	467	737	467	382	849
2.	Coffee Bean & Tea Leaf	6024 W Jefferson Blvd	123,527 sf of office, 64,206 sf manufacturing, 2,200 sf coffee shop with drive thru	2,177	194	68	262	55	168	223
3.	Wrapper Office Building	5790 W Jefferson Blvd (at National Blvd)	137,687 sf of office	1,519	142	20	162	26	128	154
4.	Venice & National Hotel	8900 National Blvd	180 hotel rooms, 16,456 sf retail, 7,330 sf restaurant	1,589	67	47	114	57	60	117
5.	Jefferson Office	5860 W Jefferson Blvd	345,000 sf office	2,856	292	48	340	54	283	337
6.	Jefferson & Obama Office	5870-5890 W Jefferson Blvd	362,718 sf of office	2,947	326	53	379	60	315	375

Notes:
[a] Related project information based on available information from November 2021 provided by LADOT and Department of City Planning and recent studies. Related projects include developments within 0.5 miles from the Project Site.

Source: Gensler, December, 2021.

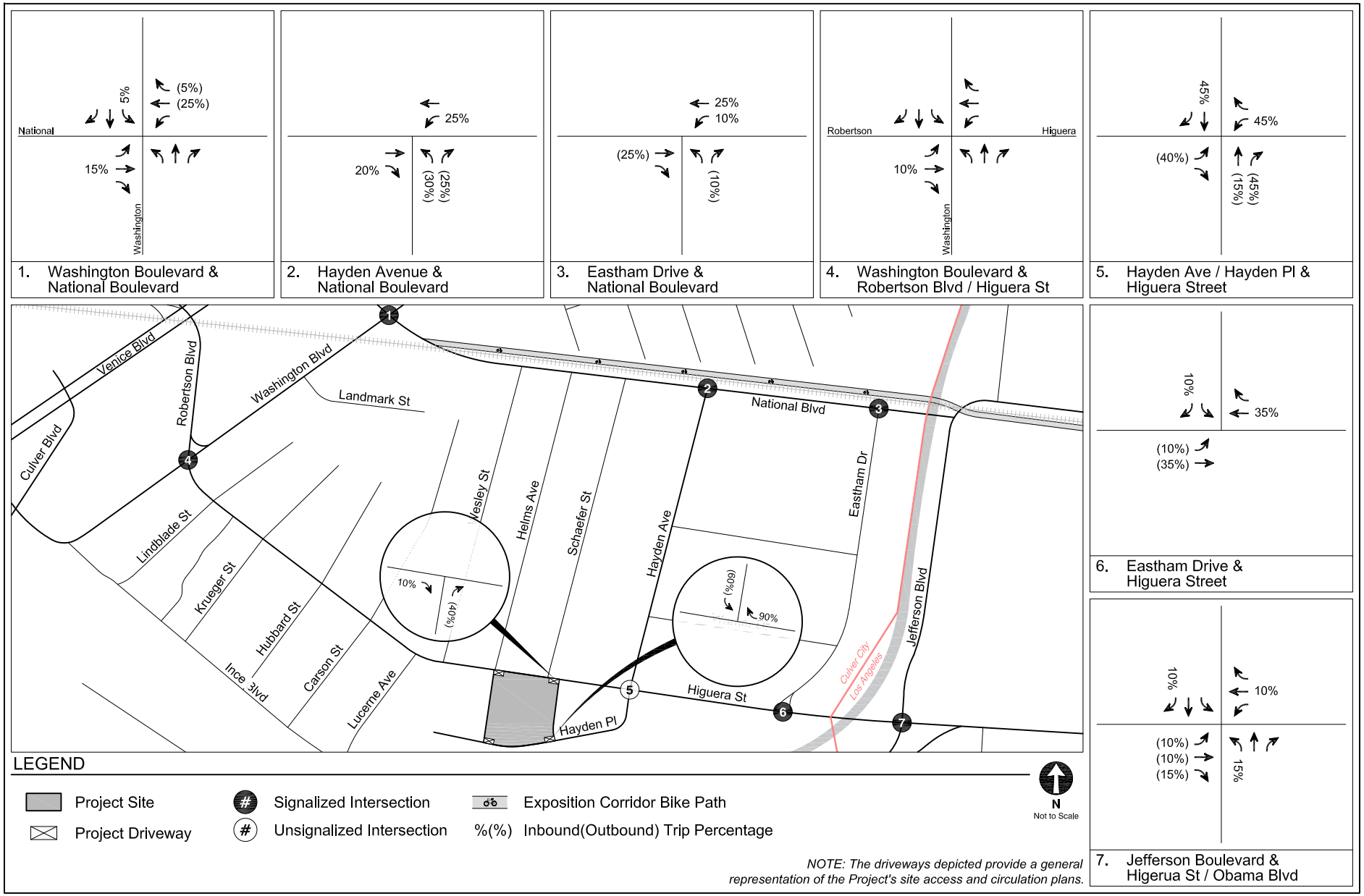
PROJECT SITE PLAN

FIGURE 1



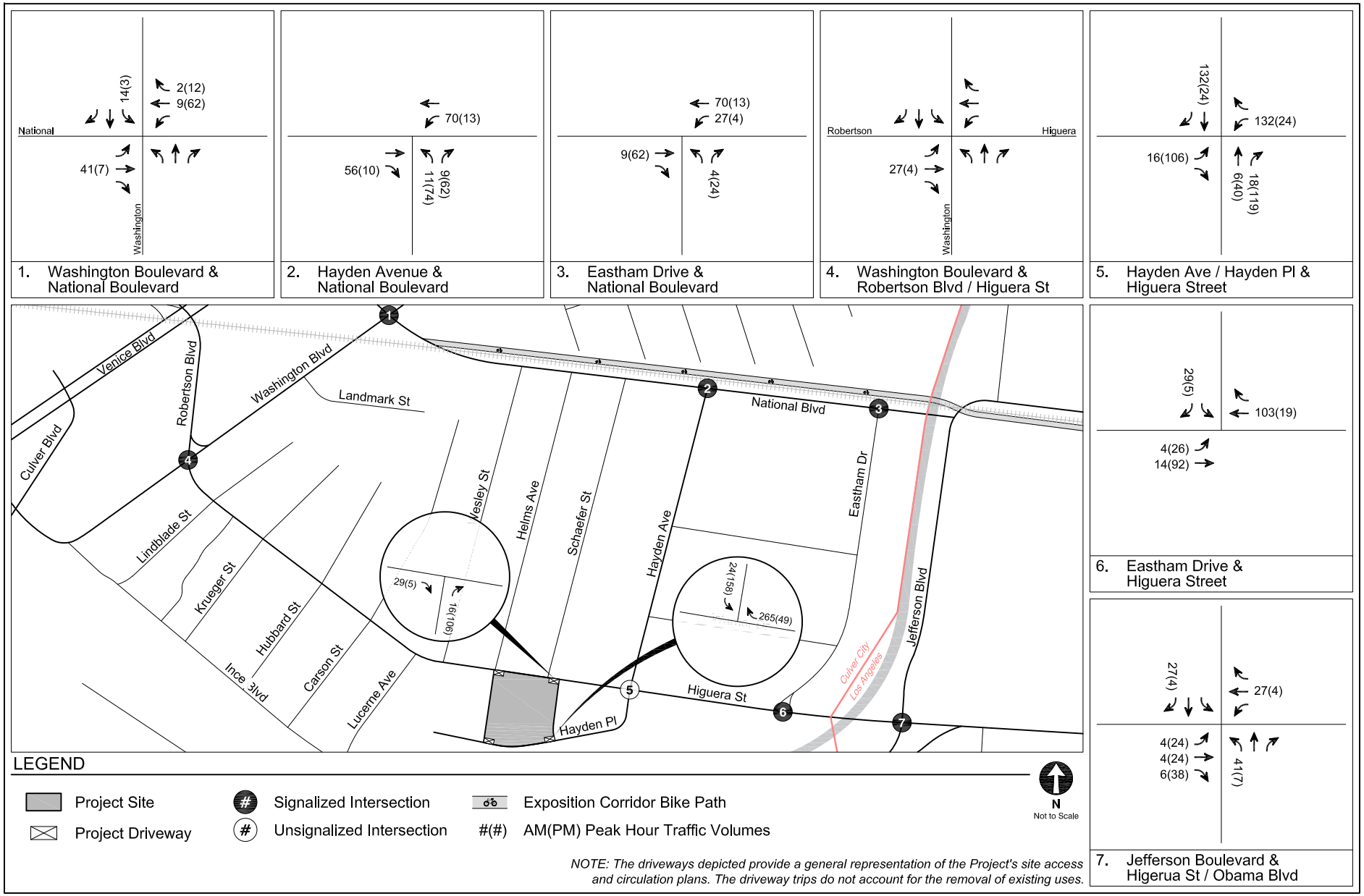
STUDY AREA AND ANALYZED INTERSECTIONS

FIGURE 2



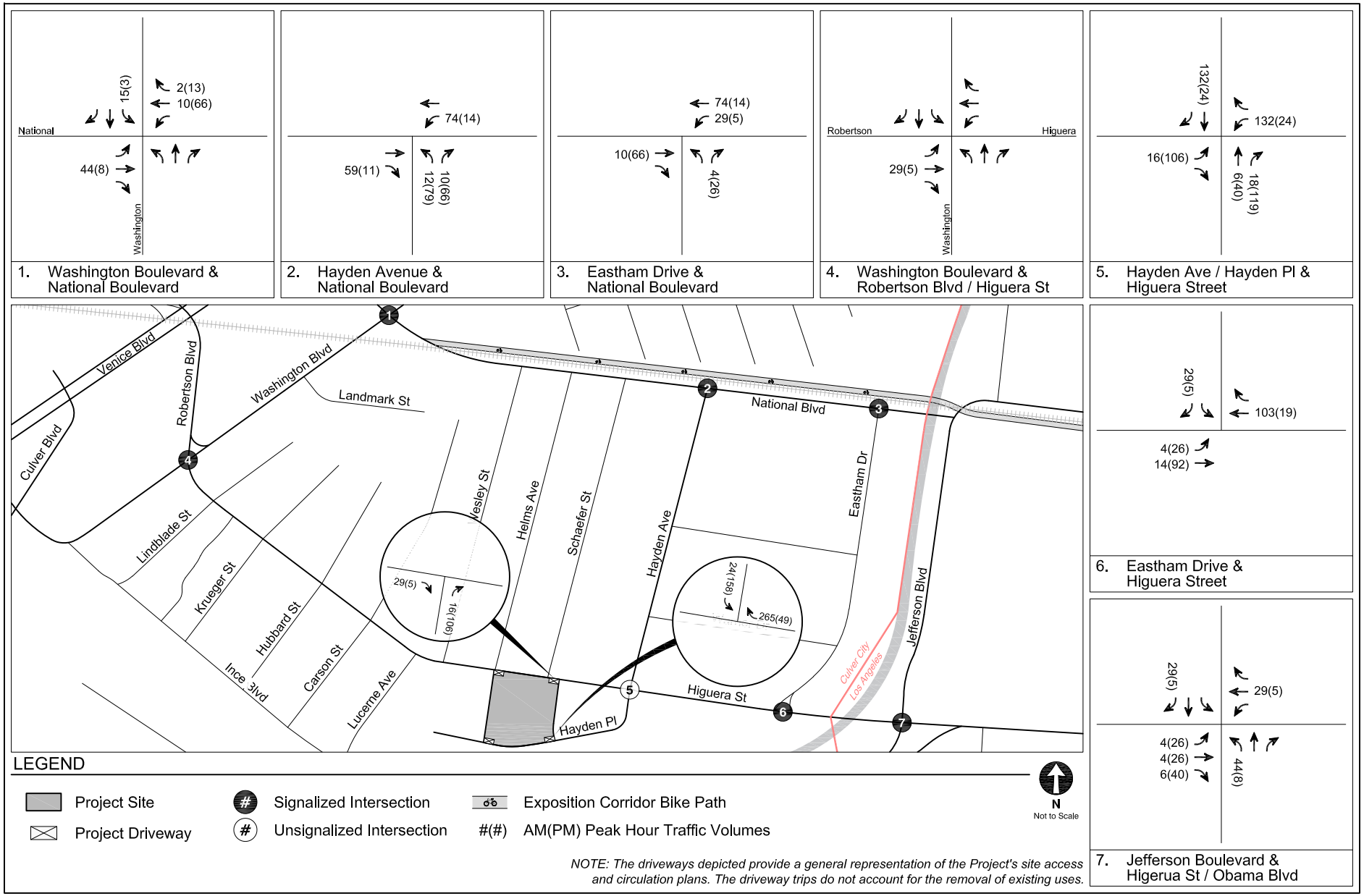
PROJECT TRIP DISTRIBUTION
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
3



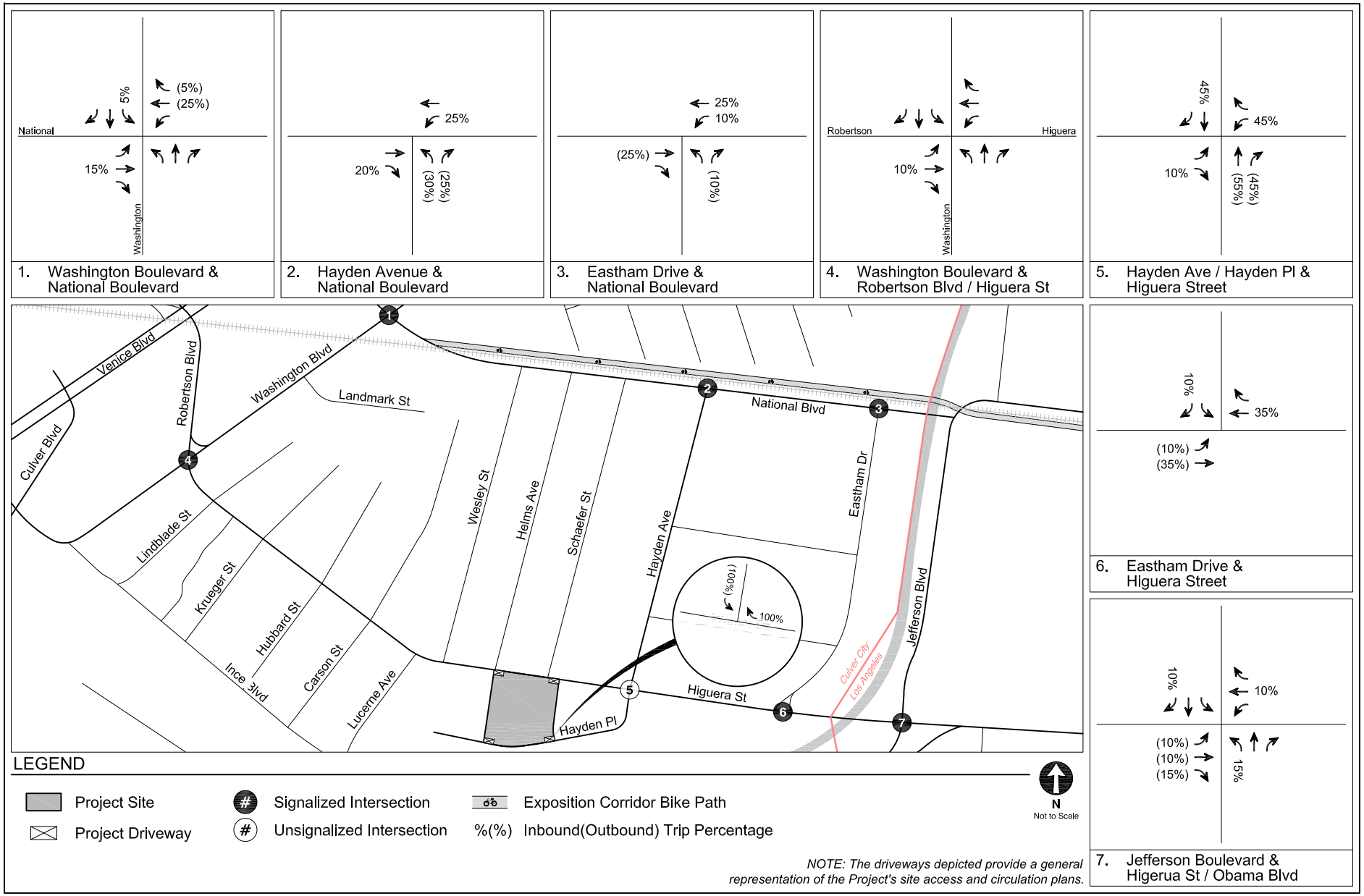
NET NEW PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
4A



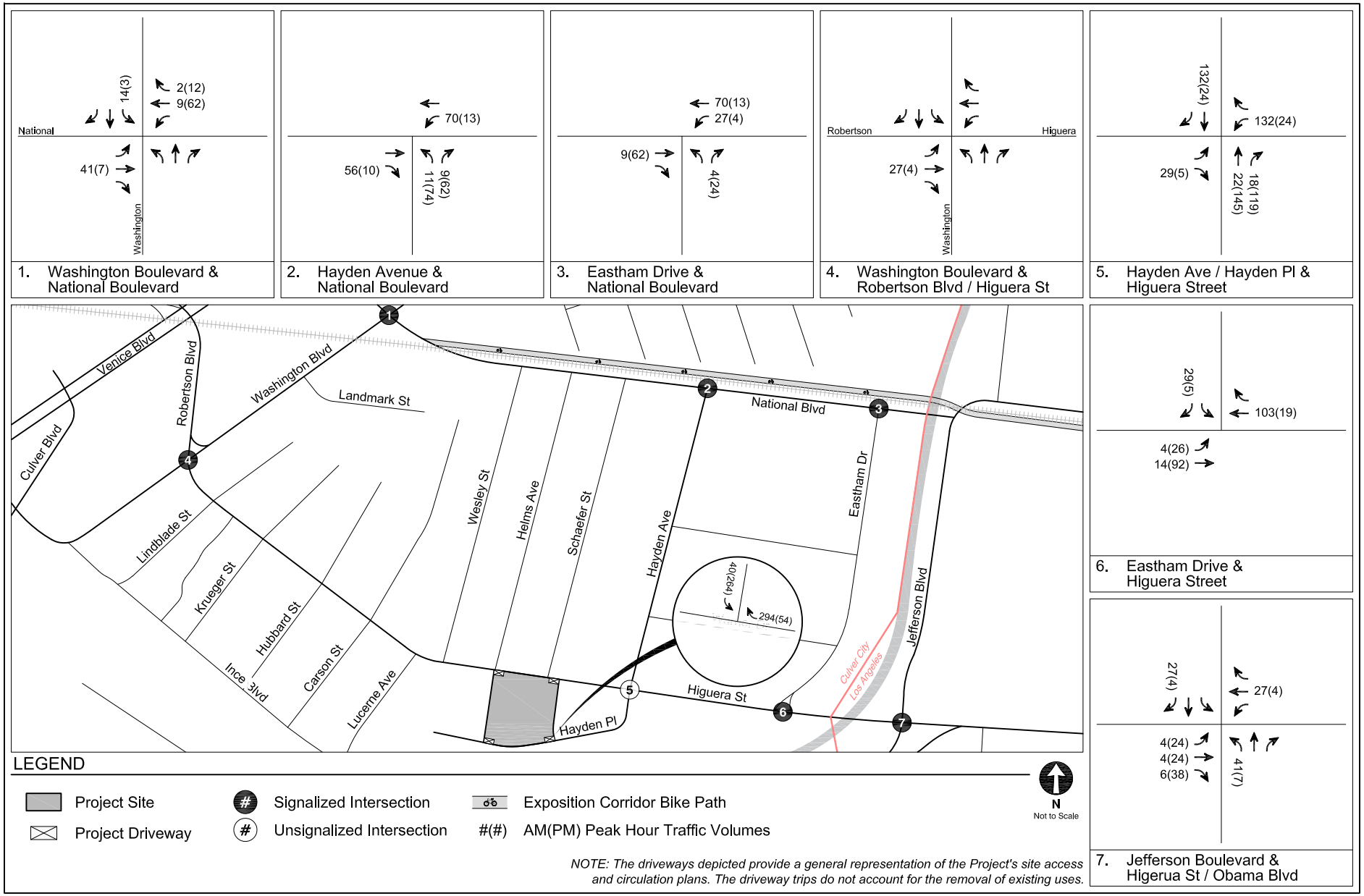
PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH LIMITED HIGUERA STREET ACCESS

FIGURE
4B



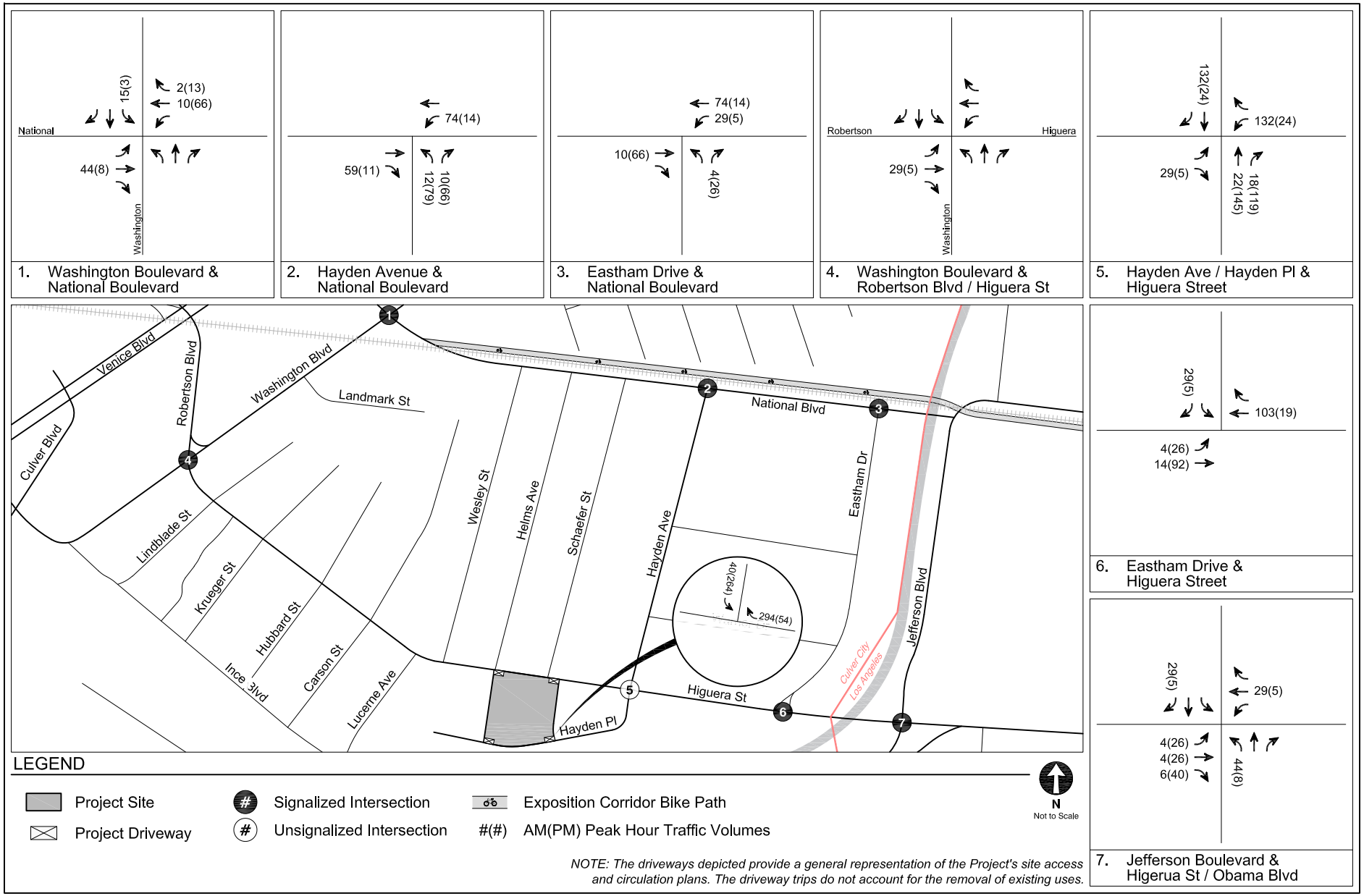
PROJECT TRIP DISTRIBUTION
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
5



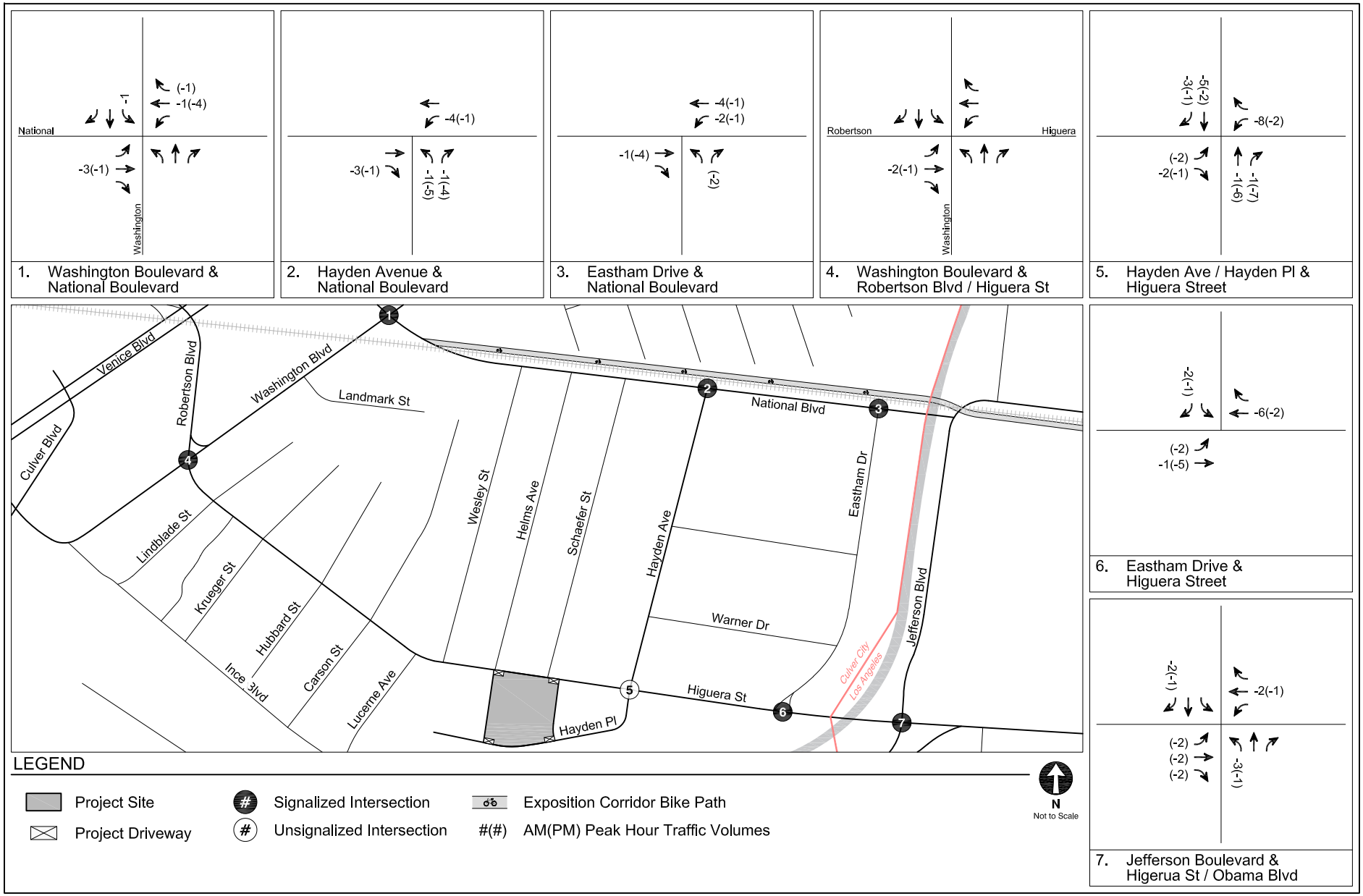
NET NEW PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
6A



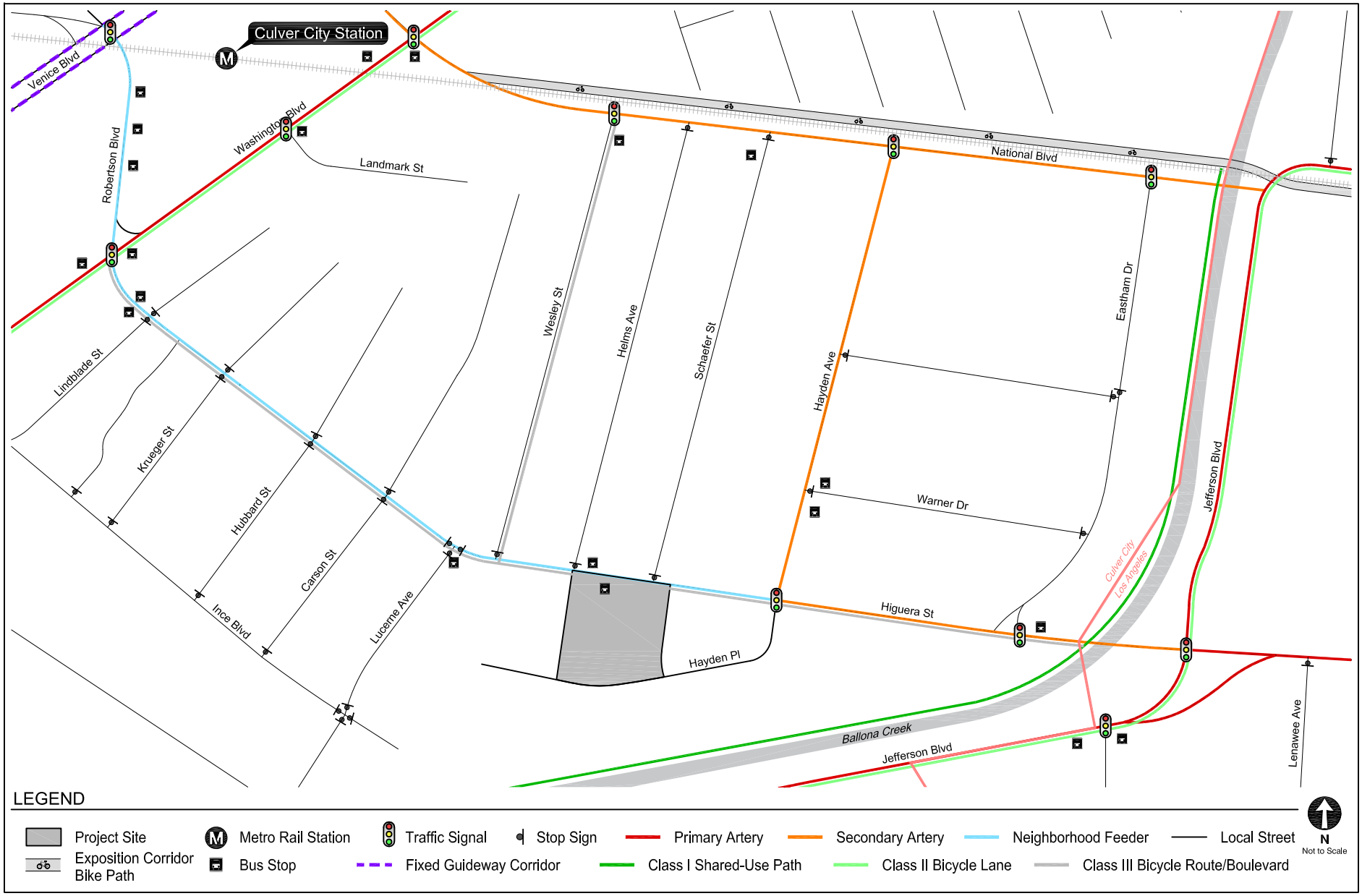
PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH HAYDEN PLACE ACCESS ONLY

FIGURE
6B



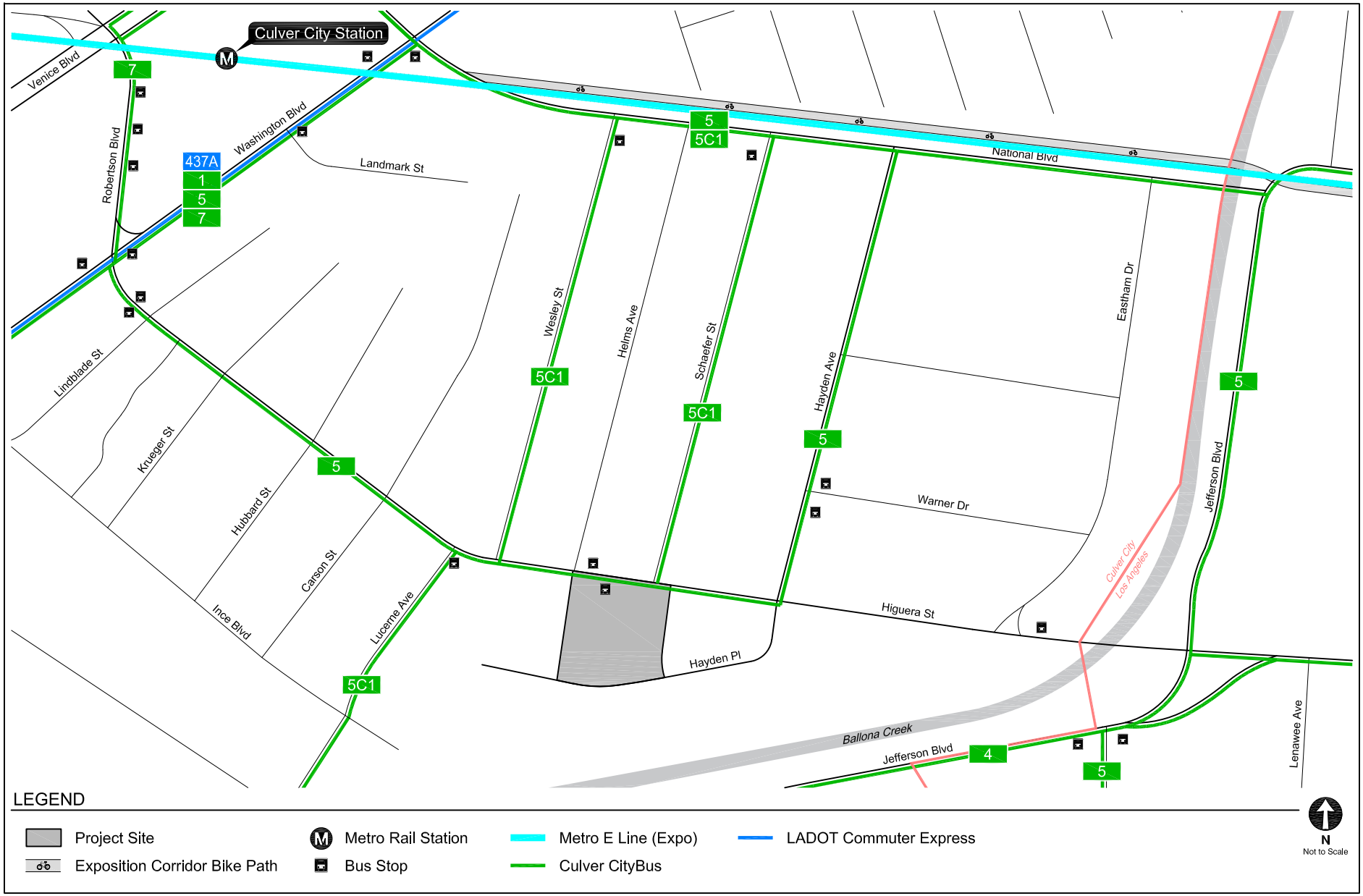
EXISTING USES TO BE REMOVED
PEAK HOUR TRAFFIC VOLUMES

FIGURE
7



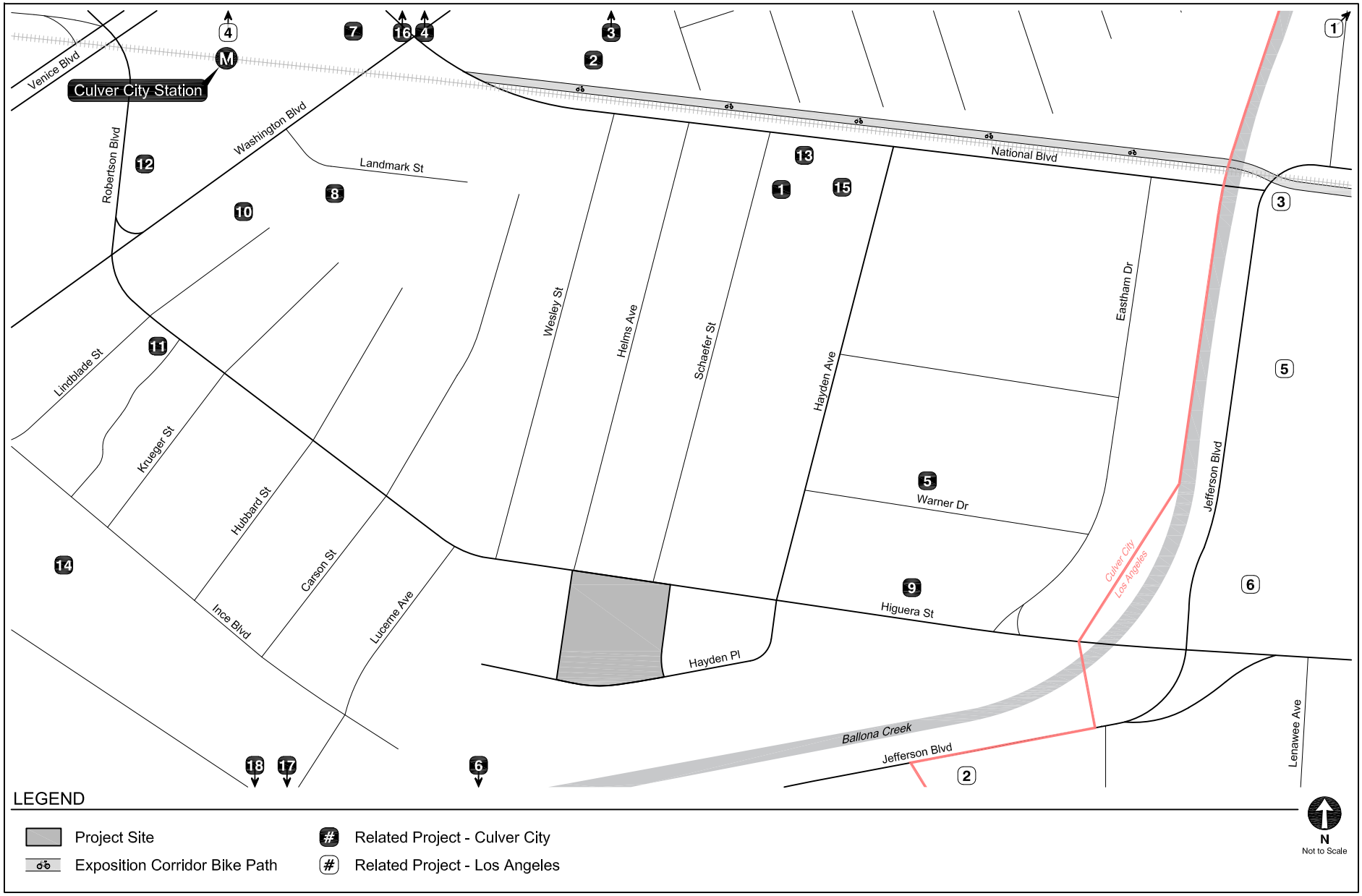
EXISTING STUDY AREA CIRCULATION

FIGURE 8



EXISTING TRANSIT SERVICE

FIGURE 9



LOCATIONS OF RELATED PROJECTS

FIGURE 10

Appendix B

Traffic Volume Data

Turning Movement Count Report AM

Location ID: 2
North/South: National Boulevard
East/West: Washington Boulevard

Date: 02/10/22
City: Culver City, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	10	44	6	22	61	12	5	230	34	6	38	3	471
7:15	2	44	7	31	116	7	11	237	37	10	38	5	545
7:30	8	72	17	41	83	22	17	192	23	17	38	11	541
7:45	9	112	14	17	108	25	5	221	29	15	52	1	608
8:00	17	140	16	19	80	27	11	152	21	16	55	10	564
8:15	22	165	11	18	102	27	7	174	27	33	82	16	684
8:30	12	183	15	30	88	44	11	181	27	29	75	10	705
8:45	12	118	21	48	90	14	23	201	26	19	68	11	651
Total Volume:	92	878	107	226	728	178	90	1588	224	145	446	67	4769
Approach %	9%	82%	10%	20%	64%	16%	5%	83%	12%	22%	68%	10%	
Peak Hr Begin:	8:00												
PHV	63	606	63	115	360	112	52	708	101	97	280	47	2604
PHF	0.871			0.906			0.861			0.809			0.923

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 2
North/South: National Boulevard
East/West: Washington Boulevard

Date: 02/10/22
City: Culver City, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:00	21	192	33	16	89	32	48	107	16	16	85	10	665
16:15	12	169	31	31	71	37	44	119	13	29	88	9	653
16:30	12	205	22	17	45	41	48	120	18	30	94	7	659
16:45	10	185	20	27	83	63	32	142	11	28	84	3	688
17:00	23	217	21	13	86	38	42	99	12	18	97	15	681
17:15	18	181	23	22	83	46	41	128	21	22	92	12	689
17:30	15	206	13	26	82	50	30	119	24	30	84	16	695
17:45	14	193	21	19	89	52	36	114	21	21	80	10	670
Total Volume:	125	1548	184	171	628	359	321	948	136	194	704	82	5400
Approach %	7%	83%	10%	15%	54%	31%	23%	67%	10%	20%	72%	8%	
Peak Hr Begin:	16:45												
PHV	66	789	77	88	334	197	145	488	68	98	357	46	2753
PHF	0.893			0.895			0.922			0.963			0.990

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Location ID: 2
North/South: National Boulevard
East/West: Washington Boulevard

Date: 02/10/22
City: Culver City, CA

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	6	0	5	0	8	1	0	1
7:15	2	0	2	0	6	0	4	0
7:30	3	1	5	0	4	2	5	0
7:45	7	0	3	0	14	3	6	0
8:00	2	0	3	0	20	0	8	0
8:15	9	0	2	0	12	0	5	0
8:30	6	2	3	1	8	0	11	0
8:45	8	0	3	0	9	0	7	0

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
16:00	11	1	19	2	22	1	8	3
16:15	7	1	2	2	17	2	11	0
16:30	12	1	5	1	14	0	12	0
16:45	12	6	3	3	6	0	12	1
17:00	12	4	5	3	7	1	5	0
17:15	15	2	4	1	16	2	7	0
17:30	20	0	13	2	11	2	9	0
17:45	6	0	7	1	20	0	14	1

National Data & Surveying Services

Intersection Turning Movement Count

Location: Hayden Ave & National Blvd
City: Culver City
Control: Signalized

Project ID: 18-05548-005
Date: 9/13/2018

Total

NS/EW Streets:	Hayden Ave				Hayden Ave				National Blvd				National Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	52	0	5	0	0	0	0	0	0	47	26	0	27	271	0	0	428
7:15 AM	34	0	3	0	0	0	0	0	0	81	37	0	25	156	0	0	336
7:30 AM	47	0	10	0	0	0	0	0	0	73	24	0	61	161	0	0	376
7:45 AM	79	0	8	0	0	0	0	0	0	153	41	0	34	146	0	0	461
8:00 AM	105	0	16	0	0	0	0	0	0	150	46	0	37	161	0	0	515
8:15 AM	44	0	9	0	0	0	0	0	0	192	52	0	28	127	0	0	452
8:30 AM	99	0	11	0	0	0	0	0	0	155	65	0	17	151	0	0	498
8:45 AM	50	0	19	0	0	0	0	0	0	167	102	0	54	197	0	0	589
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	510	0	81	0	0	0	0	0	0	1018	393	0	283	1370	0	0	3655
APPROACH %'s :	86.29%	0.00%	13.71%	0.00%					0.00%	72.15%	27.85%	0.00%	17.12%	82.88%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	298	0	55	0	0	0	0	0	0	664	265	0	136	636	0	0	2054
PEAK HR FACTOR :	0.710	0.000	0.724	0.000	0.000	0.000	0.000	0.000	0.000	0.865	0.650	0.000	0.630	0.807	0.000	0.000	0.872
	0.729								0.863				0.769				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	51	0	16	0	0	0	0	0	0	99	28	0	19	135	0	0	348
12:15 PM	45	0	14	0	0	0	0	0	0	117	46	0	10	163	0	1	396
12:30 PM	63	0	26	0	0	0	0	0	0	124	36	1	16	147	0	0	413
12:45 PM	62	0	18	0	0	0	0	0	0	148	47	0	14	152	0	2	443
1:00 PM	66	0	28	0	0	0	0	0	0	142	41	0	7	136	0	0	420
1:15 PM	45	0	19	0	0	0	0	0	0	178	42	0	13	140	0	2	439
1:30 PM	56	0	34	0	0	0	0	0	0	160	44	1	9	133	0	1	438
1:45 PM	42	0	15	0	0	0	0	0	0	204	34	0	7	131	0	0	433
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	430	0	170	0	0	0	0	0	0	1172	318	2	95	1137	0	6	3330
APPROACH %'s :	71.67%	0.00%	28.33%	0.00%					0.00%	78.55%	21.31%	0.13%	7.67%	91.84%	0.00%	0.48%	
PEAK HR :	12:45 PM - 01:45 PM																TOTAL
PEAK HR VOL :	229	0	99	0	0	0	0	0	0	628	174	1	43	561	0	5	1740
PEAK HR FACTOR :	0.867	0.000	0.728	0.000	0.000	0.000	0.000	0.000	0.000	0.882	0.926	0.250	0.768	0.923	0.000	0.625	0.982
	0.872								0.913				0.906				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	85	0	23	0	0	0	0	0	0	204	46	0	8	124	0	0	490
4:15 PM	77	0	22	0	0	0	0	0	0	255	63	0	8	104	0	0	529
4:30 PM	91	0	20	0	0	0	0	0	0	220	70	0	6	115	0	1	523
4:45 PM	72	0	21	0	0	0	0	0	0	232	71	0	7	100	0	1	504
5:00 PM	97	0	21	0	0	0	0	0	0	186	85	0	3	136	0	0	528
5:15 PM	110	0	21	0	0	0	0	0	0	124	110	0	5	140	0	0	510
5:30 PM	112	0	20	0	0	0	0	0	0	165	95	0	4	136	0	0	532
5:45 PM	98	0	10	0	0	0	0	0	0	160	87	3	5	140	0	0	503
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	742	0	158	0	0	0	0	0	0	1546	627	3	46	995	0	2	4119
APPROACH %'s :	82.44%	0.00%	17.56%	0.00%					0.00%	71.05%	28.81%	0.14%	4.41%	95.40%	0.00%	0.19%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	337	0	84	0	0	0	0	0	0	893	289	0	24	455	0	2	2084
PEAK HR FACTOR :	0.869	0.000	0.955	0.000	0.000	0.000	0.000	0.000	0.000	0.875	0.850	0.000	0.750	0.836	0.000	0.500	0.985
	0.892								0.929				0.865				

Prepared by National Data & Surveying Services

Hayden Ave & National Blvd

Peak Hour Turning Movement Count

ID: 18-05548-005
City: Culver City

Day: Thursday
Date: 09/13/2018

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	12:45 PM - 01:45 PM
PM	04:15 PM - 05:15 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	12:00 PM - 02:00 PM
PM	04:00 PM - 06:00 PM

Hayden Ave — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

National Blvd — EASTBOUND

AM	NOON	PM	
934	791	792	⇦
0	1	0	0
0	0	0	0
664	628	893	2
265	174	289	1
AM	NOON	PM	

CONTROL

Signalized

		AM	NOON	PM
TEV	2054	1740	2084
PHF	0.87	0.98	0.98

National Blvd — WESTBOUND

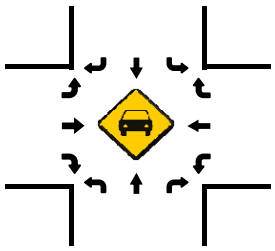
PM	NOON	AM	
0	0	0	0
455	561	636	2
24	43	136	1
2	5	0	0
979	732	719	⇨
PM	NOON	AM	

Hayden Ave — NORTHBOUND

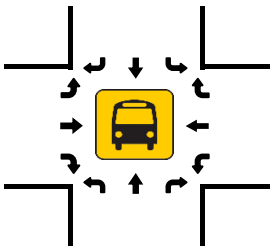
PM	313	0	337	0	84	PM
NOON	217	0	229	0	99	NOON
AM	401	0	298	0	55	AM

0 1 1 0

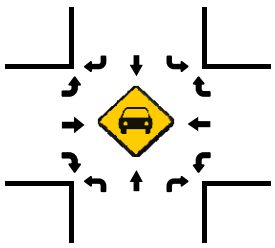
Total Vehicles (AM)



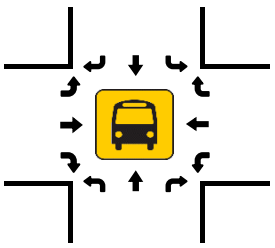
Total Vehicles (AM)



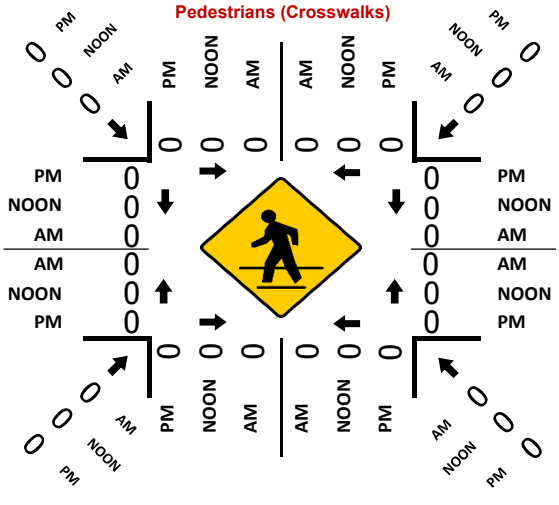
Total Vehicles (NOON)



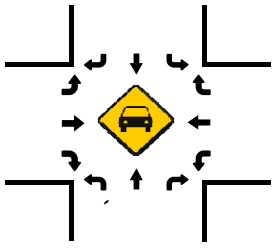
Total Vehicles (NOON)



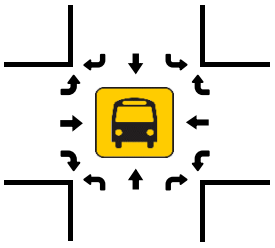
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

Eastham Dr & National Blvd

Peak Hour Turning Movement Count

ID: 18-05548-006
City: Culver City

Day: Thursday
Date: 09/13/2018

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	01:00 PM - 02:00 PM
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	12:00 PM - 02:00 PM
PM	04:00 PM - 06:00 PM

Eastham Dr — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

National Blvd — EASTBOUND

AM	NOON	PM		
757	569	471	⇦	
0	3	1	↶	0
0	0	0	↱	0
530	704	878	→	2
179	81	108	↴	0
AM	NOON	PM		

National Blvd — WESTBOUND

PM	NOON	AM		
0	0	0	↰	0
407	526	718	←	2
22	34	220	↰	1
1	0	3	↰	0
948	757	569	⇨	
PM	NOON	AM		

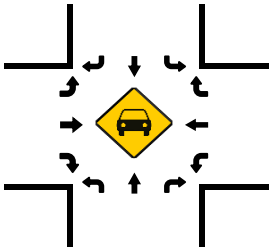
CONTROL: Signalized

		AM	NOON	PM
TEV		1725	1441	1549
PHF		0.95	0.98	0.97

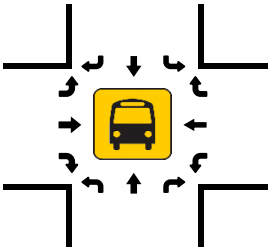
Eastham Dr — NORTHBOUND

PM	130	0	63	0	69	PM
NOON	115	0	40	0	53	NOON
AM	399	0	39	0	36	AM

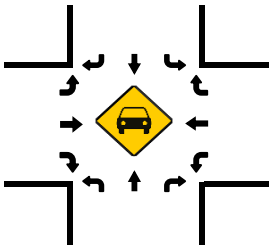
Total Vehicles (AM)



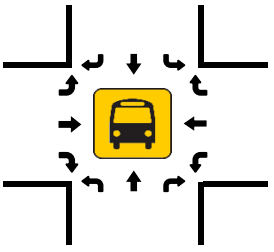
Total Vehicles (AM)



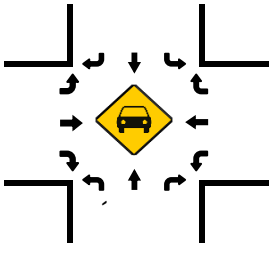
Total Vehicles (NOON)



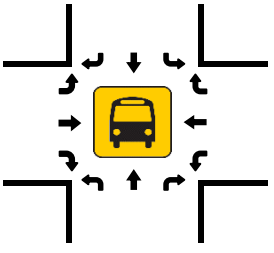
Total Vehicles (NOON)



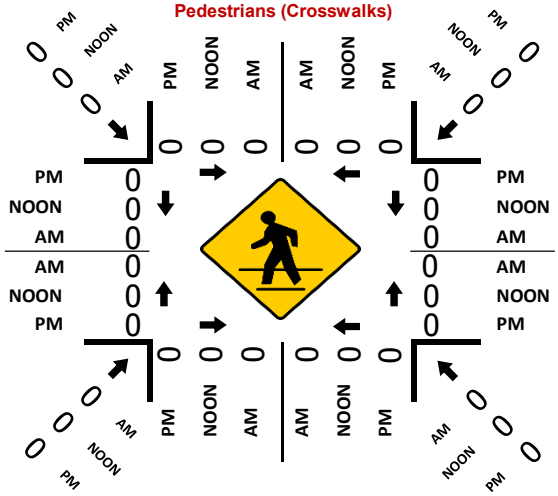
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



Turning Movement Count Report AM

Location ID: 1
North/South: Washington Boulevard
East/West: Robertson Boulevard/Higuera Street
Date: 02/10/22
City: Culver City, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	1	16	3	49	50	4	7	28	1	5	43	16	223
7:15	2	26	13	52	75	10	14	46	1	1	40	16	296
7:30	3	23	16	45	58	12	9	58	0	2	54	24	304
7:45	7	49	17	49	63	11	10	76	5	6	62	22	377
8:00	8	38	31	39	80	11	12	65	4	6	78	37	409
8:15	23	46	41	39	81	19	23	95	7	5	96	14	489
8:30	13	45	19	41	79	15	22	71	8	8	68	22	411
8:45	22	56	16	43	58	10	22	63	5	8	62	21	386
Total Volume:	79	299	156	357	544	92	119	502	31	41	503	172	2895
Approach %	15%	56%	29%	36%	55%	9%	18%	77%	5%	6%	70%	24%	
Peak Hr Begin:	8:00												
PHV	66	185	107	162	298	55	79	294	24	27	304	94	1695
PHF	0.814			0.926			0.794			0.878			0.867

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 1
North/South: Washington Boulevard
East/West: Robertson Boulevard/Higuera Street
Date: 02/10/22
City: Culver City, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:00	17	74	18	28	66	26	15	45	5	11	74	64	443
16:15	15	51	18	26	65	16	6	37	4	8	94	52	392
16:30	14	60	26	28	49	15	11	37	2	5	83	30	360
16:45	9	53	22	43	47	19	12	27	2	6	92	51	383
17:00	18	70	29	45	57	15	14	53	5	4	75	63	448
17:15	12	54	18	18	61	28	16	37	3	3	93	70	413
17:30	14	43	23	25	66	21	16	46	4	9	93	54	414
17:45	14	74	13	28	60	25	15	30	3	5	88	47	402
Total Volume:	113	479	167	241	471	165	105	312	28	51	692	431	3255
Approach %	15%	63%	22%	27%	54%	19%	24%	70%	6%	4%	59%	37%	
Peak Hr Begin:	17:00												
PHV	58	241	83	116	244	89	61	166	15	21	349	234	1677
PHF	0.816			0.959			0.840			0.910			0.936

Pedestrian/Bicycle Count Report

Location ID: 1
North/South: Washington Boulevard
East/West: Robertson Boulevard/Higuera Street
Date: 02/10/22
City: Culver City, CA

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	2	0	1	0	8	1	0	0
7:15	2	0	6	0	4	0	4	0
7:30	6	0	5	1	3	0	2	0
7:45	2	0	4	1	6	0	1	0
8:00	4	0	5	0	10	0	2	0
8:15	7	0	3	0	5	0	2	0
8:30	4	3	1	0	2	0	3	0
8:45	4	0	5	0	8	0	1	0

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
16:00	4	0	6	0	11	0	2	0
16:15	14	0	2	0	7	0	3	0
16:30	7	1	5	0	9	2	1	0
16:45	12	0	6	0	9	2	3	0
17:00	13	0	9	0	7	0	2	0
17:15	9	1	9	0	19	0	1	0
17:30	6	0	6	0	11	0	6	0
17:45	6	0	2	0	7	0	2	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Hayden Ave & Higuera St
City: Culver City
Control: Signalized

Project ID: 18-05548-014
Date: 9/13/2018

Total

NS/EW Streets:	Hayden Ave				Hayden Ave				Higuera St				Higuera St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	1	0	0	1	0	1	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	5	8	0	0	23	65	0	16	0	12	1	26	2	68	0	226
7:15 AM	0	3	6	0	0	9	141	0	13	0	8	0	14	1	64	1	260
7:30 AM	0	7	8	0	0	7	168	0	23	0	5	0	15	9	71	0	313
7:45 AM	0	8	10	0	0	6	135	0	40	0	8	0	26	4	102	0	339
8:00 AM	0	5	13	0	1	6	86	0	39	0	18	0	18	1	106	1	294
8:15 AM	0	9	11	0	0	8	105	0	45	1	23	0	16	2	95	0	315
8:30 AM	0	8	23	0	0	8	112	0	50	1	35	0	34	0	88	0	359
8:45 AM	0	14	19	0	0	15	101	0	44	0	36	0	29	6	100	0	364
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	59	98	0	1	82	913	0	270	2	145	1	178	25	694	2	2470
APPROACH %'s :	0.00%	37.58%	62.42%	0.00%	0.10%	8.23%	91.67%	0.00%	64.59%	0.48%	34.69%	0.24%	19.80%	2.78%	77.20%	0.22%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	36	66	0	1	37	404	0	178	2	112	0	97	9	389	1	1332
PEAK HR FACTOR :	0.000	0.643	0.717	0.000	0.250	0.617	0.902	0.000	0.890	0.500	0.778	0.000	0.713	0.375	0.917	0.250	0.915
		0.773				0.921				0.849				0.919			

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	1	0	0	1	0	1	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	1	12	18	0	0	10	31	0	23	0	13	0	6	0	24	0	138
12:15 PM	1	13	18	0	0	10	28	0	17	0	17	0	8	2	26	0	140
12:30 PM	0	13	21	0	0	8	34	0	8	0	21	0	10	2	43	0	160
12:45 PM	0	24	22	0	0	15	40	0	29	0	25	0	11	2	50	0	218
1:00 PM	0	22	24	0	0	8	30	0	32	0	11	0	15	1	27	0	170
1:15 PM	0	18	16	0	0	11	33	0	27	0	16	0	8	1	32	0	162
1:30 PM	0	19	28	0	0	14	25	0	25	0	19	0	14	4	29	0	177
1:45 PM	0	13	19	0	0	14	20	0	30	0	12	0	11	1	28	0	148
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	134	166	0	0	90	241	0	191	0	134	0	83	13	259	0	1313
APPROACH %'s :	0.66%	44.37%	54.97%	0.00%	0.00%	27.19%	72.81%	0.00%	58.77%	0.00%	41.23%	0.00%	23.38%	3.66%	72.96%	0.00%	
PEAK HR :	12:45 PM - 01:45 PM																TOTAL
PEAK HR VOL :	0	83	90	0	0	48	128	0	113	0	71	0	48	8	138	0	727
PEAK HR FACTOR :	0.000	0.865	0.804	0.000	0.000	0.800	0.800	0.000	0.883	0.000	0.710	0.000	0.800	0.500	0.690	0.000	0.834
		0.920				0.800				0.852				0.770			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	1	0	0	1	0	1	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	32	57	0	0	12	29	0	61	0	40	0	8	0	32	0	272
4:15 PM	1	29	56	0	0	16	22	0	59	0	41	0	8	0	41	0	273
4:30 PM	1	35	59	0	0	7	37	0	62	0	45	0	5	0	27	0	278
4:45 PM	0	31	54	0	0	15	37	0	59	1	50	0	9	2	31	0	289
5:00 PM	0	32	95	0	0	21	60	0	60	0	63	0	3	2	40	0	376
5:15 PM	0	23	97	0	0	27	70	0	37	0	59	0	5	0	45	0	363
5:30 PM	0	46	100	0	0	16	55	0	58	0	82	0	14	0	47	0	418
5:45 PM	0	54	76	0	0	12	50	0	54	0	52	0	6	2	33	0	339
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	282	594	0	0	126	360	0	450	1	432	0	58	6	296	0	2608
APPROACH %'s :	0.34%	32.08%	67.58%	0.00%	0.00%	25.93%	74.07%	0.00%	50.96%	0.11%	48.92%	0.00%	16.11%	1.67%	82.22%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	155	368	0	0	76	235	0	209	0	256	0	28	4	165	0	1496
PEAK HR FACTOR :	0.000	0.718	0.920	0.000	0.000	0.704	0.839	0.000	0.871	0.000	0.780	0.000	0.500	0.500	0.878	0.000	0.895
		0.896				0.802				0.830				0.807			

Prepared by National Data & Surveying Services

Eastham Dr & Higuera St

Peak Hour Turning Movement Count

ID: 18-05548-013
City: Culver City

Day: Thursday
Date: 09/13/2018

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	12:45 PM - 01:45 PM
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	12:00 PM - 02:00 PM
PM	04:00 PM - 06:00 PM

SOUTHBOUND (Eastham Dr)

AM	292	7	115	0	385	AM
NOON	37	0	149	0	86	NOON
PM	24	5	512	0	134	PM

1	0	1	0

EASTBOUND (Higuera St)

AM	NOON	PM	
704	215	166	⇦
0	0	3	0
15	9	39	1
116	121	469	2
0	0	1	0
AM	NOON	PM	

WESTBOUND (Higuera St)

PM	NOON	AM	
89	76	370	0
138	178	412	1
4	1	1	1
5	0	0	0
992	273	232	⇨
PM	NOON	AM	

CONTROL: Signalized

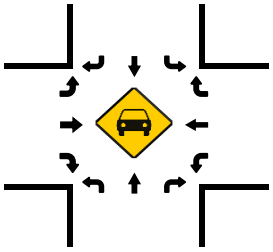
TEV	1329	575	1302
	AM	NOON	PM
PHF	0.92	0.96	0.97

NORTHBOUND (Eastham Dr)

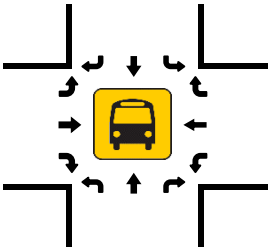
PM	10	0	1	6	6	PM
NOON	1	0	0	1	3	NOON
AM	8	0	0	0	1	AM

0	0	1	0

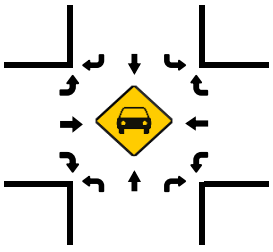
Total Vehicles (AM)



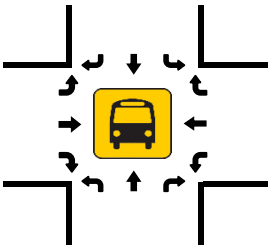
Total Vehicles (AM)



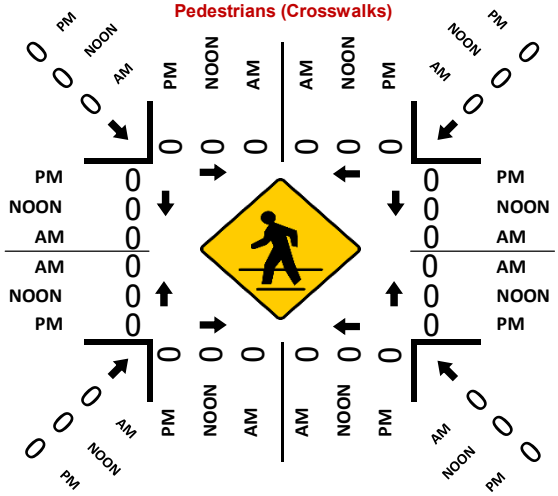
Total Vehicles (NOON)



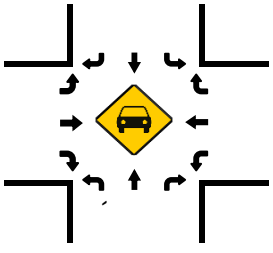
Total Vehicles (NOON)



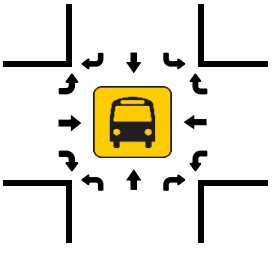
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

Rodeo Dr/Jefferson Blvd & Rodeo Rd/Higuera St

Peak Hour Turning Movement Count

ID: 18-05277-009
City: Culver City

Day: Wednesday
Date: 05/02/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	06:30 AM - 09:30 AM
NONE	NONE
04:45 PM - 05:45 PM	02:00 PM - 06:00 PM

SOUTHBOUND — Rodeo Dr/Jefferson Blvd

AM	78	808	112	0	1102	AM
NOON	0	0	0	0	0	NOON
PM	12	490	156	0	1031	PM
	0	3	1	0		

EASTBOUND — Rodeo Rd/Higuera St

AM	NOON	PM	
876	0	223	
0	0	0	0
28	0	39	1
115	0	755	2
48	0	137	1
AM	NOON	PM	

WESTBOUND — Rodeo Rd/Higuera St

PM	NOON	AM	
125	0	428	1
159	0	668	1
354	0	806	2
0	0	0	0
940	0	228	
PM	NOON	AM	

NORTHBOUND — Rodeo Dr/Jefferson Blvd

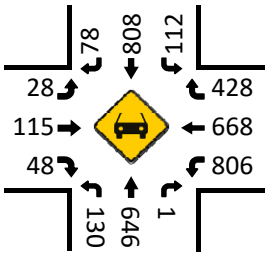
PM	983	2	52	867	29	PM
NOON	0	0	0	0	0	NOON
AM	1662	0	130	646	1	AM
		0	1	2	0	

CONTROL

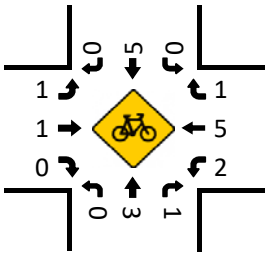
Signalized

TEV	3868 AM	0 NOON	3177 PM
PHF	0.99		0.95

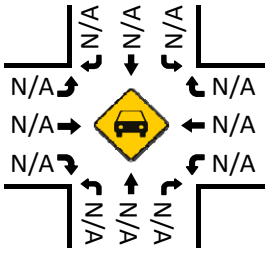
Total Vehicles (AM)



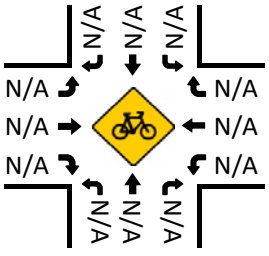
Bikes (AM)



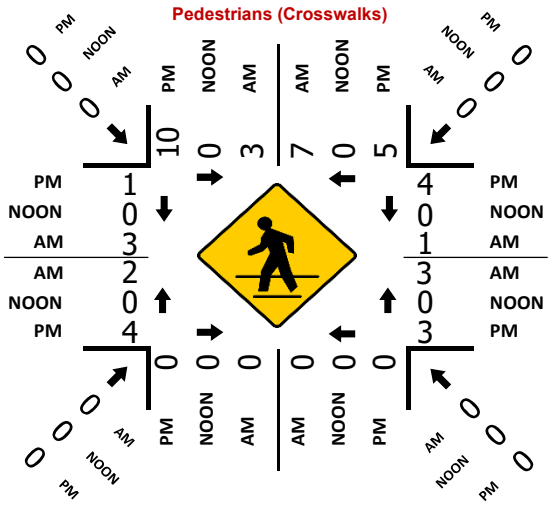
Total Vehicles (Noon)



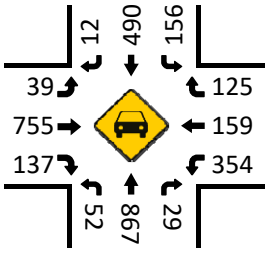
Bikes (NOON)



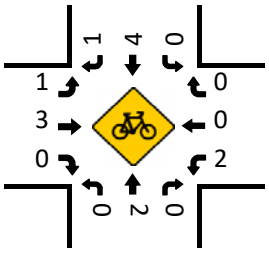
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Rodeo Dr/Jefferson Blvd & Rodeo Rd/Higuera St
City: Culver City
Control: Signalized

Project ID: 18-05277-009
Date: 5/2/2018

Total

NS/EW Streets:	Rodeo Dr/Jefferson Blvd					Rodeo Dr/Jefferson Blvd				Rodeo Rd/Higuera St				Rodeo Rd/Higuera St				
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	1	3	0	0	1	2	1	0	2	1	1	0	
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	6	96	0	0	30	9	109	8	0	1	9	4	0	131	108	143	0	654
6:45 AM	7	125	0	0	40	20	149	7	0	1	12	1	0	191	155	138	0	846
7:00 AM	15	186	0	0	55	24	133	6	0	0	8	3	0	225	167	117	0	939
7:15 AM	10	143	1	1	63	23	179	7	0	2	11	5	0	225	155	121	0	946
7:30 AM	22	161	0	0	79	24	194	7	0	2	18	3	0	286	173	117	0	1086
7:45 AM	18	116	0	0	86	34	164	11	0	5	33	9	0	232	180	131	0	1019
8:00 AM	30	157	0	0	99	20	205	18	0	12	33	12	0	195	165	113	0	1059
8:15 AM	33	167	1	0	100	29	208	15	0	5	31	11	0	222	152	106	0	1080
8:30 AM	32	167	0	0	112	27	192	16	0	3	28	11	0	206	179	102	0	1075
8:45 AM	35	155	0	0	99	36	203	29	0	8	23	14	0	183	172	107	0	1064
9:00 AM	37	155	0	1	119	24	139	22	0	9	32	15	0	194	170	120	0	1037
9:15 AM	42	164	0	0	102	32	153	9	0	2	24	12	0	171	122	102	0	935
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	287	1792	2	2	984	302	2028	155	0	50	262	100	0	2461	1898	1417	0	11740
APPROACH %'s :	9.36%	58.43%	0.07%	0.07%	32.08%	12.15%	81.61%	6.24%	0.00%	12.14%	63.59%	24.27%	0.00%	42.61%	32.86%	24.53%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																	TOTAL
PEAK HR VOL :	130	646	1	0	410	112	808	78	0	28	115	48	0	806	668	428	0	4278
PEAK HR FACTOR :	0.929	0.967	0.250	0.000	0.915	0.778	0.971	0.672	0.000	0.583	0.871	0.857	0.000	0.908	0.933	0.947	0.000	0.990
			0.954				0.931				0.838				0.976			

PM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	1	3	0	0	1	2	1	0	2	1	1	0	
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	6	159	0	0	195	52	96	7	0	9	50	12	0	111	52	49	0	798
2:15 PM	10	152	0	0	155	53	115	11	0	7	89	9	0	103	49	47	0	800
2:30 PM	8	175	4	0	215	60	97	6	0	7	75	12	0	92	60	56	0	867
2:45 PM	12	177	0	0	166	42	118	11	0	8	93	10	0	102	71	61	0	871
3:00 PM	15	178	0	0	218	53	105	11	0	8	112	12	0	104	68	50	0	934
3:15 PM	13	213	0	0	201	55	106	8	0	8	114	19	0	88	39	44	0	908
3:30 PM	14	194	3	0	218	57	84	7	0	16	144	22	0	86	51	41	0	937
3:45 PM	14	165	7	0	198	48	135	4	0	7	162	21	0	85	47	21	0	914
4:00 PM	12	206	3	0	197	54	106	3	0	13	140	30	0	66	54	35	0	919
4:15 PM	10	218	3	0	189	49	116	4	0	7	183	27	0	69	39	32	0	946
4:30 PM	12	238	16	0	168	32	124	2	0	5	146	20	0	89	41	35	0	928
4:45 PM	15	236	17	1	212	38	138	4	0	17	150	23	0	86	32	34	0	1003
5:00 PM	15	208	3	0	197	38	107	5	0	7	203	29	0	78	45	29	0	964
5:15 PM	14	201	2	1	179	43	107	2	0	6	200	42	0	93	37	23	0	950
5:30 PM	8	222	7	0	196	37	138	1	0	9	202	43	0	97	45	39	0	1044
5:45 PM	10	234	10	0	150	31	153	4	0	7	150	36	0	95	37	21	0	938
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	188	3176	75	2	3054	742	1845	90	0	141	2213	367	0	1444	767	617	0	14721
APPROACH %'s :	2.89%	48.90%	1.15%	0.03%	47.02%	27.72%	68.92%	3.36%	0.00%	5.18%	81.33%	13.49%	0.00%	51.06%	27.12%	21.82%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	52	867	29	2	784	156	490	12	0	39	755	137	0	354	159	125	0	3961
PEAK HR FACTOR :	0.867	0.918	0.426	0.500	0.925	0.907	0.888	0.600	0.000	0.574	0.930	0.797	0.000	0.912	0.883	0.801	0.000	0.949
			0.901				0.914				0.916				0.881			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rodeo Dr/Jefferson Blvd & Rodeo Rd/Higuera St
City: Culver City
Control: Signalized

Project ID: 18-05277-009
Date: 5/2/2018

Bikes

NS/EW Streets:	Rodeo Dr/Jefferson Blvd					Rodeo Dr/Jefferson Blvd				Rodeo Rd/Higuera St				Rodeo Rd/Higuera St				
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	1	3	0	0	1	2	1	0	2	1	1	0	
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
7:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	4
7:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0	0	5
7:45 AM	0	0	0	0	0	0	2	0	0	1	0	0	0	3	1	0	0	7
8:00 AM	0	1	0	0	0	0	3	0	0	0	1	0	0	0	2	0	0	7
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0	4
8:30 AM	0	2	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	5
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3
9:00 AM	0	1	0	0	0	0	0	0	0	0	0	1	0	2	1	0	0	5
9:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	2	0	5
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	1	0	0	0	12	0	0	2	1	1	0	12	10	3	0	50
APPROACH %'s :	0.00%	88.89%	11.11%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	48.00%	40.00%	12.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																	TOTAL
PEAK HR VOL :	0	3	1	0	0	0	5	0	0	1	1	0	0	2	5	1	0	19
PEAK HR FACTOR :	0.000	0.375	0.250	0.000	0.000	0.000	0.417	0.000	0.000	0.250	0.250	0.000	0.000	0.500	0.625	0.250	0.000	0.679
			0.500				0.417				0.500				0.667			

PM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	1	3	0	0	1	2	1	0	2	1	1	0	
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	1	0	0	0	0	0	1	0	0	1	0	0	1	2	0	0	6
2:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3:00 PM	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	4
3:15 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
3:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	5
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	2	1	0	0	2	0	0	0	0	0	0	5
5:30 PM	0	0	0	0	0	0	2	0	0	1	1	0	0	2	0	0	0	6
5:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	3
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	12	0	0	0	0	5	3	0	1	11	1	0	7	3	2	0	45
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	62.50%	37.50%	0.00%	7.69%	84.62%	7.69%	0.00%	58.33%	25.00%	16.67%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	0	2	0	0	0	0	4	1	0	1	3	0	0	2	0	0	0	13
PEAK HR FACTOR :	0.00	0.500	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.250	0.375	0.000	0.000	0.250	0.000	0.000	0.000	0.542
			0.500				0.417				0.500				0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rodeo Dr/Jefferson Blvd & Rodeo Rd/Higuera St **Project ID:** 18-05277-009
City: Culver City **Date:** 5/2/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Rodeo Dr/Jefferson Blvd		Rodeo Dr/Jefferson Blvd		Rodeo Rd/Higuera St		Rodeo Rd/Higuera St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:30 AM	1	6	0	0	0	0	0	1	8
6:45 AM	0	0	0	0	0	2	0	0	2
7:00 AM	0	3	0	0	0	1	0	0	4
7:15 AM	0	1	0	0	0	2	0	0	3
7:30 AM	1	1	0	0	0	2	1	1	6
7:45 AM	2	0	0	0	1	1	1	0	5
8:00 AM	0	0	0	0	1	0	0	0	1
8:15 AM	2	2	0	0	0	0	1	1	6
8:30 AM	0	1	0	0	0	0	0	1	2
8:45 AM	1	4	0	0	2	1	1	1	10
9:00 AM	2	2	0	0	0	1	0	2	7
9:15 AM	1	0	0	0	0	0	1	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	10	20	0	0	4	10	5	7	56
APPROACH %'s :	33.33%	66.67%			28.57%	71.43%	41.67%	58.33%	
PEAK HR :	**08:00 AM - 09:00 AM**								TOTAL
PEAK HR VOL :	3	7	0	0	3	1	2	3	19
PEAK HR FACTOR :	0.375	0.438			0.375	0.250	0.500	0.750	0.475
	0.500				0.333		0.625		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
2:00 PM	0	2	1	0	1	0	0	1	5
2:15 PM	3	1	0	0	0	0	0	0	4
2:30 PM	1	4	0	0	0	0	1	0	6
2:45 PM	1	0	1	0	0	0	3	1	6
3:00 PM	3	5	0	0	0	0	0	1	9
3:15 PM	1	3	0	0	0	5	0	0	9
3:30 PM	2	4	1	0	2	0	1	2	12
3:45 PM	6	5	0	0	0	0	2	0	13
4:00 PM	5	0	0	0	1	2	1	0	9
4:15 PM	0	0	1	0	1	0	0	0	2
4:30 PM	3	2	0	0	0	0	0	0	5
4:45 PM	1	2	0	0	1	1	0	0	5
5:00 PM	5	1	0	0	1	1	3	1	12
5:15 PM	1	0	0	0	1	0	1	0	3
5:30 PM	3	2	0	0	0	2	0	0	7
5:45 PM	0	0	0	0	0	1	0	0	1
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	35	31	4	0	8	12	12	6	108
APPROACH %'s :	53.03%	46.97%	100.00%	0.00%	40.00%	60.00%	66.67%	33.33%	
PEAK HR :	**04:45 PM - 05:45 PM**								TOTAL
PEAK HR VOL :	10	5	0	0	3	4	4	1	27
PEAK HR FACTOR :	0.500	0.625			0.750	0.500	0.333	0.250	0.563
	0.625				0.875		0.313		

Appendix C

VMT Analysis Worksheets

VMT Tool - Report

Project Name	Project Parcel(s)
8631 Hayden Place	4204005019

Project Screening

	Yes/No
Is this project within ½ mile of one of the following transit hubs? - Culver City Expo Station - La Cienega/Jefferson Expo Station - Westfield-Culver City Transit Center - Sepulveda/Venice intersection	Yes
Is the project located within any TPA and are at least 15% of the on-site residential units are affordable?	N/A

	Yes/No
Does this project generate fewer than 250 daily trips?	N/A
Is the retail component of project fewer than 50,000 square feet in size at every store?	0
Is this residential component of the project 100% affordable housing?	N/A

No analysis required. This project meets the screening criteria.

Project Land Use

Residential	Value (du)
Single Family	0
Multi-Family	0
Affordable Housing	
Family	0
Senior	0
Special Needs	0
Permanent Supportive	0

Office	Value (ksf)
Standard	245.000

Medical	Value (ksf)
Medical Office	0.000
Hospital	0.000

Industrial	Value (ksf)
Light Industrial	0.000
Manufacturing	0.000
Warehousing / Self-Storage	0.000

Movie Studio	Value (ksf)
Office	0.000
Post Production	0.000
Stage	0.000
Support	0.000

The following land uses will require separate impact analysis (outside of this tool) if not screened out. Please leave the land uses in the table below if they are part of a mixed use project.

Retail	Value (ksf)
General	0.000
Supermarket	0.000
Bank	0.000
Health Club	0.000
Gas Station	0.000
Auto Repair	0.000
Home Improvement Superstore	0.000
Free-Standing Discount	0.000
Restaurant Non-fast-food	0.000
Restaurant Fast-food	0.000

	Value (seats)
Theater w/ Matinee	0.000

Hotel	Value (rooms)
Hotel	0
Motel	0

School	Value (students)
University	0
High School	0
Middle School	0
Elementary	0

Proposed Project Summary

	Total Daily		Household VMT				Work VMT			
	Trips	VMT	City VMT per capita	Project VMT per capita	Project vs. City Difference (%)	Significant VMT Impact?*	City VMT per employee	Project VMT per employee	Project vs. City Difference (%)	Significant VMT Impact?*
Proposed Project	**N/A**	**N/A**	**8.3**	**N/A**	**N/A**	**N/A**	**10.1**	**N/A**	**N/A**	**N/A**
Proposed Project w/ Mitigation	**N/A**	**N/A**	**8.3**	**N/A**	**N/A**	**N/A**	**10.1**	**N/A**	**N/A**	**N/A**

*A significant impact occurs unless the project metric is 15% or more below the City metric. For VMT per capita, the project metric must be below 7.1 for VMT per employee the project must be below 8.6

VMT Tool - Report

Transportation Demand Management Strategies

TDM VMT Adjustments Summary

	Residential	Office/Retail/Other	Combined Total
Proposed Project	0.0%	0.0%	0.0%
Proposed Project w/ Mitigation	0.0%	0.0%	0.0%

MEASURE TYPE	TDM MEASURE INPUT		TDM VMT Adjustments	
Parking				
Off-Street Parking Pricing				
☐ proposed project	$ 0	Baseline Off-Street Cost ($/space)	Residential	
	$ 0	Proposed Off-Street Cost ($/space)	Office/Retail/Other	
On-Street Parking Pricing				
☐ proposed project	$ 100	Baseline On-Street Cost ($/space)	Residential	
	$ 200	Proposed On-Street Cost ($/space)	Office/Retail/Other	
Parking Supply				
☐ proposed project	0	Required Number of Spaces (for resident)	Residential	
	0	Proposed Number of Spaces (for resident)		
Transit				
Transit Frequency				
☐ proposed project	9	Baseline Frequency (minutes)	Residential	
	5	Proposed Frequency (minutes)	Office/Retail/Other	
Point-to-point Shuttles				
☐ proposed project	Select to include in the project.		Office/Retail/Other	
Last Mile Shuttles				
☐ proposed project	Select to include in the project.		Office/Retail/Other	
Commute Trip Reductions				
Commute Marketing Program				
☐ proposed project	☐ Employees		Residential	
	☐ Residents		Office/Retail/Other	
Financial Commuter Incentives				
☐ proposed project	You may choose only one Financial Commuter Strategy, Commuter Incentives or Transit S		Residential	
			Office/Retail/Other	
☐ Commuter Incentives	$ 0 per 0	Financial Incentive ($/day or $/month)		
	$ 0 per 0	Average Baseline Commute Cost ($/day or $/month)		
☐ Transit Subsidies	☐ Employees 0%	Percentage of Cost Subsidized		
	☐ Residents 0%	Percentage of Cost Subsidized		
Site Design				
Pedestrian-Oriented Design				
☐ proposed project	Select to include in the project.		Residential	
			Office/Retail/Other	

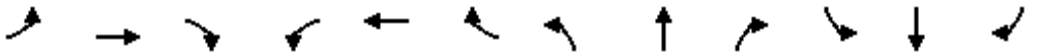
version 0.90

Appendix D

HCM Analysis Worksheets

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/22/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	618	64	103	722	53	48	286	99	114	367	117
Future Volume (veh/h)	64	618	64	103	722	53	48	286	99	114	367	117
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	70	672	70	112	785	58	52	311	108	124	399	127
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	148	875	623	145	853	614	460	631	535	521	633	536
Arrive On Green	0.08	0.25	0.25	0.16	0.48	0.48	0.15	0.34	0.34	0.15	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	70	672	70	112	785	58	52	311	108	124	399	127
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.5	21.1	0.7	7.2	24.7	0.0	0.0	15.9	4.3	0.0	21.5	6.9
Cycle Q Clear(g_c), s	4.5	21.1	0.7	7.2	24.7	0.0	0.0	15.9	4.3	0.0	21.5	6.9
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	148	875	623	145	853	614	460	631	535	521	633	536
V/C Ratio(X)	0.47	0.77	0.11	0.77	0.92	0.09	0.11	0.49	0.20	0.24	0.63	0.24
Avail Cap(c_a), veh/h	267	1031	692	208	918	643	460	631	535	521	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	42.0	10.4	49.2	30.1	15.8	30.8	31.6	15.4	28.8	33.4	28.6
Incr Delay (d2), s/veh	2.3	3.0	0.1	10.0	13.0	0.1	0.1	2.7	0.8	0.2	4.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	14.7	1.3	6.1	14.6	1.3	2.0	12.2	4.1	4.8	15.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	45.1	10.5	59.2	43.1	15.9	30.9	34.3	16.2	29.1	38.1	29.6
LnGrp LOS	D	D	B	E	D	B	C	C	B	C	D	C
Approach Vol, veh/h		812			955			471			650	
Approach Delay, s/veh		42.9			43.3			29.8			34.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.5	46.3	15.6	34.6	23.4	46.4	15.1	35.1
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	17.9	6.5	26.7	2.0	23.5	9.2	23.1
Green Ext Time (p_c), s	0.1	2.2	0.1	2.1	0.0	2.7	0.1	3.8

Intersection Summary	
HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	691	276	141	661	310	57
Future Volume (veh/h)	691	276	141	661	310	57
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	751	300	153	718	395	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1897	1282	478	2289	980	436
Arrive On Green	1.00	1.00	0.15	1.00	0.28	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3563	1585
Grp Volume(v), veh/h	751	300	153	718	395	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	4.3	0.0	10.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.3	0.0	10.8	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1897	1282	478	2289	980	436
V/C Ratio(X)	0.40	0.23	0.32	0.31	0.40	0.00
Avail Cap(c_a), veh/h	1897	1282	682	2289	980	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.96	0.96	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	8.6	0.0	35.5	0.0
Incr Delay (d2), s/veh	0.5	0.3	0.4	0.3	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	2.7	0.2	8.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.3	8.9	0.3	36.7	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1051			871	395	
Approach Delay, s/veh	0.4			1.9	36.7	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	13.2	69.8		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	12.8	6.3	2.0		2.0
Green Ext Time (p_c), s	1.4	0.3	7.7		6.0

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	551	186	232	747	69	51
Future Volume (veh/h)	551	186	232	747	69	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	599	202	252	812	75	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1943	654	565	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	2704	879	679	3647	1781	1585
Grp Volume(v), veh/h	407	394	252	812	75	55
Grp Sat Flow(s),veh/h/ln	1777	1712	679	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	18.1	9.1	4.4	3.6
Cycle Q Clear(g_c), s	0.0	0.0	18.1	9.1	4.4	3.6
Prop In Lane		0.51	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1274	565	2645	312	277
V/C Ratio(X)	0.31	0.31	0.45	0.31	0.24	0.20
Avail Cap(c_a), veh/h	1322	1274	565	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	6.2	5.1	42.6	42.3
Incr Delay (d2), s/veh	0.6	0.6	2.5	0.3	1.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.4	4.8	5.5	3.7	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.6	8.8	5.4	44.5	43.9
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	801			1064	130	
Approach Delay, s/veh	0.6			6.2	44.2	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	25.0	95.0	95.0
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	21.0	89.3	89.3
Max Q Clear Time (g_c+I1), s	6.4	2.0	20.1
Green Ext Time (p_c), s	0.3	6.3	11.0

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	189	67	24	300	81	96	310	28	56	304	165
Future Volume (veh/h)	109	189	67	24	300	81	96	310	28	56	304	165
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	118	205	73	26	326	88	104	337	30	61	330	0
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	146	420	356	86	358	303	599	1121	950	579	1121	
Arrive On Green	0.08	0.22	0.22	0.05	0.19	0.19	0.60	0.60	0.60	0.60	0.60	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1050	1870	1585	1015	1870	1585
Grp Volume(v), veh/h	118	205	73	26	326	88	104	337	30	61	330	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1050	1870	1585	1015	1870	1585
Q Serve(g_s), s	7.8	11.5	4.5	1.7	20.5	5.7	6.4	10.6	0.9	3.7	10.3	0.0
Cycle Q Clear(g_c), s	7.8	11.5	4.5	1.7	20.5	5.7	16.7	10.6	0.9	14.3	10.3	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	146	420	356	86	358	303	599	1121	950	579	1121	
V/C Ratio(X)	0.81	0.49	0.21	0.30	0.91	0.29	0.17	0.30	0.03	0.11	0.29	
Avail Cap(c_a), veh/h	157	420	356	150	382	324	599	1121	950	579	1121	
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	0.00
Uniform Delay (d), s/veh	54.2	40.5	37.8	55.1	47.5	41.6	15.7	11.7	9.8	15.2	11.7	0.0
Incr Delay (d2), s/veh	24.9	0.9	0.3	1.9	24.6	0.5	0.6	0.7	0.1	0.4	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	9.2	3.2	1.5	17.6	4.1	3.0	8.0	0.6	1.7	7.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.1	41.4	38.1	57.1	72.2	42.1	16.4	12.4	9.9	15.6	12.4	0.0
LnGrp LOS	E	D	D	E	E	D	B	B	A	B	B	
Approach Vol, veh/h		396			440			471			391	A
Approach Delay, s/veh		52.0			65.3			13.1			12.9	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	77.5	10.2	32.3	77.5	14.2	28.2
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	18.7	3.7	13.5	16.3	9.8	22.5
Green Ext Time (p_c), s	2.9	0.0	1.0	2.5	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

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	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	102	414	37	69	0	0
Future Vol, veh/h	102	414	37	69	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	450	40	75	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.5	8.5	0
HCM LOS	B	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	35%	0%	0%	100%
Vol Right, %	65%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	106	102	414	0
LT Vol	0	102	0	0
Through Vol	37	0	0	0
RT Vol	69	0	414	0
Lane Flow Rate	115	111	450	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.15	0.161	0.504	0
Departure Headway (Hd)	4.674	5.237	4.034	5.227
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	772	676	878	0
Service Time	2.674	3.032	1.829	3.236
HCM Lane V/C Ratio	0.149	0.164	0.513	0
HCM Control Delay	8.5	9.1	10.9	8.2
HCM Lane LOS	A	A	B	N
HCM 95th-tile Q	0.5	0.6	2.9	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	121	0	1	428	385	0	0	1	120	7	304
Future Volume (veh/h)	16	121	0	1	428	385	0	0	1	120	7	304
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	17	132	0	1	465	418	0	0	1	130	8	0
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	214	2245	0	837	573	515	0	0	107	222	14	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	629	3647	0	1258	908	816	0	0	1585	1683	104	1585
Grp Volume(v), veh/h	17	132	0	1	0	883	0	0	1	138	0	0
Grp Sat Flow(s),veh/h/ln	629	1777	0	1258	0	1724	0	0	1585	1786	0	1585
Q Serve(g_s), s	2.5	1.7	0.0	0.0	0.0	46.4	0.0	0.0	0.1	8.7	0.0	0.0
Cycle Q Clear(g_c), s	49.0	1.7	0.0	1.7	0.0	46.4	0.0	0.0	0.1	8.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.47	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	214	2245	0	837	0	1089	0	0	107	236	0	
V/C Ratio(X)	0.08	0.06	0.00	0.00	0.00	0.81	0.00	0.00	0.01	0.59	0.00	
Avail Cap(c_a), veh/h	214	2245	0	837	0	1089	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.51	0.00	0.51	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.2	8.5	0.0	8.8	0.0	16.7	0.0	0.0	52.2	49.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.2	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	1.1	0.0	0.0	0.0	23.0	0.0	0.0	0.1	7.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	8.5	0.0	8.8	0.0	20.2	0.0	0.0	52.4	51.3	0.0	0.0
LnGrp LOS	D	A	A	A	A	C	A	A	D	D	A	
Approach Vol, veh/h		149			884			1			138	A
Approach Delay, s/veh		11.5			20.2			52.4			51.3	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.6
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	51.0	2.1	48.4	10.7
Green Ext Time (p_c), s	0.8	0.0	8.3	0.5

Intersection Summary		
HCM 6th Ctrl Delay	22.8	
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	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	115	48	806	668	428	130	646	1	112	808	78
Future Volume (veh/h)	28	115	48	806	668	428	130	646	1	112	808	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	125	52	876	726	465	141	702	0	122	878	85
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	112	1528	682	1119	804	682	239	1607		316	1607	717
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45	0.00	0.45	0.45	0.45
Sat Flow, veh/h	470	3554	1585	2342	1870	1585	583	3554	1585	745	3554	1585
Grp Volume(v), veh/h	30	125	52	876	726	465	141	702	0	122	878	85
Grp Sat Flow(s),veh/h/ln	470	1777	1585	1171	1870	1585	583	1777	1585	745	1777	1585
Q Serve(g_s), s	5.7	1.9	1.7	31.8	32.5	21.3	20.9	12.1	0.0	12.0	16.2	2.8
Cycle Q Clear(g_c), s	38.3	1.9	1.7	33.6	32.5	21.3	37.0	12.1	0.0	24.2	16.2	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	112	1528	682	1119	804	682	239	1607		316	1607	717
V/C Ratio(X)	0.27	0.08	0.08	0.78	0.90	0.68	0.59	0.44		0.39	0.55	0.12
Avail Cap(c_a), veh/h	112	1528	682	1126	810	687	239	1607		319	1619	722
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	15.2	15.1	25.1	23.9	20.7	31.4	16.8	0.0	25.1	17.9	14.3
Incr Delay (d2), s/veh	1.3	0.0	0.0	3.6	13.3	2.7	10.3	0.9	0.0	3.5	1.3	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	1.2	1.3	1.1	13.4	22.4	12.2	6.3	8.4	0.0	4.2	10.6	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	15.2	15.2	28.7	37.2	23.4	41.7	17.7	0.0	28.6	19.3	14.6
LnGrp LOS	D	B	B	C	D	C	D	B		C	B	B
Approach Vol, veh/h		207			2067			843	A		1085	
Approach Delay, s/veh		19.2			30.5			21.7			20.0	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	46.0	44.0	46.0	44.0
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	26.2	35.6	39.0	40.3
Green Ext Time (p_c), s	9.6	2.7	1.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

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

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

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

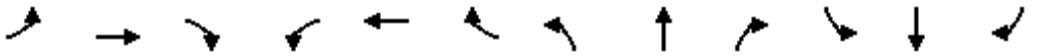
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	119	0	0	40	420
Future Vol, veh/h	0	119	0	0	40	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	129	0	0	43	457
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	8.6	0	10.6
HCM LOS	A	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	9%
Vol Right, %	0%	0%	100%	91%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	119	460
LT Vol	0	0	0	0
Through Vol	0	0	0	40
RT Vol	0	0	119	420
Lane Flow Rate	0	0	129	500
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.173	0.516
Departure Headway (Hd)	4.722	5.526	4.82	3.717
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	745	975
Service Time	2.743	3.254	2.548	1.725
HCM Lane V/C Ratio	0	0	0.173	0.513
HCM Control Delay	7.7	8.3	8.6	10.6
HCM Lane LOS	N	N	A	B
HCM 95th-tile Q	0	0	0.6	3

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/22/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	805	67	69	498	148	47	364	100	201	341	90
Future Volume (veh/h)	79	805	67	69	498	148	47	364	100	201	341	90
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	86	875	73	75	541	161	51	396	109	218	371	98
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	267	960	619	123	657	563	419	567	481	461	661	560
Arrive On Green	0.15	0.27	0.27	0.14	0.37	0.37	0.12	0.30	0.30	0.17	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	86	875	73	75	541	161	51	396	109	218	371	98
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.2	28.6	0.7	4.8	16.5	0.0	0.0	22.5	4.7	1.7	19.2	5.1
Cycle Q Clear(g_c), s	5.2	28.6	0.7	4.8	16.5	0.0	0.0	22.5	4.7	1.7	19.2	5.1
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	267	960	619	123	657	563	419	567	481	461	661	560
V/C Ratio(X)	0.32	0.91	0.12	0.61	0.82	0.29	0.12	0.70	0.23	0.47	0.56	0.17
Avail Cap(c_a), veh/h	267	1001	637	165	977	706	419	567	481	461	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	42.4	11.0	50.2	36.0	20.9	34.3	36.9	18.5	38.7	31.3	26.7
Incr Delay (d2), s/veh	0.7	11.9	0.1	4.6	3.5	0.3	0.1	7.0	1.1	0.8	3.4	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	4.2	20.2	1.5	3.9	10.2	4.6	2.1	16.8	4.5	9.4	14.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	54.3	11.0	54.8	39.5	21.2	34.4	43.9	19.6	39.5	34.7	27.4
LnGrp LOS	D	D	B	D	D	C	C	D	B	D	C	C
Approach Vol, veh/h		1034			777			556			687	
Approach Delay, s/veh		50.6			37.2			38.3			35.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.2	42.2	23.6	28.0	20.2	48.2	13.6	38.0
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	3.7	24.5	7.2	18.5	2.0	21.2	6.8	30.6
Green Ext Time (p_c), s	0.5	2.2	0.1	3.7	0.0	2.6	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	929	301	25	473	350	67
Future Volume (veh/h)	929	301	25	473	350	67
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1010	327	27	514	448	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2002	1329	369	2289	980	436
Arrive On Green	1.00	1.00	0.09	1.00	0.28	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3563	1585
Grp Volume(v), veh/h	1010	327	27	514	448	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	0.7	0.0	12.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.7	0.0	12.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2002	1329	369	2289	980	436
V/C Ratio(X)	0.50	0.25	0.07	0.22	0.46	0.00
Avail Cap(c_a), veh/h	2002	1329	433	2289	980	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.98	0.98	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	8.2	0.0	36.1	0.0
Incr Delay (d2), s/veh	0.5	0.3	0.1	0.2	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.2	0.5	0.1	9.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.3	8.3	0.2	37.6	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1337			541	448	
Approach Delay, s/veh	0.5			0.6	37.6	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	9.7	73.3		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	14.5	2.7	2.0		2.0
Green Ext Time (p_c), s	1.5	0.0	11.8		4.0

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	913	112	23	423	66	72
Future Volume (veh/h)	913	112	23	423	66	72
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	992	122	25	460	72	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1113	137	111	1241	1015	903
Arrive On Green	0.70	0.70	0.35	0.35	0.57	0.57
Sat Flow, veh/h	3279	392	506	3647	1781	1585
Grp Volume(v), veh/h	553	561	25	460	72	78
Grp Sat Flow(s),veh/h/ln	1777	1800	506	1777	1781	1585
Q Serve(g_s), s	29.8	29.9	5.6	11.6	2.2	2.7
Cycle Q Clear(g_c), s	29.8	29.9	35.5	11.6	2.2	2.7
Prop In Lane		0.22	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	621	629	111	1241	1015	903
V/C Ratio(X)	0.89	0.89	0.23	0.37	0.07	0.09
Avail Cap(c_a), veh/h	1293	1309	302	2585	1015	903
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	16.3	51.1	29.2	11.6	11.7
Incr Delay (d2), s/veh	4.1	4.1	1.0	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.9	11.1	1.3	8.7	1.6	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	20.3	52.1	29.4	11.7	11.9
LnGrp LOS	C	C	D	C	B	B
Approach Vol, veh/h	1114			485	150	
Approach Delay, s/veh	20.3			30.5	11.8	
Approach LOS	C			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	72.4	47.6	47.6
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	23.0	87.3	87.3
Max Q Clear Time (g_c+I1), s	4.7	31.9	37.5
Green Ext Time (p_c), s	0.4	10.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	246	59	15	169	62	239	356	21	91	249	118
Future Volume (veh/h)	85	246	59	15	169	62	239	356	21	91	249	118
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	92	267	64	16	184	67	260	387	23	99	271	0
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	142	317	269	61	233	197	739	1251	1060	640	1251	
Arrive On Green	0.08	0.17	0.17	0.03	0.12	0.12	0.67	0.67	0.67	0.67	0.67	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1108	1870	1585	997	1870	1585
Grp Volume(v), veh/h	92	267	64	16	184	67	260	387	23	99	271	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1108	1870	1585	997	1870	1585
Q Serve(g_s), s	6.0	16.6	4.2	1.1	11.5	4.6	14.3	10.4	0.6	5.5	6.7	0.0
Cycle Q Clear(g_c), s	6.0	16.6	4.2	1.1	11.5	4.6	21.0	10.4	0.6	15.9	6.7	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	142	317	269	61	233	197	739	1251	1060	640	1251	
V/C Ratio(X)	0.65	0.84	0.24	0.26	0.79	0.34	0.35	0.31	0.02	0.15	0.22	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	739	1251	1060	640	1251	
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	0.00
Uniform Delay (d), s/veh	53.6	48.3	43.1	56.4	51.0	48.0	11.8	8.3	6.7	11.6	7.7	0.0
Incr Delay (d2), s/veh	4.9	6.0	0.5	2.2	5.9	1.0	1.3	0.6	0.0	0.5	0.4	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	5.2	13.0	3.0	0.9	9.7	3.4	6.6	7.6	0.4	2.3	4.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	54.3	43.6	58.7	56.9	49.0	13.1	9.0	6.7	12.1	8.1	0.0
LnGrp LOS	E	D	D	E	E	D	B	A	A	B	A	
Approach Vol, veh/h		423			267			670			370	A
Approach Delay, s/veh		53.6			55.1			10.5			9.2	
Approach LOS		D			E			B			A	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	85.8	8.5	25.6	85.8	13.9	20.2
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	23.0	3.1	18.6	17.9	8.0	13.5
Green Ext Time (p_c), s	3.2	0.0	1.7	2.0	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	27.6
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	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	176	161	383	0	0
Future Vol, veh/h	29	176	161	383	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	191	175	416	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.7	15.1	0
HCM LOS	A	C	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	30%	0%	0%	100%
Vol Right, %	70%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	544	29	176	0
LT Vol	0	29	0	0
Through Vol	161	0	0	0
RT Vol	383	0	176	0
Lane Flow Rate	591	32	191	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.672	0.055	0.27	0
Departure Headway (Hd)	4.089	6.301	5.087	5.133
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	887	566	702	0
Service Time	2.112	4.068	2.854	3.192
HCM Lane V/C Ratio	0.666	0.057	0.272	0
HCM Control Delay	15.1	9.4	9.7	8.2
HCM Lane LOS	C	A	A	N
HCM 95th-tile Q	5.3	0.2	1.1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	488	1	9	144	93	1	6	6	532	5	25
Future Volume (veh/h)	44	488	1	9	144	93	1	6	6	532	5	25
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	48	530	1	10	157	101	1	7	7	578	5	0
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	465	1659	3	377	485	312	15	103	103	521	5	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1121	3639	7	873	1063	684	115	803	803	1767	15	1585
Grp Volume(v), veh/h	48	259	272	10	0	258	15	0	0	583	0	0
Grp Sat Flow(s),veh/h/ln	1121	1777	1869	873	0	1747	1720	0	0	1782	0	1585
Q Serve(g_s), s	3.4	11.1	11.1	0.9	0.0	11.3	0.9	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	14.7	11.1	11.1	12.0	0.0	11.3	0.9	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.39	0.07		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	465	810	852	377	0	796	221	0	0	526	0	
V/C Ratio(X)	0.10	0.32	0.32	0.03	0.00	0.32	0.07	0.00	0.00	1.11	0.00	
Avail Cap(c_a), veh/h	465	810	852	377	0	796	221	0	0	526	0	
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	0.99	0.00	0.99	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.5	20.8	20.8	24.6	0.0	20.8	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.4	1.0	1.0	0.1	0.0	1.1	0.6	0.0	0.0	72.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	8.5	8.8	0.4	0.0	8.4	0.8	0.0	0.0	36.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	21.8	21.8	24.8	0.0	21.9	46.6	0.0	0.0	114.9	0.0	0.0
LnGrp LOS	C	C	C	C	A	C	D	A	A	F	A	
Approach Vol, veh/h		579			268			15			583	A
Approach Delay, s/veh		22.2			22.0			46.6			114.9	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	16.7	2.9	14.0	37.4
Green Ext Time (p_c), s	3.7	0.0	1.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	59.8
HCM 6th LOS	E

Notes

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)	39	755	137	354	159	125	54	867	29	156	490	12
Future Volume (veh/h)	39	755	137	354	159	125	54	867	29	156	490	12
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	42	821	149	385	173	136	59	942	0	170	533	13
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	482	1540	687	456	810	687	479	1931		306	1931	861
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.54	0.54	0.00	0.54	0.54	0.54
Sat Flow, veh/h	1070	3554	1585	1124	1870	1585	861	3554	1585	595	3554	1585
Grp Volume(v), veh/h	42	821	149	385	173	136	59	942	0	170	533	13
Grp Sat Flow(s),veh/h/ln	1070	1777	1585	562	1870	1585	861	1777	1585	595	1777	1585
Q Serve(g_s), s	2.3	15.3	5.3	23.7	5.2	4.8	3.6	14.8	0.0	22.4	7.2	0.3
Cycle Q Clear(g_c), s	7.5	15.3	5.3	39.0	5.2	4.8	10.8	14.8	0.0	37.2	7.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	482	1540	687	456	810	687	479	1931		306	1931	861
V/C Ratio(X)	0.09	0.53	0.22	0.84	0.21	0.20	0.12	0.49		0.56	0.28	0.02
Avail Cap(c_a), veh/h	482	1540	687	456	810	687	479	1931		306	1931	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	18.8	15.9	35.9	15.9	15.8	13.9	12.8	0.0	24.3	11.0	9.5
Incr Delay (d2), s/veh	0.1	0.3	0.1	13.6	0.1	0.1	0.5	0.9	0.0	7.1	0.4	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	1.0	9.7	3.3	8.7	3.8	2.9	1.3	9.4	0.0	6.4	4.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	19.1	16.1	49.5	16.1	15.9	14.5	13.6	0.0	31.4	11.4	9.5
LnGrp LOS	B	B	B	D	B	B	B	B		C	B	A
Approach Vol, veh/h		1012			694			1001	A		716	
Approach Delay, s/veh		18.7			34.6			13.7			16.1	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.2	44.3	54.2	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	39.2	41.0	16.8	17.3
Green Ext Time (p_c), s	1.2	0.0	10.6	6.2

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

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

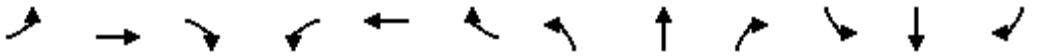
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	217	266	0	0	79	244
Future Vol, veh/h	217	266	0	0	79	244
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	236	289	0	0	86	265
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	11.1	0	11.5
HCM LOS	B	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	24%
Vol Right, %	0%	0%	100%	76%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	217	266	323
LT Vol	0	217	0	0
Through Vol	0	0	0	79
RT Vol	0	0	266	244
Lane Flow Rate	0	236	289	351
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.384	0.374	0.452
Departure Headway (Hd)	5.553	5.862	4.653	4.632
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	611	766	776
Service Time	3.633	3.632	2.422	2.67
HCM Lane V/C Ratio	0	0.386	0.377	0.452
HCM Control Delay	8.6	12.3	10.2	11.5
HCM Lane LOS	N	B	B	B
HCM 95th-tile Q	0	1.8	1.7	2.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	659	64	103	731	55	48	286	99	128	367	117
Future Volume (veh/h)	64	659	64	103	731	55	48	286	99	128	367	117
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	70	716	70	112	795	60	52	311	108	139	399	127
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	148	882	623	145	860	614	456	631	535	518	633	536
Arrive On Green	0.08	0.25	0.25	0.16	0.48	0.48	0.14	0.34	0.34	0.15	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	70	716	70	112	795	60	52	311	108	139	399	127
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.5	22.8	0.7	7.2	25.1	0.0	0.0	15.9	4.3	0.0	21.5	6.9
Cycle Q Clear(g_c), s	4.5	22.8	0.7	7.2	25.1	0.0	0.0	15.9	4.3	0.0	21.5	6.9
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	148	882	623	145	860	614	456	631	535	518	633	536
V/C Ratio(X)	0.47	0.81	0.11	0.77	0.92	0.10	0.11	0.49	0.20	0.27	0.63	0.24
Avail Cap(c_a), veh/h	267	1031	689	208	918	640	456	631	535	518	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	42.5	10.4	49.2	29.9	15.7	31.0	31.6	15.4	29.5	33.4	28.6
Incr Delay (d2), s/veh	2.3	4.4	0.1	10.0	13.5	0.1	0.1	2.7	0.8	0.3	4.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	15.8	1.3	6.1	14.8	1.3	2.1	12.2	4.1	5.6	15.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	46.8	10.5	59.2	43.5	15.8	31.1	34.3	16.2	29.8	38.1	29.6
LnGrp LOS	D	D	B	E	D	B	C	C	B	C	D	C
Approach Vol, veh/h		856			967			471			665	
Approach Delay, s/veh		44.5			43.6			29.8			34.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.3	46.3	15.6	34.8	23.2	46.4	15.1	35.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	17.9	6.5	27.1	2.0	23.5	9.2	24.8
Green Ext Time (p_c), s	0.2	2.2	0.1	2.0	0.0	2.7	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	691	332	211	661	321	66
Future Volume (veh/h)	691	332	211	661	321	66
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	751	361	229	718	416	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1873	1271	470	2289	980	436
Arrive On Green	1.00	1.00	0.16	1.00	0.28	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3563	1585
Grp Volume(v), veh/h	751	361	229	718	416	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	7.1	0.0	11.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	7.1	0.0	11.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1873	1271	470	2289	980	436
V/C Ratio(X)	0.40	0.28	0.49	0.31	0.42	0.00
Avail Cap(c_a), veh/h	1873	1271	663	2289	980	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.95	0.95	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.0	0.0	35.7	0.0
Incr Delay (d2), s/veh	0.5	0.4	0.7	0.3	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.3	4.3	0.2	8.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.4	9.7	0.3	37.1	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1112			947	416	
Approach Delay, s/veh	0.4			2.6	37.1	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	14.0	69.0		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	13.5	9.1	2.0		2.0
Green Ext Time (p_c), s	1.4	0.5	8.1		6.0

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	560	186	259	817	69	55
Future Volume (veh/h)	560	186	259	817	69	55
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	609	202	282	888	75	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1952	646	561	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	2716	868	673	3647	1781	1585
Grp Volume(v), veh/h	412	399	282	888	75	60
Grp Sat Flow(s),veh/h/ln	1777	1714	673	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	22.2	10.2	4.4	3.9
Cycle Q Clear(g_c), s	0.0	0.0	22.2	10.2	4.4	3.9
Prop In Lane		0.51	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1276	561	2645	312	277
V/C Ratio(X)	0.31	0.31	0.50	0.34	0.24	0.22
Avail Cap(c_a), veh/h	1322	1276	561	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	6.8	5.2	42.6	42.4
Incr Delay (d2), s/veh	0.6	0.6	3.2	0.3	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.4	5.8	6.2	3.7	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.6	10.0	5.6	44.5	44.2
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	811			1170	135	
Approach Delay, s/veh	0.6			6.6	44.4	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	25.0	95.0	95.0
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	21.0	89.3	89.3
Max Q Clear Time (g_c+I1), s	6.4	2.0	24.2
Green Ext Time (p_c), s	0.3	6.4	12.8

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	216	67	24	300	81	96	310	28	56	304	165
Future Volume (veh/h)	109	216	67	24	300	81	96	310	28	56	304	165
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	118	235	73	26	326	88	104	337	30	61	330	0
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	146	420	356	86	358	303	599	1121	950	579	1121	
Arrive On Green	0.08	0.22	0.22	0.05	0.19	0.19	0.60	0.60	0.60	0.60	0.60	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1050	1870	1585	1015	1870	1585
Grp Volume(v), veh/h	118	235	73	26	326	88	104	337	30	61	330	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1050	1870	1585	1015	1870	1585
Q Serve(g_s), s	7.8	13.4	4.5	1.7	20.5	5.7	6.4	10.6	0.9	3.7	10.3	0.0
Cycle Q Clear(g_c), s	7.8	13.4	4.5	1.7	20.5	5.7	16.7	10.6	0.9	14.3	10.3	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	146	420	356	86	358	303	599	1121	950	579	1121	
V/C Ratio(X)	0.81	0.56	0.21	0.30	0.91	0.29	0.17	0.30	0.03	0.11	0.29	
Avail Cap(c_a), veh/h	157	420	356	150	382	324	599	1121	950	579	1121	
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	0.00
Uniform Delay (d), s/veh	54.2	41.3	37.8	55.1	47.5	41.6	15.7	11.7	9.8	15.2	11.7	0.0
Incr Delay (d2), s/veh	24.9	1.7	0.3	1.9	24.6	0.5	0.6	0.7	0.1	0.4	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	10.5	3.2	1.5	17.6	4.1	3.0	8.0	0.6	1.7	7.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.1	42.9	38.1	57.1	72.2	42.1	16.4	12.4	9.9	15.6	12.4	0.0
LnGrp LOS	E	D	D	E	E	D	B	B	A	B	B	
Approach Vol, veh/h		426			440			471			391	A
Approach Delay, s/veh		52.1			65.3			13.1			12.9	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	77.5	10.2	32.3	77.5	14.2	28.2
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	18.7	3.7	15.4	16.3	9.8	22.5
Green Ext Time (p_c), s	2.9	0.0	1.1	2.5	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

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	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	226	414	41	86	0	0
Future Vol, veh/h	226	414	41	86	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	246	450	45	93	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.3	9	0
HCM LOS	B	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	32%	0%	0%	100%
Vol Right, %	68%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	127	226	414	0
LT Vol	0	226	0	0
Through Vol	41	0	0	0
RT Vol	86	0	414	0
Lane Flow Rate	138	246	450	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.186	0.367	0.522	0
Departure Headway (Hd)	4.855	5.382	4.178	5.47
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	740	671	864	0
Service Time	2.878	3.103	1.899	3.506
HCM Lane V/C Ratio	0.186	0.367	0.521	0
HCM Control Delay	9	11.2	11.4	8.5
HCM Lane LOS	A	B	B	N
HCM 95th-tile Q	0.7	1.7	3.1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	134	0	1	525	385	0	0	1	120	7	331
Future Volume (veh/h)	20	134	0	1	525	385	0	0	1	120	7	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	22	146	0	1	571	418	0	0	1	130	8	0
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	143	2245	0	825	634	464	0	0	107	222	14	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	569	3647	0	1242	1004	735	0	0	1585	1683	104	1585
Grp Volume(v), veh/h	22	146	0	1	0	989	0	0	1	138	0	0
Grp Sat Flow(s),veh/h/ln	569	1777	0	1242	0	1738	0	0	1585	1786	0	1585
Q Serve(g_s), s	4.1	1.9	0.0	0.0	0.0	58.4	0.0	0.0	0.1	8.7	0.0	0.0
Cycle Q Clear(g_c), s	62.5	1.9	0.0	1.9	0.0	58.4	0.0	0.0	0.1	8.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.42	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	143	2245	0	825	0	1098	0	0	107	236	0	
V/C Ratio(X)	0.15	0.07	0.00	0.00	0.00	0.90	0.00	0.00	0.01	0.59	0.00	
Avail Cap(c_a), veh/h	143	2245	0	825	0	1098	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.40	0.00	0.40	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.6	8.5	0.0	8.9	0.0	18.9	0.0	0.0	52.2	49.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.2	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	1.2	0.0	0.0	0.0	28.2	0.0	0.0	0.1	7.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	8.5	0.0	8.9	0.0	24.2	0.0	0.0	52.4	51.3	0.0	0.0
LnGrp LOS	D	A	A	A	A	C	A	A	D	D	A	
Approach Vol, veh/h		168			990			1			138	A
Approach Delay, s/veh		13.4			24.2			52.4			51.3	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.6
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	64.5	2.1	60.4	10.7
Green Ext Time (p_c), s	0.7	0.0	7.5	0.5

Intersection Summary	
HCM 6th Ctrl Delay	25.7
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	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	119	54	806	695	428	171	646	1	112	808	105
Future Volume (veh/h)	32	119	54	806	695	428	171	646	1	112	808	105
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	35	129	59	876	755	465	186	702	0	122	878	114
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	100	1528	682	1107	804	682	236	1612		318	1612	719
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45	0.00	0.45	0.45	0.45
Sat Flow, veh/h	457	3554	1585	2319	1870	1585	568	3554	1585	745	3554	1585
Grp Volume(v), veh/h	35	129	59	876	755	465	186	702	0	122	878	114
Grp Sat Flow(s),veh/h/ln	457	1777	1585	1160	1870	1585	568	1777	1585	745	1777	1585
Q Serve(g_s), s	4.0	1.9	2.0	32.3	34.7	21.3	24.7	12.1	0.0	12.0	16.1	3.8
Cycle Q Clear(g_c), s	38.7	1.9	2.0	34.2	34.7	21.3	40.8	12.1	0.0	24.1	16.1	3.8
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	100	1528	682	1107	804	682	236	1612		318	1612	719
V/C Ratio(X)	0.35	0.08	0.09	0.79	0.94	0.68	0.79	0.44		0.38	0.54	0.16
Avail Cap(c_a), veh/h	100	1528	682	1115	810	687	236	1612		319	1619	722
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	15.2	15.2	25.3	24.5	20.7	34.7	16.7	0.0	24.9	17.8	14.5
Incr Delay (d2), s/veh	2.1	0.0	0.1	3.9	18.4	2.7	23.0	0.9	0.0	3.5	1.3	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	1.5	1.3	1.2	13.5	24.8	12.2	9.4	8.4	0.0	4.2	10.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	15.2	15.2	29.2	42.9	23.4	57.6	17.6	0.0	28.4	19.2	14.9
LnGrp LOS	D	B	B	C	D	C	E	B		C	B	B
Approach Vol, veh/h		223			2096			888	A		1114	
Approach Delay, s/veh		20.0			32.9			26.0			19.7	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	46.1	44.0	46.1	44.0
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	26.1	36.7	42.8	40.7
Green Ext Time (p_c), s	9.7	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

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

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

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	117	0	0	164	420
Future Vol, veh/h	0	117	0	0	164	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	127	0	0	178	457
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	9	0	14.6
HCM LOS	A	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	28%
Vol Right, %	0%	0%	100%	72%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	117	584
LT Vol	0	0	0	0
Through Vol	0	0	0	164
RT Vol	0	0	117	420
Lane Flow Rate	0	0	127	635
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.181	0.678
Departure Headway (Hd)	4.875	5.833	5.125	3.845
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	698	946
Service Time	2.908	3.574	2.866	1.857
HCM Lane V/C Ratio	0	0	0.182	0.671
HCM Control Delay	7.9	8.6	9	14.6
HCM Lane LOS	N	N	A	B
HCM 95th-tile Q	0	0	0.7	5.5

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	106	261	248	21	0
Future Vol, veh/h	0	106	261	248	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	115	284	270	23	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	534	419
Stage 1	-	-	-	-	419	-
Stage 2	-	-	-	-	115	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1016	-	-	-	507	634
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1016	-	-	-	507	634
Mov Cap-2 Maneuver	-	-	-	-	507	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	910	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1016	-	-	-	507
HCM Lane V/C Ratio	-	-	-	-	0.045
HCM Control Delay (s)	0	-	-	-	12.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	302	29	0	539	0	16
Future Vol, veh/h	302	29	0	539	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	32	0	586	0	17

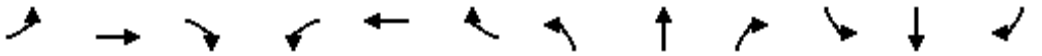
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	344
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	699
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	699
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	699	-	-	-
HCM Lane V/C Ratio	0.025	-	-	-
HCM Control Delay (s)	10.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	812	67	69	560	160	47	364	100	204	341	90
Future Volume (veh/h)	79	812	67	69	560	160	47	364	100	204	341	90
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	86	883	73	75	609	174	51	396	109	222	371	98
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	237	965	619	123	723	590	417	567	481	459	661	560
Arrive On Green	0.13	0.27	0.27	0.14	0.41	0.41	0.12	0.30	0.30	0.17	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	86	883	73	75	609	174	51	396	109	222	371	98
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.3	28.9	0.7	4.8	18.6	0.0	0.0	22.5	4.7	2.0	19.2	5.1
Cycle Q Clear(g_c), s	5.3	28.9	0.7	4.8	18.6	0.0	0.0	22.5	4.7	2.0	19.2	5.1
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	237	965	619	123	723	590	417	567	481	459	661	560
V/C Ratio(X)	0.36	0.92	0.12	0.61	0.84	0.29	0.12	0.70	0.23	0.48	0.56	0.17
Avail Cap(c_a), veh/h	237	1001	635	165	977	704	417	567	481	459	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	42.4	11.0	50.2	33.9	19.2	34.4	36.9	18.5	38.9	31.3	26.7
Incr Delay (d2), s/veh	0.9	12.4	0.1	4.4	4.6	0.2	0.1	7.0	1.1	0.8	3.4	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	4.3	20.4	1.5	3.9	11.0	4.6	2.1	16.8	4.5	9.5	14.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	54.8	11.0	54.6	38.5	19.4	34.5	43.9	19.6	39.7	34.7	27.4
LnGrp LOS	D	D	B	D	D	B	C	D	B	D	C	C
Approach Vol, veh/h		1042			858			556			691	
Approach Delay, s/veh		51.2			36.0			38.3			35.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.1	42.2	21.5	30.2	20.1	48.2	13.6	38.2
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	4.0	24.5	7.3	20.6	2.0	21.2	6.8	30.9
Green Ext Time (p_c), s	0.5	2.2	0.1	3.8	0.0	2.6	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	929	311	38	473	424	129
Future Volume (veh/h)	929	311	38	473	424	129
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1010	338	41	514	300	312
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1962	1311	382	2289	490	436
Arrive On Green	1.00	1.00	0.11	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1010	338	41	514	300	312
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	1.0	0.0	17.6	21.3
Cycle Q Clear(g_c), s	0.0	0.0	1.0	0.0	17.6	21.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1962	1311	382	2289	490	436
V/C Ratio(X)	0.51	0.26	0.11	0.22	0.61	0.72
Avail Cap(c_a), veh/h	1962	1311	426	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.2	0.0	37.9	39.3
Incr Delay (d2), s/veh	0.6	0.3	0.1	0.2	5.6	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.2	0.7	0.1	13.2	14.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.3	8.3	0.2	43.5	48.9
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	1348			555	612	
Approach Delay, s/veh	0.5			0.8	46.3	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	11.0	72.0		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	23.3	3.0	2.0		2.0
Green Ext Time (p_c), s	1.6	0.0	11.9		4.0

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	975	112	27	436	66	96
Future Volume (veh/h)	975	112	27	436	66	96
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1060	122	29	474	72	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1180	136	112	1305	983	875
Arrive On Green	0.73	0.73	0.37	0.37	0.55	0.55
Sat Flow, veh/h	3305	369	474	3647	1781	1585
Grp Volume(v), veh/h	586	596	29	474	72	104
Grp Sat Flow(s),veh/h/ln	1777	1804	474	1777	1781	1585
Q Serve(g_s), s	30.9	31.0	7.0	11.7	2.3	3.8
Cycle Q Clear(g_c), s	30.9	31.0	38.0	11.7	2.3	3.8
Prop In Lane		0.20	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	653	663	112	1305	983	875
V/C Ratio(X)	0.90	0.90	0.26	0.36	0.07	0.12
Avail Cap(c_a), veh/h	1293	1312	282	2585	983	875
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	14.2	50.8	27.7	12.6	12.9
Incr Delay (d2), s/veh	4.1	4.1	1.2	0.2	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.7	9.9	1.6	8.7	1.7	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	18.3	52.0	27.9	12.7	13.2
LnGrp LOS	B	B	D	C	B	B
Approach Vol, veh/h	1182			503	176	
Approach Delay, s/veh	18.3			29.3	13.0	
Approach LOS	B			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	70.2	49.8	49.8
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	23.0	87.3	87.3
Max Q Clear Time (g_c+I1), s	5.8	33.0	40.0
Green Ext Time (p_c), s	0.4	11.0	4.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	250	59	15	169	62	239	356	21	91	249	118
Future Volume (veh/h)	85	250	59	15	169	62	239	356	21	91	249	118
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	92	272	64	16	184	67	260	387	23	99	271	0
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	142	322	273	61	238	202	735	1245	1055	637	1245	
Arrive On Green	0.08	0.17	0.17	0.03	0.13	0.13	0.67	0.67	0.67	0.67	0.67	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1108	1870	1585	997	1870	1585
Grp Volume(v), veh/h	92	272	64	16	184	67	260	387	23	99	271	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1108	1870	1585	997	1870	1585
Q Serve(g_s), s	6.0	16.9	4.2	1.1	11.4	4.6	14.4	10.5	0.6	5.6	6.8	0.0
Cycle Q Clear(g_c), s	6.0	16.9	4.2	1.1	11.4	4.6	21.2	10.5	0.6	16.0	6.8	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	142	322	273	61	238	202	735	1245	1055	637	1245	
V/C Ratio(X)	0.65	0.84	0.23	0.26	0.77	0.33	0.35	0.31	0.02	0.16	0.22	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	735	1245	1055	637	1245	
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	0.00
Uniform Delay (d), s/veh	53.6	48.1	42.8	56.4	50.7	47.7	12.0	8.4	6.8	11.8	7.8	0.0
Incr Delay (d2), s/veh	4.9	6.0	0.4	2.2	5.3	1.0	1.3	0.7	0.0	0.5	0.4	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	5.2	13.2	3.0	0.9	9.6	3.4	6.7	7.6	0.4	2.4	5.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	54.1	43.3	58.7	56.0	48.7	13.3	9.1	6.8	12.3	8.2	0.0
LnGrp LOS	E	D	D	E	E	D	B	A	A	B	A	
Approach Vol, veh/h		428			267			670			370	A
Approach Delay, s/veh		53.5			54.3			10.7			9.3	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	85.5	8.5	26.0	85.5	13.9	20.6
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	23.2	3.1	18.9	18.0	8.0	13.4
Green Ext Time (p_c), s	3.2	0.0	1.8	2.0	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	27.7
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.

Intersection	
Intersection Delay, s/veh	23.3
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	176	193	495	0	0
Future Vol, veh/h	51	176	193	495	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	191	210	538	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.4	27.6	0
HCM LOS	B	D	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	28%	0%	0%	100%
Vol Right, %	72%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	688	51	176	0
LT Vol	0	51	0	0
Through Vol	193	0	0	0
RT Vol	495	0	176	0
Lane Flow Rate	748	55	191	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.866	0.104	0.294	0
Departure Headway (Hd)	4.169	6.754	5.535	5.515
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	867	534	652	0
Service Time	2.213	4.454	3.235	3.515
HCM Lane V/C Ratio	0.863	0.103	0.293	0
HCM Control Delay	27.6	10.2	10.5	8.5
HCM Lane LOS	D	B	B	N
HCM 95th-tile Q	11	0.3	1.2	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	575	1	9	161	93	1	6	6	532	5	29
Future Volume (veh/h)	68	575	1	9	161	93	1	6	6	532	5	29
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	74	625	1	10	175	101	1	7	7	578	5	0
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	451	1659	3	334	507	293	15	103	103	521	5	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1103	3640	6	799	1113	642	115	803	803	1767	15	1585
Grp Volume(v), veh/h	74	305	321	10	0	276	15	0	0	583	0	0
Grp Sat Flow(s),veh/h/ln	1103	1777	1869	799	0	1755	1720	0	0	1782	0	1585
Q Serve(g_s), s	5.6	13.5	13.5	1.0	0.0	12.2	0.9	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	17.8	13.5	13.5	14.5	0.0	12.2	0.9	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.37	0.07		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	451	810	852	334	0	800	221	0	0	526	0	
V/C Ratio(X)	0.16	0.38	0.38	0.03	0.00	0.35	0.07	0.00	0.00	1.11	0.00	
Avail Cap(c_a), veh/h	451	810	852	334	0	800	221	0	0	526	0	
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	0.99	0.00	0.99	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.8	21.4	21.4	26.2	0.0	21.1	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.8	1.3	1.3	0.2	0.0	1.2	0.6	0.0	0.0	72.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	9.9	10.3	0.4	0.0	9.0	0.8	0.0	0.0	36.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	22.8	22.7	26.4	0.0	22.3	46.6	0.0	0.0	114.9	0.0	0.0
LnGrp LOS	C	C	C	C	A	C	D	A	A	F	A	
Approach Vol, veh/h		700			286			15			583	A
Approach Delay, s/veh		23.3			22.4			46.6			114.9	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	19.8	2.9	16.5	37.4
Green Ext Time (p_c), s	4.6	0.0	1.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	57.1
HCM 6th LOS	E

Notes

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)	63	779	175	354	163	125	61	867	29	156	490	16
Future Volume (veh/h)	63	779	175	354	163	125	61	867	29	156	490	16
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	68	847	190	385	177	136	66	942	0	170	533	17
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	479	1540	687	430	810	687	477	1932		306	1932	862
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.54	0.54	0.00	0.54	0.54	0.54
Sat Flow, veh/h	1067	3554	1585	1055	1870	1585	858	3554	1585	595	3554	1585
Grp Volume(v), veh/h	68	847	190	385	177	136	66	942	0	170	533	17
Grp Sat Flow(s),veh/h/ln	1067	1777	1585	528	1870	1585	858	1777	1585	595	1777	1585
Q Serve(g_s), s	3.8	16.0	6.9	23.0	5.3	4.8	4.0	14.8	0.0	22.4	7.2	0.4
Cycle Q Clear(g_c), s	9.2	16.0	6.9	39.0	5.3	4.8	11.3	14.8	0.0	37.1	7.2	0.4
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	479	1540	687	430	810	687	477	1932		306	1932	862
V/C Ratio(X)	0.14	0.55	0.28	0.89	0.22	0.20	0.14	0.49		0.56	0.28	0.02
Avail Cap(c_a), veh/h	479	1540	687	430	810	687	477	1932		306	1932	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	19.0	16.4	36.9	16.0	15.8	14.0	12.8	0.0	24.3	11.0	9.5
Incr Delay (d2), s/veh	0.1	0.4	0.2	20.7	0.1	0.1	0.6	0.9	0.0	7.1	0.4	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	1.6	10.0	4.3	9.2	3.9	2.9	1.5	9.4	0.0	6.4	4.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	19.4	16.6	57.6	16.1	15.9	14.6	13.6	0.0	31.4	11.4	9.5
LnGrp LOS	B	B	B	E	B	B	B	B		C	B	A
Approach Vol, veh/h		1105			698			1008	A		720	
Approach Delay, s/veh		18.9			39.0			13.7			16.1	
Approach LOS		B			D			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.2	44.3	54.2	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	39.1	41.0	16.8	18.0
Green Ext Time (p_c), s	1.2	0.0	10.7	6.6

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

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

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

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	323	265	0	0	101	244
Future Vol, veh/h	323	265	0	0	101	244
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	351	288	0	0	110	265
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	14	0	13
HCM LOS	B	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	29%
Vol Right, %	0%	0%	100%	71%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	323	265	345
LT Vol	0	323	0	0
Through Vol	0	0	0	101
RT Vol	0	0	265	244
Lane Flow Rate	0	351	288	375
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.581	0.38	0.51
Departure Headway (Hd)	5.972	5.955	4.745	4.893
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	600	749	735
Service Time	3.972	3.747	2.536	2.942
HCM Lane V/C Ratio	0	0.585	0.385	0.51
HCM Control Delay	9	16.8	10.5	13
HCM Lane LOS	N	C	B	B
HCM 95th-tile Q	0	3.7	1.8	2.9

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	544	374	44	143	0
Future Vol, veh/h	0	544	374	44	143	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	591	407	48	155	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	455	0	-	0	1022	431
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	591	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1106	-	-	-	261	624
Stage 1	-	-	-	-	655	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1106	-	-	-	261	624
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	655	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	37.2
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1106	-	-	-	261
HCM Lane V/C Ratio	-	-	-	-	0.596
HCM Control Delay (s)	0	-	-	-	37.2
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	3.5

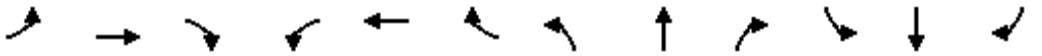
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	482	5	0	510	0	106
Future Vol, veh/h	482	5	0	510	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	524	5	0	554	0	115

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	527
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	551
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	551
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	551	-	-	-
HCM Lane V/C Ratio	0.209	-	-	-
HCM Control Delay (s)	13.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	659	64	103	731	55	48	286	99	128	367	117
Future Volume (veh/h)	64	659	64	103	731	55	48	286	99	128	367	117
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	70	716	70	112	795	60	52	311	108	139	399	127
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	148	882	623	145	860	614	456	631	535	518	633	536
Arrive On Green	0.08	0.25	0.25	0.16	0.48	0.48	0.14	0.34	0.34	0.15	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	70	716	70	112	795	60	52	311	108	139	399	127
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.5	22.8	0.7	7.2	25.1	0.0	0.0	15.9	4.3	0.0	21.5	6.9
Cycle Q Clear(g_c), s	4.5	22.8	0.7	7.2	25.1	0.0	0.0	15.9	4.3	0.0	21.5	6.9
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	148	882	623	145	860	614	456	631	535	518	633	536
V/C Ratio(X)	0.47	0.81	0.11	0.77	0.92	0.10	0.11	0.49	0.20	0.27	0.63	0.24
Avail Cap(c_a), veh/h	267	1031	689	208	918	640	456	631	535	518	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	42.5	10.4	49.2	29.9	15.7	31.0	31.6	15.4	29.5	33.4	28.6
Incr Delay (d2), s/veh	2.3	4.4	0.1	10.0	13.5	0.1	0.1	2.7	0.8	0.3	4.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	15.8	1.3	6.1	14.8	1.3	2.1	12.2	4.1	5.6	15.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	46.8	10.5	59.2	43.5	15.8	31.1	34.3	16.2	29.8	38.1	29.6
LnGrp LOS	D	D	B	E	D	B	C	C	B	C	D	C
Approach Vol, veh/h		856			967			471			665	
Approach Delay, s/veh		44.5			43.6			29.8			34.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.3	46.3	15.6	34.8	23.2	46.4	15.1	35.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	17.9	6.5	27.1	2.0	23.5	9.2	24.8
Green Ext Time (p_c), s	0.2	2.2	0.1	2.0	0.0	2.7	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	691	332	211	661	321	66
Future Volume (veh/h)	691	332	211	661	321	66
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	751	361	229	718	416	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1873	1271	470	2289	980	436
Arrive On Green	1.00	1.00	0.16	1.00	0.28	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3563	1585
Grp Volume(v), veh/h	751	361	229	718	416	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	7.1	0.0	11.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	7.1	0.0	11.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1873	1271	470	2289	980	436
V/C Ratio(X)	0.40	0.28	0.49	0.31	0.42	0.00
Avail Cap(c_a), veh/h	1873	1271	663	2289	980	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.95	0.95	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.0	0.0	35.7	0.0
Incr Delay (d2), s/veh	0.5	0.4	0.7	0.3	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.3	4.3	0.2	8.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.4	9.7	0.3	37.1	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1112			947	416	
Approach Delay, s/veh	0.4			2.6	37.1	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	14.0	69.0		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	13.5	9.1	2.0		2.0
Green Ext Time (p_c), s	1.4	0.5	8.1		6.0

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	560	186	259	817	69	55
Future Volume (veh/h)	560	186	259	817	69	55
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	609	202	282	888	75	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1952	646	561	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	2716	868	673	3647	1781	1585
Grp Volume(v), veh/h	412	399	282	888	75	60
Grp Sat Flow(s),veh/h/ln	1777	1714	673	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	22.2	10.2	4.4	3.9
Cycle Q Clear(g_c), s	0.0	0.0	22.2	10.2	4.4	3.9
Prop In Lane		0.51	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1276	561	2645	312	277
V/C Ratio(X)	0.31	0.31	0.50	0.34	0.24	0.22
Avail Cap(c_a), veh/h	1322	1276	561	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	6.8	5.2	42.6	42.4
Incr Delay (d2), s/veh	0.6	0.6	3.2	0.3	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.4	5.8	6.2	3.7	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.6	10.0	5.6	44.5	44.2
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	811			1170	135	
Approach Delay, s/veh	0.6			6.6	44.4	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	25.0	95.0	95.0
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	21.0	89.3	89.3
Max Q Clear Time (g_c+I1), s	6.4	2.0	24.2
Green Ext Time (p_c), s	0.3	6.4	12.8

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	216	67	24	300	81	96	310	28	56	304	165
Future Volume (veh/h)	109	216	67	24	300	81	96	310	28	56	304	165
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	118	235	73	26	326	88	104	337	30	61	330	0
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	146	420	356	86	358	303	599	1121	950	579	1121	
Arrive On Green	0.08	0.22	0.22	0.05	0.19	0.19	0.60	0.60	0.60	0.60	0.60	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1050	1870	1585	1015	1870	1585
Grp Volume(v), veh/h	118	235	73	26	326	88	104	337	30	61	330	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1050	1870	1585	1015	1870	1585
Q Serve(g_s), s	7.8	13.4	4.5	1.7	20.5	5.7	6.4	10.6	0.9	3.7	10.3	0.0
Cycle Q Clear(g_c), s	7.8	13.4	4.5	1.7	20.5	5.7	16.7	10.6	0.9	14.3	10.3	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	146	420	356	86	358	303	599	1121	950	579	1121	
V/C Ratio(X)	0.81	0.56	0.21	0.30	0.91	0.29	0.17	0.30	0.03	0.11	0.29	
Avail Cap(c_a), veh/h	157	420	356	150	382	324	599	1121	950	579	1121	
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	0.00
Uniform Delay (d), s/veh	54.2	41.3	37.8	55.1	47.5	41.6	15.7	11.7	9.8	15.2	11.7	0.0
Incr Delay (d2), s/veh	24.9	1.7	0.3	1.9	24.6	0.5	0.6	0.7	0.1	0.4	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	10.5	3.2	1.5	17.6	4.1	3.0	8.0	0.6	1.7	7.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.1	42.9	38.1	57.1	72.2	42.1	16.4	12.4	9.9	15.6	12.4	0.0
LnGrp LOS	E	D	D	E	E	D	B	B	A	B	B	
Approach Vol, veh/h		426			440			471			391	A
Approach Delay, s/veh		52.1			65.3			13.1			12.9	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	77.5	10.2	32.3	77.5	14.2	28.2
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	18.7	3.7	15.4	16.3	9.8	22.5
Green Ext Time (p_c), s	2.9	0.0	1.1	2.5	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

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	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	226	414	57	86	0	0
Future Vol, veh/h	226	414	57	86	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	246	450	62	93	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.5	9.3	0
HCM LOS	B	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	40%	0%	0%	100%
Vol Right, %	60%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	226	414	0
LT Vol	0	226	0	0
Through Vol	57	0	0	0
RT Vol	86	0	414	0
Lane Flow Rate	155	246	450	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.212	0.37	0.528	0
Departure Headway (Hd)	4.908	5.429	4.225	5.505
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	732	663	855	0
Service Time	2.934	3.155	1.95	3.547
HCM Lane V/C Ratio	0.212	0.371	0.526	0
HCM Control Delay	9.3	11.3	11.6	8.5
HCM Lane LOS	A	B	B	N
HCM 95th-tile Q	0.8	1.7	3.2	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	134	0	1	525	385	0	0	1	120	7	331
Future Volume (veh/h)	20	134	0	1	525	385	0	0	1	120	7	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	22	146	0	1	571	418	0	0	1	130	8	0
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	143	2245	0	825	634	464	0	0	107	222	14	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	569	3647	0	1242	1004	735	0	0	1585	1683	104	1585
Grp Volume(v), veh/h	22	146	0	1	0	989	0	0	1	138	0	0
Grp Sat Flow(s),veh/h/ln	569	1777	0	1242	0	1738	0	0	1585	1786	0	1585
Q Serve(g_s), s	4.1	1.9	0.0	0.0	0.0	58.4	0.0	0.0	0.1	8.7	0.0	0.0
Cycle Q Clear(g_c), s	62.5	1.9	0.0	1.9	0.0	58.4	0.0	0.0	0.1	8.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.42	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	143	2245	0	825	0	1098	0	0	107	236	0	
V/C Ratio(X)	0.15	0.07	0.00	0.00	0.00	0.90	0.00	0.00	0.01	0.59	0.00	
Avail Cap(c_a), veh/h	143	2245	0	825	0	1098	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.40	0.00	0.40	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.6	8.5	0.0	8.9	0.0	18.9	0.0	0.0	52.2	49.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.2	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	1.2	0.0	0.0	0.0	28.2	0.0	0.0	0.1	7.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	8.5	0.0	8.9	0.0	24.2	0.0	0.0	52.4	51.3	0.0	0.0
LnGrp LOS	D	A	A	A	A	C	A	A	D	D	A	
Approach Vol, veh/h		168			990			1			138	A
Approach Delay, s/veh		13.4			24.2			52.4			51.3	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.6
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	64.5	2.1	60.4	10.7
Green Ext Time (p_c), s	0.7	0.0	7.5	0.5

Intersection Summary	
HCM 6th Ctrl Delay	25.7
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	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	119	54	806	695	428	171	646	1	112	808	105
Future Volume (veh/h)	32	119	54	806	695	428	171	646	1	112	808	105
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	35	129	59	876	755	465	186	702	0	122	878	114
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	100	1528	682	1107	804	682	236	1612		318	1612	719
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45	0.00	0.45	0.45	0.45
Sat Flow, veh/h	457	3554	1585	2319	1870	1585	568	3554	1585	745	3554	1585
Grp Volume(v), veh/h	35	129	59	876	755	465	186	702	0	122	878	114
Grp Sat Flow(s),veh/h/ln	457	1777	1585	1160	1870	1585	568	1777	1585	745	1777	1585
Q Serve(g_s), s	4.0	1.9	2.0	32.3	34.7	21.3	24.7	12.1	0.0	12.0	16.1	3.8
Cycle Q Clear(g_c), s	38.7	1.9	2.0	34.2	34.7	21.3	40.8	12.1	0.0	24.1	16.1	3.8
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	100	1528	682	1107	804	682	236	1612		318	1612	719
V/C Ratio(X)	0.35	0.08	0.09	0.79	0.94	0.68	0.79	0.44		0.38	0.54	0.16
Avail Cap(c_a), veh/h	100	1528	682	1115	810	687	236	1612		319	1619	722
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	15.2	15.2	25.3	24.5	20.7	34.7	16.7	0.0	24.9	17.8	14.5
Incr Delay (d2), s/veh	2.1	0.0	0.1	3.9	18.4	2.7	23.0	0.9	0.0	3.5	1.3	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	1.5	1.3	1.2	13.5	24.8	12.2	9.4	8.4	0.0	4.2	10.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	15.2	15.2	29.2	42.9	23.4	57.6	17.6	0.0	28.4	19.2	14.9
LnGrp LOS	D	B	B	C	D	C	E	B		C	B	B
Approach Vol, veh/h		223			2096			888	A		1114	
Approach Delay, s/veh		20.0			32.9			26.0			19.7	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	46.1	44.0	46.1	44.0
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	26.1	36.7	42.8	40.7
Green Ext Time (p_c), s	9.7	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

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

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

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	146	0	0	164	420
Future Vol, veh/h	0	146	0	0	164	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	159	0	0	178	457
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	9.4	0	15.3
HCM LOS	A	-	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	28%
Vol Right, %	0%	0%	100%	72%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	146	584
LT Vol	0	0	0	0
Through Vol	0	0	0	164
RT Vol	0	0	146	420
Lane Flow Rate	0	0	159	635
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.227	0.693
Departure Headway (Hd)	4.981	5.851	5.142	3.929
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	695	920
Service Time	3.026	3.604	2.895	1.947
HCM Lane V/C Ratio	0	0	0.229	0.69
HCM Control Delay	8	8.6	9.4	15.3
HCM Lane LOS	N	N	A	C
HCM 95th-tile Q	0	0	0.9	5.8

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	106	261	277	37	0
Future Vol, veh/h	0	106	261	277	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	115	284	301	40	0

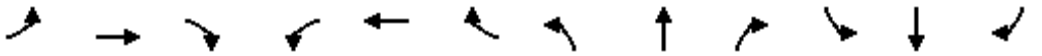
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	585	0	-	0	550	435
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	115	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	990	-	-	-	496	621
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	990	-	-	-	496	621
Mov Cap-2 Maneuver	-	-	-	-	496	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	910	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	990	-	-	-	496
HCM Lane V/C Ratio	-	-	-	-	0.081
HCM Control Delay (s)	0	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	812	67	69	560	160	47	364	100	204	341	90
Future Volume (veh/h)	79	812	67	69	560	160	47	364	100	204	341	90
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	86	883	73	75	609	174	51	396	109	222	371	98
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	237	965	619	123	723	590	417	567	481	459	661	560
Arrive On Green	0.13	0.27	0.27	0.14	0.41	0.41	0.12	0.30	0.30	0.17	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	86	883	73	75	609	174	51	396	109	222	371	98
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.3	28.9	0.7	4.8	18.6	0.0	0.0	22.5	4.7	2.0	19.2	5.1
Cycle Q Clear(g_c), s	5.3	28.9	0.7	4.8	18.6	0.0	0.0	22.5	4.7	2.0	19.2	5.1
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	237	965	619	123	723	590	417	567	481	459	661	560
V/C Ratio(X)	0.36	0.92	0.12	0.61	0.84	0.29	0.12	0.70	0.23	0.48	0.56	0.17
Avail Cap(c_a), veh/h	237	1001	635	165	977	704	417	567	481	459	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	42.4	11.0	50.2	33.9	19.2	34.4	36.9	18.5	38.9	31.3	26.7
Incr Delay (d2), s/veh	0.9	12.4	0.1	4.4	4.6	0.2	0.1	7.0	1.1	0.8	3.4	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	4.3	20.4	1.5	3.9	11.0	4.6	2.1	16.8	4.5	9.5	14.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	54.8	11.0	54.6	38.5	19.4	34.5	43.9	19.6	39.7	34.7	27.4
LnGrp LOS	D	D	B	D	D	B	C	D	B	D	C	C
Approach Vol, veh/h		1042			858			556			691	
Approach Delay, s/veh		51.2			36.0			38.3			35.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.1	42.2	21.5	30.2	20.1	48.2	13.6	38.2
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	4.0	24.5	7.3	20.6	2.0	21.2	6.8	30.9
Green Ext Time (p_c), s	0.5	2.2	0.1	3.8	0.0	2.6	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	929	311	38	473	424	129
Future Volume (veh/h)	929	311	38	473	424	129
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1010	338	41	514	300	312
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1962	1311	382	2289	490	436
Arrive On Green	1.00	1.00	0.11	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1010	338	41	514	300	312
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	1.0	0.0	17.6	21.3
Cycle Q Clear(g_c), s	0.0	0.0	1.0	0.0	17.6	21.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1962	1311	382	2289	490	436
V/C Ratio(X)	0.51	0.26	0.11	0.22	0.61	0.72
Avail Cap(c_a), veh/h	1962	1311	426	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.2	0.0	37.9	39.3
Incr Delay (d2), s/veh	0.6	0.3	0.1	0.2	5.6	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.2	0.7	0.1	13.2	14.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.3	8.3	0.2	43.5	48.9
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	1348			555	612	
Approach Delay, s/veh	0.5			0.8	46.3	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	11.0	72.0		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	23.3	3.0	2.0		2.0
Green Ext Time (p_c), s	1.6	0.0	11.9		4.0

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	975	112	27	436	66	96
Future Volume (veh/h)	975	112	27	436	66	96
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1060	122	29	474	72	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1180	136	112	1305	983	875
Arrive On Green	0.73	0.73	0.37	0.37	0.55	0.55
Sat Flow, veh/h	3305	369	474	3647	1781	1585
Grp Volume(v), veh/h	586	596	29	474	72	104
Grp Sat Flow(s),veh/h/ln	1777	1804	474	1777	1781	1585
Q Serve(g_s), s	30.9	31.0	7.0	11.7	2.3	3.8
Cycle Q Clear(g_c), s	30.9	31.0	38.0	11.7	2.3	3.8
Prop In Lane		0.20	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	653	663	112	1305	983	875
V/C Ratio(X)	0.90	0.90	0.26	0.36	0.07	0.12
Avail Cap(c_a), veh/h	1293	1312	282	2585	983	875
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	14.2	50.8	27.7	12.6	12.9
Incr Delay (d2), s/veh	4.1	4.1	1.2	0.2	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.7	9.9	1.6	8.7	1.7	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	18.3	52.0	27.9	12.7	13.2
LnGrp LOS	B	B	D	C	B	B
Approach Vol, veh/h	1182			503	176	
Approach Delay, s/veh	18.3			29.3	13.0	
Approach LOS	B			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	70.2	49.8	49.8
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	23.0	87.3	87.3
Max Q Clear Time (g_c+I1), s	5.8	33.0	40.0
Green Ext Time (p_c), s	0.4	11.0	4.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	250	59	15	169	62	239	356	21	91	249	118
Future Volume (veh/h)	85	250	59	15	169	62	239	356	21	91	249	118
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	92	272	64	16	184	67	260	387	23	99	271	0
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	142	322	273	61	238	202	735	1245	1055	637	1245	
Arrive On Green	0.08	0.17	0.17	0.03	0.13	0.13	0.67	0.67	0.67	0.67	0.67	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1108	1870	1585	997	1870	1585
Grp Volume(v), veh/h	92	272	64	16	184	67	260	387	23	99	271	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1108	1870	1585	997	1870	1585
Q Serve(g_s), s	6.0	16.9	4.2	1.1	11.4	4.6	14.4	10.5	0.6	5.6	6.8	0.0
Cycle Q Clear(g_c), s	6.0	16.9	4.2	1.1	11.4	4.6	21.2	10.5	0.6	16.0	6.8	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	142	322	273	61	238	202	735	1245	1055	637	1245	
V/C Ratio(X)	0.65	0.84	0.23	0.26	0.77	0.33	0.35	0.31	0.02	0.16	0.22	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	735	1245	1055	637	1245	
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	0.00
Uniform Delay (d), s/veh	53.6	48.1	42.8	56.4	50.7	47.7	12.0	8.4	6.8	11.8	7.8	0.0
Incr Delay (d2), s/veh	4.9	6.0	0.4	2.2	5.3	1.0	1.3	0.7	0.0	0.5	0.4	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	5.2	13.2	3.0	0.9	9.6	3.4	6.7	7.6	0.4	2.4	5.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	54.1	43.3	58.7	56.0	48.7	13.3	9.1	6.8	12.3	8.2	0.0
LnGrp LOS	E	D	D	E	E	D	B	A	A	B	A	
Approach Vol, veh/h		428			267			670			370	A
Approach Delay, s/veh		53.5			54.3			10.7			9.3	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	85.5	8.5	26.0	85.5	13.9	20.6
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	23.2	3.1	18.9	18.0	8.0	13.4
Green Ext Time (p_c), s	3.2	0.0	1.8	2.0	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	27.7
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.

Intersection	
Intersection Delay, s/veh	45.7
Intersection LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	176	298	495	0	0
Future Vol, veh/h	51	176	298	495	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	191	324	538	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.9	55.6	0
HCM LOS	B	F	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	38%	0%	0%	100%
Vol Right, %	62%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	793	51	176	0
LT Vol	0	51	0	0
Through Vol	298	0	0	0
RT Vol	495	0	176	0
Lane Flow Rate	862	55	191	0
Geometry Grp	2	7	7	2
Degree of Util (X)	1.017	0.107	0.303	0
Departure Headway (Hd)	4.249	7.054	5.832	5.691
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	853	511	620	0
Service Time	2.291	4.754	3.532	3.691
HCM Lane V/C Ratio	1.011	0.108	0.308	0
HCM Control Delay	55.6	10.6	11	8.7
HCM Lane LOS	F	B	B	N
HCM 95th-tile Q	18.8	0.4	1.3	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	575	1	9	161	93	1	6	6	532	5	29
Future Volume (veh/h)	68	575	1	9	161	93	1	6	6	532	5	29
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	74	625	1	10	175	101	1	7	7	578	5	0
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	451	1659	3	334	507	293	15	103	103	521	5	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1103	3640	6	799	1113	642	115	803	803	1767	15	1585
Grp Volume(v), veh/h	74	305	321	10	0	276	15	0	0	583	0	0
Grp Sat Flow(s),veh/h/ln	1103	1777	1869	799	0	1755	1720	0	0	1782	0	1585
Q Serve(g_s), s	5.6	13.5	13.5	1.0	0.0	12.2	0.9	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	17.8	13.5	13.5	14.5	0.0	12.2	0.9	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.37	0.07		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	451	810	852	334	0	800	221	0	0	526	0	
V/C Ratio(X)	0.16	0.38	0.38	0.03	0.00	0.35	0.07	0.00	0.00	1.11	0.00	
Avail Cap(c_a), veh/h	451	810	852	334	0	800	221	0	0	526	0	
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	0.99	0.00	0.99	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.8	21.4	21.4	26.2	0.0	21.1	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.8	1.3	1.3	0.2	0.0	1.2	0.6	0.0	0.0	72.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	9.9	10.3	0.4	0.0	9.0	0.8	0.0	0.0	36.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	22.8	22.7	26.4	0.0	22.3	46.6	0.0	0.0	114.9	0.0	0.0
LnGrp LOS	C	C	C	C	A	C	D	A	A	F	A	
Approach Vol, veh/h		700			286			15			583	A
Approach Delay, s/veh		23.3			22.4			46.6			114.9	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	19.8	2.9	16.5	37.4
Green Ext Time (p_c), s	4.6	0.0	1.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	57.1
HCM 6th LOS	E

Notes

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)	63	779	175	354	163	125	61	867	29	156	490	16
Future Volume (veh/h)	63	779	175	354	163	125	61	867	29	156	490	16
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	68	847	190	385	177	136	66	942	0	170	533	17
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	479	1540	687	430	810	687	477	1932		306	1932	862
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.54	0.54	0.00	0.54	0.54	0.54
Sat Flow, veh/h	1067	3554	1585	1055	1870	1585	858	3554	1585	595	3554	1585
Grp Volume(v), veh/h	68	847	190	385	177	136	66	942	0	170	533	17
Grp Sat Flow(s),veh/h/ln	1067	1777	1585	528	1870	1585	858	1777	1585	595	1777	1585
Q Serve(g_s), s	3.8	16.0	6.9	23.0	5.3	4.8	4.0	14.8	0.0	22.4	7.2	0.4
Cycle Q Clear(g_c), s	9.2	16.0	6.9	39.0	5.3	4.8	11.3	14.8	0.0	37.1	7.2	0.4
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	479	1540	687	430	810	687	477	1932		306	1932	862
V/C Ratio(X)	0.14	0.55	0.28	0.89	0.22	0.20	0.14	0.49		0.56	0.28	0.02
Avail Cap(c_a), veh/h	479	1540	687	430	810	687	477	1932		306	1932	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	19.0	16.4	36.9	16.0	15.8	14.0	12.8	0.0	24.3	11.0	9.5
Incr Delay (d2), s/veh	0.1	0.4	0.2	20.7	0.1	0.1	0.6	0.9	0.0	7.1	0.4	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	1.6	10.0	4.3	9.2	3.9	2.9	1.5	9.4	0.0	6.4	4.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	19.4	16.6	57.6	16.1	15.9	14.6	13.6	0.0	31.4	11.4	9.5
LnGrp LOS	B	B	B	E	B	B	B	B		C	B	A
Approach Vol, veh/h		1105			698			1008	A		720	
Approach Delay, s/veh		18.9			39.0			13.7			16.1	
Approach LOS		B			D			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.2	44.3	54.2	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	39.1	41.0	16.8	18.0
Green Ext Time (p_c), s	1.2	0.0	10.7	6.6

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

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

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

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	217	270	0	0	101	244
Future Vol, veh/h	217	270	0	0	101	244
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	236	293	0	0	110	265
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	11.3	0	12.1
HCM LOS	B	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	29%
Vol Right, %	0%	0%	100%	71%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	217	270	345
LT Vol	0	217	0	0
Through Vol	0	0	0	101
RT Vol	0	0	270	244
Lane Flow Rate	0	236	293	375
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.388	0.384	0.487
Departure Headway (Hd)	5.604	5.926	4.716	4.676
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	604	757	769
Service Time	3.691	3.701	2.491	2.715
HCM Lane V/C Ratio	0	0.391	0.387	0.488
HCM Control Delay	8.7	12.5	10.4	12.1
HCM Lane LOS	N	B	B	B
HCM 95th-tile Q	0	1.8	1.8	2.7

Intersection	
Int Delay, s/veh	22.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	544	374	49	249	0
Future Vol, veh/h	0	544	374	49	249	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	591	407	53	271	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	460	0	-	0	1025	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	591	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1101	-	-	-	~ 260	622
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1101	-	-	-	~ 260	622
Mov Cap-2 Maneuver	-	-	-	-	~ 260	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	553	-

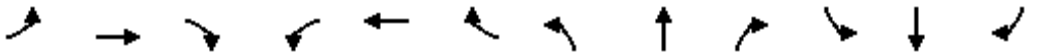
Approach	EB	WB	SB
HCM Control Delay, s	0	0	109.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1101	-	-	-	260
HCM Lane V/C Ratio	-	-	-	-	1.041
HCM Control Delay (s)	0	-	-	-	109.1
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	10.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	773	66	120	856	57	49	295	143	124	378	121
Future Volume (veh/h)	66	773	66	120	856	57	49	295	143	124	378	121
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	72	840	72	130	930	62	53	321	155	135	411	132
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	163	948	614	155	918	602	405	631	535	460	633	536
Arrive On Green	0.09	0.27	0.27	0.17	0.52	0.52	0.12	0.34	0.34	0.12	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	72	840	72	130	930	62	53	321	155	135	411	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.6	27.2	0.7	8.5	31.0	0.0	0.0	16.5	6.3	0.0	22.4	7.2
Cycle Q Clear(g_c), s	4.6	27.2	0.7	8.5	31.0	0.0	0.0	16.5	6.3	0.0	22.4	7.2
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	163	948	614	155	918	602	405	631	535	460	633	536
V/C Ratio(X)	0.44	0.89	0.12	0.84	1.01	0.10	0.13	0.51	0.29	0.29	0.65	0.25
Avail Cap(c_a), veh/h	267	1031	651	208	918	602	405	631	535	460	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	42.2	10.5	48.8	29.0	15.4	33.9	31.8	15.5	32.4	33.7	28.7
Incr Delay (d2), s/veh	1.9	8.9	0.1	17.6	31.0	0.1	0.1	2.9	1.4	0.4	5.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	18.9	1.4	7.4	19.6	1.3	2.2	12.6	6.1	5.7	16.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	51.1	10.6	66.4	60.0	15.5	34.1	34.7	16.9	32.7	38.8	29.7
LnGrp LOS	D	D	B	E	F	B	C	C	B	C	D	C
Approach Vol, veh/h		984			1122			529			678	
Approach Delay, s/veh		48.3			58.3			29.4			35.8	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	46.3	16.6	36.8	20.2	46.4	15.7	37.6
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	18.5	6.6	33.0	2.0	24.4	10.5	29.2
Green Ext Time (p_c), s	0.2	2.4	0.1	0.0	0.0	2.7	0.1	2.8

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1110	322	189	938	378	88
Future Volume (veh/h)	1110	322	189	938	378	88
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1207	350	205	1020	254	265
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1896	1281	369	2289	490	436
Arrive On Green	1.00	1.00	0.15	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1207	350	205	1020	254	265
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	6.2	0.0	14.5	17.5
Cycle Q Clear(g_c), s	0.0	0.0	6.2	0.0	14.5	17.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1896	1281	369	2289	490	436
V/C Ratio(X)	0.64	0.27	0.56	0.45	0.52	0.61
Avail Cap(c_a), veh/h	1896	1281	572	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.9	0.0	36.8	37.9
Incr Delay (d2), s/veh	1.0	0.3	1.2	0.6	3.9	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.2	3.9	0.3	11.1	12.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.3	10.1	0.6	40.7	44.1
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1557			1225	519	
Approach Delay, s/veh	0.9			2.2	42.4	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	13.3	69.7		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	19.5	8.2	2.0		2.0
Green Ext Time (p_c), s	1.5	0.5	15.0		9.9

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	885	192	239	913	71	53
Future Volume (veh/h)	885	192	239	913	71	53
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	962	209	260	992	77	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2161	469	417	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	2997	630	479	3647	1781	1585
Grp Volume(v), veh/h	588	583	260	992	77	58
Grp Sat Flow(s),veh/h/ln	1777	1757	479	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	36.4	11.9	4.5	3.8
Cycle Q Clear(g_c), s	0.0	0.0	36.4	11.9	4.5	3.8
Prop In Lane		0.36	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1307	417	2645	312	277
V/C Ratio(X)	0.44	0.45	0.62	0.38	0.25	0.21
Avail Cap(c_a), veh/h	1322	1307	417	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.6	5.4	42.7	42.4
Incr Delay (d2), s/veh	0.7	0.7	6.9	0.4	1.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.5	7.2	7.2	3.9	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.7	0.7	15.5	5.9	44.6	44.1
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1171			1252	135	
Approach Delay, s/veh	0.7			7.9	44.4	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	25.0	95.0	95.0
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	21.0	89.3	89.3
Max Q Clear Time (g_c+I1), s	6.5	2.0	38.4
Green Ext Time (p_c), s	0.3	11.3	16.2

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	195	69	25	309	83	99	382	29	58	323	170
Future Volume (veh/h)	112	195	69	25	309	83	99	382	29	58	323	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	122	212	75	27	336	90	108	415	32	63	351	0
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	147	428	363	88	366	310	575	1111	942	511	1111	
Arrive On Green	0.08	0.23	0.23	0.05	0.20	0.20	0.59	0.59	0.59	0.59	0.59	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1030	1870	1585	943	1870	1585
Grp Volume(v), veh/h	122	212	75	27	336	90	108	415	32	63	351	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1030	1870	1585	943	1870	1585
Q Serve(g_s), s	8.1	11.8	4.6	1.8	21.1	5.8	7.0	13.9	1.0	4.5	11.3	0.0
Cycle Q Clear(g_c), s	8.1	11.8	4.6	1.8	21.1	5.8	18.3	13.9	1.0	18.4	11.3	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	147	428	363	88	366	310	575	1111	942	511	1111	
V/C Ratio(X)	0.83	0.50	0.21	0.31	0.92	0.29	0.19	0.37	0.03	0.12	0.32	
Avail Cap(c_a), veh/h	157	428	363	150	382	324	575	1111	942	511	1111	
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	0.00
Uniform Delay (d), s/veh	54.2	40.2	37.4	55.0	47.3	41.2	16.7	12.7	10.1	17.5	12.2	0.0
Incr Delay (d2), s/veh	27.9	0.9	0.3	1.9	26.2	0.5	0.7	1.0	0.1	0.5	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	9.4	3.3	1.5	18.3	4.2	3.2	10.0	0.7	1.9	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.1	41.1	37.7	57.0	73.5	41.7	17.5	13.7	10.2	18.0	12.9	0.0
LnGrp LOS	F	D	D	E	E	D	B	B	B	B	B	
Approach Vol, veh/h		409			453			555			414	A
Approach Delay, s/veh		52.7			66.2			14.2			13.7	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	76.9	10.3	32.8	76.9	14.3	28.8
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	20.3	3.8	13.8	20.4	10.1	23.1
Green Ext Time (p_c), s	3.6	0.0	1.1	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

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	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	105	465	38	71	0	0
Future Vol, veh/h	105	465	38	71	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	505	41	77	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.8	8.7	0
HCM LOS	B	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	35%	0%	0%	100%
Vol Right, %	65%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	105	465	0
LT Vol	0	105	0	0
Through Vol	38	0	0	0
RT Vol	71	0	465	0
Lane Flow Rate	118	114	505	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.157	0.169	0.582	0
Departure Headway (Hd)	4.78	5.346	4.142	5.346
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	751	676	874	0
Service Time	2.807	3.046	1.842	3.383
HCM Lane V/C Ratio	0.157	0.169	0.578	0
HCM Control Delay	8.7	9.1	12.4	8.4
HCM Lane LOS	A	A	B	N
HCM 95th-tile Q	0.6	0.6	3.9	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	125	0	1	480	397	0	0	1	124	7	313
Future Volume (veh/h)	16	125	0	1	480	397	0	0	1	124	7	313
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	17	136	0	1	522	432	0	0	1	135	8	0
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	346	2245	0	833	1166	965	0	0	107	223	13	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	588	3647	0	1253	1845	1527	0	0	1585	1686	100	1585
Grp Volume(v), veh/h	17	136	0	1	503	451	0	0	1	143	0	0
Grp Sat Flow(s),veh/h/ln	588	1777	0	1253	1777	1595	0	0	1585	1786	0	1585
Q Serve(g_s), s	1.8	1.8	0.0	0.0	17.4	17.4	0.0	0.0	0.1	9.1	0.0	0.0
Cycle Q Clear(g_c), s	19.3	1.8	0.0	1.8	17.4	17.4	0.0	0.0	0.1	9.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.96	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	346	2245	0	833	1122	1008	0	0	107	236	0	
V/C Ratio(X)	0.05	0.06	0.00	0.00	0.45	0.45	0.00	0.00	0.01	0.61	0.00	
Avail Cap(c_a), veh/h	346	2245	0	833	1122	1008	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.32	0.32	0.32	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.3	8.5	0.0	8.8	11.4	11.4	0.0	0.0	52.2	49.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.2	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	1.1	0.0	0.0	9.1	8.3	0.0	0.0	0.1	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	8.5	0.0	8.8	11.8	11.8	0.0	0.0	52.4	51.6	0.0	0.0
LnGrp LOS	B	A	A	A	B	B	A	A	D	D	A	
Approach Vol, veh/h		153			955			1			143	A
Approach Delay, s/veh		9.4			11.8			52.4			51.6	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.7
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	21.3	2.1	19.4	11.1
Green Ext Time (p_c), s	1.0	0.0	8.3	0.5

Intersection Summary		
HCM 6th Ctrl Delay	16.1	
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)	29	118	49	852	711	534	148	790	2	136	900	80
Future Volume (veh/h)	29	118	49	852	711	534	148	790	2	136	900	80
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	32	128	53	926	773	580	161	859	0	148	978	87
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	94	1539	686	1121	810	686	281	1969		342	1969	878
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.55	0.55	0.00	0.55	0.55	0.55
Sat Flow, veh/h	403	3554	1585	2334	1870	1585	530	3554	1585	643	3554	1585
Grp Volume(v), veh/h	32	128	53	926	773	580	161	859	0	148	978	87
Grp Sat Flow(s),veh/h/ln	403	1777	1585	1167	1870	1585	530	1777	1585	643	1777	1585
Q Serve(g_s), s	3.0	1.9	1.8	34.8	35.9	29.4	24.4	12.8	0.0	16.0	15.2	2.3
Cycle Q Clear(g_c), s	39.0	1.9	1.8	36.7	35.9	29.4	40.1	12.8	0.0	29.2	15.2	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	1539	686	1121	810	686	281	1969		342	1969	878
V/C Ratio(X)	0.34	0.08	0.08	0.83	0.95	0.85	0.57	0.44		0.43	0.50	0.10
Avail Cap(c_a), veh/h	94	1539	686	1122	810	687	281	1969		342	1969	878
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	15.0	15.0	25.8	24.7	22.8	24.9	11.8	0.0	20.6	12.3	9.5
Incr Delay (d2), s/veh	2.1	0.0	0.0	5.2	21.2	9.5	8.2	0.7	0.0	4.0	0.9	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	1.3	1.3	1.1	14.6	26.2	17.4	6.3	8.3	0.0	4.7	9.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	15.0	15.0	31.0	45.9	32.3	33.1	12.5	0.0	24.5	13.2	9.7
LnGrp LOS	D	B	B	C	D	C	C	B		C	B	A
Approach Vol, veh/h		213			2279			1020	A		1213	
Approach Delay, s/veh		19.8			36.4			15.8			14.4	
Approach LOS		B			D			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	55.4	44.3	55.4	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	31.2	38.7	42.1	41.0
Green Ext Time (p_c), s	7.5	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

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

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

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

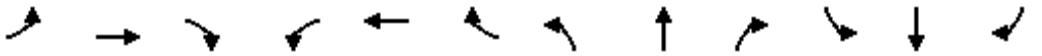
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	123	0	0	41	437
Future Vol, veh/h	0	123	0	0	41	437
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	134	0	0	45	475
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	8.7	0	11
HCM LOS	A	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	9%
Vol Right, %	0%	0%	100%	91%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	123	478
LT Vol	0	0	0	0
Through Vol	0	0	0	41
RT Vol	0	0	123	437
Lane Flow Rate	0	0	134	520
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.18	0.538
Departure Headway (Hd)	4.755	5.566	4.859	3.73
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	738	972
Service Time	2.778	3.298	2.591	1.738
HCM Lane V/C Ratio	0	0	0.182	0.535
HCM Control Delay	7.8	8.3	8.7	11
HCM Lane LOS	N	N	A	B
HCM 95th-tile Q	0	0	0.7	3.3

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	962	69	111	654	154	48	375	120	212	351	93
Future Volume (veh/h)	81	962	69	111	654	154	48	375	120	212	351	93
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	88	1046	75	121	711	167	52	408	130	230	382	101
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	232	1001	599	145	812	594	369	567	481	411	661	560
Arrive On Green	0.13	0.28	0.28	0.16	0.46	0.46	0.10	0.30	0.30	0.15	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	88	1046	75	121	711	167	52	408	130	230	382	101
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.4	33.8	0.7	7.9	21.7	0.0	0.0	23.3	5.6	3.6	19.9	5.3
Cycle Q Clear(g_c), s	5.4	33.8	0.7	7.9	21.7	0.0	0.0	23.3	5.6	3.6	19.9	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	1001	599	145	812	594	369	567	481	411	661	560
V/C Ratio(X)	0.38	1.05	0.13	0.84	0.88	0.28	0.14	0.72	0.27	0.56	0.58	0.18
Avail Cap(c_a), veh/h	232	1001	599	165	977	668	369	567	481	411	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	43.1	11.2	49.5	31.0	17.8	37.2	37.2	17.9	41.9	31.5	26.8
Incr Delay (d2), s/veh	1.0	40.9	0.1	24.0	6.8	0.2	0.2	7.7	1.4	1.7	3.7	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	4.5	28.5	1.5	7.3	12.4	4.2	2.3	17.5	5.4	10.3	14.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.8	84.0	11.2	73.4	37.9	18.0	37.3	44.9	19.3	43.6	35.2	27.5
LnGrp LOS	D	F	B	E	D	B	D	D	B	D	D	C
Approach Vol, veh/h		1209			999			590			713	
Approach Delay, s/veh		76.9			38.9			38.6			36.8	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.3	42.2	21.2	33.2	17.3	48.2	15.1	39.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	5.6	25.3	7.4	23.7	2.0	21.9	9.9	35.8
Green Ext Time (p_c), s	0.5	2.3	0.1	3.7	0.1	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1294	349	73	899	408	114
Future Volume (veh/h)	1294	349	73	899	408	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1407	379	79	977	284	295
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1914	1290	326	2289	490	436
Arrive On Green	1.00	1.00	0.14	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1407	379	79	977	284	295
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	2.0	0.0	16.5	19.9
Cycle Q Clear(g_c), s	0.0	0.0	2.0	0.0	16.5	19.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1914	1290	326	2289	490	436
V/C Ratio(X)	0.74	0.29	0.24	0.43	0.58	0.68
Avail Cap(c_a), veh/h	1914	1290	345	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.93	0.93	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.2	0.0	37.5	38.7
Incr Delay (d2), s/veh	1.0	0.2	0.4	0.5	4.9	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.1	1.4	0.3	12.5	13.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.2	8.6	0.5	42.5	46.9
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	1786			1056	579	
Approach Delay, s/veh	0.9			1.1	44.7	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	12.7	70.3		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	21.9	4.0	2.0		2.0
Green Ext Time (p_c), s	1.6	0.1	20.5		9.3

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1153	115	24	747	68	74
Future Volume (veh/h)	1153	115	24	747	68	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1253	125	26	812	74	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1361	135	115	1481	895	796
Arrive On Green	0.83	0.83	0.42	0.42	0.50	0.50
Sat Flow, veh/h	3358	325	393	3647	1781	1585
Grp Volume(v), veh/h	680	698	26	812	74	80
Grp Sat Flow(s),veh/h/ln	1777	1812	393	1777	1781	1585
Q Serve(g_s), s	32.6	33.4	7.3	20.7	2.6	3.2
Cycle Q Clear(g_c), s	32.6	33.4	40.6	20.7	2.6	3.2
Prop In Lane		0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	741	755	115	1481	895	796
V/C Ratio(X)	0.92	0.92	0.23	0.55	0.08	0.10
Avail Cap(c_a), veh/h	1293	1318	237	2585	895	796
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	8.6	47.6	26.4	15.5	15.7
Incr Delay (d2), s/veh	4.0	4.2	1.0	0.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	7.4	1.3	13.6	2.0	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	12.8	48.6	26.8	15.7	15.9
LnGrp LOS	B	B	D	C	B	B
Approach Vol, veh/h	1378			838	154	
Approach Delay, s/veh	12.7			27.4	15.8	
Approach LOS	B			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	64.2	55.8	55.8
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	23.0	87.3	87.3
Max Q Clear Time (g_c+I1), s	5.2	35.4	42.6
Green Ext Time (p_c), s	0.4	14.4	7.6

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	253	61	15	176	64	246	379	22	94	317	122
Future Volume (veh/h)	88	253	61	15	176	64	246	379	22	94	317	122
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	96	275	66	16	191	70	267	412	24	102	345	0
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	142	325	276	61	240	204	669	1242	1053	614	1242	
Arrive On Green	0.08	0.17	0.17	0.03	0.13	0.13	0.66	0.66	0.66	0.66	0.66	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1036	1870	1585	974	1870	1585
Grp Volume(v), veh/h	96	275	66	16	191	70	267	412	24	102	345	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1036	1870	1585	974	1870	1585
Q Serve(g_s), s	6.3	17.1	4.3	1.1	11.9	4.8	17.2	11.4	0.6	6.0	9.1	0.0
Cycle Q Clear(g_c), s	6.3	17.1	4.3	1.1	11.9	4.8	26.3	11.4	0.6	17.4	9.1	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	142	325	276	61	240	204	669	1242	1053	614	1242	
V/C Ratio(X)	0.67	0.85	0.24	0.26	0.79	0.34	0.40	0.33	0.02	0.17	0.28	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	669	1242	1053	614	1242	
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	0.00
Uniform Delay (d), s/veh	53.7	48.0	42.7	56.4	50.8	47.7	13.7	8.7	6.9	12.4	8.3	0.0
Incr Delay (d2), s/veh	5.4	6.0	0.4	2.2	5.9	1.0	1.8	0.7	0.0	0.6	0.6	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	5.5	13.3	3.1	0.9	10.0	3.5	7.6	8.2	0.4	2.5	6.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.1	54.0	43.2	58.7	56.7	48.7	15.5	9.4	6.9	13.0	8.9	0.0
LnGrp LOS	E	D	D	E	E	D	B	A	A	B	A	
Approach Vol, veh/h		437			277			703			447	A
Approach Delay, s/veh		53.5			54.8			11.6			9.8	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	85.3	8.5	26.2	85.3	14.0	20.7
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	28.3	3.1	19.1	19.4	8.3	13.9
Green Ext Time (p_c), s	2.8	0.0	1.8	2.4	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	27.4
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	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	191	166	394	0	0
Future Vol, veh/h	30	191	166	394	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	208	180	428	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10	16.2	0
HCM LOS	A	C	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	30%	0%	0%	100%
Vol Right, %	70%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	560	30	191	0
LT Vol	0	30	0	0
Through Vol	166	0	0	0
RT Vol	394	0	191	0
Lane Flow Rate	609	33	208	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.699	0.058	0.296	0
Departure Headway (Hd)	4.134	6.349	5.134	5.208
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	877	561	695	0
Service Time	2.164	4.122	2.907	3.279
HCM Lane V/C Ratio	0.694	0.059	0.299	0
HCM Control Delay	16.2	9.5	10.1	8.3
HCM Lane LOS	C	A	B	N
HCM 95th-tile Q	5.9	0.2	1.2	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	503	1	9	158	96	1	6	6	548	5	26
Future Volume (veh/h)	45	503	1	9	158	96	1	6	6	548	5	26
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	49	547	1	10	172	104	1	7	7	596	5	0
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	508	1659	3	369	991	569	15	103	103	521	4	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1103	3639	7	859	2174	1248	115	803	803	1767	15	1585
Grp Volume(v), veh/h	49	267	281	10	139	137	15	0	0	601	0	0
Grp Sat Flow(s),veh/h/ln	1103	1777	1869	859	1777	1646	1720	0	0	1782	0	1585
Q Serve(g_s), s	3.3	11.5	11.6	0.9	5.5	5.9	0.9	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	9.2	11.5	11.6	12.5	5.5	5.9	0.9	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.76	0.07		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	508	810	852	369	810	750	221	0	0	526	0	
V/C Ratio(X)	0.10	0.33	0.33	0.03	0.17	0.18	0.07	0.00	0.00	1.14	0.00	
Avail Cap(c_a), veh/h	508	810	852	369	810	750	221	0	0	526	0	
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	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.1	20.9	20.9	24.9	19.3	19.4	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.4	1.1	1.0	0.1	0.5	0.5	0.6	0.0	0.0	85.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	8.7	9.1	0.4	4.3	4.3	0.8	0.0	0.0	39.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	22.0	21.9	25.0	19.7	19.9	46.6	0.0	0.0	127.5	0.0	0.0
LnGrp LOS	C	C	C	C	B	B	D	A	A	F	A	
Approach Vol, veh/h		597			286			15			601	A
Approach Delay, s/veh		22.0			20.0			46.6			127.5	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	13.6	2.9	14.5	37.4
Green Ext Time (p_c), s	3.9	0.0	1.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	64.1
HCM 6th LOS	E

Notes

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)	40	778	141	400	169	146	61	979	34	259	609	12
Future Volume (veh/h)	40	778	141	400	169	146	61	979	34	259	609	12
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	43	846	153	435	184	159	66	1064	0	282	662	13
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	465	1540	687	440	810	687	532	2401		358	2401	1071
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.68	0.68	0.00	0.68	0.68	0.68
Sat Flow, veh/h	1038	3554	1585	1094	1870	1585	764	3554	1585	530	3554	1585
Grp Volume(v), veh/h	43	846	153	435	184	159	66	1064	0	282	662	13
Grp Sat Flow(s),veh/h/ln	1038	1777	1585	547	1870	1585	764	1777	1585	530	1777	1585
Q Serve(g_s), s	2.4	15.9	5.4	23.1	5.6	5.7	3.5	12.5	0.0	47.2	6.7	0.2
Cycle Q Clear(g_c), s	8.0	15.9	5.4	39.0	5.6	5.7	11.0	12.5	0.0	60.8	6.7	0.2
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	465	1540	687	440	810	687	532	2401		358	2401	1071
V/C Ratio(X)	0.09	0.55	0.22	0.99	0.23	0.23	0.12	0.44		0.79	0.28	0.01
Avail Cap(c_a), veh/h	465	1540	687	440	810	687	532	2401		358	2401	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	19.0	16.0	37.6	16.0	16.1	8.2	6.8	0.0	21.7	5.8	4.8
Incr Delay (d2), s/veh	0.1	0.4	0.2	39.6	0.1	0.2	0.5	0.6	0.0	15.9	0.3	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	1.0	10.1	3.4	11.5	4.0	3.5	1.1	7.2	0.0	11.2	3.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	19.4	16.1	77.1	16.2	16.2	8.7	7.4	0.0	37.7	6.1	4.8
LnGrp LOS	B	B	B	E	B	B	A	A		D	A	A
Approach Vol, veh/h		1042			778			1130	A		957	
Approach Delay, s/veh		18.9			50.3			7.4			15.4	
Approach LOS		B			D			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	66.7	44.3	66.7	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	62.8	41.0	14.5	17.9
Green Ext Time (p_c), s	0.0	0.0	12.9	6.4

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

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

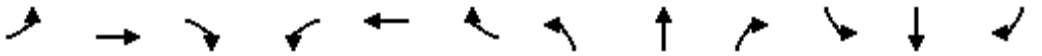
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	224	274	0	0	81	255
Future Vol, veh/h	224	274	0	0	81	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	243	298	0	0	88	277
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	11.4	0	11.8
HCM LOS	B	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	24%
Vol Right, %	0%	0%	100%	76%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	224	274	336
LT Vol	0	224	0	0
Through Vol	0	0	0	81
RT Vol	0	0	274	255
Lane Flow Rate	0	243	298	365
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.399	0.388	0.473
Departure Headway (Hd)	5.61	5.9	4.69	4.663
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	606	759	771
Service Time	3.695	3.673	2.463	2.702
HCM Lane V/C Ratio	0	0.401	0.393	0.473
HCM Control Delay	8.7	12.6	10.5	11.8
HCM Lane LOS	N	B	B	B
HCM 95th-tile Q	0	1.9	1.8	2.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	814	66	120	865	59	49	295	143	138	378	121
Future Volume (veh/h)	66	814	66	120	865	59	49	295	143	138	378	121
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	72	885	72	130	940	64	53	321	155	150	411	132
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	178	978	614	155	918	588	390	631	535	445	633	536
Arrive On Green	0.10	0.28	0.28	0.17	0.52	0.52	0.11	0.34	0.34	0.11	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	72	885	72	130	940	64	53	321	155	150	411	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.6	28.8	0.7	8.5	31.0	0.0	0.0	16.5	6.3	0.0	22.4	7.2
Cycle Q Clear(g_c), s	4.6	28.8	0.7	8.5	31.0	0.0	0.0	16.5	6.3	0.0	22.4	7.2
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	178	978	614	155	918	588	390	631	535	445	633	536
V/C Ratio(X)	0.41	0.90	0.12	0.84	1.02	0.11	0.14	0.51	0.29	0.34	0.65	0.25
Avail Cap(c_a), veh/h	267	1031	637	208	918	588	390	631	535	445	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	42.0	10.5	48.8	29.0	15.9	34.7	31.8	15.5	33.8	33.7	28.7
Incr Delay (d2), s/veh	1.5	10.8	0.1	17.6	33.9	0.1	0.2	2.9	1.4	0.4	5.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	20.1	1.4	7.4	20.2	1.4	2.2	12.6	6.1	6.6	16.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	52.8	10.6	66.4	62.9	16.0	34.9	34.7	16.9	34.3	38.8	29.7
LnGrp LOS	D	D	B	E	F	B	C	C	B	C	D	C
Approach Vol, veh/h		1029			1134			529			693	
Approach Delay, s/veh		49.8			60.7			29.5			36.1	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	46.3	17.6	36.8	19.2	46.4	15.7	38.6
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	18.5	6.6	33.0	2.0	24.4	10.5	30.8
Green Ext Time (p_c), s	0.2	2.4	0.1	0.0	0.0	2.7	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1110	378	259	938	389	97
Future Volume (veh/h)	1110	378	259	938	389	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1207	411	282	1020	264	275
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1806	1241	396	2289	490	436
Arrive On Green	1.00	1.00	0.20	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1207	411	282	1020	264	275
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	9.3	0.0	15.1	18.3
Cycle Q Clear(g_c), s	0.0	0.0	9.3	0.0	15.1	18.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1806	1241	396	2289	490	436
V/C Ratio(X)	0.67	0.33	0.71	0.45	0.54	0.63
Avail Cap(c_a), veh/h	1806	1241	554	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.92	0.92	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	9.2	0.0	37.0	38.2
Incr Delay (d2), s/veh	1.2	0.4	2.3	0.6	4.2	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.3	5.5	0.3	11.6	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.2	0.4	11.5	0.6	41.2	44.9
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1618			1302	539	
Approach Delay, s/veh	1.0			2.9	43.1	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	16.3	66.7		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	20.3	11.3	2.0		2.0
Green Ext Time (p_c), s	1.5	0.6	15.5		9.9

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	894	192	266	983	71	57
Future Volume (veh/h)	894	192	266	983	71	57
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	972	209	289	1068	77	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2166	465	413	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	3004	625	475	3647	1781	1585
Grp Volume(v), veh/h	593	588	289	1068	77	62
Grp Sat Flow(s),veh/h/ln	1777	1758	475	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	47.8	13.2	4.5	4.0
Cycle Q Clear(g_c), s	0.0	0.0	47.8	13.2	4.5	4.0
Prop In Lane		0.36	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1308	413	2645	312	277
V/C Ratio(X)	0.45	0.45	0.70	0.40	0.25	0.22
Avail Cap(c_a), veh/h	1322	1308	413	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	10.0	5.6	42.7	42.5
Incr Delay (d2), s/veh	0.6	0.7	9.5	0.5	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.4	9.0	7.9	3.9	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.7	19.5	6.1	44.6	44.4
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1181			1357	139	
Approach Delay, s/veh	0.6			8.9	44.5	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		8
Phs Duration (G+Y+Rc), s	25.0		95.0		95.0
Change Period (Y+Rc), s	4.0		5.7		5.7
Max Green Setting (Gmax), s	21.0		89.3		89.3
Max Q Clear Time (g_c+I1), s	6.5		2.0		49.8
Green Ext Time (p_c), s	0.3		11.5		17.0

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	222	69	25	309	83	99	382	29	58	323	170
Future Volume (veh/h)	112	222	69	25	309	83	99	382	29	58	323	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	122	241	75	27	336	90	108	415	32	63	351	0
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	147	428	363	88	366	310	575	1111	942	511	1111	
Arrive On Green	0.08	0.23	0.23	0.05	0.20	0.20	0.59	0.59	0.59	0.59	0.59	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1030	1870	1585	943	1870	1585
Grp Volume(v), veh/h	122	241	75	27	336	90	108	415	32	63	351	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1030	1870	1585	943	1870	1585
Q Serve(g_s), s	8.1	13.7	4.6	1.8	21.1	5.8	7.0	13.9	1.0	4.5	11.3	0.0
Cycle Q Clear(g_c), s	8.1	13.7	4.6	1.8	21.1	5.8	18.3	13.9	1.0	18.4	11.3	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	147	428	363	88	366	310	575	1111	942	511	1111	
V/C Ratio(X)	0.83	0.56	0.21	0.31	0.92	0.29	0.19	0.37	0.03	0.12	0.32	
Avail Cap(c_a), veh/h	157	428	363	150	382	324	575	1111	942	511	1111	
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	0.00
Uniform Delay (d), s/veh	54.2	40.9	37.4	55.0	47.3	41.2	16.7	12.7	10.1	17.5	12.2	0.0
Incr Delay (d2), s/veh	27.9	1.7	0.3	1.9	26.2	0.5	0.7	1.0	0.1	0.5	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	10.7	3.3	1.5	18.3	4.2	3.2	10.0	0.7	1.9	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.1	42.6	37.7	57.0	73.5	41.7	17.5	13.7	10.2	18.0	12.9	0.0
LnGrp LOS	F	D	D	E	E	D	B	B	B	B	B	
Approach Vol, veh/h		438			453			555			414	A
Approach Delay, s/veh		52.8			66.2			14.2			13.7	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	76.9	10.3	32.8	76.9	14.3	28.8
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	20.3	3.8	15.7	20.4	10.1	23.1
Green Ext Time (p_c), s	3.6	0.0	1.1	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

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	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	229	465	42	88	0	0
Future Vol, veh/h	229	465	42	88	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	249	505	46	96	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	12.3	9.2	0
HCM LOS	B	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	32%	0%	0%	100%
Vol Right, %	68%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	229	465	0
LT Vol	0	229	0	0
Through Vol	42	0	0	0
RT Vol	88	0	465	0
Lane Flow Rate	141	249	505	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.194	0.373	0.589	0
Departure Headway (Hd)	4.939	5.395	4.192	5.566
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	728	667	859	0
Service Time	2.965	3.119	1.915	3.607
HCM Lane V/C Ratio	0.194	0.373	0.588	0
HCM Control Delay	9.2	11.3	12.8	8.6
HCM Lane LOS	A	B	B	N
HCM 95th-tile Q	0.7	1.7	3.9	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	138	0	1	577	397	0	0	1	124	7	340
Future Volume (veh/h)	20	138	0	1	577	397	0	0	1	124	7	340
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	22	150	0	1	627	432	0	0	1	135	8	0
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	308	2245	0	822	1271	875	0	0	107	223	13	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	533	3647	0	1237	2013	1385	0	0	1585	1686	100	1585
Grp Volume(v), veh/h	22	150	0	1	554	505	0	0	1	143	0	0
Grp Sat Flow(s),veh/h/ln	533	1777	0	1237	1777	1621	0	0	1585	1786	0	1585
Q Serve(g_s), s	2.8	1.9	0.0	0.0	20.0	20.0	0.0	0.0	0.1	9.1	0.0	0.0
Cycle Q Clear(g_c), s	22.8	1.9	0.0	2.0	20.0	20.0	0.0	0.0	0.1	9.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.85	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	308	2245	0	822	1122	1024	0	0	107	236	0	
V/C Ratio(X)	0.07	0.07	0.00	0.00	0.49	0.49	0.00	0.00	0.01	0.61	0.00	
Avail Cap(c_a), veh/h	308	2245	0	822	1122	1024	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.18	0.18	0.18	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.9	8.5	0.0	8.9	11.8	11.8	0.0	0.0	52.2	49.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.2	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	1.3	0.0	0.0	9.5	8.8	0.0	0.0	0.1	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	8.5	0.0	8.9	12.1	12.1	0.0	0.0	52.4	51.6	0.0	0.0
LnGrp LOS	B	A	A	A	B	B	A	A	D	D	A	
Approach Vol, veh/h		172			1060			1			143	A
Approach Delay, s/veh		9.7			12.1			52.4			51.6	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.7
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	24.8	2.1	22.0	11.1
Green Ext Time (p_c), s	1.2	0.0	9.7	0.5

Intersection Summary	
HCM 6th Ctrl Delay	16.0
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)	33	122	55	852	738	534	189	790	2	136	900	107
Future Volume (veh/h)	33	122	55	852	738	534	189	790	2	136	900	107
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	36	133	60	926	802	580	205	859	0	148	978	116
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	83	1540	687	1110	810	687	281	1998		348	1998	891
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.56	0.56	0.00	0.56	0.56	0.56
Sat Flow, veh/h	392	3554	1585	2309	1870	1585	515	3554	1585	643	3554	1585
Grp Volume(v), veh/h	36	133	60	926	802	580	205	859	0	148	978	116
Grp Sat Flow(s),veh/h/ln	392	1777	1585	1154	1870	1585	515	1777	1585	643	1777	1585
Q Serve(g_s), s	0.7	2.0	2.0	35.5	38.3	29.4	35.1	12.6	0.0	15.7	15.0	3.1
Cycle Q Clear(g_c), s	39.0	2.0	2.0	37.5	38.3	29.4	50.6	12.6	0.0	28.7	15.0	3.1
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	83	1540	687	1110	810	687	281	1998		348	1998	891
V/C Ratio(X)	0.43	0.09	0.09	0.83	0.99	0.84	0.73	0.43		0.42	0.49	0.13
Avail Cap(c_a), veh/h	83	1540	687	1110	810	687	281	1998		348	1998	891
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	15.0	15.0	26.0	25.3	22.8	27.8	11.4	0.0	19.9	11.9	9.3
Incr Delay (d2), s/veh	3.5	0.0	0.1	5.6	28.9	9.5	15.3	0.7	0.0	3.8	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	1.5	1.4	1.2	14.8	29.4	17.3	9.1	8.2	0.0	4.6	9.4	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	15.0	15.1	31.7	54.2	32.3	43.1	12.1	0.0	23.6	12.8	9.6
LnGrp LOS	D	B	B	C	D	C	D	B		C	B	A
Approach Vol, veh/h		229			2308			1064	A		1242	
Approach Delay, s/veh		20.3			39.7			18.0			13.8	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	56.2	44.3	56.2	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	30.7	40.3	52.6	41.0
Green Ext Time (p_c), s	7.9	0.0	0.0	0.0

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.

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

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	121	0	0	165	437
Future Vol, veh/h	0	121	0	0	165	437
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	132	0	0	179	475
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	9.1	0	15.4
HCM LOS	A	-	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	27%
Vol Right, %	0%	0%	100%	73%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	121	602
LT Vol	0	0	0	0
Through Vol	0	0	0	165
RT Vol	0	0	121	437
Lane Flow Rate	0	0	132	654
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.189	0.701
Departure Headway (Hd)	4.91	5.874	5.166	3.855
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	693	942
Service Time	2.947	3.62	2.911	1.869
HCM Lane V/C Ratio	0	0	0.19	0.694
HCM Control Delay	7.9	8.6	9.1	15.4
HCM Lane LOS	N	N	A	C
HCM 95th-tile Q	0	0	0.7	6

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	109	269	248	21	0
Future Vol, veh/h	0	109	269	248	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	118	292	270	23	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	562	0	-	0	545	427
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	118	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1009	-	-	-	499	628
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	907	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1009	-	-	-	499	628
Mov Cap-2 Maneuver	-	-	-	-	499	-
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	907	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1009	-	-	-	499
HCM Lane V/C Ratio	-	-	-	-	0.046
HCM Control Delay (s)	0	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	311	29	0	559	0	16
Future Vol, veh/h	311	29	0	559	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	338	32	0	608	0	17

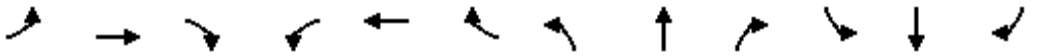
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	354
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	690
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	690
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	690	-	-	-
HCM Lane V/C Ratio	0.025	-	-	-
HCM Control Delay (s)	10.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	969	69	111	716	166	48	375	120	215	351	93
Future Volume (veh/h)	81	969	69	111	716	166	48	375	120	215	351	93
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	88	1053	75	121	778	180	52	408	130	234	382	101
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	205	1001	599	145	867	618	369	567	481	411	661	560
Arrive On Green	0.11	0.28	0.28	0.16	0.49	0.49	0.10	0.30	0.30	0.15	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	88	1053	75	121	778	180	52	408	130	234	382	101
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.5	33.8	0.7	7.9	23.9	0.0	0.0	23.3	5.6	3.8	19.9	5.3
Cycle Q Clear(g_c), s	5.5	33.8	0.7	7.9	23.9	0.0	0.0	23.3	5.6	3.8	19.9	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	1001	599	145	867	618	369	567	481	411	661	560
V/C Ratio(X)	0.43	1.05	0.13	0.84	0.90	0.29	0.14	0.72	0.27	0.57	0.58	0.18
Avail Cap(c_a), veh/h	205	1001	599	165	977	668	369	567	481	411	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	43.1	11.2	49.5	29.4	16.4	37.2	37.2	17.9	42.0	31.5	26.8
Incr Delay (d2), s/veh	1.4	43.1	0.1	22.6	8.4	0.2	0.2	7.7	1.4	1.9	3.7	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	4.6	29.0	1.5	7.2	13.2	4.2	2.3	17.5	5.4	10.5	14.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	86.2	11.2	72.1	37.7	16.6	37.3	44.9	19.3	43.9	35.2	27.5
LnGrp LOS	D	F	B	E	D	B	D	D	B	D	D	C
Approach Vol, veh/h		1216			1079			590			717	
Approach Delay, s/veh		79.1			38.1			38.6			36.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.3	42.2	19.4	35.1	17.3	48.2	15.1	39.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	5.8	25.3	7.5	25.9	2.0	21.9	9.9	35.8
Green Ext Time (p_c), s	0.5	2.3	0.1	3.3	0.1	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1294	359	86	899	482	176
Future Volume (veh/h)	1294	359	86	899	482	176
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1407	390	93	977	358	369
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1907	1287	327	2289	490	436
Arrive On Green	1.00	1.00	0.14	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1407	390	93	977	358	369
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	2.4	0.0	21.9	26.4
Cycle Q Clear(g_c), s	0.0	0.0	2.4	0.0	21.9	26.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1907	1287	327	2289	490	436
V/C Ratio(X)	0.74	0.30	0.28	0.43	0.73	0.85
Avail Cap(c_a), veh/h	1907	1287	343	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.3	0.0	39.5	41.1
Incr Delay (d2), s/veh	1.0	0.2	0.4	0.5	9.3	18.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.2	1.6	0.3	16.2	18.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.2	8.7	0.5	48.7	59.2
LnGrp LOS	A	A	A	A	D	E
Approach Vol, veh/h	1797			1070	727	
Approach Delay, s/veh	0.9			1.3	54.0	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	12.9	70.1		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	28.4	4.4	2.0		2.0
Green Ext Time (p_c), s	1.2	0.1	20.6		9.3

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1215	115	28	760	68	98
Future Volume (veh/h)	1215	115	28	760	68	98
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1321	125	30	826	74	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1413	133	119	1530	870	774
Arrive On Green	0.86	0.86	0.43	0.43	0.49	0.49
Sat Flow, veh/h	3376	309	369	3647	1781	1585
Grp Volume(v), veh/h	713	733	30	826	74	107
Grp Sat Flow(s),veh/h/ln	1777	1815	369	1777	1781	1585
Q Serve(g_s), s	33.8	35.1	8.9	20.7	2.7	4.4
Cycle Q Clear(g_c), s	33.8	35.1	41.3	20.7	2.7	4.4
Prop In Lane		0.17	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	765	781	119	1530	870	774
V/C Ratio(X)	0.93	0.94	0.25	0.54	0.09	0.14
Avail Cap(c_a), veh/h	1293	1320	229	2585	870	774
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	7.2	46.0	25.3	16.4	16.8
Incr Delay (d2), s/veh	4.8	5.2	1.1	0.3	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	6.9	1.5	13.6	2.1	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.9	12.4	47.1	25.6	16.6	17.2
LnGrp LOS	B	B	D	C	B	B
Approach Vol, veh/h	1446			856	181	
Approach Delay, s/veh	12.1			26.4	16.9	
Approach LOS	B			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	62.1	57.9	57.9
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	23.0	87.3	87.3
Max Q Clear Time (g_c+I1), s	6.4	37.1	43.3
Green Ext Time (p_c), s	0.5	15.6	7.9

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	257	61	15	176	64	246	379	22	94	317	122
Future Volume (veh/h)	88	257	61	15	176	64	246	379	22	94	317	122
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	96	279	66	16	191	70	267	412	24	102	345	0
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	142	330	279	61	244	207	666	1238	1049	612	1238	
Arrive On Green	0.08	0.18	0.18	0.03	0.13	0.13	0.66	0.66	0.66	0.66	0.66	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1036	1870	1585	974	1870	1585
Grp Volume(v), veh/h	96	279	66	16	191	70	267	412	24	102	345	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1036	1870	1585	974	1870	1585
Q Serve(g_s), s	6.3	17.3	4.3	1.1	11.9	4.8	17.3	11.5	0.6	6.1	9.2	0.0
Cycle Q Clear(g_c), s	6.3	17.3	4.3	1.1	11.9	4.8	26.5	11.5	0.6	17.6	9.2	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	142	330	279	61	244	207	666	1238	1049	612	1238	
V/C Ratio(X)	0.67	0.85	0.24	0.26	0.78	0.34	0.40	0.33	0.02	0.17	0.28	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	666	1238	1049	612	1238	
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	0.00
Uniform Delay (d), s/veh	53.7	47.9	42.5	56.4	50.5	47.4	13.9	8.8	7.0	12.6	8.4	0.0
Incr Delay (d2), s/veh	5.4	6.0	0.4	2.2	5.4	1.0	1.8	0.7	0.0	0.6	0.6	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	5.5	13.4	3.1	0.9	9.9	3.5	7.6	8.2	0.4	2.6	6.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.1	53.9	42.9	58.7	55.9	48.4	15.7	9.5	7.0	13.2	9.0	0.0
LnGrp LOS	E	D	D	E	E	D	B	A	A	B	A	
Approach Vol, veh/h		441			277			703			447	A
Approach Delay, s/veh		53.4			54.2			11.8			9.9	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	85.0	8.5	26.4	85.0	14.0	21.0
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	28.5	3.1	19.3	19.6	8.3	13.9
Green Ext Time (p_c), s	2.7	0.0	1.8	2.4	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	27.4
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	
Intersection Delay, s/veh	26.2
Intersection LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	191	198	506	0	0
Future Vol, veh/h	52	191	198	506	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	208	215	550	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.8	31.5	0
HCM LOS	B	D	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	28%	0%	0%	100%
Vol Right, %	72%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	704	52	191	0
LT Vol	0	52	0	0
Through Vol	198	0	0	0
RT Vol	506	0	191	0
Lane Flow Rate	765	57	208	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.896	0.107	0.323	0
Departure Headway (Hd)	4.215	6.813	5.594	5.594
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	857	529	646	0
Service Time	2.268	4.513	3.294	3.611
HCM Lane V/C Ratio	0.893	0.108	0.322	0
HCM Control Delay	31.5	10.3	10.9	8.6
HCM Lane LOS	D	B	B	N
HCM 95th-tile Q	12.2	0.4	1.4	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	590	1	9	175	96	1	6	6	548	5	30
Future Volume (veh/h)	69	590	1	9	175	96	1	6	6	548	5	30
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	75	641	1	10	190	104	1	7	7	596	5	0
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	498	1659	3	327	1028	538	15	103	103	521	4	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1085	3641	6	787	2255	1180	115	803	803	1767	15	1585
Grp Volume(v), veh/h	75	313	329	10	148	146	15	0	0	601	0	0
Grp Sat Flow(s),veh/h/ln	1085	1777	1869	787	1777	1658	1720	0	0	1782	0	1585
Q Serve(g_s), s	5.3	14.0	14.0	1.0	5.9	6.3	0.9	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	11.6	14.0	14.0	15.0	5.9	6.3	0.9	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.71	0.07		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	498	810	852	327	810	756	221	0	0	526	0	
V/C Ratio(X)	0.15	0.39	0.39	0.03	0.18	0.19	0.07	0.00	0.00	1.14	0.00	
Avail Cap(c_a), veh/h	498	810	852	327	810	756	221	0	0	526	0	
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	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	21.6	21.6	26.5	19.4	19.5	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.6	1.4	1.3	0.2	0.5	0.6	0.6	0.0	0.0	85.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	10.2	10.6	0.4	4.6	4.6	0.8	0.0	0.0	39.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	23.0	22.9	26.7	19.9	20.0	46.6	0.0	0.0	127.5	0.0	0.0
LnGrp LOS	C	C	C	C	B	C	D	A	A	F	A	
Approach Vol, veh/h		717			304			15			601	A
Approach Delay, s/veh		23.0			20.2			46.6			127.5	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	16.0	2.9	17.0	37.4
Green Ext Time (p_c), s	4.8	0.0	2.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.0
HCM 6th LOS	E

Notes

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)	64	802	179	400	173	146	68	979	34	259	609	16
Future Volume (veh/h)	64	802	179	400	173	146	68	979	34	259	609	16
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	70	872	195	435	188	159	74	1064	0	282	662	17
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	463	1540	687	416	810	687	530	2401		358	2401	1071
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.68	0.68	0.00	0.68	0.68	0.68
Sat Flow, veh/h	1034	3554	1585	1026	1870	1585	761	3554	1585	530	3554	1585
Grp Volume(v), veh/h	70	872	195	435	188	159	74	1064	0	282	662	17
Grp Sat Flow(s),veh/h/ln	1034	1777	1585	513	1870	1585	761	1777	1585	530	1777	1585
Q Serve(g_s), s	4.1	16.6	7.2	22.4	5.7	5.7	4.0	12.5	0.0	47.2	6.7	0.3
Cycle Q Clear(g_c), s	9.8	16.6	7.2	39.0	5.7	5.7	11.5	12.5	0.0	60.8	6.7	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	1540	687	416	810	687	530	2401		358	2401	1071
V/C Ratio(X)	0.15	0.57	0.28	1.05	0.23	0.23	0.14	0.44		0.79	0.28	0.02
Avail Cap(c_a), veh/h	463	1540	687	416	810	687	530	2401		358	2401	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	19.1	16.5	38.1	16.1	16.1	8.3	6.8	0.0	21.7	5.8	4.8
Incr Delay (d2), s/veh	0.1	0.4	0.2	56.9	0.1	0.2	0.6	0.6	0.0	15.9	0.3	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	1.7	10.3	4.4	12.7	4.1	3.5	1.2	7.2	0.0	11.2	3.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	19.6	16.7	95.0	16.2	16.2	8.9	7.4	0.0	37.7	6.1	4.8
LnGrp LOS	B	B	B	F	B	B	A	A		D	A	A
Approach Vol, veh/h		1137			782			1138	A		961	
Approach Delay, s/veh		19.1			60.1			7.5			15.3	
Approach LOS		B			E			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	66.7	44.3	66.7	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	62.8	41.0	14.5	18.6
Green Ext Time (p_c), s	0.0	0.0	13.0	6.8

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

Notes

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

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

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	330	273	0	0	103	255
Future Vol, veh/h	330	273	0	0	103	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	359	297	0	0	112	277
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	14.4	0	13.5
HCM LOS	B	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	29%
Vol Right, %	0%	0%	100%	71%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	330	273	358
LT Vol	0	330	0	0
Through Vol	0	0	0	103
RT Vol	0	0	273	255
Lane Flow Rate	0	359	297	389
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.597	0.394	0.532
Departure Headway (Hd)	6.032	5.993	4.783	4.919
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	595	742	732
Service Time	4.032	3.79	2.579	2.969
HCM Lane V/C Ratio	0	0.603	0.4	0.531
HCM Control Delay	9	17.4	10.7	13.5
HCM Lane LOS	N	C	B	B
HCM 95th-tile Q	0	3.9	1.9	3.2

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	560	385	44	143	0
Future Vol, veh/h	0	560	385	44	143	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	609	418	48	155	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	466	0	-	0	1051	442
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	609	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1095	-	-	-	251	615
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1095	-	-	-	251	615
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	543	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	40.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1095	-	-	-	251
HCM Lane V/C Ratio	-	-	-	-	0.619
HCM Control Delay (s)	0	-	-	-	40.1
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	3.7

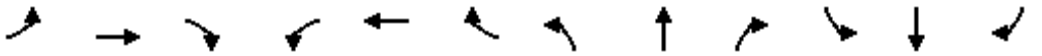
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	496	5	0	531	0	106
Future Vol, veh/h	496	5	0	531	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	539	5	0	577	0	115

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	542
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	540
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	540
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	540	-	-	-
HCM Lane V/C Ratio	0.213	-	-	-
HCM Control Delay (s)	13.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	814	66	120	865	59	49	295	143	138	378	121
Future Volume (veh/h)	66	814	66	120	865	59	49	295	143	138	378	121
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	72	885	72	130	940	64	53	321	155	150	411	132
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	178	978	614	155	918	588	390	631	535	445	633	536
Arrive On Green	0.10	0.28	0.28	0.17	0.52	0.52	0.11	0.34	0.34	0.11	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	72	885	72	130	940	64	53	321	155	150	411	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.6	28.8	0.7	8.5	31.0	0.0	0.0	16.5	6.3	0.0	22.4	7.2
Cycle Q Clear(g_c), s	4.6	28.8	0.7	8.5	31.0	0.0	0.0	16.5	6.3	0.0	22.4	7.2
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	178	978	614	155	918	588	390	631	535	445	633	536
V/C Ratio(X)	0.41	0.90	0.12	0.84	1.02	0.11	0.14	0.51	0.29	0.34	0.65	0.25
Avail Cap(c_a), veh/h	267	1031	637	208	918	588	390	631	535	445	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	42.0	10.5	48.8	29.0	15.9	34.7	31.8	15.5	33.8	33.7	28.7
Incr Delay (d2), s/veh	1.5	10.8	0.1	17.6	33.9	0.1	0.2	2.9	1.4	0.4	5.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	20.1	1.4	7.4	20.2	1.4	2.2	12.6	6.1	6.6	16.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	52.8	10.6	66.4	62.9	16.0	34.9	34.7	16.9	34.3	38.8	29.7
LnGrp LOS	D	D	B	E	F	B	C	C	B	C	D	C
Approach Vol, veh/h		1029			1134			529			693	
Approach Delay, s/veh		49.8			60.7			29.5			36.1	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	46.3	17.6	36.8	19.2	46.4	15.7	38.6
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	18.5	6.6	33.0	2.0	24.4	10.5	30.8
Green Ext Time (p_c), s	0.2	2.4	0.1	0.0	0.0	2.7	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1110	378	259	938	389	97
Future Volume (veh/h)	1110	378	259	938	389	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1207	411	282	1020	264	275
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1806	1241	396	2289	490	436
Arrive On Green	1.00	1.00	0.20	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1207	411	282	1020	264	275
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	9.3	0.0	15.1	18.3
Cycle Q Clear(g_c), s	0.0	0.0	9.3	0.0	15.1	18.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1806	1241	396	2289	490	436
V/C Ratio(X)	0.67	0.33	0.71	0.45	0.54	0.63
Avail Cap(c_a), veh/h	1806	1241	554	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.92	0.92	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	9.2	0.0	37.0	38.2
Incr Delay (d2), s/veh	1.2	0.4	2.3	0.6	4.2	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.3	5.5	0.3	11.6	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.2	0.4	11.5	0.6	41.2	44.9
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1618			1302	539	
Approach Delay, s/veh	1.0			2.9	43.1	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	16.3	66.7		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	20.3	11.3	2.0		2.0
Green Ext Time (p_c), s	1.5	0.6	15.5		9.9

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	894	192	266	983	71	57
Future Volume (veh/h)	894	192	266	983	71	57
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	972	209	289	1068	77	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2166	465	413	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	3004	625	475	3647	1781	1585
Grp Volume(v), veh/h	593	588	289	1068	77	62
Grp Sat Flow(s),veh/h/ln	1777	1758	475	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	47.8	13.2	4.5	4.0
Cycle Q Clear(g_c), s	0.0	0.0	47.8	13.2	4.5	4.0
Prop In Lane		0.36	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1308	413	2645	312	277
V/C Ratio(X)	0.45	0.45	0.70	0.40	0.25	0.22
Avail Cap(c_a), veh/h	1322	1308	413	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	10.0	5.6	42.7	42.5
Incr Delay (d2), s/veh	0.6	0.7	9.5	0.5	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.4	9.0	7.9	3.9	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.7	19.5	6.1	44.6	44.4
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1181			1357	139	
Approach Delay, s/veh	0.6			8.9	44.5	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		8
Phs Duration (G+Y+Rc), s	25.0		95.0		95.0
Change Period (Y+Rc), s	4.0		5.7		5.7
Max Green Setting (Gmax), s	21.0		89.3		89.3
Max Q Clear Time (g_c+I1), s	6.5		2.0		49.8
Green Ext Time (p_c), s	0.3		11.5		17.0

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	222	69	25	309	83	99	382	29	58	323	170
Future Volume (veh/h)	112	222	69	25	309	83	99	382	29	58	323	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	122	241	75	27	336	90	108	415	32	63	351	0
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	147	428	363	88	366	310	575	1111	942	511	1111	
Arrive On Green	0.08	0.23	0.23	0.05	0.20	0.20	0.59	0.59	0.59	0.59	0.59	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1030	1870	1585	943	1870	1585
Grp Volume(v), veh/h	122	241	75	27	336	90	108	415	32	63	351	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1030	1870	1585	943	1870	1585
Q Serve(g_s), s	8.1	13.7	4.6	1.8	21.1	5.8	7.0	13.9	1.0	4.5	11.3	0.0
Cycle Q Clear(g_c), s	8.1	13.7	4.6	1.8	21.1	5.8	18.3	13.9	1.0	18.4	11.3	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	147	428	363	88	366	310	575	1111	942	511	1111	
V/C Ratio(X)	0.83	0.56	0.21	0.31	0.92	0.29	0.19	0.37	0.03	0.12	0.32	
Avail Cap(c_a), veh/h	157	428	363	150	382	324	575	1111	942	511	1111	
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	0.00
Uniform Delay (d), s/veh	54.2	40.9	37.4	55.0	47.3	41.2	16.7	12.7	10.1	17.5	12.2	0.0
Incr Delay (d2), s/veh	27.9	1.7	0.3	1.9	26.2	0.5	0.7	1.0	0.1	0.5	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	10.7	3.3	1.5	18.3	4.2	3.2	10.0	0.7	1.9	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.1	42.6	37.7	57.0	73.5	41.7	17.5	13.7	10.2	18.0	12.9	0.0
LnGrp LOS	F	D	D	E	E	D	B	B	B	B	B	
Approach Vol, veh/h		438			453			555			414	A
Approach Delay, s/veh		52.8			66.2			14.2			13.7	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	76.9	10.3	32.8	76.9	14.3	28.8
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	20.3	3.8	15.7	20.4	10.1	23.1
Green Ext Time (p_c), s	3.6	0.0	1.1	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

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	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	229	465	58	88	0	0
Future Vol, veh/h	229	465	58	88	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	249	505	63	96	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	12.5	9.4	0
HCM LOS	B	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	40%	0%	0%	100%
Vol Right, %	60%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	146	229	465	0
LT Vol	0	229	0	0
Through Vol	58	0	0	0
RT Vol	88	0	465	0
Lane Flow Rate	159	249	505	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.22	0.376	0.595	0
Departure Headway (Hd)	4.99	5.443	4.239	5.6
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	719	662	849	0
Service Time	3.019	3.171	1.966	3.648
HCM Lane V/C Ratio	0.221	0.376	0.595	0
HCM Control Delay	9.4	11.4	13	8.6
HCM Lane LOS	A	B	B	N
HCM 95th-tile Q	0.8	1.7	4	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	138	0	1	577	397	0	0	1	124	7	340
Future Volume (veh/h)	20	138	0	1	577	397	0	0	1	124	7	340
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	22	150	0	1	627	432	0	0	1	135	8	0
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	308	2245	0	822	1271	875	0	0	107	223	13	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	533	3647	0	1237	2013	1385	0	0	1585	1686	100	1585
Grp Volume(v), veh/h	22	150	0	1	554	505	0	0	1	143	0	0
Grp Sat Flow(s),veh/h/ln	533	1777	0	1237	1777	1621	0	0	1585	1786	0	1585
Q Serve(g_s), s	2.8	1.9	0.0	0.0	20.0	20.0	0.0	0.0	0.1	9.1	0.0	0.0
Cycle Q Clear(g_c), s	22.8	1.9	0.0	2.0	20.0	20.0	0.0	0.0	0.1	9.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.85	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	308	2245	0	822	1122	1024	0	0	107	236	0	
V/C Ratio(X)	0.07	0.07	0.00	0.00	0.49	0.49	0.00	0.00	0.01	0.61	0.00	
Avail Cap(c_a), veh/h	308	2245	0	822	1122	1024	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.18	0.18	0.18	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.9	8.5	0.0	8.9	11.8	11.8	0.0	0.0	52.2	49.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.2	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	1.3	0.0	0.0	9.5	8.8	0.0	0.0	0.1	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	8.5	0.0	8.9	12.1	12.1	0.0	0.0	52.4	51.6	0.0	0.0
LnGrp LOS	B	A	A	A	B	B	A	A	D	D	A	
Approach Vol, veh/h		172			1060			1			143	A
Approach Delay, s/veh		9.7			12.1			52.4			51.6	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.7
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	24.8	2.1	22.0	11.1
Green Ext Time (p_c), s	1.2	0.0	9.7	0.5

Intersection Summary	
HCM 6th Ctrl Delay	16.0
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)	33	122	55	852	738	534	189	790	2	136	900	107
Future Volume (veh/h)	33	122	55	852	738	534	189	790	2	136	900	107
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	36	133	60	926	802	580	205	859	0	148	978	116
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	83	1540	687	1110	810	687	281	1998		348	1998	891
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.56	0.56	0.00	0.56	0.56	0.56
Sat Flow, veh/h	392	3554	1585	2309	1870	1585	515	3554	1585	643	3554	1585
Grp Volume(v), veh/h	36	133	60	926	802	580	205	859	0	148	978	116
Grp Sat Flow(s),veh/h/ln	392	1777	1585	1154	1870	1585	515	1777	1585	643	1777	1585
Q Serve(g_s), s	0.7	2.0	2.0	35.5	38.3	29.4	35.1	12.6	0.0	15.7	15.0	3.1
Cycle Q Clear(g_c), s	39.0	2.0	2.0	37.5	38.3	29.4	50.6	12.6	0.0	28.7	15.0	3.1
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	83	1540	687	1110	810	687	281	1998		348	1998	891
V/C Ratio(X)	0.43	0.09	0.09	0.83	0.99	0.84	0.73	0.43		0.42	0.49	0.13
Avail Cap(c_a), veh/h	83	1540	687	1110	810	687	281	1998		348	1998	891
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	15.0	15.0	26.0	25.3	22.8	27.8	11.4	0.0	19.9	11.9	9.3
Incr Delay (d2), s/veh	3.5	0.0	0.1	5.6	28.9	9.5	15.3	0.7	0.0	3.8	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	1.5	1.4	1.2	14.8	29.4	17.3	9.1	8.2	0.0	4.6	9.4	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	15.0	15.1	31.7	54.2	32.3	43.1	12.1	0.0	23.6	12.8	9.6
LnGrp LOS	D	B	B	C	D	C	D	B		C	B	A
Approach Vol, veh/h		229			2308			1064	A		1242	
Approach Delay, s/veh		20.3			39.7			18.0			13.8	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	56.2	44.3	56.2	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	30.7	40.3	52.6	41.0
Green Ext Time (p_c), s	7.9	0.0	0.0	0.0

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.

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

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	150	0	0	165	437
Future Vol, veh/h	0	150	0	0	165	437
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	163	0	0	179	475
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	9.5	0	16.3
HCM LOS	A	-	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	27%
Vol Right, %	0%	0%	100%	73%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	150	602
LT Vol	0	0	0	0
Through Vol	0	0	0	165
RT Vol	0	0	150	437
Lane Flow Rate	0	0	163	654
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.235	0.716
Departure Headway (Hd)	5.016	5.892	5.184	3.939
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	690	916
Service Time	3.066	3.649	2.941	1.959
HCM Lane V/C Ratio	0	0	0.236	0.714
HCM Control Delay	8.1	8.6	9.5	16.3
HCM Lane LOS	N	N	A	C
HCM 95th-tile Q	0	0	0.9	6.3

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	109	269	277	37	0
Future Vol, veh/h	0	109	269	277	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	118	292	301	40	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	593	0	-	0	561	443
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	118	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	983	-	-	-	489	615
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	907	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	983	-	-	-	489	615
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	907	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	983	-	-	-	489
HCM Lane V/C Ratio	-	-	-	-	0.082
HCM Control Delay (s)	0	-	-	-	13
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	969	69	111	716	166	48	375	120	215	351	93
Future Volume (veh/h)	81	969	69	111	716	166	48	375	120	215	351	93
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	88	1053	75	121	778	180	52	408	130	234	382	101
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	205	1001	599	145	867	618	369	567	481	411	661	560
Arrive On Green	0.11	0.28	0.28	0.16	0.49	0.49	0.10	0.30	0.30	0.15	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	88	1053	75	121	778	180	52	408	130	234	382	101
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.5	33.8	0.7	7.9	23.9	0.0	0.0	23.3	5.6	3.8	19.9	5.3
Cycle Q Clear(g_c), s	5.5	33.8	0.7	7.9	23.9	0.0	0.0	23.3	5.6	3.8	19.9	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	1001	599	145	867	618	369	567	481	411	661	560
V/C Ratio(X)	0.43	1.05	0.13	0.84	0.90	0.29	0.14	0.72	0.27	0.57	0.58	0.18
Avail Cap(c_a), veh/h	205	1001	599	165	977	668	369	567	481	411	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	43.1	11.2	49.5	29.4	16.4	37.2	37.2	17.9	42.0	31.5	26.8
Incr Delay (d2), s/veh	1.4	43.1	0.1	22.6	8.4	0.2	0.2	7.7	1.4	1.9	3.7	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	4.6	29.0	1.5	7.2	13.2	4.2	2.3	17.5	5.4	10.5	14.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	86.2	11.2	72.1	37.7	16.6	37.3	44.9	19.3	43.9	35.2	27.5
LnGrp LOS	D	F	B	E	D	B	D	D	B	D	D	C
Approach Vol, veh/h		1216			1079			590			717	
Approach Delay, s/veh		79.1			38.1			38.6			36.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.3	42.2	19.4	35.1	17.3	48.2	15.1	39.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	5.8	25.3	7.5	25.9	2.0	21.9	9.9	35.8
Green Ext Time (p_c), s	0.5	2.3	0.1	3.3	0.1	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1294	359	86	899	482	176
Future Volume (veh/h)	1294	359	86	899	482	176
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1407	390	93	977	358	369
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1907	1287	327	2289	490	436
Arrive On Green	1.00	1.00	0.14	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1407	390	93	977	358	369
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	2.4	0.0	21.9	26.4
Cycle Q Clear(g_c), s	0.0	0.0	2.4	0.0	21.9	26.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1907	1287	327	2289	490	436
V/C Ratio(X)	0.74	0.30	0.28	0.43	0.73	0.85
Avail Cap(c_a), veh/h	1907	1287	343	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.3	0.0	39.5	41.1
Incr Delay (d2), s/veh	1.0	0.2	0.4	0.5	9.3	18.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.2	1.6	0.3	16.2	18.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.2	8.7	0.5	48.7	59.2
LnGrp LOS	A	A	A	A	D	E
Approach Vol, veh/h	1797			1070	727	
Approach Delay, s/veh	0.9			1.3	54.0	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	12.9	70.1		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	28.4	4.4	2.0		2.0
Green Ext Time (p_c), s	1.2	0.1	20.6		9.3

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1215	115	28	760	68	98
Future Volume (veh/h)	1215	115	28	760	68	98
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1321	125	30	826	74	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1413	133	119	1530	870	774
Arrive On Green	0.86	0.86	0.43	0.43	0.49	0.49
Sat Flow, veh/h	3376	309	369	3647	1781	1585
Grp Volume(v), veh/h	713	733	30	826	74	107
Grp Sat Flow(s),veh/h/ln	1777	1815	369	1777	1781	1585
Q Serve(g_s), s	33.8	35.1	8.9	20.7	2.7	4.4
Cycle Q Clear(g_c), s	33.8	35.1	41.3	20.7	2.7	4.4
Prop In Lane		0.17	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	765	781	119	1530	870	774
V/C Ratio(X)	0.93	0.94	0.25	0.54	0.09	0.14
Avail Cap(c_a), veh/h	1293	1320	229	2585	870	774
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	7.2	46.0	25.3	16.4	16.8
Incr Delay (d2), s/veh	4.8	5.2	1.1	0.3	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	6.9	1.5	13.6	2.1	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.9	12.4	47.1	25.6	16.6	17.2
LnGrp LOS	B	B	D	C	B	B
Approach Vol, veh/h	1446			856	181	
Approach Delay, s/veh	12.1			26.4	16.9	
Approach LOS	B			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	62.1	57.9	57.9
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	23.0	87.3	87.3
Max Q Clear Time (g_c+I1), s	6.4	37.1	43.3
Green Ext Time (p_c), s	0.5	15.6	7.9

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	257	61	15	176	64	246	379	22	94	317	122
Future Volume (veh/h)	88	257	61	15	176	64	246	379	22	94	317	122
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	96	279	66	16	191	70	267	412	24	102	345	0
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	142	330	279	61	244	207	666	1238	1049	612	1238	
Arrive On Green	0.08	0.18	0.18	0.03	0.13	0.13	0.66	0.66	0.66	0.66	0.66	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1036	1870	1585	974	1870	1585
Grp Volume(v), veh/h	96	279	66	16	191	70	267	412	24	102	345	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1036	1870	1585	974	1870	1585
Q Serve(g_s), s	6.3	17.3	4.3	1.1	11.9	4.8	17.3	11.5	0.6	6.1	9.2	0.0
Cycle Q Clear(g_c), s	6.3	17.3	4.3	1.1	11.9	4.8	26.5	11.5	0.6	17.6	9.2	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	142	330	279	61	244	207	666	1238	1049	612	1238	
V/C Ratio(X)	0.67	0.85	0.24	0.26	0.78	0.34	0.40	0.33	0.02	0.17	0.28	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	666	1238	1049	612	1238	
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	0.00
Uniform Delay (d), s/veh	53.7	47.9	42.5	56.4	50.5	47.4	13.9	8.8	7.0	12.6	8.4	0.0
Incr Delay (d2), s/veh	5.4	6.0	0.4	2.2	5.4	1.0	1.8	0.7	0.0	0.6	0.6	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	5.5	13.4	3.1	0.9	9.9	3.5	7.6	8.2	0.4	2.6	6.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.1	53.9	42.9	58.7	55.9	48.4	15.7	9.5	7.0	13.2	9.0	0.0
LnGrp LOS	E	D	D	E	E	D	B	A	A	B	A	
Approach Vol, veh/h		441			277			703			447	A
Approach Delay, s/veh		53.4			54.2			11.8			9.9	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	85.0	8.5	26.4	85.0	14.0	21.0
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	28.5	3.1	19.3	19.6	8.3	13.9
Green Ext Time (p_c), s	2.7	0.0	1.8	2.4	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	27.4
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	
Intersection Delay, s/veh	52.8
Intersection LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	191	303	506	0	0
Future Vol, veh/h	52	191	303	506	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	208	329	550	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.3	65.3	0
HCM LOS	B	F	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	37%	0%	0%	100%
Vol Right, %	63%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	809	52	191	0
LT Vol	0	52	0	0
Through Vol	303	0	0	0
RT Vol	506	0	191	0
Lane Flow Rate	879	57	208	0
Geometry Grp	2	7	7	2
Degree of Util (X)	1.05	0.109	0.332	0
Departure Headway (Hd)	4.297	7.119	5.897	5.79
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	844	506	615	0
Service Time	2.342	4.819	3.597	3.79
HCM Lane V/C Ratio	1.041	0.113	0.338	0
HCM Control Delay	65.3	10.7	11.5	8.8
HCM Lane LOS	F	B	B	N
HCM 95th-tile Q	20.8	0.4	1.4	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	590	1	9	175	96	1	6	6	548	5	30
Future Volume (veh/h)	69	590	1	9	175	96	1	6	6	548	5	30
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	75	641	1	10	190	104	1	7	7	596	5	0
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	498	1659	3	327	1028	538	15	103	103	521	4	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1085	3641	6	787	2255	1180	115	803	803	1767	15	1585
Grp Volume(v), veh/h	75	313	329	10	148	146	15	0	0	601	0	0
Grp Sat Flow(s),veh/h/ln	1085	1777	1869	787	1777	1658	1720	0	0	1782	0	1585
Q Serve(g_s), s	5.3	14.0	14.0	1.0	5.9	6.3	0.9	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	11.6	14.0	14.0	15.0	5.9	6.3	0.9	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.71	0.07		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	498	810	852	327	810	756	221	0	0	526	0	
V/C Ratio(X)	0.15	0.39	0.39	0.03	0.18	0.19	0.07	0.00	0.00	1.14	0.00	
Avail Cap(c_a), veh/h	498	810	852	327	810	756	221	0	0	526	0	
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	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	21.6	21.6	26.5	19.4	19.5	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.6	1.4	1.3	0.2	0.5	0.6	0.6	0.0	0.0	85.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	10.2	10.6	0.4	4.6	4.6	0.8	0.0	0.0	39.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	23.0	22.9	26.7	19.9	20.0	46.6	0.0	0.0	127.5	0.0	0.0
LnGrp LOS	C	C	C	C	B	C	D	A	A	F	A	
Approach Vol, veh/h		717			304			15			601	A
Approach Delay, s/veh		23.0			20.2			46.6			127.5	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	16.0	2.9	17.0	37.4
Green Ext Time (p_c), s	4.8	0.0	2.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.0
HCM 6th LOS	E

Notes

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)	64	802	179	400	173	146	68	979	34	259	609	16
Future Volume (veh/h)	64	802	179	400	173	146	68	979	34	259	609	16
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	70	872	195	435	188	159	74	1064	0	282	662	17
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	463	1540	687	416	810	687	530	2401		358	2401	1071
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.68	0.68	0.00	0.68	0.68	0.68
Sat Flow, veh/h	1034	3554	1585	1026	1870	1585	761	3554	1585	530	3554	1585
Grp Volume(v), veh/h	70	872	195	435	188	159	74	1064	0	282	662	17
Grp Sat Flow(s),veh/h/ln	1034	1777	1585	513	1870	1585	761	1777	1585	530	1777	1585
Q Serve(g_s), s	4.1	16.6	7.2	22.4	5.7	5.7	4.0	12.5	0.0	47.2	6.7	0.3
Cycle Q Clear(g_c), s	9.8	16.6	7.2	39.0	5.7	5.7	11.5	12.5	0.0	60.8	6.7	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	1540	687	416	810	687	530	2401		358	2401	1071
V/C Ratio(X)	0.15	0.57	0.28	1.05	0.23	0.23	0.14	0.44		0.79	0.28	0.02
Avail Cap(c_a), veh/h	463	1540	687	416	810	687	530	2401		358	2401	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	19.1	16.5	38.1	16.1	16.1	8.3	6.8	0.0	21.7	5.8	4.8
Incr Delay (d2), s/veh	0.1	0.4	0.2	56.9	0.1	0.2	0.6	0.6	0.0	15.9	0.3	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	1.7	10.3	4.4	12.7	4.1	3.5	1.2	7.2	0.0	11.2	3.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	19.6	16.7	95.0	16.2	16.2	8.9	7.4	0.0	37.7	6.1	4.8
LnGrp LOS	B	B	B	F	B	B	A	A		D	A	A
Approach Vol, veh/h		1137			782			1138	A		961	
Approach Delay, s/veh		19.1			60.1			7.5			15.3	
Approach LOS		B			E			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	66.7	44.3	66.7	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	62.8	41.0	14.5	18.6
Green Ext Time (p_c), s	0.0	0.0	13.0	6.8

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

Notes

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

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

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	224	278	0	0	103	255
Future Vol, veh/h	224	278	0	0	103	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	243	302	0	0	112	277
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	11.6	0	12.6
HCM LOS	B	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	29%
Vol Right, %	0%	0%	100%	71%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	224	278	358
LT Vol	0	224	0	0
Through Vol	0	0	0	103
RT Vol	0	0	278	255
Lane Flow Rate	0	243	302	389
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.403	0.399	0.509
Departure Headway (Hd)	5.662	5.963	4.753	4.705
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	599	749	763
Service Time	3.755	3.745	2.534	2.748
HCM Lane V/C Ratio	0	0.406	0.403	0.51
HCM Control Delay	8.8	12.8	10.7	12.6
HCM Lane LOS	N	B	B	B
HCM 95th-tile Q	0	1.9	1.9	2.9

Intersection	
Int Delay, s/veh	24.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	560	385	49	249	0
Future Vol, veh/h	0	560	385	49	249	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	609	418	53	271	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	471	0	-	0	1054	445
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	609	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1091	-	-	-	~ 250	613
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1091	-	-	-	~ 250	613
Mov Cap-2 Maneuver	-	-	-	-	~ 250	-
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	543	-

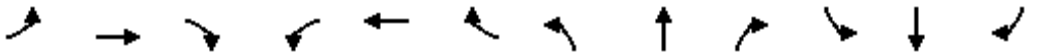
Approach	EB	WB	SB
HCM Control Delay, s	0	0	123.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1091	-	-	-	250
HCM Lane V/C Ratio	-	-	-	-	1.083
HCM Control Delay (s)	0	-	-	-	123.8
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	11.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	896	79	141	1000	67	59	352	163	147	451	144
Future Volume (veh/h)	79	896	79	141	1000	67	59	352	163	147	451	144
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	86	974	86	153	1087	73	64	383	177	160	490	157
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	224	1025	594	178	918	547	294	631	535	356	633	536
Arrive On Green	0.13	0.29	0.29	0.20	0.52	0.52	0.09	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	86	974	86	153	1087	73	64	383	177	160	490	157
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.3	32.2	1.0	10.0	31.0	0.0	0.0	20.5	7.1	0.0	28.2	8.7
Cycle Q Clear(g_c), s	5.3	32.2	1.0	10.0	31.0	0.0	0.0	20.5	7.1	0.0	28.2	8.7
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	224	1025	594	178	918	547	294	631	535	356	633	536
V/C Ratio(X)	0.38	0.95	0.14	0.86	1.18	0.13	0.22	0.61	0.33	0.45	0.77	0.29
Avail Cap(c_a), veh/h	267	1031	596	208	918	547	294	631	535	356	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	41.8	10.8	47.2	29.0	17.3	43.0	33.1	14.9	41.2	35.6	29.2
Incr Delay (d2), s/veh	1.1	17.3	0.1	22.3	92.1	0.1	0.4	4.3	1.7	0.9	9.0	1.4
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	4.4	23.1	1.7	8.4	31.3	1.7	3.1	15.2	5.0	7.9	20.5	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	59.1	10.9	69.6	121.1	17.4	43.4	37.4	16.6	42.0	44.6	30.5
LnGrp LOS	D	E	B	E	F	B	D	D	B	D	D	C
Approach Vol, veh/h		1146			1313			624			807	
Approach Delay, s/veh		54.7			109.3			32.1			41.3	
Approach LOS		D			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	46.3	20.7	36.8	16.1	46.4	17.3	40.2
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	22.5	7.3	33.0	2.0	30.2	12.0	34.2
Green Ext Time (p_c), s	0.2	2.8	0.1	0.0	0.1	2.7	0.1	0.4

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1248	377	217	1070	440	99
Future Volume (veh/h)	1248	377	217	1070	440	99
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1357	410	236	1163	579	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1865	1268	349	2289	980	436
Arrive On Green	1.00	1.00	0.17	1.00	0.28	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3563	1585
Grp Volume(v), veh/h	1357	410	236	1163	579	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	7.4	0.0	16.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	7.4	0.0	16.9	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1865	1268	349	2289	980	436
V/C Ratio(X)	0.73	0.32	0.68	0.51	0.59	0.00
Avail Cap(c_a), veh/h	1865	1268	537	2289	980	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.91	0.91	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.0	0.0	37.7	0.0
Incr Delay (d2), s/veh	1.3	0.3	2.1	0.7	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.2	4.6	0.4	12.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.3	0.3	11.1	0.7	40.3	0.0
LnGrp LOS	A	A	B	A	D	A
Approach Vol, veh/h	1767			1399	579	
Approach Delay, s/veh	1.0			2.5	40.3	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	14.3	68.7		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	18.9	9.4	2.0		2.0
Green Ext Time (p_c), s	1.9	0.5	18.4		12.3

Intersection Summary	
HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	995	229	285	1063	85	63
Future Volume (veh/h)	995	229	285	1063	85	63
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1082	249	310	1155	92	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2137	489	366	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	2965	657	411	3647	1781	1585
Grp Volume(v), veh/h	667	664	310	1155	92	68
Grp Sat Flow(s),veh/h/ln	1777	1752	411	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	89.3	14.8	5.4	4.4
Cycle Q Clear(g_c), s	0.0	0.0	89.3	14.8	5.4	4.4
Prop In Lane		0.38	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1304	366	2645	312	277
V/C Ratio(X)	0.50	0.51	0.85	0.44	0.30	0.25
Avail Cap(c_a), veh/h	1322	1304	366	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	15.9	5.8	43.1	42.7
Incr Delay (d2), s/veh	0.7	0.7	20.8	0.5	2.4	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.5	14.2	8.7	4.7	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.7	0.7	36.7	6.3	45.5	44.8
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1331			1465	160	
Approach Delay, s/veh	0.7			12.8	45.2	
Approach LOS	A			B	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	25.0	95.0	95.0
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	21.0	89.3	89.3
Max Q Clear Time (g_c+I1), s	7.4	2.0	91.3
Green Ext Time (p_c), s	0.3	14.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	232	82	30	369	100	118	444	34	69	384	203
Future Volume (veh/h)	134	232	82	30	369	100	118	444	34	69	384	203
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	146	252	89	33	401	109	128	483	37	75	417	0
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	157	443	376	99	382	324	505	1085	919	442	1085	
Arrive On Green	0.09	0.24	0.24	0.06	0.20	0.20	0.58	0.58	0.58	0.58	0.58	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	969	1870	1585	882	1870	1585
Grp Volume(v), veh/h	146	252	89	33	401	109	128	483	37	75	417	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	969	1870	1585	882	1870	1585
Q Serve(g_s), s	9.8	14.3	5.4	2.1	24.5	7.1	9.9	17.5	1.2	6.3	14.5	0.0
Cycle Q Clear(g_c), s	9.8	14.3	5.4	2.1	24.5	7.1	24.3	17.5	1.2	23.9	14.5	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	157	443	376	99	382	324	505	1085	919	442	1085	
V/C Ratio(X)	0.93	0.57	0.24	0.33	1.05	0.34	0.25	0.45	0.04	0.17	0.38	
Avail Cap(c_a), veh/h	157	443	376	150	382	324	505	1085	919	442	1085	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.3	40.4	37.0	54.5	47.8	40.8	20.2	14.3	10.8	21.0	13.6	0.0
Incr Delay (d2), s/veh	50.9	1.7	0.3	2.0	59.8	0.6	1.2	1.3	0.1	0.8	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	11.0	3.9	1.8	25.3	5.1	4.3	12.2	0.8	2.5	10.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.2	42.1	37.3	56.5	107.5	41.4	21.4	15.6	10.9	21.9	14.7	0.0
LnGrp LOS	F	D	D	E	F	D	C	B	B	C	B	
Approach Vol, veh/h		487			543			648			492	A
Approach Delay, s/veh		60.1			91.2			16.5			15.8	
Approach LOS		E			F			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	75.2	11.1	33.7	75.2	15.0	29.8
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	26.3	4.1	16.3	25.9	11.8	26.5
Green Ext Time (p_c), s	4.4	0.0	1.1	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

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	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	125	548	46	85	0	0
Future Vol, veh/h	125	548	46	85	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	136	596	50	92	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	14.7	9.2	0
HCM LOS	B	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	35%	0%	0%	100%
Vol Right, %	65%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	125	548	0
LT Vol	0	125	0	0
Through Vol	46	0	0	0
RT Vol	85	0	548	0
Lane Flow Rate	142	136	596	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.197	0.204	0.694	0
Departure Headway (Hd)	4.979	5.401	4.197	5.593
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	720	666	864	0
Service Time	3.009	3.125	1.921	3.639
HCM Lane V/C Ratio	0.197	0.204	0.69	0
HCM Control Delay	9.2	9.5	15.9	8.6
HCM Lane LOS	A	A	C	N
HCM 95th-tile Q	0.7	0.8	5.8	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	149	0	1	565	474	0	0	1	148	9	374
Future Volume (veh/h)	20	149	0	1	565	474	0	0	1	148	9	374
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	22	162	0	1	614	515	0	0	1	161	10	0
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	282	2245	0	812	1160	969	0	0	107	223	14	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	499	3647	0	1224	1836	1535	0	0	1585	1682	104	1585
Grp Volume(v), veh/h	22	162	0	1	594	535	0	0	1	171	0	0
Grp Sat Flow(s),veh/h/ln	499	1777	0	1224	1777	1594	0	0	1585	1786	0	1585
Q Serve(g_s), s	3.1	2.1	0.0	0.0	22.2	22.3	0.0	0.0	0.1	11.0	0.0	0.0
Cycle Q Clear(g_c), s	25.4	2.1	0.0	2.1	22.2	22.3	0.0	0.0	0.1	11.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.96	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	282	2245	0	812	1122	1007	0	0	107	237	0	
V/C Ratio(X)	0.08	0.07	0.00	0.00	0.53	0.53	0.00	0.00	0.01	0.72	0.00	
Avail Cap(c_a), veh/h	282	2245	0	812	1122	1007	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.09	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.3	8.5	0.0	8.9	12.2	12.3	0.0	0.0	52.2	49.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.2	5.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	1.4	0.0	0.0	9.8	9.0	0.0	0.0	0.1	9.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	8.5	0.0	8.9	12.4	12.4	0.0	0.0	52.4	55.2	0.0	0.0
LnGrp LOS	B	A	A	A	B	B	A	A	D	E	A	
Approach Vol, veh/h		184			1130			1			171	A
Approach Delay, s/veh		9.8			12.4			52.4			55.2	
Approach LOS		A			B			D			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.7
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	27.4	2.1	24.3	13.0
Green Ext Time (p_c), s	1.3	0.0	10.8	0.5

Intersection Summary	
HCM 6th Ctrl Delay	17.0
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)	34	141	59	1013	845	619	174	920	2	159	1062	96
Future Volume (veh/h)	34	141	59	1013	845	619	174	920	2	159	1062	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	153	64	1101	918	673	189	1000	0	173	1154	104
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	80	1540	687	1081	810	687	284	2282		359	2282	1018
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.64	0.64	0.00	0.64	0.64	0.64
Sat Flow, veh/h	321	3554	1585	2259	1870	1585	441	3554	1585	563	3554	1585
Grp Volume(v), veh/h	37	153	64	1101	918	673	189	1000	0	173	1154	104
Grp Sat Flow(s),veh/h/ln	321	1777	1585	1129	1870	1585	441	1777	1585	563	1777	1585
Q Serve(g_s), s	0.0	2.3	2.1	36.7	39.0	37.6	36.2	12.6	0.0	20.1	15.5	2.3
Cycle Q Clear(g_c), s	39.0	2.3	2.1	39.0	39.0	37.6	52.3	12.6	0.0	33.3	15.5	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	1540	687	1081	810	687	284	2282		359	2282	1018
V/C Ratio(X)	0.46	0.10	0.09	1.02	1.13	0.98	0.66	0.44		0.48	0.51	0.10
Avail Cap(c_a), veh/h	80	1540	687	1081	810	687	284	2282		359	2282	1018
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	15.1	15.1	29.4	25.5	25.1	22.7	8.0	0.0	16.5	8.5	6.2
Incr Delay (d2), s/veh	4.1	0.0	0.1	32.1	74.8	29.2	11.6	0.6	0.0	4.6	0.8	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	1.6	1.6	1.3	23.5	45.6	25.3	7.7	7.7	0.0	5.1	9.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	15.1	15.1	61.4	100.3	54.3	34.3	8.6	0.0	21.1	9.3	6.4
LnGrp LOS	D	B	B	F	F	D	C	A		C	A	A
Approach Vol, veh/h		254			2692			1189	A		1431	
Approach Delay, s/veh		20.1			72.9			12.7			10.5	
Approach LOS		C			E			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	63.4	44.3	63.4	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	35.3	41.0	54.3	41.0
Green Ext Time (p_c), s	5.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Notes

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

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

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

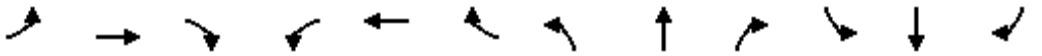
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	146	0	0	49	521
Future Vol, veh/h	0	146	0	0	49	521
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	159	0	0	53	566
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	9.3	0	13.8
HCM LOS	A	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	9%
Vol Right, %	0%	0%	100%	91%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	146	570
LT Vol	0	0	0	0
Through Vol	0	0	0	49
RT Vol	0	0	146	521
Lane Flow Rate	0	0	159	620
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.224	0.656
Departure Headway (Hd)	4.945	5.779	5.072	3.81
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	705	948
Service Time	2.985	3.531	2.823	1.824
HCM Lane V/C Ratio	0	0	0.226	0.654
HCM Control Delay	8	8.5	9.3	13.8
HCM Lane LOS	N	N	A	B
HCM 95th-tile Q	0	0	0.9	5.1

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	1123	82	125	754	184	58	448	140	252	419	111
Future Volume (veh/h)	97	1123	82	125	754	184	58	448	140	252	419	111
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	105	1221	89	136	820	200	63	487	152	274	455	121
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	203	1001	586	160	899	619	306	567	481	343	661	560
Arrive On Green	0.11	0.28	0.28	0.18	0.51	0.51	0.09	0.30	0.30	0.14	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	105	1221	89	136	820	200	63	487	152	274	455	121
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	6.7	33.8	1.0	8.9	25.4	0.0	0.0	29.4	6.5	11.0	24.9	6.4
Cycle Q Clear(g_c), s	6.7	33.8	1.0	8.9	25.4	0.0	0.0	29.4	6.5	11.0	24.9	6.4
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	203	1001	586	160	899	619	306	567	481	343	661	560
V/C Ratio(X)	0.52	1.22	0.15	0.85	0.91	0.32	0.21	0.86	0.32	0.80	0.69	0.22
Avail Cap(c_a), veh/h	203	1001	586	165	977	654	314	567	481	343	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	43.1	11.4	48.5	28.4	16.1	42.9	39.4	17.6	47.1	33.2	27.2
Incr Delay (d2), s/veh	2.3	108.1	0.1	27.0	10.0	0.2	0.3	15.5	1.7	12.5	5.8	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	5.6	43.3	1.8	8.1	13.9	4.6	3.0	22.3	4.7	13.9	18.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	151.2	11.5	75.5	38.5	16.3	43.2	54.8	19.3	59.6	38.9	28.0
LnGrp LOS	D	F	B	E	D	B	D	D	B	E	D	C
Approach Vol, veh/h		1415			1156			702			850	
Approach Delay, s/veh		135.0			39.0			46.1			44.0	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.3	42.2	19.3	36.2	16.3	48.2	16.1	39.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	13.0	31.4	8.7	27.4	2.0	26.9	10.9	35.8
Green Ext Time (p_c), s	0.3	1.6	0.1	2.9	0.1	2.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	74.2
HCM 6th LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1480	409	78	994	478	127
Future Volume (veh/h)	1480	409	78	994	478	127
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1609	445	85	1080	329	343
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1911	1288	294	2289	490	436
Arrive On Green	1.00	1.00	0.14	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1609	445	85	1080	329	343
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	2.2	0.0	19.7	24.0
Cycle Q Clear(g_c), s	0.0	0.0	2.2	0.0	19.7	24.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1911	1288	294	2289	490	436
V/C Ratio(X)	0.84	0.35	0.29	0.47	0.67	0.79
Avail Cap(c_a), veh/h	1911	1288	312	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.93	0.93	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.2	0.0	38.7	40.2
Incr Delay (d2), s/veh	0.4	0.1	0.5	0.7	7.2	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	1.5	0.4	14.6	16.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.4	0.1	8.7	0.7	45.8	53.6
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	2054			1165	672	
Approach Delay, s/veh	0.4			1.2	49.8	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	12.8	70.2		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	26.0	4.2	2.0		2.0
Green Ext Time (p_c), s	1.5	0.1	26.6		10.9

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1336	138	28	831	81	89
Future Volume (veh/h)	1336	138	28	831	81	89
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1452	150	30	903	88	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1449	149	131	1583	844	751
Arrive On Green	0.89	0.89	0.45	0.45	0.47	0.47
Sat Flow, veh/h	3347	334	317	3647	1781	1585
Grp Volume(v), veh/h	788	814	30	903	88	97
Grp Sat Flow(s),veh/h/ln	1777	1810	317	1777	1781	1585
Q Serve(g_s), s	51.5	53.4	9.7	22.7	3.3	4.1
Cycle Q Clear(g_c), s	51.5	53.4	36.5	22.7	3.3	4.1
Prop In Lane		0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	791	806	131	1583	844	751
V/C Ratio(X)	1.00	1.01	0.23	0.57	0.10	0.13
Avail Cap(c_a), veh/h	1263	1287	215	2526	844	751
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.5	6.6	40.0	24.7	17.5	17.7
Incr Delay (d2), s/veh	13.0	16.4	0.9	0.3	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	9.3	1.4	14.6	2.5	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	22.9	40.9	25.1	17.7	18.0
LnGrp LOS	B	F	D	C	B	B
Approach Vol, veh/h	1602			933	185	
Approach Delay, s/veh	21.2			25.6	17.9	
Approach LOS	C			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	52.2	67.8	67.8
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	25.0	85.3	85.3
Max Q Clear Time (g_c+I1), s	6.1	55.4	38.5
Green Ext Time (p_c), s	0.5	15.3	9.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	303	73	18	210	76	294	450	26	112	367	145
Future Volume (veh/h)	105	303	73	18	210	76	294	450	26	112	367	145
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	114	329	79	20	228	83	320	489	28	122	399	0
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	145	382	323	72	305	259	579	1174	995	510	1174	
Arrive On Green	0.08	0.20	0.20	0.04	0.16	0.16	0.63	0.63	0.63	0.63	0.63	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	986	1870	1585	907	1870	1585
Grp Volume(v), veh/h	114	329	79	20	228	83	320	489	28	122	399	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	986	1870	1585	907	1870	1585
Q Serve(g_s), s	7.5	20.4	5.0	1.3	13.9	5.5	27.3	15.8	0.8	9.4	12.1	0.0
Cycle Q Clear(g_c), s	7.5	20.4	5.0	1.3	13.9	5.5	39.4	15.8	0.8	25.2	12.1	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	145	382	323	72	305	259	579	1174	995	510	1174	
V/C Ratio(X)	0.79	0.86	0.24	0.28	0.75	0.32	0.55	0.42	0.03	0.24	0.34	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	579	1174	995	510	1174	
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	0.00
Uniform Delay (d), s/veh	54.1	46.1	40.0	55.9	47.9	44.3	19.9	11.2	8.5	17.6	10.6	0.0
Incr Delay (d2), s/veh	9.0	6.4	0.4	2.0	3.6	0.7	3.8	1.1	0.1	1.1	0.8	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	6.7	15.3	3.6	1.1	11.1	4.0	11.0	10.9	0.5	3.8	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	52.5	40.4	57.9	51.5	45.0	23.6	12.3	8.5	18.7	11.3	0.0
LnGrp LOS	E	D	D	E	D	D	C	B	A	B	B	
Approach Vol, veh/h		522			331			837			521	A
Approach Delay, s/veh		53.0			50.3			16.5			13.1	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	80.9	9.3	29.8	80.9	14.2	24.9
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	41.4	3.3	22.4	27.2	9.5	15.9
Green Ext Time (p_c), s	0.0	0.0	2.1	2.3	0.2	1.6

Intersection Summary	
HCM 6th Ctrl Delay	29.4
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	
Intersection Delay, s/veh	23.2
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	226	198	471	0	0
Future Vol, veh/h	36	226	198	471	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	246	215	512	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.3	27.8	0
HCM LOS	B	D	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	30%	0%	0%	100%
Vol Right, %	70%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	669	36	226	0
LT Vol	0	36	0	0
Through Vol	198	0	0	0
RT Vol	471	0	226	0
Lane Flow Rate	727	39	246	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.863	0.073	0.377	0
Departure Headway (Hd)	4.272	6.748	5.529	5.625
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	844	534	656	0
Service Time	2.329	4.448	3.229	3.641
HCM Lane V/C Ratio	0.861	0.073	0.375	0
HCM Control Delay	27.8	10	11.5	8.6
HCM Lane LOS	D	A	B	N
HCM 95th-tile Q	10.8	0.2	1.8	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	600	1	11	187	114	1	7	7	654	6	31
Future Volume (veh/h)	54	600	1	11	187	114	1	7	7	654	6	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		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	59	652	1	12	203	124	1	8	8	711	7	0
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	477	1660	3	323	984	575	13	104	104	521	5	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1053	3641	6	779	2159	1261	101	809	809	1765	17	1585
Grp Volume(v), veh/h	59	318	335	12	165	162	17	0	0	718	0	0
Grp Sat Flow(s),veh/h/ln	1053	1777	1869	779	1777	1643	1720	0	0	1782	0	1585
Q Serve(g_s), s	4.3	14.2	14.2	1.2	6.7	7.1	1.0	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	11.4	14.2	14.2	15.5	6.7	7.1	1.0	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.77	0.06		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	477	810	852	323	810	749	221	0	0	526	0	
V/C Ratio(X)	0.12	0.39	0.39	0.04	0.20	0.22	0.08	0.00	0.00	1.37	0.00	
Avail Cap(c_a), veh/h	477	810	852	323	810	749	221	0	0	526	0	
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	0.97	0.97	0.97	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.2	21.6	21.6	26.8	19.6	19.7	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	1.4	1.4	0.2	0.6	0.6	0.7	0.0	0.0	176.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	10.3	10.7	0.5	5.2	5.2	0.9	0.0	0.0	61.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	23.1	23.0	27.0	20.1	20.3	46.7	0.0	0.0	218.8	0.0	0.0
LnGrp LOS	C	C	C	C	C	C	D	A	A	F	A	
Approach Vol, veh/h		712			339			17			718	A
Approach Delay, s/veh		23.1			20.5			46.7			218.8	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	16.2	3.0	17.5	37.4
Green Ext Time (p_c), s	4.8	0.0	2.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	101.5
HCM 6th LOS	F

Notes

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)	48	929	169	470	201	171	71	1152	40	290	707	15
Future Volume (veh/h)	48	929	169	470	201	171	71	1152	40	290	707	15
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	52	1010	184	511	218	186	77	1252	0	315	768	16
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	432	1540	687	349	810	687	477	2401		295	2401	1071
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.68	0.68	0.00	0.68	0.68	0.68
Sat Flow, veh/h	981	3554	1585	910	1870	1585	690	3554	1585	444	3554	1585
Grp Volume(v), veh/h	52	1010	184	511	218	186	77	1252	0	315	768	16
Grp Sat Flow(s),veh/h/ln	981	1777	1585	455	1870	1585	690	1777	1585	444	1777	1585
Q Serve(g_s), s	3.2	20.3	6.7	18.7	6.7	6.8	4.8	15.9	0.0	43.7	8.1	0.3
Cycle Q Clear(g_c), s	10.0	20.3	6.7	39.0	6.7	6.8	13.8	15.9	0.0	60.8	8.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	432	1540	687	349	810	687	477	2401		295	2401	1071
V/C Ratio(X)	0.12	0.66	0.27	1.46	0.27	0.27	0.16	0.52		1.07	0.32	0.01
Avail Cap(c_a), veh/h	432	1540	687	349	810	687	477	2401		295	2401	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	20.2	16.3	39.9	16.4	16.4	9.1	7.3	0.0	29.1	6.0	4.8
Incr Delay (d2), s/veh	0.1	0.9	0.2	223.1	0.2	0.2	0.7	0.8	0.0	71.2	0.4	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	1.3	12.3	4.1	25.4	4.9	4.2	1.3	8.8	0.0	19.0	4.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	21.1	16.5	263.1	16.5	16.6	9.8	8.1	0.0	100.3	6.4	4.8
LnGrp LOS	B	C	B	F	B	B	A	A		F	A	A
Approach Vol, veh/h		1246			915			1329	A		1099	
Approach Delay, s/veh		20.4			154.2			8.2			33.3	
Approach LOS		C			F			A			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	66.7	44.3	66.7	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	62.8	41.0	17.9	22.3
Green Ext Time (p_c), s	0.0	0.0	14.2	7.1

Intersection Summary	
HCM 6th Ctrl Delay	46.6
HCM 6th LOS	D

Notes

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

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

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

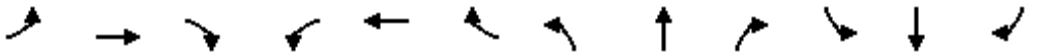
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	267	327	0	0	97	304
Future Vol, veh/h	267	327	0	0	97	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	355	0	0	105	330
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	13.5	0	14.7
HCM LOS	B	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	24%
Vol Right, %	0%	0%	100%	76%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	267	327	401
LT Vol	0	267	0	0
Through Vol	0	0	0	97
RT Vol	0	0	327	304
Lane Flow Rate	0	290	355	436
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.5	0.483	0.587
Departure Headway (Hd)	6.056	6.2	4.889	4.852
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	586	729	741
Service Time	4.065	3.9	2.687	2.914
HCM Lane V/C Ratio	0	0.495	0.487	0.588
HCM Control Delay	9.1	14.9	12.3	14.7
HCM Lane LOS	N	B	B	B
HCM 95th-tile Q	0	2.8	2.7	3.9

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	937	79	141	1009	69	59	352	163	161	451	144
Future Volume (veh/h)	79	937	79	141	1009	69	59	352	163	161	451	144
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	86	1018	86	153	1097	75	64	383	177	175	490	157
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	227	1031	594	178	918	545	291	631	535	354	633	536
Arrive On Green	0.13	0.29	0.29	0.20	0.52	0.52	0.08	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	86	1018	86	153	1097	75	64	383	177	175	490	157
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.3	34.2	1.0	10.0	31.0	0.0	0.0	20.5	7.1	0.0	28.2	8.7
Cycle Q Clear(g_c), s	5.3	34.2	1.0	10.0	31.0	0.0	0.0	20.5	7.1	0.0	28.2	8.7
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	227	1031	594	178	918	545	291	631	535	354	633	536
V/C Ratio(X)	0.38	0.99	0.14	0.86	1.19	0.14	0.22	0.61	0.33	0.49	0.77	0.29
Avail Cap(c_a), veh/h	267	1031	594	208	918	545	291	631	535	354	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	42.4	10.8	47.2	29.0	17.4	43.2	33.1	14.9	42.1	35.6	29.2
Incr Delay (d2), s/veh	1.0	25.0	0.1	22.1	96.6	0.1	0.4	4.3	1.7	1.1	9.0	1.4
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	4.4	25.4	1.7	8.4	32.1	1.7	3.1	15.2	5.0	8.6	20.5	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	67.4	10.9	69.3	125.6	17.5	43.6	37.4	16.6	43.2	44.6	30.5
LnGrp LOS	D	E	B	E	F	B	D	D	B	D	D	C
Approach Vol, veh/h		1190			1325			624			822	
Approach Delay, s/veh		62.0			113.0			32.1			41.6	
Approach LOS		E			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	46.3	20.9	36.8	15.9	46.4	17.3	40.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	22.5	7.3	33.0	2.0	30.2	12.0	36.2
Green Ext Time (p_c), s	0.2	2.8	0.1	0.0	0.1	2.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.1
HCM 6th LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1248	433	287	1070	451	108
Future Volume (veh/h)	1248	433	287	1070	451	108
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1357	471	312	1163	304	317
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1764	1223	381	2289	490	436
Arrive On Green	0.99	0.99	0.22	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1357	471	312	1163	304	317
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	1.4	0.3	10.6	0.0	17.9	21.7
Cycle Q Clear(g_c), s	1.4	0.3	10.6	0.0	17.9	21.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1764	1223	381	2289	490	436
V/C Ratio(X)	0.77	0.39	0.82	0.51	0.62	0.73
Avail Cap(c_a), veh/h	1764	1223	519	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	0.2	0.0	11.5	0.0	38.0	39.4
Incr Delay (d2), s/veh	1.5	0.4	6.6	0.7	5.8	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.4	6.8	0.4	13.4	14.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.7	0.4	18.0	0.7	43.8	49.6
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1828			1475	621	
Approach Delay, s/veh	1.4			4.4	46.8	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	17.7	65.3		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	23.7	12.6	3.4		2.0
Green Ext Time (p_c), s	1.6	0.7	18.9		12.3

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1004	229	312	1133	85	67
Future Volume (veh/h)	1004	229	312	1133	85	67
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1091	249	339	1232	92	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2141	486	364	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	2970	653	408	3647	1781	1585
Grp Volume(v), veh/h	672	668	339	1232	92	73
Grp Sat Flow(s),veh/h/ln	1777	1753	408	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	89.3	16.3	5.4	4.8
Cycle Q Clear(g_c), s	0.0	0.0	89.3	16.3	5.4	4.8
Prop In Lane		0.37	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1304	364	2645	312	277
V/C Ratio(X)	0.51	0.51	0.93	0.47	0.30	0.26
Avail Cap(c_a), veh/h	1322	1304	364	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.38	0.38	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.0	6.0	43.1	42.8
Incr Delay (d2), s/veh	0.5	0.5	32.8	0.6	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.4	19.7	9.4	4.7	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.5	52.9	6.6	45.5	45.1
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1340			1571	165	
Approach Delay, s/veh	0.5			16.6	45.3	
Approach LOS	A			B	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	25.0	95.0	95.0
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	21.0	89.3	89.3
Max Q Clear Time (g_c+I1), s	7.4	2.0	91.3
Green Ext Time (p_c), s	0.4	14.6	0.0

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	259	82	30	369	100	118	444	34	69	384	203
Future Volume (veh/h)	134	259	82	30	369	100	118	444	34	69	384	203
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	146	282	89	33	401	109	128	483	37	75	417	0
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	157	443	376	99	382	324	505	1085	919	442	1085	
Arrive On Green	0.09	0.24	0.24	0.06	0.20	0.20	0.58	0.58	0.58	0.58	0.58	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	969	1870	1585	882	1870	1585
Grp Volume(v), veh/h	146	282	89	33	401	109	128	483	37	75	417	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	969	1870	1585	882	1870	1585
Q Serve(g_s), s	9.8	16.3	5.4	2.1	24.5	7.1	9.9	17.5	1.2	6.3	14.5	0.0
Cycle Q Clear(g_c), s	9.8	16.3	5.4	2.1	24.5	7.1	24.3	17.5	1.2	23.9	14.5	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	157	443	376	99	382	324	505	1085	919	442	1085	
V/C Ratio(X)	0.93	0.64	0.24	0.33	1.05	0.34	0.25	0.45	0.04	0.17	0.38	
Avail Cap(c_a), veh/h	157	443	376	150	382	324	505	1085	919	442	1085	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.3	41.1	37.0	54.5	47.8	40.8	20.2	14.3	10.8	21.0	13.6	0.0
Incr Delay (d2), s/veh	50.9	3.0	0.3	2.0	59.8	0.6	1.2	1.3	0.1	0.8	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	12.5	3.9	1.8	25.3	5.1	4.3	12.2	0.8	2.5	10.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.2	44.1	37.3	56.5	107.5	41.4	21.4	15.6	10.9	21.9	14.7	0.0
LnGrp LOS	F	D	D	E	F	D	C	B	B	C	B	
Approach Vol, veh/h		517			543			648			492	A
Approach Delay, s/veh		60.2			91.2			16.5			15.8	
Approach LOS		E			F			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	75.2	11.1	33.7	75.2	15.0	29.8
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	26.3	4.1	18.3	25.9	11.8	26.5
Green Ext Time (p_c), s	4.4	0.0	1.1	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

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	
Intersection Delay, s/veh	14.3
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	249	548	50	102	0	0
Future Vol, veh/h	249	548	50	102	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	271	596	54	111	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	15.2	9.7	0
HCM LOS	C	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	33%	0%	0%	100%
Vol Right, %	67%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	152	249	548	0
LT Vol	0	249	0	0
Through Vol	50	0	0	0
RT Vol	102	0	548	0
Lane Flow Rate	165	271	596	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.234	0.411	0.706	0
Departure Headway (Hd)	5.098	5.469	4.264	5.773
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	704	658	846	0
Service Time	3.132	3.199	1.994	3.827
HCM Lane V/C Ratio	0.234	0.412	0.704	0
HCM Control Delay	9.7	12	16.6	8.8
HCM Lane LOS	A	B	C	N
HCM 95th-tile Q	0.9	2	6	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	162	0	1	662	474	0	0	1	148	9	401
Future Volume (veh/h)	24	162	0	1	662	474	0	0	1	148	9	401
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	26	176	0	1	720	515	0	0	1	161	10	0
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	249	2245	0	800	1254	889	0	0	107	223	14	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	451	3647	0	1209	1986	1408	0	0	1585	1682	104	1585
Grp Volume(v), veh/h	26	176	0	1	644	591	0	0	1	171	0	0
Grp Sat Flow(s),veh/h/ln	451	1777	0	1209	1777	1617	0	0	1585	1786	0	1585
Q Serve(g_s), s	4.3	2.3	0.0	0.0	25.1	25.5	0.0	0.0	0.1	11.0	0.0	0.0
Cycle Q Clear(g_c), s	29.8	2.3	0.0	2.3	25.1	25.5	0.0	0.0	0.1	11.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.87	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	249	2245	0	800	1122	1021	0	0	107	237	0	
V/C Ratio(X)	0.10	0.08	0.00	0.00	0.57	0.58	0.00	0.00	0.01	0.72	0.00	
Avail Cap(c_a), veh/h	249	2245	0	800	1122	1021	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.09	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.5	8.6	0.0	9.0	12.8	12.8	0.0	0.0	52.2	49.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.2	5.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	1.5	0.0	0.0	11.0	10.3	0.0	0.0	0.1	9.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	8.6	0.0	9.0	13.0	13.1	0.0	0.0	52.4	55.2	0.0	0.0
LnGrp LOS	C	A	A	A	B	B	A	A	D	E	A	
Approach Vol, veh/h		202			1236			1			171	A
Approach Delay, s/veh		10.3			13.0			52.4			55.2	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.7
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	31.8	2.1	27.5	13.0
Green Ext Time (p_c), s	1.5	0.0	12.3	0.5

Intersection Summary	
HCM 6th Ctrl Delay	17.2
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)	38	145	65	1013	872	619	215	920	2	159	1062	123
Future Volume (veh/h)	38	145	65	1013	872	619	215	920	2	159	1062	123
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	41	158	71	1101	948	673	234	1000	0	173	1154	134
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	80	1540	687	1069	810	687	279	2283		360	2283	1018
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.64	0.64	0.00	0.64	0.64	0.64
Sat Flow, veh/h	311	3554	1585	2234	1870	1585	429	3554	1585	563	3554	1585
Grp Volume(v), veh/h	41	158	71	1101	948	673	234	1000	0	173	1154	134
Grp Sat Flow(s),veh/h/ln	311	1777	1585	1117	1870	1585	429	1777	1585	563	1777	1585
Q Serve(g_s), s	0.0	2.4	2.4	36.6	39.0	37.6	41.8	12.6	0.0	20.1	15.5	3.0
Cycle Q Clear(g_c), s	39.0	2.4	2.4	39.0	39.0	37.6	57.8	12.6	0.0	33.2	15.5	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	80	1540	687	1069	810	687	279	2283		360	2283	1018
V/C Ratio(X)	0.51	0.10	0.10	1.03	1.17	0.98	0.84	0.44		0.48	0.51	0.13
Avail Cap(c_a), veh/h	80	1540	687	1069	810	687	279	2283		360	2283	1018
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	15.1	15.1	29.4	25.5	25.1	27.3	8.0	0.0	16.5	8.5	6.3
Incr Delay (d2), s/veh	5.4	0.0	0.1	35.4	89.4	29.2	25.0	0.6	0.0	4.5	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	1.6	1.5	24.0	50.7	25.3	11.4	7.6	0.0	5.1	9.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	15.2	15.2	64.8	114.9	54.3	52.3	8.6	0.0	21.0	9.3	6.6
LnGrp LOS	D	B	B	F	F	D	D	A		C	A	A
Approach Vol, veh/h		270			2722			1234	A		1461	
Approach Delay, s/veh		20.5			79.7			16.9			10.5	
Approach LOS		C			E			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	63.4	44.3	63.4	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	35.2	41.0	59.8	41.0
Green Ext Time (p_c), s	5.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Notes

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

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

Intersection	
Intersection Delay, s/veh	20.1
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	144	0	0	173	521
Future Vol, veh/h	0	144	0	0	173	521
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	157	0	0	188	566
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	9.8	0	22.2
HCM LOS	A	-	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	25%
Vol Right, %	0%	0%	100%	75%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	144	694
LT Vol	0	0	0	0
Through Vol	0	0	0	173
RT Vol	0	0	144	521
Lane Flow Rate	0	0	157	754
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.234	0.822
Departure Headway (Hd)	5.107	6.09	5.38	3.922
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	664	928
Service Time	3.162	3.859	3.149	1.942
HCM Lane V/C Ratio	0	0	0.236	0.813
HCM Control Delay	8.2	8.9	9.8	22.2
HCM Lane LOS	N	N	A	C
HCM 95th-tile Q	0	0	0.9	9.5

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	130	321	248	21	0
Future Vol, veh/h	0	130	321	248	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	141	349	270	23	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	619	0	-	0	625	484
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	961	-	-	-	449	583
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	961	-	-	-	449	583
Mov Cap-2 Maneuver	-	-	-	-	449	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	961	-	-	-	449
HCM Lane V/C Ratio	-	-	-	-	0.051
HCM Control Delay (s)	0	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	372	29	0	667	0	16
Future Vol, veh/h	372	29	0	667	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	404	32	0	725	0	17

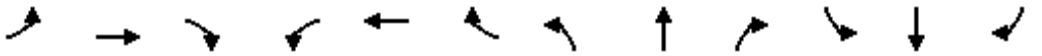
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	420
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	633
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	633
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	633	-	-	-
HCM Lane V/C Ratio	0.027	-	-	-
HCM Control Delay (s)	10.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	1130	82	125	816	196	58	448	140	255	419	111
Future Volume (veh/h)	97	1130	82	125	816	196	58	448	140	255	419	111
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	105	1228	89	136	887	213	63	487	152	277	455	121
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	181	1001	586	160	944	639	306	567	481	343	661	560
Arrive On Green	0.10	0.28	0.28	0.18	0.53	0.53	0.09	0.30	0.30	0.14	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	105	1228	89	136	887	213	63	487	152	277	455	121
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	6.8	33.8	1.0	8.9	28.0	0.0	0.0	29.4	6.5	11.3	24.9	6.4
Cycle Q Clear(g_c), s	6.8	33.8	1.0	8.9	28.0	0.0	0.0	29.4	6.5	11.3	24.9	6.4
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	1001	586	160	944	639	306	567	481	343	661	560
V/C Ratio(X)	0.58	1.23	0.15	0.85	0.94	0.33	0.21	0.86	0.32	0.81	0.69	0.22
Avail Cap(c_a), veh/h	181	1001	586	165	977	654	314	567	481	343	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	43.1	11.4	48.5	27.2	14.9	42.9	39.4	17.6	47.1	33.2	27.2
Incr Delay (d2), s/veh	4.6	111.0	0.1	24.9	12.7	0.2	0.3	15.5	1.7	13.3	5.8	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	5.9	44.0	1.8	7.8	14.9	4.6	3.0	22.3	4.7	14.1	18.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	154.1	11.5	73.4	39.9	15.1	43.2	54.8	19.3	60.4	38.9	28.0
LnGrp LOS	E	F	B	E	D	B	D	D	B	E	D	C
Approach Vol, veh/h		1422			1236			702			853	
Approach Delay, s/veh		137.9			39.3			46.1			44.4	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.3	42.2	17.8	37.7	16.3	48.2	16.1	39.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	13.3	31.4	8.8	30.0	2.0	26.9	10.9	35.8
Green Ext Time (p_c), s	0.2	1.6	0.1	1.8	0.1	2.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	74.8
HCM 6th LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1480	419	91	994	552	189
Future Volume (veh/h)	1480	419	91	994	552	189
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1609	455	99	1080	402	417
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1905	1286	296	2289	490	436
Arrive On Green	1.00	1.00	0.14	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1609	455	99	1080	402	417
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	2.6	0.0	25.4	31.1
Cycle Q Clear(g_c), s	0.0	0.0	2.6	0.0	25.4	31.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1905	1286	296	2289	490	436
V/C Ratio(X)	0.84	0.35	0.33	0.47	0.82	0.96
Avail Cap(c_a), veh/h	1905	1286	311	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.3	0.0	40.7	42.8
Incr Delay (d2), s/veh	0.5	0.1	0.6	0.7	14.3	33.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	1.8	0.4	18.9	22.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.1	8.9	0.7	55.0	76.3
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h	2064			1179	819	
Approach Delay, s/veh	0.4			1.4	65.9	
Approach LOS	A			A	E	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	13.0	70.0		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	33.1	4.6	2.0		2.0
Green Ext Time (p_c), s	0.0	0.1	26.8		10.9

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1398	138	32	844	81	113
Future Volume (veh/h)	1398	138	32	844	81	113
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1520	150	35	917	88	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1541	151	137	1675	798	710
Arrive On Green	0.94	0.94	0.47	0.47	0.45	0.45
Sat Flow, veh/h	3363	320	297	3647	1781	1585
Grp Volume(v), veh/h	820	850	35	917	88	123
Grp Sat Flow(s),veh/h/ln	1777	1813	297	1777	1781	1585
Q Serve(g_s), s	41.2	51.9	11.9	22.1	3.4	5.6
Cycle Q Clear(g_c), s	41.2	51.9	37.5	22.1	3.4	5.6
Prop In Lane		0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	837	854	137	1675	798	710
V/C Ratio(X)	0.98	0.99	0.26	0.55	0.11	0.17
Avail Cap(c_a), veh/h	1263	1289	208	2526	798	710
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.0	3.3	37.5	22.6	19.2	19.8
Incr Delay (d2), s/veh	9.2	12.2	1.0	0.3	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.5	6.5	1.6	14.1	2.7	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	15.5	38.4	22.9	19.5	20.4
LnGrp LOS	B	B	D	C	B	C
Approach Vol, veh/h	1670			952	211	
Approach Delay, s/veh	13.9			23.5	20.0	
Approach LOS	B			C	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	50.7	69.3	69.3
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	25.0	85.3	85.3
Max Q Clear Time (g_c+I1), s	7.6	53.9	39.5
Green Ext Time (p_c), s	0.6	16.7	9.6

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	307	73	18	210	76	294	450	26	112	367	145
Future Volume (veh/h)	105	307	73	18	210	76	294	450	26	112	367	145
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	114	334	79	20	228	83	320	489	28	122	399	0
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	145	387	328	72	310	263	576	1169	991	507	1169	
Arrive On Green	0.08	0.21	0.21	0.04	0.17	0.17	0.63	0.63	0.63	0.63	0.63	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	986	1870	1585	907	1870	1585
Grp Volume(v), veh/h	114	334	79	20	228	83	320	489	28	122	399	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	986	1870	1585	907	1870	1585
Q Serve(g_s), s	7.5	20.7	5.0	1.3	13.9	5.5	27.5	15.9	0.8	9.5	12.2	0.0
Cycle Q Clear(g_c), s	7.5	20.7	5.0	1.3	13.9	5.5	39.7	15.9	0.8	25.4	12.2	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	145	387	328	72	310	263	576	1169	991	507	1169	
V/C Ratio(X)	0.79	0.86	0.24	0.28	0.73	0.32	0.56	0.42	0.03	0.24	0.34	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	576	1169	991	507	1169	
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	0.00
Uniform Delay (d), s/veh	54.1	46.0	39.7	55.9	47.5	44.1	20.2	11.4	8.6	17.9	10.7	0.0
Incr Delay (d2), s/veh	9.0	6.7	0.4	2.0	3.4	0.7	3.8	1.1	0.1	1.1	0.8	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	6.7	15.6	3.6	1.1	11.0	4.0	11.0	11.0	0.5	3.8	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	52.6	40.1	57.9	50.9	44.7	24.0	12.5	8.6	19.0	11.5	0.0
LnGrp LOS	E	D	D	E	D	D	C	B	A	B	B	
Approach Vol, veh/h		527			331			837			521	A
Approach Delay, s/veh		53.0			49.8			16.8			13.3	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	80.6	9.3	30.1	80.6	14.2	25.2
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	41.7	3.3	22.7	27.4	9.5	15.9
Green Ext Time (p_c), s	0.0	0.0	2.1	2.3	0.2	1.6

Intersection Summary	
HCM 6th Ctrl Delay	29.5
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.

Intersection	
Intersection Delay, s/veh	56.1
Intersection LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	226	230	583	0	0
Future Vol, veh/h	58	226	230	583	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	246	250	634	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	12.1	71.5	0
HCM LOS	B	F	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	28%	0%	0%	100%
Vol Right, %	72%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	813	58	226	0
LT Vol	0	58	0	0
Through Vol	230	0	0	0
RT Vol	583	0	226	0
Lane Flow Rate	884	63	246	0
Geometry Grp	2	7	7	2
Degree of Util (X)	1.069	0.122	0.394	0
Departure Headway (Hd)	4.355	7.157	5.934	5.963
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	831	504	609	0
Service Time	2.409	4.857	3.634	3.963
HCM Lane V/C Ratio	1.064	0.125	0.404	0
HCM Control Delay	71.5	10.8	12.4	9
HCM Lane LOS	F	B	B	N
HCM 95th-tile Q	22	0.4	1.9	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	687	1	11	204	114	1	7	7	654	6	35
Future Volume (veh/h)	78	687	1	11	204	114	1	7	7	654	6	35
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	85	747	1	12	222	124	1	8	8	711	7	0
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	467	1660	2	285	1017	547	13	104	104	521	5	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1035	3641	5	713	2232	1199	101	809	809	1765	17	1585
Grp Volume(v), veh/h	85	364	384	12	175	171	17	0	0	718	0	0
Grp Sat Flow(s),veh/h/ln	1035	1777	1869	713	1777	1655	1720	0	0	1782	0	1585
Q Serve(g_s), s	6.5	16.9	16.9	1.4	7.1	7.5	1.0	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	14.0	16.9	16.9	18.3	7.1	7.5	1.0	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.72	0.06		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	467	810	852	285	810	754	221	0	0	526	0	
V/C Ratio(X)	0.18	0.45	0.45	0.04	0.22	0.23	0.08	0.00	0.00	1.37	0.00	
Avail Cap(c_a), veh/h	467	810	852	285	810	754	221	0	0	526	0	
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	0.97	0.97	0.97	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.1	22.4	22.4	28.6	19.7	19.8	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.9	1.8	1.7	0.3	0.6	0.7	0.7	0.0	0.0	176.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	11.9	12.3	0.5	5.6	5.5	0.9	0.0	0.0	61.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	24.2	24.1	28.9	20.3	20.5	46.7	0.0	0.0	218.8	0.0	0.0
LnGrp LOS	C	C	C	C	C	C	D	A	A	F	A	
Approach Vol, veh/h		833			358			17			718	A
Approach Delay, s/veh		24.2			20.7			46.7			218.8	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	18.9	3.0	20.3	37.4
Green Ext Time (p_c), s	5.8	0.0	2.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	96.3
HCM 6th LOS	F

Notes

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)	72	953	207	470	205	171	78	1152	40	290	707	19
Future Volume (veh/h)	72	953	207	470	205	171	78	1152	40	290	707	19
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	78	1036	225	511	223	186	85	1252	0	315	768	21
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	428	1540	687	331	810	687	475	2401		295	2401	1071
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.68	0.68	0.00	0.68	0.68	0.68
Sat Flow, veh/h	977	3554	1585	853	1870	1585	687	3554	1585	444	3554	1585
Grp Volume(v), veh/h	78	1036	225	511	223	186	85	1252	0	315	768	21
Grp Sat Flow(s),veh/h/ln	977	1777	1585	427	1870	1585	687	1777	1585	444	1777	1585
Q Serve(g_s), s	5.0	21.0	8.4	18.0	6.9	6.8	5.4	15.9	0.0	43.7	8.1	0.4
Cycle Q Clear(g_c), s	11.9	21.0	8.4	39.0	6.9	6.8	14.4	15.9	0.0	60.8	8.1	0.4
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	428	1540	687	331	810	687	475	2401		295	2401	1071
V/C Ratio(X)	0.18	0.67	0.33	1.54	0.28	0.27	0.18	0.52		1.07	0.32	0.02
Avail Cap(c_a), veh/h	428	1540	687	331	810	687	475	2401		295	2401	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	20.4	16.8	40.3	16.4	16.4	9.2	7.3	0.0	29.1	6.0	4.8
Incr Delay (d2), s/veh	0.2	1.0	0.2	259.7	0.2	0.2	0.8	0.8	0.0	71.2	0.4	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	2.0	12.5	5.2	27.2	5.0	4.2	1.5	8.8	0.0	19.0	4.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	21.4	17.1	300.0	16.6	16.6	10.1	8.1	0.0	100.3	6.4	4.8
LnGrp LOS	C	C	B	F	B	B	B	A		F	A	A
Approach Vol, veh/h		1339			920			1337	A		1104	
Approach Delay, s/veh		20.6			174.0			8.3			33.2	
Approach LOS		C			F			A			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	66.7	44.3	66.7	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	62.8	41.0	17.9	23.0
Green Ext Time (p_c), s	0.0	0.0	14.3	7.3

Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Notes

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

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

Intersection	
Intersection Delay, s/veh	17.9
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	373	326	0	0	119	304
Future Vol, veh/h	373	326	0	0	119	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	405	354	0	0	129	330
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	18.3	0	17.2
HCM LOS	C	-	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	28%
Vol Right, %	0%	0%	100%	72%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	373	326	423
LT Vol	0	373	0	0
Through Vol	0	0	0	119
RT Vol	0	0	326	304
Lane Flow Rate	0	405	354	460
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.712	0.503	0.649
Departure Headway (Hd)	6.373	6.323	5.109	5.078
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	576	709	703
Service Time	4.396	4.023	2.809	3.161
HCM Lane V/C Ratio	0	0.703	0.499	0.654
HCM Control Delay	9.4	23.1	12.9	17.2
HCM Lane LOS	N	C	B	C
HCM 95th-tile Q	0	5.8	2.9	4.8

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	669	460	44	143	0
Future Vol, veh/h	0	669	460	44	143	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	727	500	48	155	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	548	0	-	0	1251	524
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	727	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1021	-	-	-	190	553
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1021	-	-	-	190	553
Mov Cap-2 Maneuver	-	-	-	-	190	-
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	76
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1021	-	-	-	190
HCM Lane V/C Ratio	-	-	-	-	0.818
HCM Control Delay (s)	0	-	-	-	76
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	5.8

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	593	5	0	633	0	106
Future Vol, veh/h	593	5	0	633	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	645	5	0	688	0	115

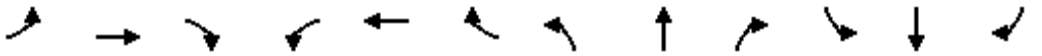
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	648
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	470
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	470
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	470	-	-	-
HCM Lane V/C Ratio	0.245	-	-	-
HCM Control Delay (s)	15.1	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	1	-	-	-

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	937	79	141	1009	69	59	352	163	161	451	144
Future Volume (veh/h)	79	937	79	141	1009	69	59	352	163	161	451	144
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	86	1018	86	153	1097	75	64	383	177	175	490	157
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	227	1031	594	178	918	545	291	631	535	354	633	536
Arrive On Green	0.13	0.29	0.29	0.20	0.52	0.52	0.08	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	86	1018	86	153	1097	75	64	383	177	175	490	157
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.3	34.2	1.0	10.0	31.0	0.0	0.0	20.5	7.1	0.0	28.2	8.7
Cycle Q Clear(g_c), s	5.3	34.2	1.0	10.0	31.0	0.0	0.0	20.5	7.1	0.0	28.2	8.7
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	227	1031	594	178	918	545	291	631	535	354	633	536
V/C Ratio(X)	0.38	0.99	0.14	0.86	1.19	0.14	0.22	0.61	0.33	0.49	0.77	0.29
Avail Cap(c_a), veh/h	267	1031	594	208	918	545	291	631	535	354	633	536
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	42.4	10.8	47.2	29.0	17.4	43.2	33.1	14.9	42.1	35.6	29.2
Incr Delay (d2), s/veh	1.0	25.0	0.1	22.1	96.6	0.1	0.4	4.3	1.7	1.1	9.0	1.4
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	4.4	25.4	1.7	8.4	32.1	1.7	3.1	15.2	5.0	8.6	20.5	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	67.4	10.9	69.3	125.6	17.5	43.6	37.4	16.6	43.2	44.6	30.5
LnGrp LOS	D	E	B	E	F	B	D	D	B	D	D	C
Approach Vol, veh/h		1190			1325			624			822	
Approach Delay, s/veh		62.0			113.0			32.1			41.6	
Approach LOS		E			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	46.3	20.9	36.8	15.9	46.4	17.3	40.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	8.2	40.5	* 18	* 31	9.0	* 41	14.0	* 35
Max Q Clear Time (g_c+I1), s	2.0	22.5	7.3	33.0	2.0	30.2	12.0	36.2
Green Ext Time (p_c), s	0.2	2.8	0.1	0.0	0.1	2.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.1
HCM 6th LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1248	433	287	1070	451	108
Future Volume (veh/h)	1248	433	287	1070	451	108
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1357	471	312	1163	304	317
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1764	1223	381	2289	490	436
Arrive On Green	0.99	0.99	0.22	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1357	471	312	1163	304	317
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	1.4	0.3	10.6	0.0	17.9	21.7
Cycle Q Clear(g_c), s	1.4	0.3	10.6	0.0	17.9	21.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1764	1223	381	2289	490	436
V/C Ratio(X)	0.77	0.39	0.82	0.51	0.62	0.73
Avail Cap(c_a), veh/h	1764	1223	519	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	0.2	0.0	11.5	0.0	38.0	39.4
Incr Delay (d2), s/veh	1.5	0.4	6.6	0.7	5.8	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.4	6.8	0.4	13.4	14.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.7	0.4	18.0	0.7	43.8	49.6
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h	1828			1475	621	
Approach Delay, s/veh	1.4			4.4	46.8	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	17.7	65.3		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	22.6	50.3		77.3
Max Q Clear Time (g_c+I1), s	23.7	12.6	3.4		2.0
Green Ext Time (p_c), s	1.6	0.7	18.9		12.3

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1004	229	312	1133	85	67
Future Volume (veh/h)	1004	229	312	1133	85	67
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1091	249	339	1232	92	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2141	486	364	2645	312	277
Arrive On Green	1.00	1.00	0.74	0.74	0.17	0.17
Sat Flow, veh/h	2970	653	408	3647	1781	1585
Grp Volume(v), veh/h	672	668	339	1232	92	73
Grp Sat Flow(s),veh/h/ln	1777	1753	408	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	89.3	16.3	5.4	4.8
Cycle Q Clear(g_c), s	0.0	0.0	89.3	16.3	5.4	4.8
Prop In Lane		0.37	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1322	1304	364	2645	312	277
V/C Ratio(X)	0.51	0.51	0.93	0.47	0.30	0.26
Avail Cap(c_a), veh/h	1322	1304	364	2645	312	277
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.38	0.38	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.0	6.0	43.1	42.8
Incr Delay (d2), s/veh	0.5	0.5	32.8	0.6	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.4	19.7	9.4	4.7	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.5	52.9	6.6	45.5	45.1
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1340			1571	165	
Approach Delay, s/veh	0.5			16.6	45.3	
Approach LOS	A			B	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	25.0	95.0	95.0
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	21.0	89.3	89.3
Max Q Clear Time (g_c+I1), s	7.4	2.0	91.3
Green Ext Time (p_c), s	0.4	14.6	0.0

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	259	82	30	369	100	118	444	34	69	384	203
Future Volume (veh/h)	134	259	82	30	369	100	118	444	34	69	384	203
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	146	282	89	33	401	109	128	483	37	75	417	0
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	157	443	376	99	382	324	505	1085	919	442	1085	
Arrive On Green	0.09	0.24	0.24	0.06	0.20	0.20	0.58	0.58	0.58	0.58	0.58	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	969	1870	1585	882	1870	1585
Grp Volume(v), veh/h	146	282	89	33	401	109	128	483	37	75	417	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	969	1870	1585	882	1870	1585
Q Serve(g_s), s	9.8	16.3	5.4	2.1	24.5	7.1	9.9	17.5	1.2	6.3	14.5	0.0
Cycle Q Clear(g_c), s	9.8	16.3	5.4	2.1	24.5	7.1	24.3	17.5	1.2	23.9	14.5	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	157	443	376	99	382	324	505	1085	919	442	1085	
V/C Ratio(X)	0.93	0.64	0.24	0.33	1.05	0.34	0.25	0.45	0.04	0.17	0.38	
Avail Cap(c_a), veh/h	157	443	376	150	382	324	505	1085	919	442	1085	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.3	41.1	37.0	54.5	47.8	40.8	20.2	14.3	10.8	21.0	13.6	0.0
Incr Delay (d2), s/veh	50.9	3.0	0.3	2.0	59.8	0.6	1.2	1.3	0.1	0.8	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	12.5	3.9	1.8	25.3	5.1	4.3	12.2	0.8	2.5	10.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.2	44.1	37.3	56.5	107.5	41.4	21.4	15.6	10.9	21.9	14.7	0.0
LnGrp LOS	F	D	D	E	F	D	C	B	B	C	B	
Approach Vol, veh/h		517			543			648			492	A
Approach Delay, s/veh		60.2			91.2			16.5			15.8	
Approach LOS		E			F			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	75.2	11.1	33.7	75.2	15.0	29.8
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 70	* 10	* 25	* 70	* 11	* 25
Max Q Clear Time (g_c+I1), s	26.3	4.1	18.3	25.9	11.8	26.5
Green Ext Time (p_c), s	4.4	0.0	1.1	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

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	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	249	548	66	102	0	0
Future Vol, veh/h	249	548	66	102	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	271	596	72	111	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	15.5	10	0
HCM LOS	C	A	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	39%	0%	0%	100%
Vol Right, %	61%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	168	249	548	0
LT Vol	0	249	0	0
Through Vol	66	0	0	0
RT Vol	102	0	548	0
Lane Flow Rate	183	271	596	0
Geometry Grp	2	7	7	2
Degree of Util (X)	0.261	0.415	0.714	0
Departure Headway (Hd)	5.144	5.519	4.313	5.811
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	698	652	840	0
Service Time	3.182	3.252	2.047	3.872
HCM Lane V/C Ratio	0.262	0.416	0.71	0
HCM Control Delay	10	12.1	17.1	8.9
HCM Lane LOS	A	B	C	N
HCM 95th-tile Q	1	2	6.2	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	162	0	1	662	474	0	0	1	148	9	401
Future Volume (veh/h)	24	162	0	1	662	474	0	0	1	148	9	401
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	26	176	0	1	720	515	0	0	1	161	10	0
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	249	2245	0	800	1254	889	0	0	107	223	14	
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.00	0.00	0.07	0.13	0.13	0.00
Sat Flow, veh/h	451	3647	0	1209	1986	1408	0	0	1585	1682	104	1585
Grp Volume(v), veh/h	26	176	0	1	644	591	0	0	1	171	0	0
Grp Sat Flow(s),veh/h/ln	451	1777	0	1209	1777	1617	0	0	1585	1786	0	1585
Q Serve(g_s), s	4.3	2.3	0.0	0.0	25.1	25.5	0.0	0.0	0.1	11.0	0.0	0.0
Cycle Q Clear(g_c), s	29.8	2.3	0.0	2.3	25.1	25.5	0.0	0.0	0.1	11.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.87	0.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	249	2245	0	800	1122	1021	0	0	107	237	0	
V/C Ratio(X)	0.10	0.08	0.00	0.00	0.57	0.58	0.00	0.00	0.01	0.72	0.00	
Avail Cap(c_a), veh/h	249	2245	0	800	1122	1021	0	0	107	316	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.09	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.5	8.6	0.0	9.0	12.8	12.8	0.0	0.0	52.2	49.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.2	5.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	1.5	0.0	0.0	11.0	10.3	0.0	0.0	0.1	9.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	8.6	0.0	9.0	13.0	13.1	0.0	0.0	52.4	55.2	0.0	0.0
LnGrp LOS	C	A	A	A	B	B	A	A	D	E	A	
Approach Vol, veh/h		202			1236			1			171	A
Approach Delay, s/veh		10.3			13.0			52.4			55.2	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.1	12.9	81.1	20.7
Change Period (Y+Rc), s	5.3	* 4.8	5.3	4.8
Max Green Setting (Gmax), s	75.8	* 8.1	75.8	21.2
Max Q Clear Time (g_c+I1), s	31.8	2.1	27.5	13.0
Green Ext Time (p_c), s	1.5	0.0	12.3	0.5

Intersection Summary	
HCM 6th Ctrl Delay	17.2
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)	38	145	65	1013	872	619	215	920	2	159	1062	123
Future Volume (veh/h)	38	145	65	1013	872	619	215	920	2	159	1062	123
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	41	158	71	1101	948	673	234	1000	0	173	1154	134
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	80	1540	687	1069	810	687	279	2283		360	2283	1018
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.64	0.64	0.00	0.64	0.64	0.64
Sat Flow, veh/h	311	3554	1585	2234	1870	1585	429	3554	1585	563	3554	1585
Grp Volume(v), veh/h	41	158	71	1101	948	673	234	1000	0	173	1154	134
Grp Sat Flow(s),veh/h/ln	311	1777	1585	1117	1870	1585	429	1777	1585	563	1777	1585
Q Serve(g_s), s	0.0	2.4	2.4	36.6	39.0	37.6	41.8	12.6	0.0	20.1	15.5	3.0
Cycle Q Clear(g_c), s	39.0	2.4	2.4	39.0	39.0	37.6	57.8	12.6	0.0	33.2	15.5	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	80	1540	687	1069	810	687	279	2283		360	2283	1018
V/C Ratio(X)	0.51	0.10	0.10	1.03	1.17	0.98	0.84	0.44		0.48	0.51	0.13
Avail Cap(c_a), veh/h	80	1540	687	1069	810	687	279	2283		360	2283	1018
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	15.1	15.1	29.4	25.5	25.1	27.3	8.0	0.0	16.5	8.5	6.3
Incr Delay (d2), s/veh	5.4	0.0	0.1	35.4	89.4	29.2	25.0	0.6	0.0	4.5	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	1.6	1.5	24.0	50.7	25.3	11.4	7.6	0.0	5.1	9.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	15.2	15.2	64.8	114.9	54.3	52.3	8.6	0.0	21.0	9.3	6.6
LnGrp LOS	D	B	B	F	F	D	D	A		C	A	A
Approach Vol, veh/h		270			2722			1234	A		1461	
Approach Delay, s/veh		20.5			79.7			16.9			10.5	
Approach LOS		C			E			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	63.4	44.3	63.4	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	35.2	41.0	59.8	41.0
Green Ext Time (p_c), s	5.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Notes

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

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

Intersection	
Intersection Delay, s/veh	21.4
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	173	0	0	173	521
Future Vol, veh/h	0	173	0	0	173	521
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	188	0	0	188	566
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.3	0	24.2
HCM LOS	B	-	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	0%	25%
Vol Right, %	0%	0%	100%	75%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	173	694
LT Vol	0	0	0	0
Through Vol	0	0	0	173
RT Vol	0	0	173	521
Lane Flow Rate	0	0	188	754
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0	0.282	0.84
Departure Headway (Hd)	5.222	6.114	5.404	4.01
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	660	905
Service Time	3.291	3.895	3.184	2.036
HCM Lane V/C Ratio	0	0	0.285	0.833
HCM Control Delay	8.3	8.9	10.3	24.2
HCM Lane LOS	N	N	B	C
HCM 95th-tile Q	0	0	1.2	10.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	130	321	294	40	0
Future Vol, veh/h	0	130	321	294	40	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	141	349	320	43	0

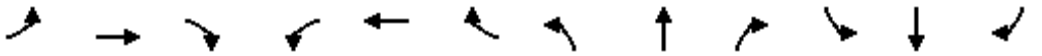
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	669	0	-	0	650	509
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	921	-	-	-	434	564
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	921	-	-	-	434	564
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	921	-	-	-	434
HCM Lane V/C Ratio	-	-	-	-	0.1
HCM Control Delay (s)	0	-	-	-	14.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

HCM 6th Signalized Intersection Summary
1: National Bl & Washington Bl

02/23/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	1130	82	125	816	196	58	448	140	255	419	111
Future Volume (veh/h)	97	1130	82	125	816	196	58	448	140	255	419	111
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	105	1228	89	136	887	213	63	487	152	277	455	121
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	181	1001	586	160	944	639	306	567	481	343	661	560
Arrive On Green	0.10	0.28	0.28	0.18	0.53	0.53	0.09	0.30	0.30	0.14	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	105	1228	89	136	887	213	63	487	152	277	455	121
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	6.8	33.8	1.0	8.9	28.0	0.0	0.0	29.4	6.5	11.3	24.9	6.4
Cycle Q Clear(g_c), s	6.8	33.8	1.0	8.9	28.0	0.0	0.0	29.4	6.5	11.3	24.9	6.4
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	1001	586	160	944	639	306	567	481	343	661	560
V/C Ratio(X)	0.58	1.23	0.15	0.85	0.94	0.33	0.21	0.86	0.32	0.81	0.69	0.22
Avail Cap(c_a), veh/h	181	1001	586	165	977	654	314	567	481	343	661	560
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	43.1	11.4	48.5	27.2	14.9	42.9	39.4	17.6	47.1	33.2	27.2
Incr Delay (d2), s/veh	4.6	111.0	0.1	24.9	12.7	0.2	0.3	15.5	1.7	13.3	5.8	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	5.9	44.0	1.8	7.8	14.9	4.6	3.0	22.3	4.7	14.1	18.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	154.1	11.5	73.4	39.9	15.1	43.2	54.8	19.3	60.4	38.9	28.0
LnGrp LOS	E	F	B	E	D	B	D	D	B	E	D	C
Approach Vol, veh/h		1422			1236			702			853	
Approach Delay, s/veh		137.9			39.3			46.1			44.4	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.3	42.2	17.8	37.7	16.3	48.2	16.1	39.4
Change Period (Y+Rc), s	5.8	5.8	* 5.6	* 5.8	5.8	* 5.8	5.3	* 5.6
Max Green Setting (Gmax), s	16.2	36.4	* 12	* 33	11.1	* 42	11.1	* 34
Max Q Clear Time (g_c+I1), s	13.3	31.4	8.8	30.0	2.0	26.9	10.9	35.8
Green Ext Time (p_c), s	0.2	1.6	0.1	1.8	0.1	2.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	74.8
HCM 6th LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1480	419	91	994	552	189
Future Volume (veh/h)	1480	419	91	994	552	189
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1609	455	99	1080	402	417
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1905	1286	296	2289	490	436
Arrive On Green	1.00	1.00	0.14	1.00	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1609	455	99	1080	402	417
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	0.0	0.0	2.6	0.0	25.4	31.1
Cycle Q Clear(g_c), s	0.0	0.0	2.6	0.0	25.4	31.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1905	1286	296	2289	490	436
V/C Ratio(X)	0.84	0.35	0.33	0.47	0.82	0.96
Avail Cap(c_a), veh/h	1905	1286	311	2289	490	436
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.3	0.0	40.7	42.8
Incr Delay (d2), s/veh	0.5	0.1	0.6	0.7	14.3	33.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	1.8	0.4	18.9	22.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.1	8.9	0.7	55.0	76.3
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h	2064			1179	819	
Approach Delay, s/veh	0.4			1.4	65.9	
Approach LOS	A			A	E	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	37.0	13.0	70.0		83.0
Change Period (Y+Rc), s	4.0	4.4	5.7		5.7
Max Green Setting (Gmax), s	33.0	9.6	63.3		77.3
Max Q Clear Time (g_c+I1), s	33.1	4.6	2.0		2.0
Green Ext Time (p_c), s	0.0	0.1	26.8		10.9

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1398	138	32	844	81	113
Future Volume (veh/h)	1398	138	32	844	81	113
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1520	150	35	917	88	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1541	151	137	1675	798	710
Arrive On Green	0.94	0.94	0.47	0.47	0.45	0.45
Sat Flow, veh/h	3363	320	297	3647	1781	1585
Grp Volume(v), veh/h	820	850	35	917	88	123
Grp Sat Flow(s),veh/h/ln	1777	1813	297	1777	1781	1585
Q Serve(g_s), s	41.2	51.9	11.9	22.1	3.4	5.6
Cycle Q Clear(g_c), s	41.2	51.9	37.5	22.1	3.4	5.6
Prop In Lane		0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	837	854	137	1675	798	710
V/C Ratio(X)	0.98	0.99	0.26	0.55	0.11	0.17
Avail Cap(c_a), veh/h	1263	1289	208	2526	798	710
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.0	3.3	37.5	22.6	19.2	19.8
Incr Delay (d2), s/veh	9.2	12.2	1.0	0.3	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.5	6.5	1.6	14.1	2.7	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	15.5	38.4	22.9	19.5	20.4
LnGrp LOS	B	B	D	C	B	C
Approach Vol, veh/h	1670			952	211	
Approach Delay, s/veh	13.9			23.5	20.0	
Approach LOS	B			C	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	50.7	69.3	69.3
Change Period (Y+Rc), s	4.0	5.7	5.7
Max Green Setting (Gmax), s	25.0	85.3	85.3
Max Q Clear Time (g_c+I1), s	7.6	53.9	39.5
Green Ext Time (p_c), s	0.6	16.7	9.6

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	307	73	18	210	76	294	450	26	112	367	145
Future Volume (veh/h)	105	307	73	18	210	76	294	450	26	112	367	145
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	114	334	79	20	228	83	320	489	28	122	399	0
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	145	387	328	72	310	263	576	1169	991	507	1169	
Arrive On Green	0.08	0.21	0.21	0.04	0.17	0.17	0.63	0.63	0.63	0.63	0.63	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	986	1870	1585	907	1870	1585
Grp Volume(v), veh/h	114	334	79	20	228	83	320	489	28	122	399	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	986	1870	1585	907	1870	1585
Q Serve(g_s), s	7.5	20.7	5.0	1.3	13.9	5.5	27.5	15.9	0.8	9.5	12.2	0.0
Cycle Q Clear(g_c), s	7.5	20.7	5.0	1.3	13.9	5.5	39.7	15.9	0.8	25.4	12.2	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	145	387	328	72	310	263	576	1169	991	507	1169	
V/C Ratio(X)	0.79	0.86	0.24	0.28	0.73	0.32	0.56	0.42	0.03	0.24	0.34	
Avail Cap(c_a), veh/h	387	639	542	387	639	542	576	1169	991	507	1169	
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	0.00
Uniform Delay (d), s/veh	54.1	46.0	39.7	55.9	47.5	44.1	20.2	11.4	8.6	17.9	10.7	0.0
Incr Delay (d2), s/veh	9.0	6.7	0.4	2.0	3.4	0.7	3.8	1.1	0.1	1.1	0.8	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	6.7	15.6	3.6	1.1	11.0	4.0	11.0	11.0	0.5	3.8	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	52.6	40.1	57.9	50.9	44.7	24.0	12.5	8.6	19.0	11.5	0.0
LnGrp LOS	E	D	D	E	D	D	C	B	A	B	B	
Approach Vol, veh/h		527			331			837			521	A
Approach Delay, s/veh		53.0			49.8			16.8			13.3	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	80.6	9.3	30.1	80.6	14.2	25.2
Change Period (Y+Rc), s	* 5.6	* 4.4	* 5.3	* 5.6	* 4.4	* 5.3
Max Green Setting (Gmax), s	* 38	* 26	* 41	* 38	* 26	* 41
Max Q Clear Time (g_c+I1), s	41.7	3.3	22.7	27.4	9.5	15.9
Green Ext Time (p_c), s	0.0	0.0	2.1	2.3	0.2	1.6

Intersection Summary	
HCM 6th Ctrl Delay	29.5
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.

Intersection	
Intersection Delay, s/veh	102.3
Intersection LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	226	335	583	0	0
Future Vol, veh/h	58	226	335	583	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	246	364	634	0	0
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	12.6	130.1	0
HCM LOS	B	F	-

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	36%	0%	0%	100%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	918	58	226	0
LT Vol	0	58	0	0
Through Vol	335	0	0	0
RT Vol	583	0	226	0
Lane Flow Rate	998	63	246	0
Geometry Grp	2	7	7	2
Degree of Util (X)	1.228	0.121	0.39	0
Departure Headway (Hd)	4.431	7.473	6.246	6.119
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	483	580	0
Service Time	2.451	5.173	3.946	4.119
HCM Lane V/C Ratio	1.205	0.13	0.424	0
HCM Control Delay	130.1	11.2	12.9	9.1
HCM Lane LOS	F	B	B	N
HCM 95th-tile Q	34	0.4	1.8	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	687	1	11	204	114	1	7	7	654	6	35
Future Volume (veh/h)	78	687	1	11	204	114	1	7	7	654	6	35
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	85	747	1	12	222	124	1	8	8	711	7	0
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	467	1660	2	285	1017	547	13	104	104	521	5	
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.13	0.13	0.13	0.29	0.29	0.00
Sat Flow, veh/h	1035	3641	5	713	2232	1199	101	809	809	1765	17	1585
Grp Volume(v), veh/h	85	364	384	12	175	171	17	0	0	718	0	0
Grp Sat Flow(s),veh/h/ln	1035	1777	1869	713	1777	1655	1720	0	0	1782	0	1585
Q Serve(g_s), s	6.5	16.9	16.9	1.4	7.1	7.5	1.0	0.0	0.0	35.4	0.0	0.0
Cycle Q Clear(g_c), s	14.0	16.9	16.9	18.3	7.1	7.5	1.0	0.0	0.0	35.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.72	0.06		0.47	0.99		1.00
Lane Grp Cap(c), veh/h	467	810	852	285	810	754	221	0	0	526	0	
V/C Ratio(X)	0.18	0.45	0.45	0.04	0.22	0.23	0.08	0.00	0.00	1.37	0.00	
Avail Cap(c_a), veh/h	467	810	852	285	810	754	221	0	0	526	0	
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	0.97	0.97	0.97	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.1	22.4	22.4	28.6	19.7	19.8	46.0	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	0.9	1.8	1.7	0.3	0.6	0.7	0.7	0.0	0.0	176.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	11.9	12.3	0.5	5.6	5.5	0.9	0.0	0.0	61.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	24.2	24.1	28.9	20.3	20.5	46.7	0.0	0.0	218.8	0.0	0.0
LnGrp LOS	C	C	C	C	C	C	D	A	A	F	A	
Approach Vol, veh/h		833			358			17			718	A
Approach Delay, s/veh		24.2			20.7			46.7			218.8	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	60.0	20.0	60.0	40.0
Change Period (Y+Rc), s	5.3	4.6	5.3	4.6
Max Green Setting (Gmax), s	54.7	15.4	54.7	35.4
Max Q Clear Time (g_c+I1), s	18.9	3.0	20.3	37.4
Green Ext Time (p_c), s	5.8	0.0	2.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	96.3
HCM 6th LOS	F

Notes

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)	72	953	207	470	205	171	78	1152	40	290	707	19
Future Volume (veh/h)	72	953	207	470	205	171	78	1152	40	290	707	19
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	78	1036	225	511	223	186	85	1252	0	315	768	21
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	428	1540	687	331	810	687	475	2401		295	2401	1071
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.68	0.68	0.00	0.68	0.68	0.68
Sat Flow, veh/h	977	3554	1585	853	1870	1585	687	3554	1585	444	3554	1585
Grp Volume(v), veh/h	78	1036	225	511	223	186	85	1252	0	315	768	21
Grp Sat Flow(s),veh/h/ln	977	1777	1585	427	1870	1585	687	1777	1585	444	1777	1585
Q Serve(g_s), s	5.0	21.0	8.4	18.0	6.9	6.8	5.4	15.9	0.0	43.7	8.1	0.4
Cycle Q Clear(g_c), s	11.9	21.0	8.4	39.0	6.9	6.8	14.4	15.9	0.0	60.8	8.1	0.4
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	428	1540	687	331	810	687	475	2401		295	2401	1071
V/C Ratio(X)	0.18	0.67	0.33	1.54	0.28	0.27	0.18	0.52		1.07	0.32	0.02
Avail Cap(c_a), veh/h	428	1540	687	331	810	687	475	2401		295	2401	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	20.4	16.8	40.3	16.4	16.4	9.2	7.3	0.0	29.1	6.0	4.8
Incr Delay (d2), s/veh	0.2	1.0	0.2	259.7	0.2	0.2	0.8	0.8	0.0	71.2	0.4	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	2.0	12.5	5.2	27.2	5.0	4.2	1.5	8.8	0.0	19.0	4.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	21.4	17.1	300.0	16.6	16.6	10.1	8.1	0.0	100.3	6.4	4.8
LnGrp LOS	C	C	B	F	B	B	B	A		F	A	A
Approach Vol, veh/h		1339			920			1337	A		1104	
Approach Delay, s/veh		20.6			174.0			8.3			33.2	
Approach LOS		C			F			A			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	66.7	44.3	66.7	44.3
Change Period (Y+Rc), s	* 5.3	* 5.3	* 5.3	* 5.3
Max Green Setting (Gmax), s	* 41	* 39	* 41	* 39
Max Q Clear Time (g_c+I1), s	62.8	41.0	17.9	23.0
Green Ext Time (p_c), s	0.0	0.0	14.3	7.3

Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Notes

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

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

Intersection	
Intersection Delay, s/veh	14.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	267	331	0	0	119	304
Future Vol, veh/h	267	331	0	0	119	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	360	0	0	129	330
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	13.9	0	15.8
HCM LOS	B	-	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	28%
Vol Right, %	0%	0%	100%	72%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	267	331	423
LT Vol	0	267	0	0
Through Vol	0	0	0	119
RT Vol	0	0	331	304
Lane Flow Rate	0	290	360	460
Geometry Grp	2	7	7	2
Degree of Util (X)	0	0.506	0.506	0.624
Departure Headway (Hd)	6.118	6.273	5.06	4.888
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	578	716	731
Service Time	4.141	3.973	2.76	2.966
HCM Lane V/C Ratio	0	0.502	0.503	0.629
HCM Control Delay	9.1	15.2	12.8	15.8
HCM Lane LOS	N	C	B	C
HCM 95th-tile Q	0	2.8	2.9	4.4

Intersection	
Int Delay, s/veh	55.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	669	460	54	264	0
Future Vol, veh/h	0	669	460	54	264	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	727	500	59	287	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	559	0	-	0	1257	530
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	727	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1012	-	-	-	~ 189	549
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1012	-	-	-	~ 189	549
Mov Cap-2 Maneuver	-	-	-	-	~ 189	-
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 303.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1012	-	-	-	189
HCM Lane V/C Ratio	-	-	-	-	1.518
HCM Control Delay (s)	0	-	-	-	-$ 303.8
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	18.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon