Appendix TIA

Transportation Impact Analysis

499 Forbes Boulevard

Draft Transportation Impact Analysis

Prepared for:
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SF19-1076

FEHR PEERS

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1. Project Description

The transportation impact analysis (TIA) evaluates potential transportation effects associated with the 499 Forbes Boulevard development project ("Project"). The Project is a new 128,737 square foot Office/R&D building on an approximately three-acre site at 499 Forbes Boulevard in the City of South San Francisco's East of 101 employment area. The site was formerly occupied by an approximately 54,000 square foot industrial use which was demolished in Fall 2019. The site location is shown in **Figure 1-1** and Project site plan in **Figure 1-2**. Off-street parking facilities consist of 322 auto parking stalls, 308 of which are within an above and below grade parking structure and the remaining 14 stalls are within a surface parking lot. Proposed bicycle parking facilities include 26 long- and 33 short-term spaces. Project plans show 24 short-term bicycle parking spaces near the main building entrance while the location of the remining spaces have yet to be shown.

Primary bicycle, pedestrian, and motor vehicle site access is provided via the Forbes Boulevard frontage with a new driveway approach and dedicated pedestrian walkways connecting with existing public sidewalks. Removal of approximately 35 feet of center median within Forbes Boulevard is proposed to permit intuitive left turn movements departing and approaching the Project site. Secondary bicycle and pedestrian access is provided via a new Class I shared-use bicycle and pedestrian pathway along an abandoned railroad right-of-way to the rear of the Project site.

The new Class I shared-use path follows the railroad right-of-way beginning at the Project site and ending at an entrance to Forbes Boulevard approximately 1,400 feet to the northeast. At the southwesterly end, the pathway is configured to permit future westerly expansion should an active rail spur between the Project Site and Eccles Avenue be repurposed.

1.1 Alternative Mode Share Target

The Project is located in the Business and Technology Park zoning district and the proposed floor area ratio (FAR) exceeds base zoning maximums. Accordingly, the Project sponsor is requesting a FAR bonus under the City's floor area ratio and transportation demand management (TDM) incentive program. The following alternative mode share target applies to the Project:

Zoning District	Requested FAR	Minimum Alternative Mode Use (Percent of Total Trips)
Business and Technology Park	0.81-1.00	35%

Source: City of South San Francisco Zoning Ordinance, Chapter 20.400 Transportation Demand Management

The Project TDM plan identifies and proposes site design and program measures to achieve the non-drive alone mode share target. Key measures include: short- and long-term bicycle parking facilities; building entrances are directly linked to the public street via pedestrian pathways; and, office tenants will offer subsidies to employees who commute via transit, vanpool, bicycle, or walking and promote non drive-alone

modes through ongoing marketing campaigns. Finally, performance will be evaluated in accordance with the City's TDM ordinance.

Figure 1-1

499 Forbes Project Location

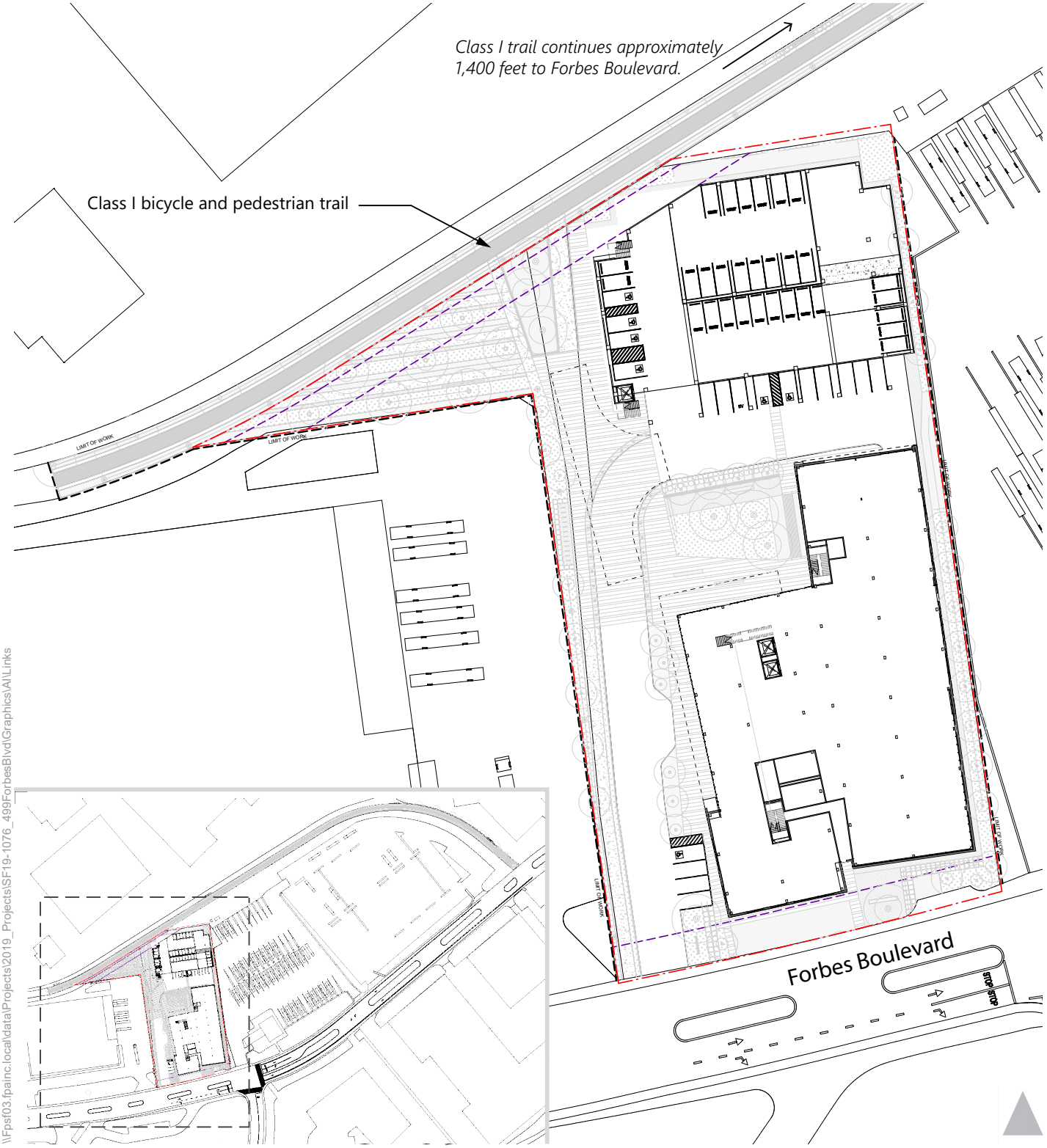


Figure 1-2

Site Plan

499 Forbes Boulevard

2. Environmental Setting

This section describes the existing transportation and circulation setting in the vicinity of the Project site: the existing roadway network, transit network and service, pedestrian conditions, and bicycle conditions.

2.1 Roadway Facilities

The Project site is at the northwest corner of the Forbes Boulevard and Allerton Avenue intersection in the City of South San Francisco's East of 101 employment area. Regional access to the site is provided via US-101 and Gateway Boulevard to the north and, and US-101 and East Grand Avenue to the south. **Figure 1-1** shows the Project location and the surrounding roadway system. Project site vehicular access is provided via one, two-way driveway that intersects Forbes Boulevard west of Allerton Avenue. A dedicated pedestrian walkway parallels the driveway.

Key local roadways in the vicinity of the Project site are described below:

- *US-101* is an eight-lane freeway and principle north-south roadway connection between San Francisco, San Jose, and intermediate San Francisco Peninsula cities. In South San Francisco, US-101 is located approximately one mile west of the Project site and serves the East of 101 area with three primary access pionts. Near the Project, US-101 carries about 220,000 vehicles per day and defines the East of 101 area's western edge and barrier to east-west bicycle and pedestrian connectivity. Access points include:
    - *Northern Access – Oyster Point Boulevard:* Northbound on- and off-ramps intersect Dubuque Aveneue at and immediately south of Oyster Point Boulevard. Southbound on-ramps are at Dubuque Ave, adjacent to the Northbound off-ramp. The southbound off-ramp intersects Gateway Boulevard / Oyster Point Boulevard as the intersection's fifth leg.
    - *Central Access – East Grand Avenue:* Northbound off-ramps are at East Grand Avenue/Poletti Way and on-ramps are to the west at Grand Avenue/Airport Bouleavrd. Southbound off-ramps are at Airport Boulevard/Miller Avenue. There is no southbound freeway acccess at this location.
    - *Southern Access –Gateway Boulevard*: Northbound on- and off-ramps are at South Airport Boulevard/Wondercolor Lane; southbound on- and off-ramps are immediately south of the San Mateo Avenue/Produce Avenue/South Airport Boulevard intersection.
- *East Grand Avenue* is an east-west arterial street. It has six travel lanes west of Gateway Boulevard, and four travel lanes east of Gateway Boulevard and two travel lanes east of Haskins Way. US-101 freeway ramps at East Grand Avenue enable Project access from the south. East Grand Avenue carries about 17,000 vehicles per day.
- *Airport Boulevard* runs roughly parallel to US-101 in South San Francisco. Freeway ramps south of Grand Avenue provide alternate Project access from the south. Airport Boulevard carries approximately 24,000 vehicles per day

- *Gateway Boulevard* is a four-lane north-south arterial connecting East Grand Avenue with South Airport Boulevard and Oyster Point Boulevard. Class II bicycle lanes exist between East Grand Avenue and South Airport Boulevard. The corridor provides Project access from the north via US-101 ramps at Oyster Point Boulevard. Gateway Boulevard carries approximately 12,000 vehicles per day.
- *Forbes Boulevard* is a four-lane street extending north from East Grand Avenue, then running east into the Genentech campus, terminting at DNA Way. East of Allerton, Forbes Boulevard has two lanes and Class II buffered bicycle lanes. Principle local Project is provided via Forbes Boulevard, immediatley west of the Allerton Avenue intersection.
- *Allerton Avenue* is a two-lane road with Class II buffered bicycle lanes connecting East Grand Avenue with Forbes Boulevard along the western edge of the Genentech Campus. The Project site is adjacent ot the northerly endpoint at Forbes Boulevard.

2.2 Transit Facilities and Service

The Project site is not served directly by regional rail, ferry, or bus transit services; however, regional rail service (Caltrain and BART), ferry service (WETA), and bus service (SamTrans) is provided in the greater vicinity of the Project site. All transit services are located beyond a comfortable half-mile, ten-minute walking distance. The East of 101 Area therefore relies on supplementary shuttle services to connect employees with regional transit. The existing transit services are shown on **Figure 2-1** and described in detail below.

2.2.1 Regional Transit Service

The following transit services operate within San Francisco and are accessible from the Project site with a bicycle or first- and last-mile shuttle connection provided by Commute.org:

- *Bay Area Rapid Transit (BART)* provides regional rail service between the East Bay, San Francisco, and San Mateo County, connecting between San Francisco International Airport and Millbrae Intermodal Station to the south, San Francisco to the north, and Oakland, Richmond, Pittsburgh/Bay Point, Dublin/Pleasanton and Fremont in the East Bay. The South San Francisco Station is located approximately four miles northwest of the Project at Mission Road and McLellan Drive. BART trains operate on 15 minute headways during peak hours, and 20 minute headways during off-peak hours.
- *Caltrain* provides passenger rail service on the Peninsula between San Francisco and San Jose, and limited service trains to Morgan Hill and Gilroy during weekday commute periods. The South San Francisco Caltrain Station is currently located approximately one mile west of the Project at 590 Dubuque Avenue, on the east side of US-101, immediately north of East Grand Avenue. Toward the end of 2020, Caltrain plans to open a relocated the South San Francisco Caltrain Station several hundred feet to the south near the Grand Avenue/Airport Boulevard intersection and provide more direct pedestrian access to the East of 101 area via a tunnel with access at East Grand Avenue and Poletti Way. The South San Francisco Caltrain Station is currently served by 23 northbound and 23 southbound local or limited trains during a typical weekday.

Figure 2-1
Existing Transit Service

- southbound weekday trains. The South San Francisco Caltrain Station has weekday service from 5:40 AM to 12:00 AM, with 60 minute headways during off-peak times.
- *Water Emergency Transportation Authority (WETA)* provides weekday commuter ferry service between Oakland/Alameda ferry terminals and the South San Francisco Ferry Terminal at Oyster Point. There are three morning departures from Oakland/Alameda to South San Francisco, and three evening departures from South San Francisco to Oakland/Alameda. The South San Francisco Ferry terminal is located approximately one mile from the Project site.
- *San Mateo County Transit District (SamTrans)* provides bus and rail service (through Caltrain) in San Mateo County, but only serves the western edge of the East of 101 employment area. The closest bus stops to the Project site are apprxomately one and a half miles to the west at the intersction of Airport Boulevard and Grand Avenue and are served by Routes 292 and 397.

2.2.2 East of 101 Commuter Shuttle Service

Peninsula Traffic Congestion Relief Alliance (Commute.org) shuttles provide weekday commute period first/last mile connections between BART and Caltrain stations and the WETA ferry terminal and local employers in the East of 101 Area, including the Project site. Six weekday peak period, peak-direction routes serve the East of 101 area and are described in **Table 2.1**. Service is roughly distributed between the East of 101 area's north (Oyster Point area) and south (Utah/Grand area) geographic halves. Project shuttle access is provided by an existing stop 0.2 miles away at the intersection of Allerton Avenue and Carlton Court which is served by all Utah/Grand area shuttles. These routes connect with Caltrain, BART, and the WETA ferry terminal. While all Oyster Point area shuttle routes pass the Project site on Forbes Boulevard, they do not stop within walking distance of the site.

Table 2.1. East of 101 Area Commute.org Shuttle Service

Service Area	Regional Transit Connection	Peak Period Headway (minutes)	Total Daily Weekday Trips	
			AM (6:30-10:00)	PM (3:00-6:00)
Oyster Point	Caltrain	30-40	7	7
	Ferry Terminal	20-60	3	3
	BART	15-30	10	9
Utah/Grand	Caltrain	30-40	8	7
	Ferry Terminal and Caltrain	30-60	4	3
	BART	30	8	7

Note: Highlighted text denotes service that is walking distance to the Project site from an existing shuttle stop.

2.3 Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, trails, and pedestrian signals. In the Project vicinity, continuous sidewalks exist along the north side of Forbes Boulevard only except east of the Allerton Avenue intersection where continuous sidewalks exist on both sides of the roadway for approximately 900 feet. At the intersection of Forbes Boulevard and Allerton Avenue, an all-way "stop" controlled intersection immediately adjacent to the Project site, marked, high visibility "ladder" crosswalks are provided on two of the three intersection legs. Sidewalks exist on the east side of Allerton Avenue between Forbes Boulevard and Cabot Road, which provides continuous pedestrian connectivity between the Project site and the nearest existing Commute.org shuttle stop.

A segment of the San Francisco Bay Trail runs along the shoreline in the East of 101 area, providing a continuous off-street shared-use trail connection between Brisbane's Sierra Point to the north and South Airport Boulevard at the San Bruno Canal to the south. The Bay Trail is a public pedestrian and bicycle trail that is planned to extend around the entire San Francisco Bay. To the north of the Project site, the Bay Trail connects to the South San Francisco Ferry Terminal to Forbes Boulevard, allowing bicyclists and pedestrians traveling between the Ferry Terminal and Project Site to avoid circuitous and steeper routing via Gull Drive. Currently, there are gaps in the trail to the north of Brisbane, and just south of South San Francisco.

2.4 Bicycle Facilities

Bicycle facilities consist of separated bikeways, bicycle lanes, routes, trails, and paths, as well as bike parking, bike lockers, and showers for cyclists. Caltrans recognizes four classifications of bicycle facilities:

- Class I – Shared-Use Pathway Provides a completely separated right-of-way for the exclusive use of cyclists and pedestrians with cross-flow minimized (e.g. off-street bicycle paths).
- Class II – Bicycle Lanes:Provides a striped lane for one-way travel on a street or highway. May include a "buffer" zone consisting of a striped portion of roadway between the bicycle lane and the nearest vehicle travel lane.
- Class III – Bicycle Route Provides for shared use with motor vehicle traffic; however, are often signed or include a striped bicycle lane.
- Class IV – Separtaed Bikeway: Provides a right-of-way designated exclusively for bicycle travel adjacent to a roadway and which are protected from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

The area surrounding the Project site has a partially complete bicycle network that connects to the South San Francisco Ferry Terminal but lacks dedicated bicycle connections to the Caltrain station and residential uses west of US-101. Existing and planned bicycle facilities in the Project vicinity, as designated by the South San Francisco Bicycle Master Plan (2011) and Active South City Plan (ongoing), are shown in **Figure 2-2,** and discussed below.

Figure 2-2

Existing and Planned Bicycle Facilites

- *East Grand Avenue* has Class II bicycle lanes between Littlefield Avenue and Allerton Avenue and between Haskins Way and the South Campus entrance; Class II bike lanes are planned for the remainder of East Grand Avenue and Grand Avenue
- *Forbes Boulevard* has Class II buffered bicycle lanes between Allerton Avenue and DNA Way, but does not have bicycle lanes connecting to the Project site
- *Allerton Avenue* has Class II buffered bicycle lanes between Forbes Boulevard and East Grand Avenue
- *The San Francisco Bay Trail* (Bay Trail) is a Class I shared pedestrian, bicycle, and non-motorized vehicle pathway along the Oyster Point shoreline and Point San Bruno, part of a planned 400 mile regional trail system ecircling the San Francisco Bay shoreline.

Bicyclists would primarily access the Project site via Forbes Boulevard and Allerton Avenue. Commute trip lengths, lack of continuous low stress bicycle facilities, lack of connectivity to residences and transit stations, and topography present barriers to bicycle commuting to the East of 101 area today.

The 2011 City of South San Francisco Bicycle Master Plan identifies several bicycle improvements near the Project site, including completing bicycle lanes along East Grand Avenue and Forbes Boulevard and the addition of new Class I shared-use trails along abandoned railroad corridors. Near the Project site, rails-to-trails projects are currently planned for inactive railways paralleling Forbes Boulevard to the south and Eccles Avenue to the west, connecting to a proposed trail between East Grand Avenue and the new Caltrain station. The trail segment north of Forbes Boulevard adjacent the Project is not included on these plans due to its partially active rail use and lack of connectivity to the surrounding bicycle network.

As noted in the prior section, the reconstructed South San Francisco Caltrain station features a bicycle and pedestrian undercrossing that connects the East of 101 area to the upgraded South San Francisco Caltrain station, Downtown South San Francisco, housing, and commercial services to the west. The undercrossing represents the first non-motorized connection spanning the Caltrain and US-101 corridors, which are substantial barriers to east-west bicycle and pedestrian travel.

3. Transportation Analysis

This section includes analysis and findings of Project effects on transportation services and facilities, including motor vehicle travel and operations, transit service, pedestrian facilities and bicycle facilities. The amount and distance of motor vehicle travel was analyzed using vehicle miles traveled (VMT), while the motor vehicle operations analysis focused on weekday AM and PM peak hour queue conditions at freeway off-ramps. Other vehicle operations measures, such as level of service (LOS), are presented in **Appendix C**:for informational purposes. Bicycle, pedestrian, and transit impacts were qualitatively assessed using transportation planning and engineering methods and practices.

3.1 Significance Criteria

The impacts of the proposed Project related to transportation would be considered significant if any of the following Standards of Significance are exceeded, in accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

City of South San Francisco and San Mateo County C/CAG guidance was used to identify additional relevant thresholds of significance to determine whether implementation of the Project would result in significant environmental impacts and are described below.

3.1.1 Vehicle Miles Traveled (VMT)

As a part of *Shape SSF,* the City of South San Francisco's general plan update, the City is updating its transportation impact thresholds. By July 1st, 2020, the City will adopt a VMT threshold in accordance with the Office of Planning and Research (OPR)'s guidance in implementing Senate Bill 743. Since the City has not yet adopted such a VMT threshold, an interim Project threshold was developed based on the metrics and methods described in **Appendix A:**, Vehicle Miles Traveled Technical Context. Analysis of greenhouse gas reduction goals performed by the California Air Resources Board (CARB) indicates that a reduction of at least 16.8 percent of light-duty vehicle VMT is necessary to reach statewide goals.[1] Light-duty VMT is appropriate for the Project because most Project trips are expected to be light duty vehicles.

[1] California Air Resources Board, *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, January 2019. Available online at https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate

- A significant impact would occur should existing home-based work (HBW) VMT per employee in the travel demand model transportation analysis zone (TAZ) that encompasses the project result in greater than 11.8 HBW VMT per employee under existing conditions based on 16.8 percent below the existing regional average of 14.2 HBW VMT per employee as shown in **Table 3.1.**

Table 3.1 Home-Based Work (HBW) VMT Per Employee Threshold

Location	Total HBW VMT *(a)*	Total Employees *(b)*	HBW VMT per Employee *(a) / (b)*
Bay Area Region	60,994,917	4,285,001	14.2
		VMT Reduction Factor	(16.8%)
		HBW VMT Per Employee Threshold	**11.8**

Source: Fehr & Peers 2020; C/CAG-VTA Bi-County Transportation Demand Model, 2019.

3.1.2 Freeway Ramp Queuing

While SB743 notes that "traffic congestion shall not be considered a significant impact on the environment" the freeway on- and off-ramp vehicle queuing criteria was retained to assess potential hazards from Project traffic exceeding ramp storage capacities. Traffic in queue represents congested, stop-and-go conditions, and should queues interfere with through, free-moving traffic streams on the freeway mainline, hazards could arise due to the differences in speed.

- A significant impact would occur if the Project causes vehicle queues approaching a given movement downstream of Caltrans freeway facilities to exceed existing storage space for that movement or would contribute to existing vehicle queues that exceed storage space for that movement.

3.1.3 Unsignalized Intersections

Just as with the freeway ramp queueing criteria, the need for a traffic signal at an unsignalized intersection is not solely based on traffic delay but must include safety considerations, spatial context, and engineering judgement. Since the potential addition of a traffic signal at an isolated intersection is not based entirely on traffic operations criteria and is unlikely to induce vehicle travel, and therefore increase VMT, a traffic signal warrant analysis was retained as a significance criteria.

- A significant impact would occur if the Project would increase total volumes passing through an intersection by two percent or more with all-way stop operation already at a baseline LOS E or F, or when a side street stop controlled approach is at a baseline LOS F. Side street stop criteria are applicable only for approaches with more than 25 trips during any peak traffic hour.

3.1.4 Bicycle, Pedestrian, and Transit

- A significant impact would occur if Project traffic would produce a detrimental impact to existing bicycle or pedestrian facilities, or conflict with adopted plans and programs.
- A significant impact would occur if Project traffic would produce a detrimental impact to local transit or shuttle service.

The criteria of significance apply to all Project scenarios as measured against the corresponding No Project scenario.

3.2 Analysis Scenarios

The impacts of the proposed project to the surrounding transportation system were evaluated for the four scenarios listed below:

- Scenario 1: Existing Conditions
- Scenario 2: Existing Plus Project Conditions
- Scenario 3: Cumulative Conditions
- Scenario 4: Cumulative Plus Project Conditions

A description of the methods used to estimate the amount of traffic and VMT generated by the proposed project is provided below. Project-specific impacts are described under Section 5, Project Impacts and Mitigation Measures.

3.2.1 Existing Conditions

Existing conditions represent the baseline condition upon which project impacts are measured. The baseline condition represents conditions in 2019.

3.2.2 Existing Plus Project Conditions

Existing Plus Project conditions represent the baseline condition with the addition of the Project. Traffic volumes for Existing Plus Project conditions include existing traffic volumes plus traffic generated by the proposed project. Existing Plus Project conditions were compared to Existing conditions to determine potential immediate project impacts. As noted in the Project Description, major off-site transportation network improvements consist of a new Class I shared-use path that begins at the Project's northwestern edge and follows the disused railroad right-of-way approximately 1,400 feet, connecting with Forbes Boulevard north of Allerton Avenue.

3.2.3 Cumulative Conditions

Cumulative conditions include transportation demand resulting from reasonably foreseeable land use changes and conditions associated with funded transportation projects at year 2040. Cumulative conditions are based on land use and transportation conditions included in Plan Bay Area 2040, as represented in the C/CAG Model.

3.2.4 Cumulative Plus Project Conditions

Cumulative plus project conditions represent the cumulative condition with the addition of the Project to determine the extent to which the proposed project would contribute to long-term cumulative transportation impacts.

3.3 VMT Analysis

Project-generated home-based work (HBW) vehicle miles traveled (VMT) per employee is calculated based on average home-based work VMT generated by employees working in the C/CAG travel demand model transportation analysis zone (TAZ) where the Project is located, divided by the number of jobs within the TAZ. Based on this methodology, the project would generate 16 HBW VMT per employee under existing conditions. This total is above the regional average total of 14.2 HBW VMT per employee, and also above the VMT per employee threshold of 11.8 HBW VMT per employee. The C/CAG model variables are presented in **Table 3.2**.

As discussed in Section 1, Project Description, the Project is subject to a 35 percent non-drive alone mode share during peak periods under the current TDM ordinance, which represent an approximately nine percent reduction in non-drive alone mode share from baseline conditions (71%).[2] However, reductions in non-drive alone mode share are not necessarily interchangeable with VMT reductions on a percentage point for percentage point basis. This is due to several reasons. First, mode share targets do not necessarily correlate with trip generation and trip length: although many East of 101 employers meet their non-drive alone mode share targets, vehicle trip generation and trip lengths are similar (if not slightly higher than) regional averages. Second, a non-drive alone mode share target includes passenger vehicle-based modes such as vanpools and carpools, which may dilute its effectiveness for VMT reductions. Third, VMT is a measure of daily activity for all trips, whereas accounting of non-drive alone mode share targets focuses only on commute trips. Therefore, Project HBW VMT per employee was not adjusted based on the Project TDM plan.

Table 3.2 Home-Based Work (HBW) VMT per Employee

Location	Total HBW VMT *(a)*	Total Employment *(b)*	HBW VMT per Employee *(a) / (b)*
East of 101 Area	572,219	35,831	16.0
Bay Area Region	60,994,917	4,285,001	14.2
		VMT Reduction Factor	(16.8%)
		VMT Per Employee Threshold	**11.8**

Source: Fehr & Peers 2020; C/CAG-VTA Bi-County Transportation Demand Model, 2019.

The project's effect on VMT describes changes in VMT generation from neighboring land uses by comparing area VMT for "no project" and "plus project" scenarios. An analysis of the project's effect on VMT requires the use of sophisticated tools, such as a locally-calibrated and validated travel demand forecasting model. The C/CAG Travel Demand Model, which is used to analyze project-generated VMT per capita, is a regional

[2] 2012-2016 five-year American Community Survey commute mode share estimates for the East of 101 employment area. Accessed via the Census Transportation Planning Products (CTPP).

travel demand forecasting model that has limited sensitivity to relatively small changes in land use and therefore is not appropriate for use in analyzing project effect on VMT for this Project.

Due to these limitations in available tools and the limited effect that a project of this size would have on total regional VMT, a quantitative analysis of the project's effect on VMT is not included in this DEIR. However, given the similarities in the proposed Project land uses to those of the surrounding land uses (e.g., location that generates higher than average VMT for the region, single-use employment centers, and limited non-auto access), the analysis of Project-generated HBW VMT per employee provides a reasonable estimation of the environmental consequences associated with the project's effect on VMT.

A long-range cumulative VMT analysis was not performed since, as noted above, community, city, or regional scale sustainable land use and transportation policy changes are necessary to substantially reduce HBW VMT per employee. While land use changes are currently under consideration through Shape SSF, the General Plan update process, active City land use policy envisions continued single-use employment uses within the East of 101 area, and therefore VMT is unlikely to be substantially reduced from existing conditions.

Overall, the existing land use and transportation characteristics of the East of 101 area contribute to the East of 101 Area's higher-than-average VMT per employee. As a single-use employment center, all home-based trips begin or end outside the East of 101 area, requiring longer travel along auto-oriented roadways or via transit service that is currently not competitive with the automobile. In contrast, mixed-use settings near transit can reduce trip generation and trip lengths while increasing the use of non-auto modes.

3.4 Trip Generation, Distribution, and Assignment

The amount of traffic added to the roadway system by the proposed project was estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. The first step estimates the amount of traffic that would be generated once the proposed project was built and fully occupied. The second step estimates the direction of travel to and from the project site. The third step assigns the proposed project trips to specific street segments and intersection turning movements. The results are described below.

3.4.1.1 Project Trip Generation

Proposed Project traffic added to the surrounding roadway system was estimated using data collected in Fall 2019 from three sample office and research and development (R&D) campus sites in the East of 101 area. Local travel demand data was used instead of national averages because of the unique conditions in the East of 101 area, including peak spreading, employment land use mix, and higher rates of participation in TDM programs. In contrast, national trip generation databases such as the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* is generally collected at suburban sites with limited non-auto access and less congestion.

Of the three sample sites, driveway count data from an approximately 435,000 square-foot office building at 395/400 Oyster Point Boulevard was selected to estimate Project travel demand. The site's land use, TDM

program, and proximity to first- and last-mile shuttles closely match Project characteristics. Specifically, the Project is required to achieve a 35% non-drive alone mode share during peak periods, which is similar to the sample site's 31%[3] non-drive alone mode share. The sample site's land use is predominately administrative office and the Project is intended for office, research and development (R&D) or mixed office and R&D occupancy. Compared to R&D, office uses typically have higher employee density, greater travel demand, and represent the maximum reasonable use at the Project site. The sample site driveway traffic data is presented in **Appendix E:**.

The Project trip generation rate was derived from the sample site data and multiplied by the size of the proposed Project (gross square feet) to determine daily and weekday morning and evening peak hour vehicle trip generation volume, shown in **Table 3.3**. According to this trip generation analysis, the new 128,700 square foot office building would generate 721 new daily trips, 127 new AM peak hour trips (113 inbound and 14 outbound), and 135 new PM peak hour trips (19 inbound and 116 outbound). As noted previously, the Project site is currently vacant and therefore no trips were discounted from the total trip generation estimate.

Table 3.3 Project Trip Generation Rates and Estimates

Land Use	Size (KSF)	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Total	Rate	In	Out	Total	Rate	In	Out	Total
Office	128.7	5.6	721	0.99	113	14	127	1.05	19	116	135

Notes:
1. Rates based on 2019 driveway count data collected at 395-400 Oyster Point Boulevard and similar sites in the East of 101 area. Rates assume a non-drive alone mode share reduction of about 35 percent.

Potential effectiveness of the proposed TDM measures was evaluated using TDM+, a tool based on Quantifying Greenhouse Gas Mitigation Measures, a report for the California Air Pollution Control Officer's Association (CAPCOA) produced in 2010. Based on this assessment, the Project's TDM plan has the potential to meet the 35 percent non-drive alone target with aggressive marketing, transit subsidies, and provision of or participation in a first- and last-mile shuttle program. Existing employee mode share data for the East of 101 area show the non-drive alone mode share is about 29 percent for office employers. Accordingly, the project would have to reduce the non-drive alone mode share by approximately nine percent compared to baseline conditions.

3.4.1.2 Project Trip Distribution

The directions of approach and departure for the proposed project traffic were estimated based on the City of South San Francisco's Travel Demand Model, which has greater sensitivity to local travel patterns. **Figure 3-1,** shows the general trip distribution pattern for the proposed Project. Most of the Project traffic is split

[3] 395-400 Oyster Point Marina Plaza TDM Survey, 2017

between the north (33%) and south (49%) US-101 approaches to the East of 101 area. Locally, the greatest number of trips are estimated to occur between the west side of US-101 and the Project site (18%).

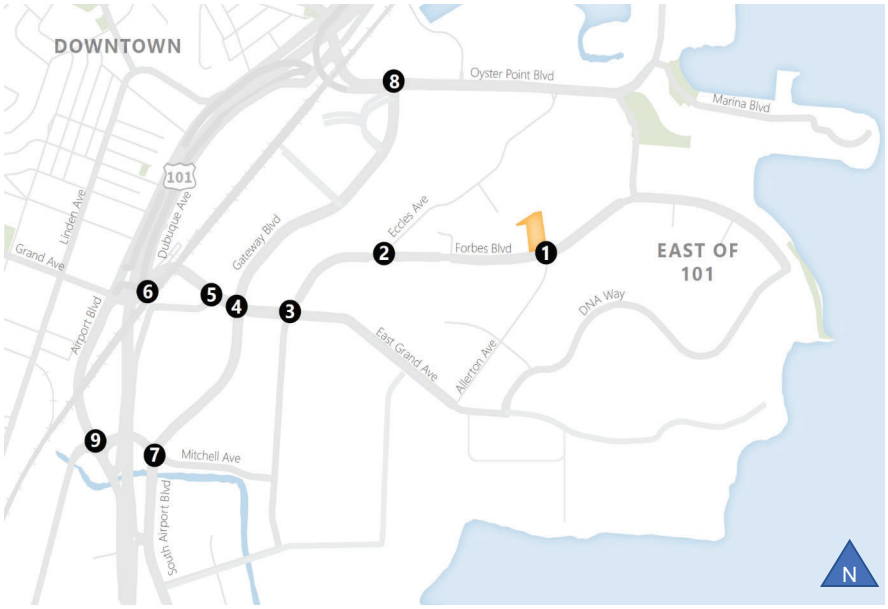
3.4.1.3 Project Trip Assignment

The proposed Project trips were assigned to the roadway system based on the directions of approach and departure discussed above. The locations of complimentary land uses and local knowledge of the study area helped determine specific trip routes. **Figure 3-2** shows the expected increases in peak hour turning movement volume at key vicinity intersections due to the proposed Project.

Project traffic would access the roadway network via a two-lane driveway along the Forbes Boulevard frontage, immediately to the west of Allerton Avenue and Forbes Boulevard. An existing landscape median along the Project frontage would be modified as part of the Project permit unrestricted inbound and outbound left turns at the site driveway. Most inbound vehicular traffic accesses the project site via Forbes Boulevard from the west and outbound traffic departs via Forbes Boulevard in the opposite direction. This route is the shortest and most direct connection between north and south US-101 access points and local destinations west of US-101.

Figure 3-1

Project Trip Distribution



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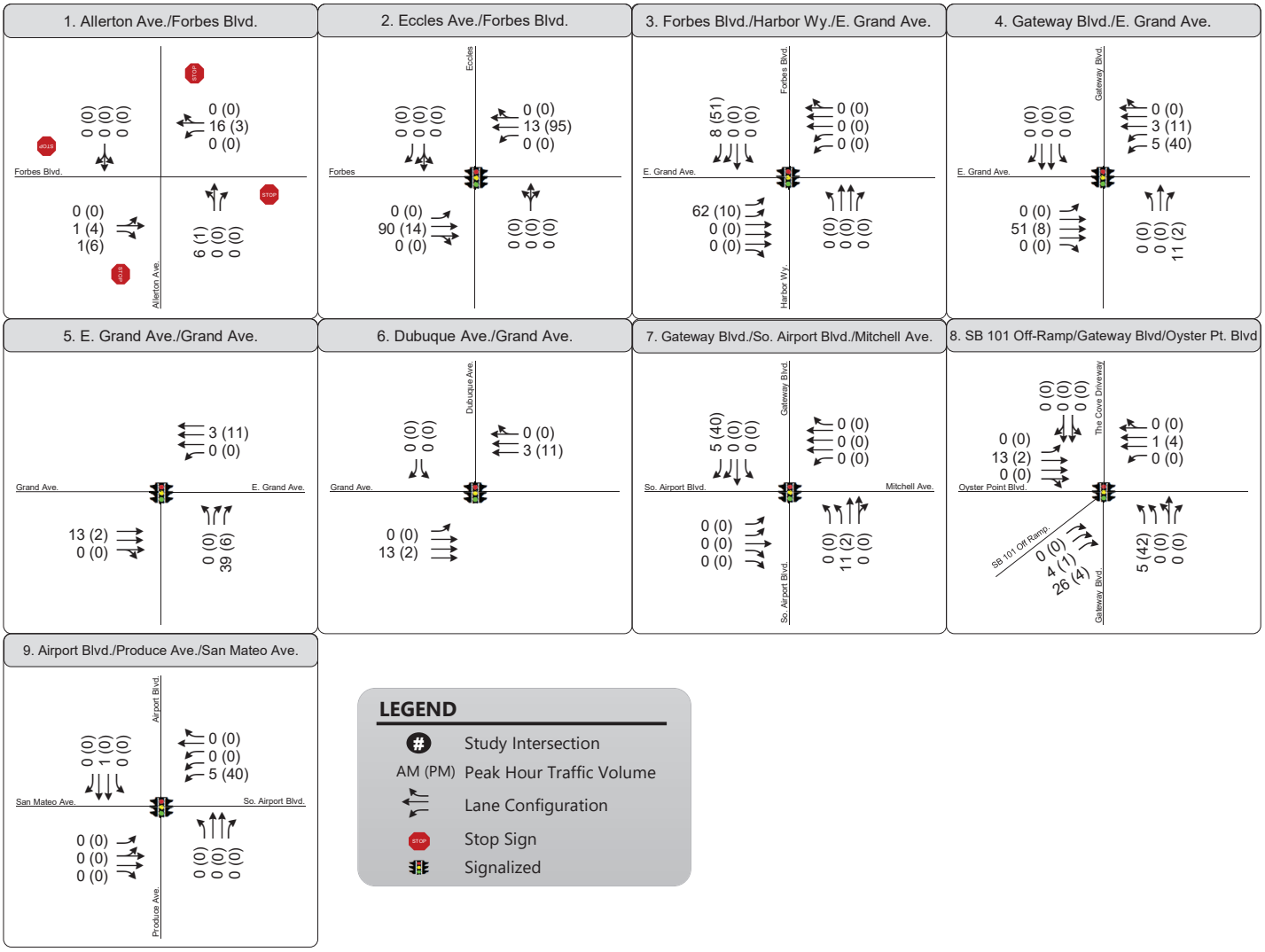


Figure 3-2

Project Trip Assignment

3.5 Freeway Ramp Queuing Analysis

Two freeway off-ramps were selected for analysis based on local traffic patterns, Project trip assignment forecasts, input from the City of South San Francisco, and engineering judgment, to assess conditions where the addition of Project trips may result in hazards to road users. The study locations are listed below and shown in **Figure 3-3**.

1. US-101 Southbound Off-Ramp at Oyster Point Boulevard
2. US-101 Northbound Off-Ramp at East Grand Avenue

Traffic counts were collected at the approaches and departures to the four freeway on- and off-ramps during the morning (7:00 AM to 9:00 AM) and evening (4:00 PM to 6:00 PM) peak periods in November, 2019. During all counts, weather conditions were generally dry, no unusual traffic patterns were observed, and the South San Francisco Unified School District was in regular session.

Table 3.5 presents weekday AM peak hour vehicle queues at the two US-101 off-ramp study locations. The AM peak hour was selected as the analysis period since the Project, and the East of 101 area The Project would extend or contribute to queues longer than storage distances at study location #1, the US-101 Southbound Off-Ramp at Oyster Point Boulevard. Specifically, the queue would spill back from the eastbound right turn lane approaching the Oyster Point Boulevard / Gateway Boulevard Intersection. However, the queue would not interfere with the US-101 freeway mainline as the combined right turn and through queue lengths are less than the overall 3,100-foot ramp storage distance.

Table 3.4 Existing Weekday AM Peak Hour 95th Percentile Queues

Approach Lanes	Storage Distance	Existing		Existing Plus Project	
		Volume	Queue Length	Volume	Queue Length
1. US-101 Southbound Off-Ramp at Oyster Point Boulevard					
Through	3,100	704	525	708	525
Right	350	319	**550**	345	**600**
2. US-101 Southbound Off-Ramp at East Grand Avenue					
Left	1,775	131	200	131	200
Right	1,775	639	1,025	678	1,100

Notes: Bold type indicates conditions where queue length exceeds storage capacity. Queues do not take into account downstream spillover from adjacent intersections. Storage distance and queues in feet per lane. Source: Fehr & Peers, 2020

Cumulative Plus Project traffic volumes are presented in **Appendix C**: and the volume relevant to the freeway ramp queuing assessment is presented in **Table 3.6**.

Figure 3-3

Study Locations

Table 3.5 Cumulative Weekday AM Peak Hour 95th Percentile Queues

Approach Lanes	Storage Distance	Cumulative		Cumulative Plus Project	
		Volume	Queue Length	Volume	Queue Length
1. US-101 Southbound Off-Ramp at Oyster Point Boulevard					
Through	3,100	1,809	1,550	1,813	1,550
Right	350	675	**1,200**	701	**1,250**
2. US-101 Southbound Off-Ramp at East Grand Avenue					
Left	1,775	216	325	216	325
Right	1,775	683	1,100	722	1,150

Notes: Bold type indicates conditions where queue length exceeds storage capacity. Queues do not take into account downstream spillover from adjacent intersections. Storage distance and queues in feet per lane. Source: Fehr & Peers, 2020

3.6 Alternatives

Three potentially feasible Project alternatives were identified as part of the environmental review process and are described below:

1. *No Project*: Assumes no structure would be built on the Project site and existing improvements would remain. Additionally, the abandoned rail corridor to the north of the site would not be repurposed into a trail and greenway.
2. *Research and Development Building*: Demolition of existing site improvements and construction of a 128,737 square-foot research and development (R&D) building. The abandoned rail corridor would be repurposed as proposed in the Project alternative.
3. *Reduced Size office Building*: Demolition of existing site improvements and construction of an approximately 77,000 square-foot office building. The abandoned rail corridor would be repurposed as proposed win the Project alternative.

All alternatives would likely result in reduced vehicle trips, but home-based work vehicle miles traveled (HBW VMT) per employee would not change from the Project alternative. Location, land use and building size are the primary variables that affect vehicle trip generation. Alternatives two and three lead to lower trip generation through either change in land use (Alternative 2, R&D use); or reduced size (Alternative 3, Reduced Size Office). However, HBW VMT per employee is a measure of the amount and distance of vehicle travel in a geographic area by an average employee. Since this is a per capita metric, the changes in Project size nor use do not affect VMT results and findings.

4. Impacts and Mitigations

4.1 Vehicular Traffic

This section includes the evaluation of the Project's potential VMT and freeway ramp queuing impacts.

4.1.1 Vehicle Miles Traveled

Impact TRANS-1: Development of the proposed Project would generate per-employee vehicle miles traveled (VMT) greater than the City threshold. (*Significant; Significant and Unavoidable*)

As documented in Section 4.4.2, Scenario 2: Existing Plus Project Conditions , the proposed Project would generate approximately 16 HBW VMT per employee under existing conditions, which is greater than the per-employee significance threshold of 11.8 HBW VMT (based on a VMT rate 16.8 percent below the regional average of 14.2 HBW VMT per employee. Therefore, the project would have a significant impact on VMT. A comparison between the Bay Area region and East of 101 per-employee VMT averages are presented in **Table 4.1**.

Table 4.1 VMT Impact Determination

Location	Total HBW VMT *(a)*	Total Employment *(b)*	HBW VMT per Employee *(a) / (b)*
Bay Area Region	60,994,917	4,285,001	14.2
East of 101 Area	572,219	35,831	16.0
		VMT Per Employee Threshold	**11.8**
		Project VMT Impact?	**Yes**

Source: Fehr & Peers 2020; C/CAG-VTA Bi-County Transportation Demand Model, 2019.

Mitigation Measures:

First- and last-mile transit connections and active transportation improvements are likely to yield the greatest Project VMT reductions. The following mitigation measures support and enhance the effectiveness of the Project's TDM strategies, which as noted in Section 3.3 are unlikely to substantially reduce HBW VMT per-employee but will aid in reducing Project auto travel demand.

TRANS-1 As part of the proposed Project, the applicant shall design and fund the following off-site improvements to support the Project's first- and last-mile TDM strategies necessary to support auto trip reduction measures.

- Eastbound and westbound Class II buffered bicycle lanes along Forbes Boulevard between Allerton Avenue and Eccles Avenue, spanning approximately 2,000 linear feet. The improvement consists primarily of restriping the curbside vehicle travel lane in each direction to a Class II buffered bicycle lane, signage, and bicycle traffic signal detection upgrades at Eccles Avenue as required. The bicycle facility will close a gap between existing bicycle lanes to the east and a planned Class I shared-use pathway between Forbes Boulevard / Eccles Avenue and the South San Francisco Caltrain station. When implemented, the bicycle lanes will provide dedicated bicycle facilities between the Project site and two regional transit stations: the Downtown South San Francisco Caltrain Station and the South San Francisco Ferry Terminal, enabling first- and last-mile bicycle connections to regional transit.
- A marked crosswalk and necessary accessibility improvements per City standards across the west leg of the Allerton Avenue and Forbes Boulevard intersection, enabling direct pedestrian connectivity to the closest existing first- and last-mile shuttle stop at Allerton Avenue and Cabot Road.
- Accommodation for a potential future on-street shuttle stop along the Forbes Boulevard frontage. Provide a minimum 5-foot long by 8-foot wide (as measured perpendicular to the curb) sidewalk within the public right-of-way adjacent to the Project frontage, located approximately 50-feet downstream from the Forbes Boulevard and Allerton Avenue intersection. The existing curb alignment would not be substantially altered, and the final configuration should be reviewed by City staff. The Project shall coordinate with Commute.org and/or Genentech's gRide transportation program to determine the most appropriate on-street location for shuttle service (whether at this location on Forbes Boulevard or at another location within approximately ¼ mile of the Project site).

Significance after Mitigation: Implementation of Mitigation Measure TRANS-1 supports and enables the first- and last-mile non-auto commute strategies in the Project's TDM plan. However, this mitigation measure is unlikely to reduce the Project impact on VMT by 26 percent to reach a less-than-significant level. Therefore, this impact would be significant and unavoidable.

4.1.2 Freeway Ramp Queuing

Impact TRANS-2: **Development of the proposed Project would not add vehicle trips to existing freeway off-ramp vehicle queues that exceed storage capacity resulting in a potentially hazardous condition. (*Less than Significant*)**

As documented in Section 4.4.2, Scenario 2: Existing Plus Project Conditions , Project vehicle trips that could interfere with the freeway mainline are concentrated at study locations #1, US-101 Southbound off-ramp at Oyster Point Boulevard, and #2, US-101 Northbound off-ramp at East Grand Avenue, but Project trips would not exceed ramp storage capacities and interfere with the freeway mainline. Therefore, the Project would have a less-than-significant impact on freeway ramp queuing.

Mitigation Measures: None required

4.1.3 Unsignalized Intersections

Impact TRANS-3: **Development of the proposed Project would increase total vehicle volumes passing through an all-way stop controlled intersection operating at baseline LOS E or F by two percent or more or when a side-street stop controlled approach is at a baseline LOS F. Side street stop criteria are applicable only for approaches with more than 25 trips during any peak traffic hour.**

The Forbes Boulevard and Allerton Avenue intersection is the sole major stop-controlled intersection in the vicinity of the Project site and is expected to operate at LOS E or F only during cumulative no project conditions. However, Project traffic entering the intersection is less than two percent of total cumulative no project volume. Therefore, a traffic signal warrant analysis or further study was not performed.

Mitigation Measures: None required

4.2 Bicycle, Pedestrian, and Transit

Impact TRANS-4: **Development of the proposed Project would produce a detrimental impact to existing bicycle or pedestrian facilities, or conflict with adopted plans and programs (*Less than Significant with Mitigation*)**

Project site bicycle and pedestrian access is provided via a pathway that connects the main building entrance directly with Forbes Boulevard. Secondary access is provided via the proposed Class I shared-use bicycle and pedestrian trail as described in Section 1, which provides a strong non-auto linkage to the east. On-site connectivity is consistent with the City's multimodal site design objectives, but off-site improvements must be strengthened to meet the City's Pedestrian Master Plan access policies and General Plan complete street policies concerning reconstructed facilities, both of which are identified in Appendix B, Relevant Policies and Plans.

Specifically, the Project is disturbing existing sidewalk along the Forbes Boulevard frontage, including a portion that intersects the west leg of the Allerton Avenue and Forbes Boulevard intersection where a marked, accessible crosswalk is missing under existing conditions, likely since the ideal crosswalk alignment would conflict with an existing driveway along the Project site. This driveway is being removed as part of the Project, and the missing crosswalk shall be installed to provide full pedestrian connectivity at all legs of the intersection for consistency with City policy.

Mitigation Measures:

TRANS-4 As part of the proposed project, the applicant shall design and implement the Forbes Boulevard and Allerton Avenue crosswalk improvements described in mitigation measure **TRANS-1**.

Significance after mitigation: Implementation of Mitigation Measure TRANS-3 would upgrade a pedestrian facility disturbed by the Project to include a missing crosswalk at stop-controlled intersection, thereby providing connectivity consistent with the City's Pedestrian Master Plan goals and Complete Street policies

concerning altered facilities. This Mitigation Measure would reduce Project pedestrian impacts to less-than-significant levels.

Impact TRANS-5: Project development or project traffic would produce a detrimental impact to local transit or shuttle service *(Less than Significant with Mitigation)*

As a measure of vehicle congestion, level of service is a reasonable proxy to evaluate the Project's effect on transit operations. The existing no project traffic operations analysis presented in **Appendix A** show several major intersections in the East of 101 area near the Project site operate at levels of service below the City's General Plan standard of LOS D. The two intersections that operate below the City's LOS standard are traversed by first- and last-mile public Commute.org shuttles that serve the Project site but Project vehicle trips are not anticipated to cause any intersection to change from acceptable to unacceptable LOS. Under cumulative no project conditions, most intersections operate at unacceptable LOS but the addition of Project vehicle trips are not anticipated to cause any intersection to change from acceptable to unacceptable LOS. Therefore, the Project's impacts to local transit or shuttle service are less-than-significant.

Mitigation Measures: None Required

Appendix A: VMT Technical Context

Senate Bill 743 (Stats. 2013, ch. 386) (SB 743) is intended to better align CEQA transportation impact analysis practices and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. The law creates several key statewide changes to the California Environmental Quality Act (CEQA).

First, the law requires the Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected vehicle miles of travel (VMT) as the preferred transportation impact metric and applied their discretion to require its use statewide.

Second, this legislation establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment.

Third, the new CEQA Guidelines that implement this legislation state that vehicle LOS and similar measures related to auto delay shall not be used as the sole basis for determining the significance of transportation impacts, and that as of July 1, 2020, this requirement shall apply statewide, but that until that date, lead agencies may elect to rely on VMT rather than LOS to analyze transportation impacts.

Finally, it establishes a new CEQA exemption for a residential, mixed-use, and employment center project a) within a transit priority area, b) consistent with a specific plan for which an EIR has been certified, and c) consistent with a Sustainable Communities Strategy (SCS). This exemption requires further review if the project or circumstances changes significantly.

To aid in SB 743 implementation, the following state guidance has been produced:

- *Technical Advisory on Evaluating Transportation Impacts in CEQA,* California Governor's Office of Planning and Research, December 2018[4]
- *California Air Resources Board* (CARB) *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, California Air Resources Board, January 2019[5]
- *Local Development – Intergovernmental Review Program Interim Guidance, Implementing Caltrans Strategic Management Plan 2015-2020 Consistent with SB 743*, Caltrans, November 9, 2016[6]

The California Air Resources Board 2017 *Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* provides recommendations for VMT reduction thresholds that would be necessary to achieve the State's GHG reduction goals. CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be

[4] http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf
[5] https://ww2.arb.ca.gov/sites/default/files/2019-01/2017_sp_vmt_reductions_jan19.pdf
[6] https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743

approximately 14.3 percent lower than existing levels under that scenario. CARB also acknowledges that the SCS targets are not sufficient to meet climate goals. As stated in the report, "…the full reduction needed to meet our climate goals is an approximately 25 percent reduction in statewide per capita on-road light-duty transportation-related GHG emissions by 2035 relative to 2005." This estimate was made with a model that does not fully capture emerging transportation trends such as a growing e-commerce market, greater use of Uber and Lyft, plus future transitions to autonomous vehicles. As such, the level of VMT reduction necessary to reach the State's GHG reduction goals may exceed 25 percent.

OPR considered this research when developing recommended VMT thresholds. In the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. This threshold is based on the abovementioned research documents from CARB as well as evidence that suggests a 15 percent reduction in VMT is achievable at the project level in a variety of place types[7] and would help the State towards achieving its climate goals. However, each jurisdiction must apply the statewide VMT analysis guidance based on available travel data and tools.

Application of Statewide Guidance for Project Analysis

Home-based work VMT (HBW VMT) per employee was identified as the Project analysis metric. This metric follows OPR guidance for measuring office project VMT and helps compare the Project's relative transportation efficiency to the regional average. OPR recommends using a regional geography for office projects. Neither the local city or county level geographic area is robust enough to capture the full length of most trips or evaluate the interaction of the Project in a regional setting. Accordingly, the nine-county Bay Area region was selected as the geographic boundary for the assessment. The nine-county Bay Area region will capture the full length of work trips and would be most consistent with OPR's guidance.

For office projects, OPR recommends using a tour-based VMT accounting method which is based on a chain of trips including multiple stops. The Metropolitan Transportation Commission (MTC) model is the sole tour-based travel demand model available for South San Francisco. However, the MTC model lacks the level of roadway network and land use detail that is necessary for this assessment. Instead, existing per capita VMT data, expressed as HBW VMT per employee, was extracted from similar existing land uses in the East of 101 area as a proxy for the Project to reasonably assess the Project VMT. The C/CAG bi-county travel demand model was used to obtain employee population data and total HBW VMT from the appropriate East of 101 transportation analysis zone (TAZ). Updates were made to the C/CAG Model to calibrate existing population and employment data in South San Francisco, consistent with the *Shape SSF* General Plan analysis.

[7] CAPCOA (2010) Quantifying Greenhouse Gas Mitigation Measures, p. 55, available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Appendix B: Relevant Plans and Policies

Agencies with Jurisdiction over Transportation in South San Francisco

The City of South San Francisco has jurisdiction over all local City streets and City-operated traffic signals within the study area. Several regional agencies, including the City/County Association of Governments of San Mateo County (C/CAG), the Congestion Management Agency in San Mateo County, and the Metropolitan Transportation Commission (MTC), coordinate and establish funding priorities for regional transportation improvement programs. Freeways serving South San Francisco (U.S. 101, I-380, and I-280), associated local freeway ramps, and local surface highway segments (SR-82) are under the jurisdiction of the State of California Department of Transportation (Caltrans). Transit service providers such as BART, Caltrain, SamTrans, and the Water Emergency Transportation Authority (ferry service), have jurisdiction over their respective services. These agencies, their responsibilities, and funding sources are more specifically described below.

City of South San Francisco

The City of South San Francisco is responsible for planning, constructing, and maintaining local public-serving transportation facilities, including all City streets, City-operated traffic signals, sidewalks, and bicycle facilities. These local services are funded primarily by gas-tax revenue and land development Impact Fees.

San Mateo City/County Association of Governments (C/CAG)

C/CAG is the Congestion Management Agency (CMA) for San Mateo County authorized to set State and federal funding priorities for improvements affecting the San Mateo County Congestion Management Program (CMP) roadway system. The C/CAG-designated CMP roadway system in South San Francisco include SR 82 (El Camino Real), U.S. 101, I-380, and I-280. C/CAG has set the level of service standards for U.S. 101 segments in the vicinity of the Project site.

C/CAG has adopted guidelines to reduce the number of net new vehicle trips generated by new land development. These guidelines apply to all developments that generate 100 or more net new peak-hour vehicular trips on the CMP network and are subject to CEQA review. The goal of the guidelines is that the developer and/or tenants will reduce the demand for all new peak hour trips (including the first 100 trips) projected to be generated by the development.

Peninsula Traffic Congestion Relief Alliance (Commute.org)

The Alliance is a joint powers authority dedicated to implementing transportation demand management programs in San Mateo County and providing alternatives to single-occupant auto travel, including both commuter and community shuttles. A Board of Directors consisting of elected officials from each of its 17-member cities and one representative from the County Board of Supervisors governs the Alliance. The Alliance manages 26 shuttle routes in San Mateo County. In South San Francisco, the Alliance runs seven first- and last-mile weekday peak hour and direction commuter routes that connect the South San Francisco Caltrain and BART stations, and the South San Francisco Bay Ferry (WETA) terminal with the East of 101 employment area.

California Department of Transportation (Caltrans)

Caltrans has authority over the State highway system, including mainline facilities, interchanges, and arterial State routes. Caltrans approves the planning and design of improvements for all State-controlled facilities. Caltrans facilities in South San Francisco include US-101 and its interchanges, I-280 and its interchanges, I-380 and its interchanges, and SR 82 (El Camino Real).

SamTrans

The San Mateo County Transit District (SamTrans) is the primary public transportation provider in San Mateo County. SamTrans manages local and regional bus service, paratransit services, and Caltrain commuter rail. There are over 50 routes in the county that can be categorized as community, express, BART connection, Caltrain connection, and BART and Caltrain connection routes. SamTrans buses do not serve the Project site nor the East of 101 employment area.

Caltrain

Caltrain operates 50 miles of commuter rail between San Francisco and San Jose, and limited service trains to Morgan Hill and Gilroy during weekday commute periods and directions. Caltrain is governed through the Peninsula Corridor Joint Powers Board and managed by SamTrans. On weekdays, Caltrain operates approximately 100 trains per day of local, limited stop, and Baby Bullet express service in both directions. The South San Francisco station is currently served by two limited-stop trains per hour during peak weekday commute periods and directions.

Water Emergency Transit Agency (WETA)

The San Francisco Bay Area Water Emergency Transportation Authority (WETA) operates the San Francisco Bay Ferry, a regional ferry service on the San Francisco Bay and coordinates water transit response to regional emergencies. WETA provides public ferry service to the cities of Alameda, Oakland, San Francisco, South San Francisco, and Vallejo.

Relevant Plans and Policies

State of California Senate Bill 743

Discussed in **Appendix A:**.

City of South San Francisco General Plan Transportation Chapter

The City of South San Francisco General Plan (1999) defines transportation and land use policies for the City. The General Plan establishes transportation policies pertinent to the Proposed Project, including:

- *4.2-G-1: Undertake efforts to enhance transportation capacity, especially in growth and emerging employment areas such as in the East of 101 area.*
- *4.2-G-10 Make efficient use of existing transportation facilities and, through the arrangement of land uses, improved alternate modes, and enhanced integration of various transportation systems serving South San Francisco, strive to reduce the total vehicle-miles traveled.*
- *4.2-1-10: Design roadway improvements and evaluate development proposals based on LOS standards.*
- *4.3-I-16 Favor Transportation Systems Management programs that limit vehicle use over those that extend the commute hour.*

The City of South San Francisco's General Plan is currently being updated through the *Shape SSF General Plan 2040* public engagement process and is targeted for adoption in late 2021. Since the update is underway, this document refers to policies and programs from the approved 1999 general plan and relevant adopted amendments.

South San Francisco East of 101 Mobility 20/20 Plan

The City of South San Francisco Mobility 20/20 Plan (2019) analyzed existing and future land use in the East of 101 Area, with the goal of providing a framework for multimodal improvements to the area's transportation network. Its findings and recommendations will be incorporated into *Shape SSF,* the City's 2040 General Plan Update. The plan envisions reducing vehicle miles traveled and drive-alone mode share while expanding throughput capacity along major corridors serving the area's core employment areas.

Key identified project opportunities include US-101 interchange improvements and secondary north-south arterial connections to Brisbane's Sierra Point to the north and the San Francisco International Airport area to the south via a new causeway spanning San Bruno Channel. The bicycle and pedestrian network would be substantially upgraded with separated bikeways, expanded sidewalks, and new pedestrian crosswalks. Transit enhancements include transit-only lanes along the Oyster Point Boulevard corridor complimented by new or upgraded direct service connections between job centers and regional transit stations.

South San Francisco Complete Streets Policy

The City of South San Francisco adopted its Complete Streets Policy (2012) to serve all street users:

- *Resolution 86-2012: Create and maintain complete streets that provide safe, comfortable, and convenient travel along and across streets including streets, roads, highways, bridges, and other portions of the transportation system through a comprehensive, integrated transportation network that serves all categories of users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, seniors, children, youth, and families.*

The Complete Streets Policy was incorporated into the amended General Plan and includes the following policy related to the Project:

- *4.2-I-11: In all street projects include infrastructure that improves transportation options for pedestrians, bicyclists, and users of public transportation of all ages and abilities. Incorporate this infrastructure into all construction, reconstruction, retrofit, maintenance, alteration, and repair of streets, bridges, and other portions of the transportation network.*

South San Francisco Bicycle Master Plan

The City of South San Francisco Bicycle Master Plan (2011) identifies and prioritizes street improvements to enhance bicycle access. The plan analyzes bicycle demand and gaps in bicycle facilities and recommends improvements and programs for implementation. The Bicycle Master Plan establishes the following policy related to the Proposed Project:

- *3.2-1: All development projects shall be required to conform to the Bicycle Transportation Plan goals, policies and implementation measures.*

South San Francisco Pedestrian Master Plan

The City of South San Francisco Pedestrian Master Plan (2012) identifies and prioritizes street improvements to enhance pedestrian access. The plan analyzes pedestrian demand and gaps in pedestrian facilities and recommends improvements and programs for implementation. The Pedestrian Master Plan establishes the following policy related to the Project:

- *Policy 3.2: Pedestrian facilities and amenities should be provided at schools, parks, and transit stops, and shall be required to be provided at private developments, including places of work, commercial shopping establishments, parks, community facilities and other pedestrian destinations.*

South San Francisco Transportation Demand Management Ordinance

The City of South San Francisco TDM Ordinance (Ord. 1432 § 2, 2010) seeks to reduce the amount of traffic generated by nonresidential development and minimize drive-alone commute trips. The ordinance establishes a performance target of 28 percent minimum alternative mode share for all nonresidential projects resulting in more than 100 average daily trips and identifies a higher threshold for projects requesting a floor area ratio (FAR) bonus.

All projects are required to submit annual mode share surveys and FAR bonus project sponsors are required to submit triennial reports assessing project compliance with the required alternative mode share target. Where targets are not achieved, the report must include program modification recommendations and City officials may impose administrative penalties should subsequent triennial reports indicate mode share targets remain unachieved. As documented in Section 1, Project Description, the Project sponsors are pursing the FAR bonus program and are subject to a 35% non-drive alone mode share target and the more rigorous monitoring and enforcement mechanisms described above.

C/CAG Congestion Management Program Guidelines

C/CAG has adopted guidelines as a part of its Congestion Management Program (CMP), which are intended to reduce the regional traffic impacts of substantive new developments. The guidelines apply to all projects in San Mateo County that will generate 100 or more net new peak-hour trips on the CMP network and are subject to CEQA review. C/CAG calls for projects that meet the criteria to determine if a combination of acceptable measures is possible that has the capacity to "fully reduce," through the use of a trip credit system, the demand for net new trips that the project is anticipated to generate on the CMP roadway network (including the first 100 trips). C/CAG has published a list of mitigation options in a memorandum that also outlines a process for obtaining C/CAG approval.

Caltrain Business Plan

Caltrain is developing a Business Plan to provide guidance for the rail corridor's growth through year 2040. The Caltrain Business Plan includes both policy and technical recommendations and will help define how Caltrain service should grow and evolve in the near-term and long-term to best serve existing and future passengers. The Peninsula Corridor Joint Powers Board, Caltrain's board of directors, adopted a 2040 service plan vision in October 2019 that calls for increasing peak commute service to a minimum of eight trains per direction per hour and increased off-peak and weekend service.

Appendix C: Traffic Operations Analysis

This traffic operations analysis studies the vehicle congestion effects of the Project at signalized and unsignalized intersections using level of service (LOS). LOS is a quantitative description of an intersection's performance based on the average delay per vehicle. Intersection levels of service range from LOS A, which indicates free flow or excellent vehicle flow conditions with short delays, to LOS F, which indicates congested or overloaded vehicle flow conditions with extremely long delays. The City of South San Francisco General Plan establishes LOS A through LOS D as acceptable operations, while LOS E and LOS F are considered unsatisfactory except at intersections within ¼ mile of rail stations or ferry terminals. LOS for the study intersections were analyzed using the Highway Capacity Manual (HCM) 2000 and 6th Edition methodology and the Synchro traffic analysis software to maintain consistency with previous studies. Due to the relatively small Project size, detailed freeway analysis was not preformed unless Project trips exceeded one percent of capacity.

While HCM methodology and Synchro traffic analysis software represent the state of the practice in evaluating isolated intersection operations, this methodology presents some limitations for both signalized and unsignalized intersections within a congested network. Under highly congested conditions, use of deterministic traffic modeling tools such as Synchro may not fully reflect the extent of vehicular queuing and spillover effects between intersections. To partially account for these conditions, saturated flow rates were manually adjusted based on field observations and traffic monitoring data. Similarly, these tools cannot anticipate how drivers may react to day-to-day variations in traffic conditions. Finally, this analysis is predicated on data collected on specific days; while existing conditions were counted on "typical" weekdays, traffic flows may vary by up to ten percent from day to day.

The analysis results are presented for information only and are not intended to inform the environmental review process. As documented in **Appendix A:**, VMT Technical Analysis, Senate Bill 743 stipulates that vehicle LOS and similar measures related to auto delay shall not be used as the sole basis for determining the significance of transportation impacts under the California Environmental Quality Act (CEQA). However, local agencies may continue to use vehicle congestion metrics for non-CEQA transportation planning and evaluation.

Signalized Intersections

The method from Chapter 16 of the *Highway Capacity Manual* (HCM) bases signalized intersection operations on the average control delay experienced by motorists traveling through it. Control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. This method uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to estimate the average control delay. **Table C.1** summarizes the relationship between average delay per vehicle and LOS for signalized intersections according to the HCM 6th Edition methodology.

Table C.1 Signalized Intersection LOS Criteria

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10 and ≤ 20
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20 and ≤ 35
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35 and ≤ 55
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55 and ≤ 80
F	Operation with delays unacceptable to most drivers occurring due to over saturation poor progression, or very long cycle lengths.	> 80

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

Unsignalized Intersections

Traffic conditions at the unsignalized study intersections (stop sign and yield sign-controlled intersections) were evaluated using the method from Chapter 17 of the HCM. With this method, operations are defined by the average control delay per vehicle (measured in seconds) for each stop-controlled approach that must yield the right-of-way. At four-way stop-controlled intersections, the control delay is calculated for the entire intersection and for each approach. The delays and corresponding LOS for the entire intersection are reported. At two-way stop-controlled intersections the movement with the highest delay and corresponding LOS is reported. **Table C.2** summarizes the relationship between delay and LOS for unsignalized intersections.

Table C.2 Unsignalized Intersection LOS Criteria

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no traffic delays.	≤ 10
B	Short traffic delays.	> 10 and ≤ 15
C	Average traffic delays.	> 15 and ≤ 25
D	Long traffic delays.	> 25 and ≤ 35
E	Very long traffic delays.	> 35 and ≤ 50
F	Extreme traffic delays with intersection capacity exceeded.	> 50

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

Traffic Operations Policy

The City of South San Francisco's General Plan includes the following traffic operations polices relevant to the Project traffic operations analysis, including:

- *4.2-G-15 Strive to maintain LOS D or better on arterial and collector streets, at all intersections and on principal arterials in the CMP during peak hours.*
- *4.2-G-16 Accept LOS E or F after finding that: there is no practical and feasible way to mitigate the lower level of service; and, the uses resulting in the lower level of service are of clear, overall public benefit.*
- *4.2-G-17 Exempt development within one-quarter mile of a Caltrain or BART station, or a City-designated ferry terminal, from LOS standards.*

Analysis Scenarios

This analysis evaluates weekday AM peak hour traffic period between 7:00 AM and 9:00 AM and the weekday PM peak hour traffic periods between 4:00 PM and 6:00 PM. Counts were conducted during November 2019 while freeway counts were based on the Caltrans Performance Measurement System (PeMS) for the same time period. Study intersections were evaluated for the following scenarios:

- **Existing Conditions**: Existing November 2019 traffic volumes for local roadways.
- **Plus Project Conditions**: Existing traffic volumes plus new traffic from the Project.
- **Cumulative No Project Conditions**: Projected conditions in 2040 without the Project.
- **Cumulative Plus Project Conditions**: Projected conditions in 2040 with the Project.

While this analysis intends to be representative of existing conditions at the time of the Notice of Preparation, transportation conditions have continued to change while this analysis occurred. In particular, ongoing construction in the downtown area and along Oyster Point Boulevard and East Grand Avenue have temporarily disrupted traffic patterns. As some of these developments have been completed, peak hour traffic volumes may have changed. However, while these new developments are not fully captured in the existing conditions analysis, they are reflected in the cumulative analysis.

Study Locations

Study locations were selected for evaluation for the Project. The study area for the traffic analysis was selected based on local traffic patterns, trip assignment forecasts, input from the City of South San Francisco, and engineering judgment, to capture the transportation facilities where motorists are likely to experience impacts due to a net increase of trips associated with the Proposed Project. The study intersections are listed below and shown on **Figure C-1** and listed below.

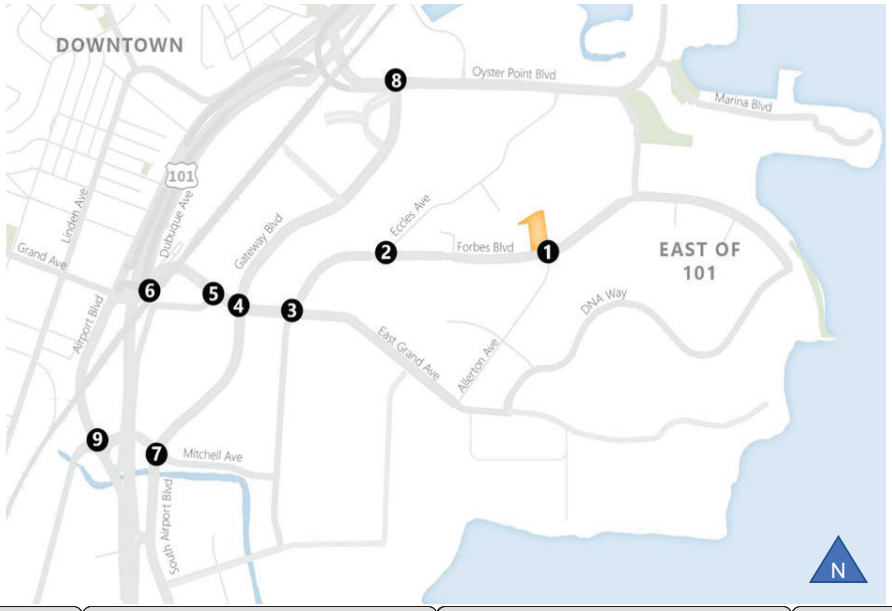
1. Forbes Boulevard / Allerton Avenue
2. Forbes Boulevard / Eccles Avenue
3. Forbes Boulevard / E Grand Avenue
4. Gateway Boulevard / E Grand Avenue
5. Grand Avenue / E Grand Avenue
6. Grand Avenue / Dubuque Avenue
7. Gateway Boulevard / S Airport Boulevard
8. Gateway Boulevard / Oyster Point Boulevard
9. S Airport Boulevard / Airport Boulevard / Produce Avenue

Existing Conditions

The existing conditions section include the existing no project and existing plus project scenarios. **Figure C-2**, Existing Traffic Volume, shows the existing lane configuration, traffic control, and weekday AM and PM peak hour traffic volume breakdown by movement at each of the nine study intersections.

Figure C-1

Study Locations



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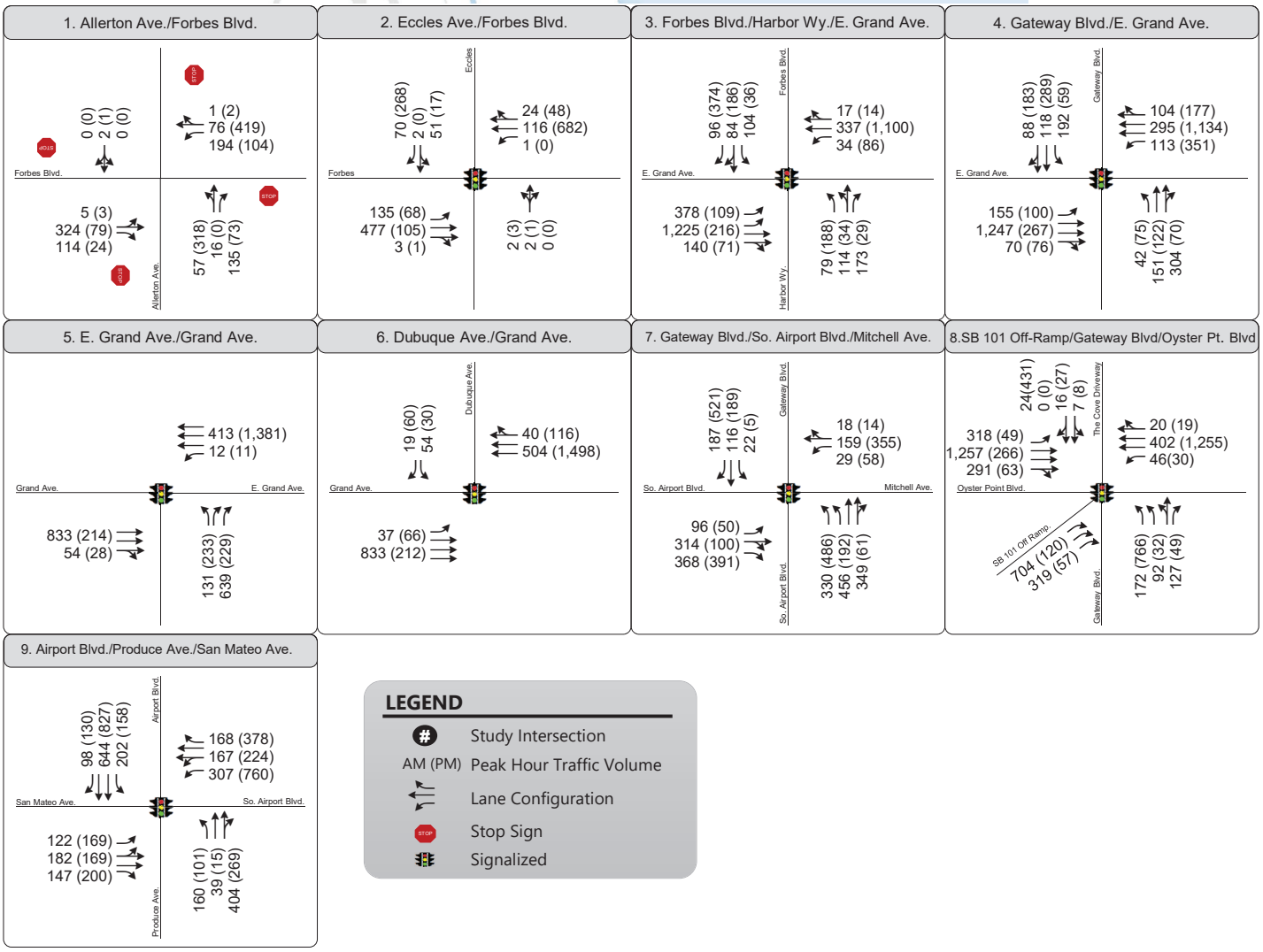


Figure C-2

Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions

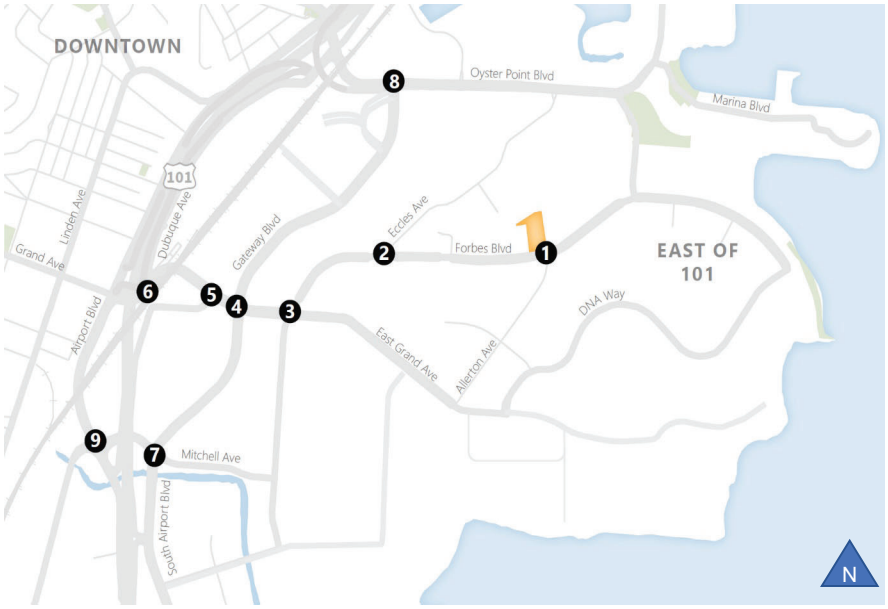
Vehicle Trip Generation, Distribution, Assignment and Level of Service

The Project trip generation and distribution estimates and methodologies are presented in Section 3, Transportation Analysis. The trip distribution estimates presented previously were used as the basis for assigning Project-generated vehicle trips to the local transportation network and nine study intersections. **Figure C-3**, Project Trip Assignment, presents vehicle trip assignment at the nine study intersections and **Figure C-4**, Existing Plus Project Traffic Volume, shows the sum of Project trips and existing traffic volume. **Table C.3** presents level of service conditions for the study intersections.

Table C.3 Peak Hour Intersection Levels of Service: Existing Conditions Scenarios

Intersection		Traffic Control	Peak Hour	Existing Conditions		Existing Plus Project	
				Average Delay	LOS	Average Delay	LOS
1	Forbes Boulevard / Allerton Avenue	AWSC	AM	12.4	B	12.6	B
			PM	21.1	C	21.6	C
2	Forbes Boulevard / Eccles Avenue	Signal	AM	11.2	B	10.9	B
			PM	25.8	C	25.9	C
3	Forbes Boulevard / E Grand Avenue	Signal	AM	34.5	C	34.4	C
			PM	**65.9**	**E**	**65.7**	**E**
4	Gateway Boulevard / E Grand Avenue	Signal	AM	48	D	51	D
			PM	44.5	D	44.5	D
5	Grand Avenue / E Grand Avenue	Signal	AM	17.2	B	21.1	C
			PM	10.8	B	10.8	B
6	Grand Avenue / Dubuque Avenue	Signal	AM	6.1	A	6.0	A
			PM	42.2	D	42.2	D
7	Gateway Boulevard / S. Airport Boulevard	Signal	AM	44.1	D	43.9	D
			PM	**>80**	**F**	**>80**	**F**
8	Gateway Boulevard / Oyster Point Boulevard	Signal	AM	**>80**	**F**	**>80**	**F**
			PM	53.1	D	54.1	D
9	S. Airport Boulevard / Airport Boulevard / Produce Avenue	Signal	AM	36.9	D	37	D
			PM	42.8	D	43.6	D

Notes: **Bold** indicates unacceptable LOS E or F. Delay reported as seconds per vehicle. LOS based on the methodology in the Highway Capacity Manual 6th Edition. Intersections 2, 6, and 8 were analyzed based on HCM 2000. Signalized and all-way stop control (AWSC) intersections, the delay shown in the weighted average for all movements in seconds per vehicle. Calculations based on signal timing provided by the City of South San Francisco from November 2019.



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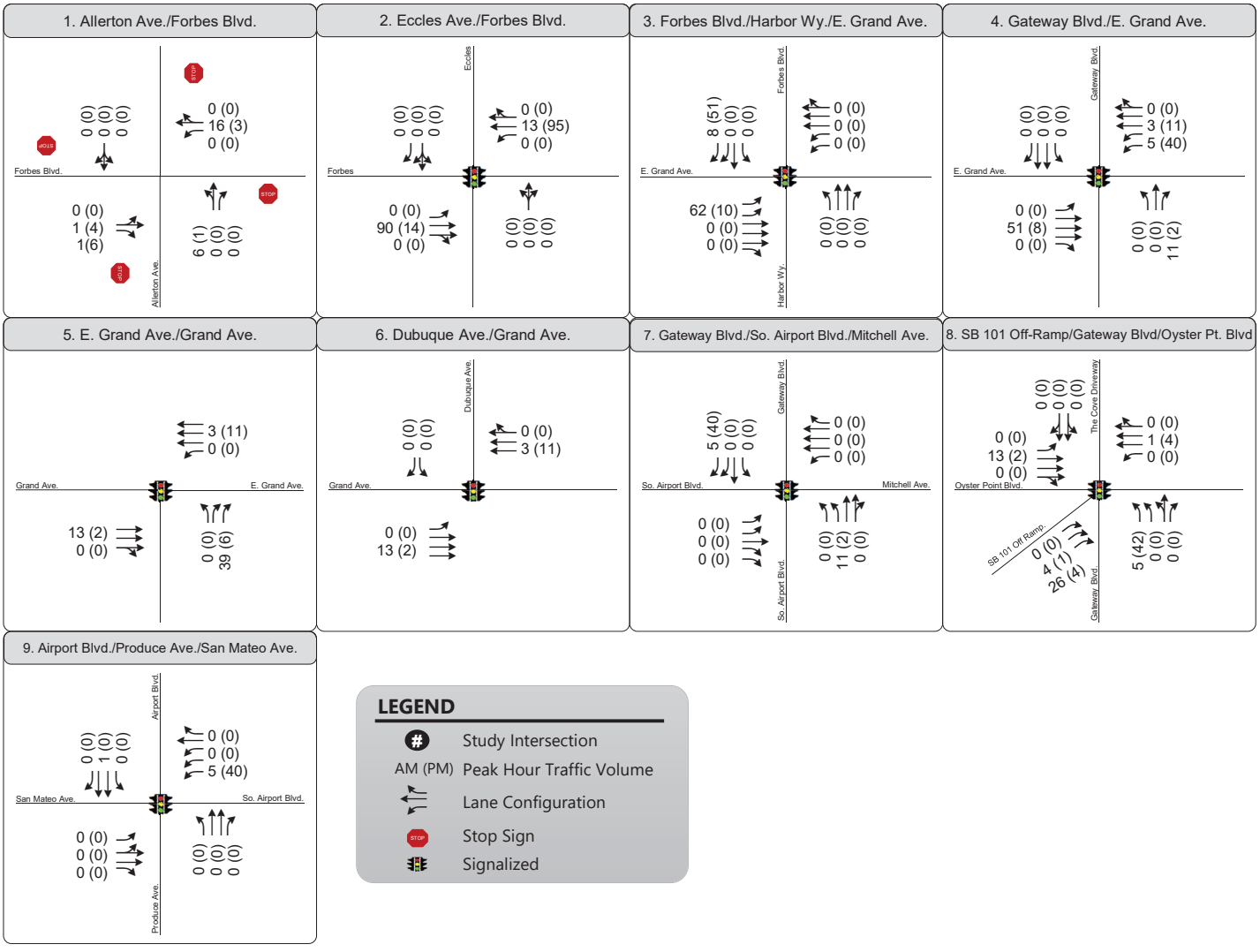
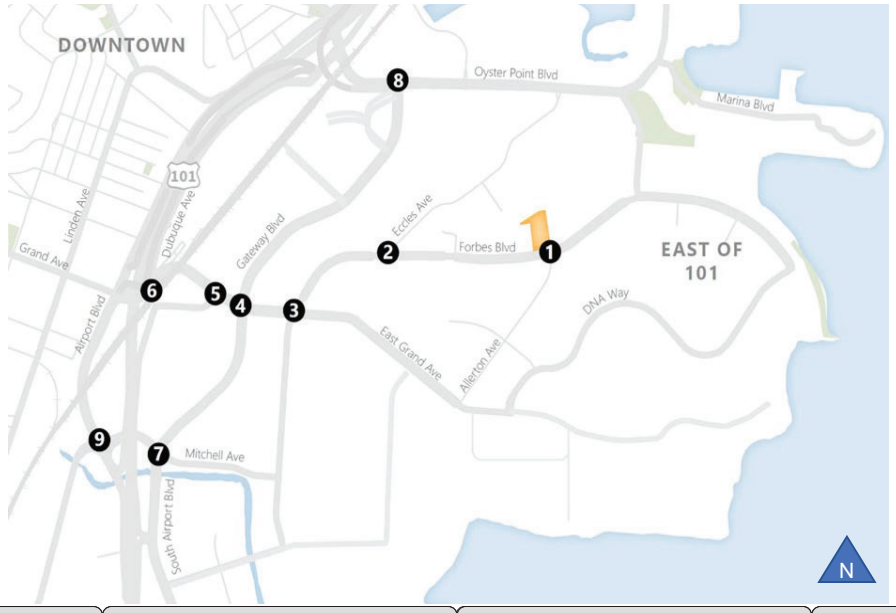


Figure C-3

Project Trip Assignment



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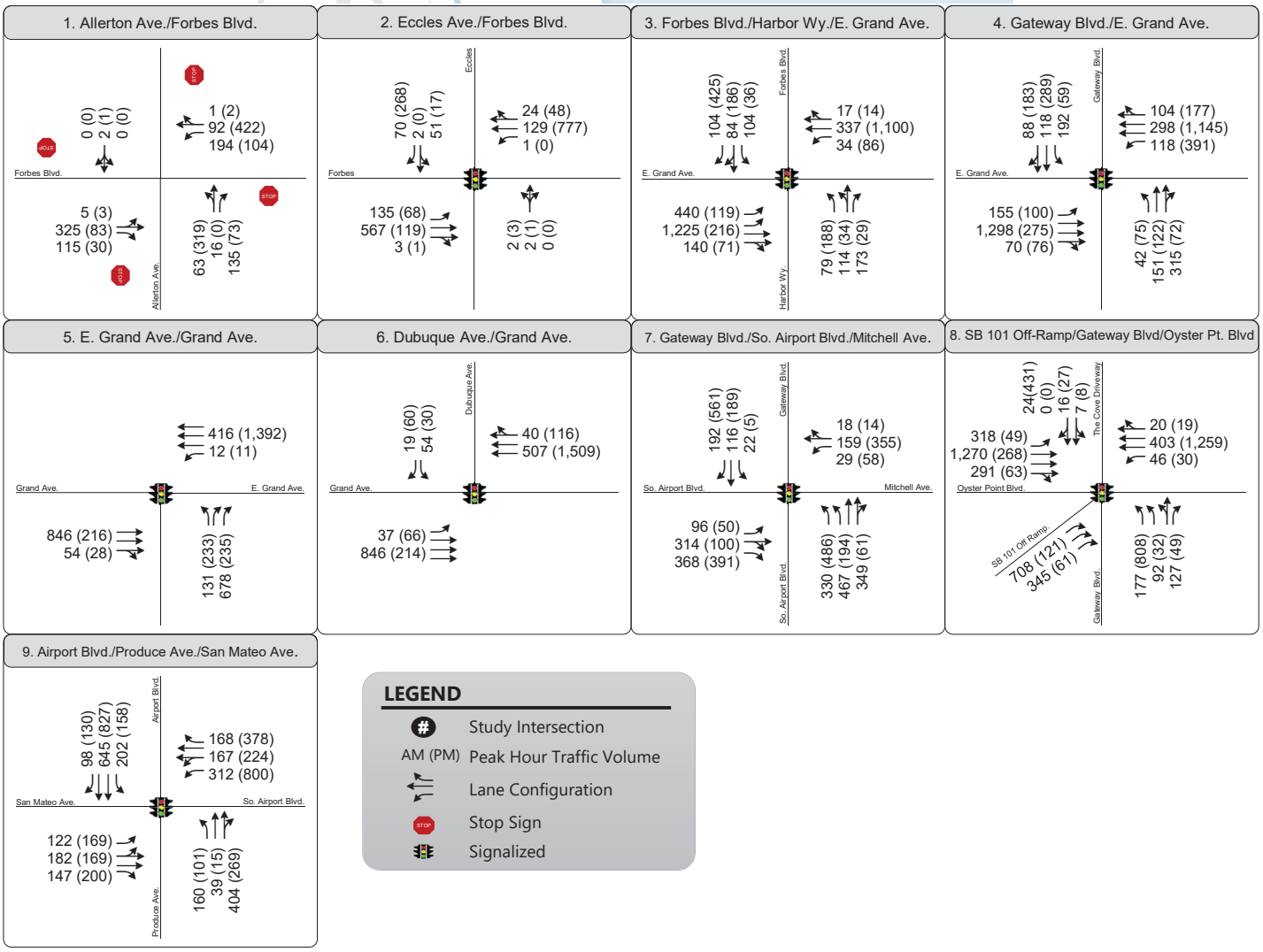


Figure C-4

Peak Hour Traffic Volumes and Lane Configurations
Existing + Project Conditions

All intersections operate under LOS D or better during AM and PM peak hours in both scenarios except for intersections #7 Gateway Boulevard / S Airport Boulevard and #8 Gateway Boulevard / Oyster Point Boulevard. Intersection #7 operates at LOS F during the PM peak hour under existing and existing plus project conditions. Intersection #8, Gateway Boulevard / Oyster Point Boulevard and operates at LOS F during the AM peak hour under existing and existing plus project conditions. Project traffic does not cause any intersection to operate at LOS E or F that was not already operating at these levels. Project trips assigned to the US-101 freeway mainline were compared to existing capacity figures and found to be less than one percent of capacity along all northbound and southbound freeway segments in the vicinity of the Project. Accordingly, a detailed freeway operations analysis was not performed.

Freeway On-Ramp Queuing

Table C.4 shows estimated 95th percentile PM peak hour queue lengths for two US-101 on ramps that are anticipated to receive the largest share of Project vehicle trips: the Northbound US-101 on-ramp at Oyster Point Boulevard and the Southbound US-101 on-ramp at Produce Avenue. This analysis determines if freeway on-ramp vehicle queue lengths exceed storage capacity and interfere with local streets upstream from the ramp. The weekday PM peak hour was analyzed since the East of 101's employment uses result in imbalanced peak direction traffic flow in the outbound direction. Queue lengths exceed storage capacities at the US-101 northbound on-ramp at Oyster Point Boulevard in both the existing and existing plus project scenarios.

Table C.4 PM Peak Hour US-101 On-Ramp 95th Percentile Queues: Existing Conditions

US-101 Northbound Freeway On-Ramp Location		Lanes	Storage Length	Existing Conditions		Existing Plus Project	
				Volume	Queue Length	Volume	Queue Length
1	Oyster Point Boulevard	2 + 1 HOV	500	1,384	**>500**	1,414	**>500**
2	Produce Avenue	2	1500	1,806	200	1,843	250

Notes: Bold type indicates conditions where queue length exceeds storage capacity. Storage distance and queues in feet per lane.
Source: Fehr & Peers, 2020

Cumulative Conditions

The cumulative conditions section includes the cumulative no project and cumulative plus project scenarios. **Figure C-5**, Cumulative Traffic Volume, shows cumulative no project weekday AM and PM peak hour traffic volumes that were obtained from the City of South San Francisco travel model for the year 2040. **Figure C-6**, Cumulative Plus Project Traffic Volume, shows the sum of Project trips and cumulative no project traffic volume during weekday AM and PM peak hours. **Table C.5** presents level of service at the nine study intersections.

Table C.5 Peak Hour Intersection Levels of Service: Cumulative Conditions Scenarios

Intersection		Traffic Control	Peak Hour	Cumulative Conditions		Cumulative Plus Project	
				Average Delay	LOS	Average Delay	LOS
1	Forbes Boulevard / Allerton Avenue	AWSC	AM	**>50**	**F**	**>50**	**F**
			PM	**>50**	**F**	**>50**	**F**
2	Forbes Boulevard / Eccles Avenue	Signal	AM	11.8	B	11.6	B
			PM	28.7	C	29	C
3	Forbes Boulevard / E Grand Avenue	Signal	AM	**>80**	**F**	**>80**	**F**
			PM	**>80**	**F**	**>80**	**F**
4	Gateway Boulevard / E Grand Avenue	Signal	AM	**>80**	**F**	**>80**	**F**
			PM	**>80**	**F**	**>80**	**F**
5	Grand Avenue / E Grand Avenue	Signal	AM	18.7	B	31.5	C
			PM	**>80**	**F**	**>80**	**F**
6	Grand Avenue / Dubuque Avenue	Signal	AM	7.3	A	7.2	A
			PM	**>80**	**F**	**>80**	**F**
7	Gateway Boulevard / S. Airport Boulevard	Signal	AM	48.2	D	48.4	D
			PM	**>80**	**F**	**>80**	**F**
8	Gateway Boulevard / Oyster Point Boulevard	Signal	AM	**>80**	**F**	**>80**	**F**
			PM	**>80**	**F**	**>80**	**F**
9	S. Airport Boulevard / Airport Boulevard / Produce Avenue	Signal	AM	50.2	D	50.4	D
			PM	**>80**	**F**	**>80**	**F**

Notes: **Bold** indicates LOS E or F. Delay reported as seconds per vehicle. LOS is based on the methodology in the Highway Capacity Manual 6th Edition. Intersections 2, 6, and 8 were analyzed based on HCM 2000. Signalized and all-way stop control (AWSC) intersections, the delay shown in the weighted average for all movements in seconds per vehicle. Calculations based on signal timing provided by the City of South San Francisco from November 2019.

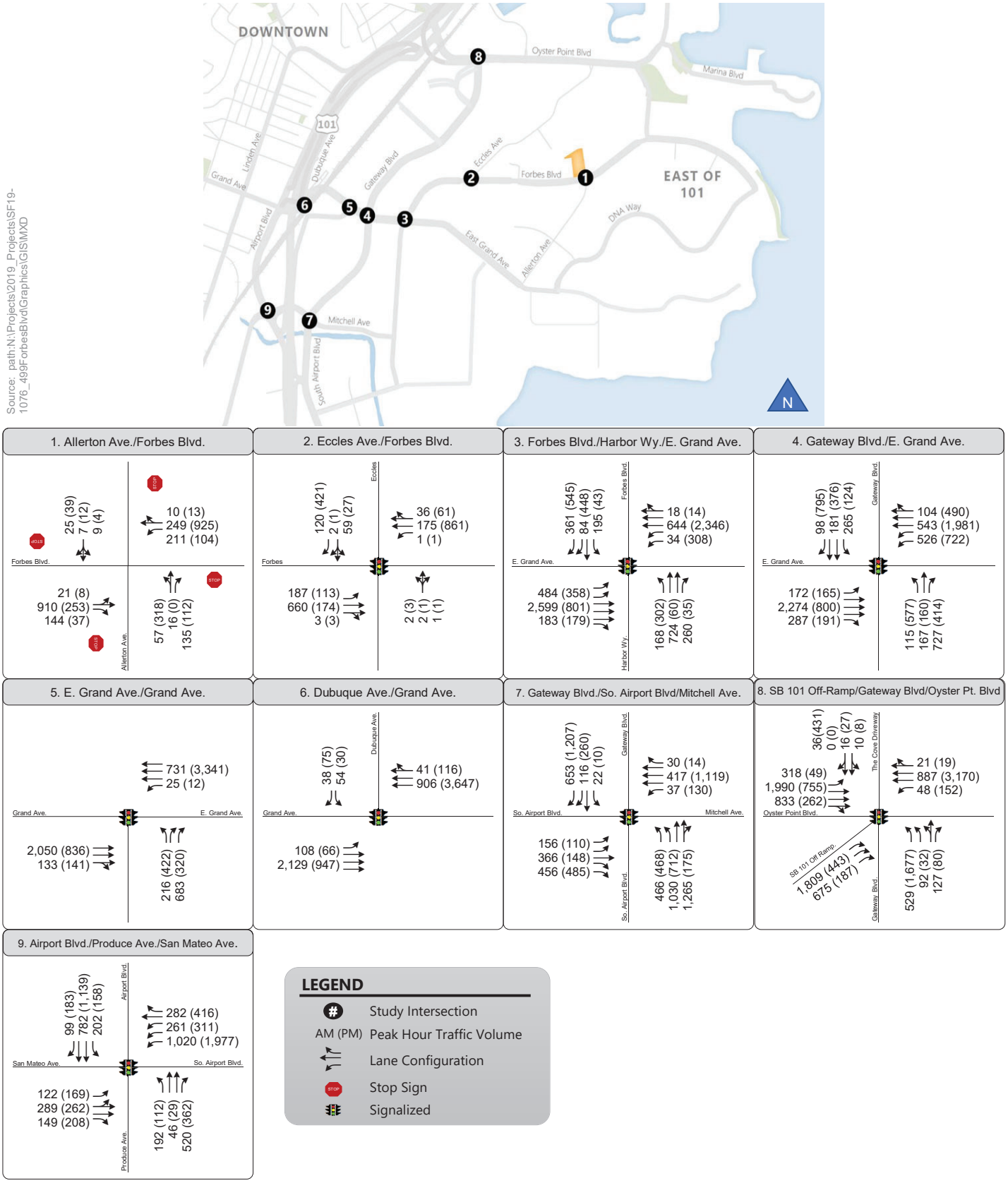
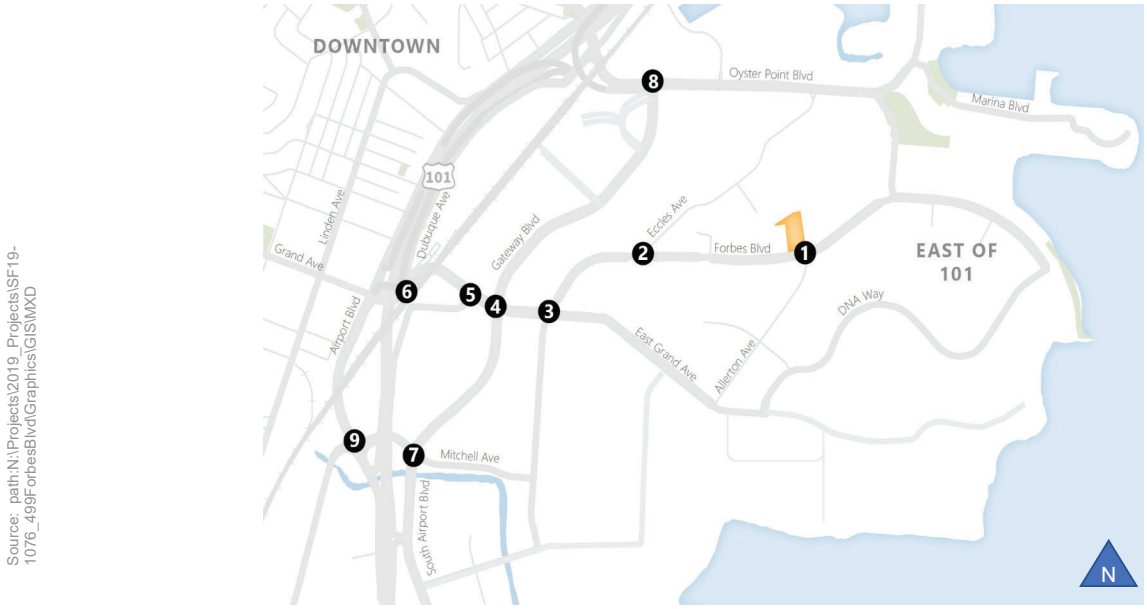


Figure C-5

Peak Hour Traffic Volumes and Lane Configurations Cumulative Conditions



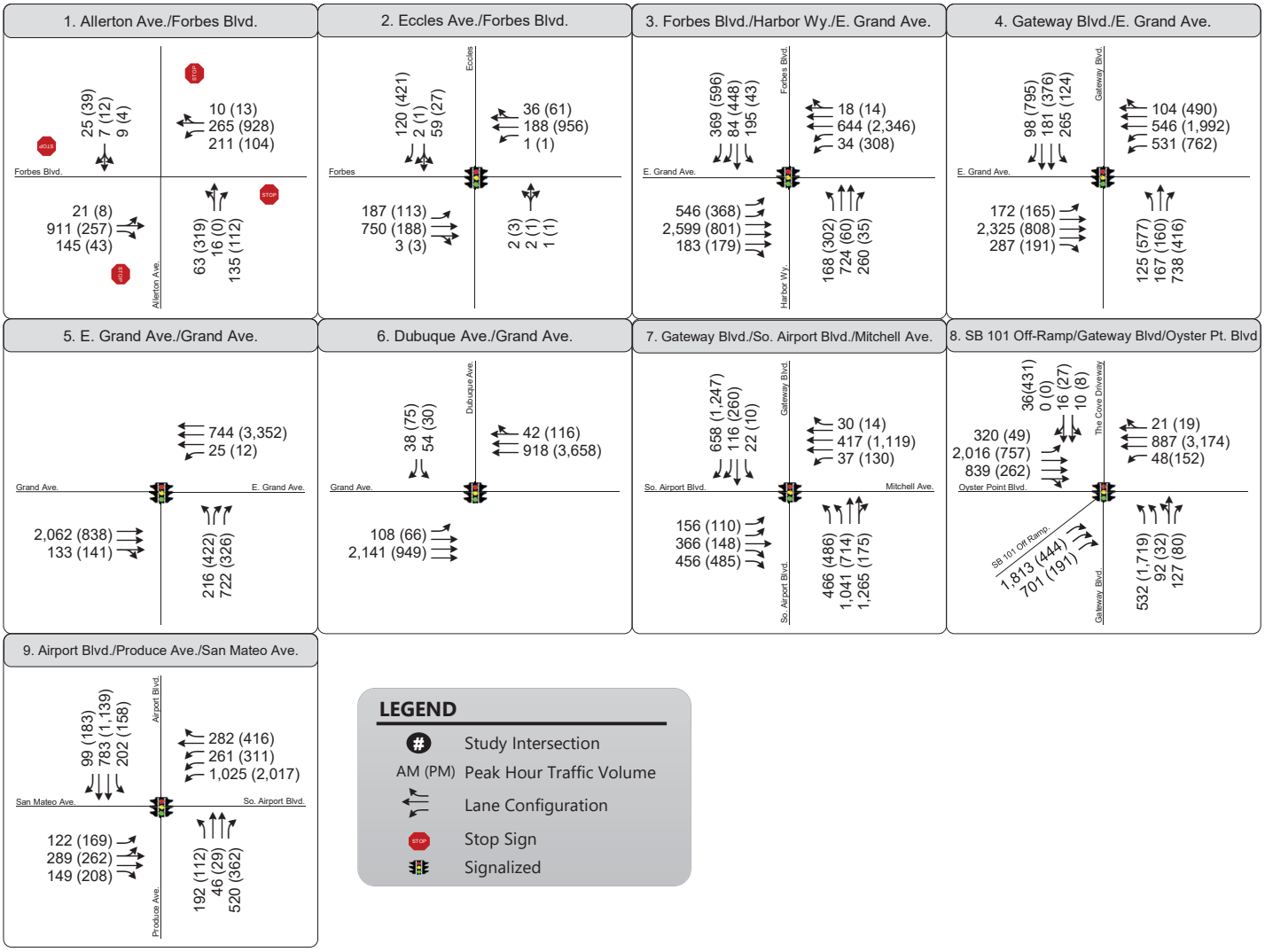


Figure C-6

Peak Hour Traffic Volumes and Lane Configurations
Cumulative + Project Conditions

Freeway On-Ramp Queuing

Table C.6 shows estimated 95th percentile PM peak hour queue lengths for two US-101 on ramps that are anticipated to receive the largest share of Project vehicle trips: the Northbound US-101 on-ramp at Oyster Point Boulevard and the Southbound US-101 on-ramp at Produce Avenue. As described in the existing conditions section, the PM peak hour is the peak direction of outbound travel for the East of 101 area and is therefore the focus of the analysis. At the US-101 northbound on-ramp at Oyster Point Boulevard, queue lengths exceed storage capacity under cumulative no project and cumulative plus project scenarios.

Table C.6 PM Peak Hour US-101 On-Ramp 95th Percentile Queues: Cumulative Conditions

US-101 Northbound Freeway On-Ramp Location		Lanes	Storage Length	Cumulative Conditions		Cumulative Plus Project	
				Volume	Queue Length	Volume	Queue Length
1	Oyster Point Boulevard	2 + 1 HOV	500	2,756	**>500**	2,788	**>500**
2	Produce Avenue	2	1500	3,254	800	3,291	1,150

Notes: Bold type indicates conditions where queue length exceeds storage capacity. Storage distance and queues in feet per lane.
Source: Fehr & Peers, 2020

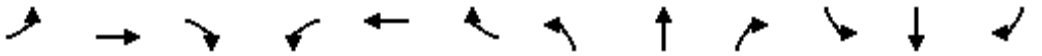
Appendix D: Syncrho Reports

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	324	114	194	76	1	57	16	135	0	2	0
Future Vol, veh/h	5	324	114	194	76	1	57	16	135	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	4	4	4	10	10	10	16	16	16	50	50	50
Mvmt Flow	5	345	121	206	81	1	61	17	144	0	2	0
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	13.5	12	10.8	10.9
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	78%	0%	2%	0%	100%	0%	0%
Vol Thru, %	22%	0%	98%	0%	0%	99%	100%
Vol Right, %	0%	100%	0%	100%	0%	1%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	135	329	114	194	77	2
LT Vol	57	0	5	0	194	0	0
Through Vol	16	0	324	0	0	76	2
RT Vol	0	135	0	114	0	1	0
Lane Flow Rate	78	144	350	121	206	82	2
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.154	0.24	0.553	0.167	0.37	0.135	0.005
Departure Headway (Hd)	7.119	6.015	5.686	4.971	6.456	5.941	7.802
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	505	597	637	723	557	605	459
Service Time	4.853	3.748	3.412	2.697	4.186	3.67	5.849
HCM Lane V/C Ratio	0.154	0.241	0.549	0.167	0.37	0.136	0.004
HCM Control Delay	11.2	10.6	15.2	8.7	12.9	9.6	10.9
HCM Lane LOS	B	B	C	A	B	A	B
HCM 95th-tile Q	0.5	0.9	3.4	0.6	1.7	0.5	0

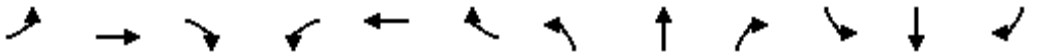


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	477	3	1	116	24	2	2	0	51	2	70
Future Volume (vph)	135	477	3	1	116	24	2	2	0	51	2	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.97			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.95	1.00
Satd. Flow (prot)	1752	3502		1378	2670			1854			1523	1357
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.73	1.00
Satd. Flow (perm)	1752	3502		1378	2670			1900			1167	1357
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	157	555	3	1	135	28	2	2	0	59	2	81
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	71
Lane Group Flow (vph)	157	558	0	1	163	0	0	4	0	0	61	10
Confl. Peds. (#/hr)						11						
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	3%	3%	3%	31%	31%	31%	0%	0%	0%	19%	19%	19%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	9.1	27.5		0.6	19.0			0.6			6.2	6.2
Effective Green, g (s)	9.1	27.5		0.6	19.0			0.6			6.2	6.2
Actuated g/C Ratio	0.18	0.54		0.01	0.37			0.01			0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	313	1892		16	996			22			142	165
v/s Ratio Prot	c0.09	c0.16		0.00	0.06							
v/s Ratio Perm								c0.00			c0.05	0.01
v/c Ratio	0.50	0.29		0.06	0.16			0.18			0.43	0.06
Uniform Delay, d1	18.9	6.4		24.9	10.6			24.9			20.7	19.8
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.5	0.1		0.6	0.1			1.4			0.8	0.1
Delay (s)	19.3	6.5		25.5	10.7			26.4			21.5	19.8
Level of Service	B	A		C	B			C			C	B
Approach Delay (s)		9.3			10.8			26.4			20.5	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Harbor Wy./Forbes Blvd. & E. Grand Ave.

04/06/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	378	1225	140	34	337	17	79	114	173	104	84	96
Future Volume (veh/h)	378	1225	140	34	337	17	79	114	173	104	84	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.89	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1618	1618	1618	1752	1752	1752	1663	1663	1663
Adj Flow Rate, veh/h	394	1276	146	35	351	16	82	119	14	108	88	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	19	19	19	10	10	10	16	16	16
Cap, veh/h	1510	1867	213	110	643	29	148	156	129	182	192	156
Arrive On Green	0.45	0.60	0.60	0.07	0.22	0.22	0.09	0.09	0.09	0.12	0.12	0.12
Sat Flow, veh/h	3346	3104	353	1541	2977	135	1668	1752	1448	1584	1663	1350
Grp Volume(v), veh/h	394	705	717	35	180	187	82	119	14	108	88	17
Grp Sat Flow(s),veh/h/ln	1673	1721	1737	1541	1537	1575	1668	1752	1448	1584	1663	1350
Q Serve(g_s), s	11.0	41.4	42.1	3.2	15.6	15.8	7.1	10.0	1.3	9.7	7.4	1.7
Cycle Q Clear(g_c), s	11.0	41.4	42.1	3.2	15.6	15.8	7.1	10.0	1.3	9.7	7.4	1.7
Prop In Lane	1.00		0.20	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1510	1035	1045	110	332	340	148	156	129	182	192	156
V/C Ratio(X)	0.26	0.68	0.69	0.32	0.54	0.55	0.55	0.76	0.11	0.59	0.46	0.11
Avail Cap(c_a), veh/h	1510	1035	1045	144	332	340	301	316	262	433	455	369
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)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	20.2	20.3	66.1	52.2	52.3	65.5	66.8	62.9	63.0	62.0	59.5
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.6	6.3	6.2	1.2	2.9	0.1	1.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	16.2	16.6	1.3	6.7	6.9	3.1	4.6	0.5	4.0	3.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	20.5	20.6	66.7	58.5	58.5	66.7	69.7	63.0	64.2	62.6	59.6
LnGrp LOS	C	C	C	E	E	E	E	E	E	E	E	E
Approach Vol, veh/h		1816			402			215			213	
Approach Delay, s/veh		21.7			59.2			68.1			63.2	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	72.6	37.3		22.2	14.7	95.1		17.9				
Change Period (Y+Rc), s	4.9	* 4.9		4.9	4.0	4.9		4.6				
Max Green Setting (Gmax), s	31.1	* 32		41.0	14.0	50.0		27.1				
Max Q Clear Time (g_c+I1), s	13.0	17.8		11.7	5.2	44.1		12.0				
Green Ext Time (p_c), s	1.7	1.2		0.6	0.0	4.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		34.5	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

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

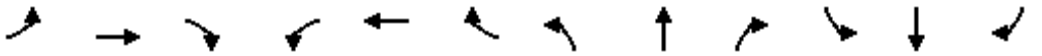
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	833	54	12	413	131	639
Future Volume (veh/h)	833	54	12	413	131	639
Initial Q (Qb), veh	45	0	0	0	10	51
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1707	1707	1811	1811
Adj Flow Rate, veh/h	905	52	13	449	142	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	13	13	6	6
Cap, veh/h	3602	195	30	3719	214	
Arrive On Green	0.51	0.51	0.02	0.82	0.10	0.00
Sat Flow, veh/h	5014	278	1626	4815	1725	2701
Grp Volume(v), veh/h	625	332	13	449	142	0
Grp Sat Flow(s),veh/h/ln	1675	1776	1626	1554	1725	1351
Q Serve(g_s), s	10.5	10.5	0.8	2.0	8.0	0.0
Cycle Q Clear(g_c), s	10.5	10.5	0.8	2.0	8.0	0.0
Prop In Lane		0.16	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2479	1320	30	3719	214	
V/C Ratio(X)	0.25	0.25	0.44	0.12	0.66	
Avail Cap(c_a), veh/h	2542	1347	130	3808	517	
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.99	0.99	1.00	0.00
Uniform Delay (d), s/veh	10.7	10.5	48.6	2.4	42.9	0.0
Incr Delay (d2), s/veh	0.2	0.4	3.7	0.1	3.5	0.0
Initial Q Delay(d3),s/veh	1.4	1.2	0.0	0.0	46.7	0.0
%ile BackOfQ(50%),veh/ln	6.3	6.6	0.4	0.5	7.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.3	12.2	52.3	2.5	93.1	0.0
LnGrp LOS	B	B	D	A	F	
Approach Vol, veh/h	957			462	142	A
Approach Delay, s/veh	12.3			3.9	93.1	
Approach LOS	B			A	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.8	79.9				85.7	14.3
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	50.0				62.0	30.0
Max Q Clear Time (g_c+I1), s	2.8	12.5				4.0	10.0
Green Ext Time (p_c), s	0.0	4.5				2.2	0.5

Intersection Summary			
HCM 6th Ctrl Delay		17.2	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [NBR] 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)	155	1247	70	113	295	104	42	151	304	192	118	88
Future Volume (veh/h)	155	1247	70	113	295	104	42	151	304	192	118	88
Initial Q (Qb), veh	5	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	969	1841	1633	1633	1633	1752	1752	1752	1767	1767	1767
Adj Flow Rate, veh/h	163	1313	71	119	311	76	44	159	0	202	124	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	18	18	18	10	10	10	9	9	9
Cap, veh/h	202	1479	80	138	1981	461	131	273		225	461	
Arrive On Green	0.11	0.58	0.58	0.09	0.56	0.56	0.08	0.08	0.00	0.13	0.14	0.00
Sat Flow, veh/h	1753	2564	139	1555	3597	838	1668	3416	0	1682	3445	0
Grp Volume(v), veh/h	163	903	481	119	254	133	44	159	0	202	124	0
Grp Sat Flow(s),veh/h/ln	1753	882	939	1555	1486	1462	1668	1664	0	1682	1678	0
Q Serve(g_s), s	13.7	66.6	66.6	11.3	6.2	6.6	3.7	6.9	0.0	17.7	5.0	0.0
Cycle Q Clear(g_c), s	13.7	66.6	66.6	11.3	6.2	6.6	3.7	6.9	0.0	17.7	5.0	0.0
Prop In Lane	1.00		0.15	1.00		0.57	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	202	1018	542	138	1637	805	131	273		225	461	
V/C Ratio(X)	0.81	0.89	0.89	0.86	0.16	0.16	0.34	0.58		0.90	0.27	
Avail Cap(c_a), veh/h	270	1018	542	170	1663	818	157	710		371	1141	
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)	0.85	0.85	0.85	0.96	0.96	0.96	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.6	27.5	27.5	67.5	16.6	16.7	65.4	66.4	0.0	64.0	58.0	0.0
Incr Delay (d2), s/veh	7.9	9.9	16.7	25.2	0.2	0.4	0.6	0.7	0.0	9.4	0.1	0.0
Initial Q Delay(d3),s/veh	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	15.0	17.1	5.5	2.2	2.4	1.6	3.0	0.0	8.2	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.6	37.4	44.2	92.6	16.8	17.1	66.0	67.1	0.0	73.4	58.1	0.0
LnGrp LOS	F	D	D	F	B	B	E	E		E	E	
Approach Vol, veh/h		1547			506			203	A		326	A
Approach Delay, s/veh		45.8			34.7			66.9			67.5	
Approach LOS		D			C			E			E	

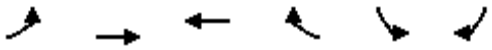
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	91.5	15.8	25.5	19.9	88.8	24.1	17.2
Change Period (Y+Rc), s	4.0	4.9	4.0	* 4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	16.4	50.7	14.1	* 51	23.1	44.0	33.1	32.0
Max Q Clear Time (g_c+I1), s	13.3	68.6	5.7	7.0	15.7	8.6	19.7	8.9
Green Ext Time (p_c), s	0.1	0.0	0.0	0.5	0.2	1.7	0.3	0.6

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

Notes

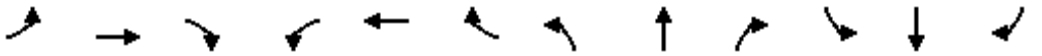
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	833	504	40	54	19
Future Volume (vph)	37	833	504	40	54	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1736	4988	4540		1703	1524
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1736	4988	4540		1703	1524
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	40	896	542	43	58	20
RTOR Reduction (vph)	0	0	3	0	0	18
Lane Group Flow (vph)	40	896	582	0	58	2
Heavy Vehicles (%)	4%	4%	13%	13%	6%	6%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	5.5	81.3	71.8		9.6	9.6
Effective Green, g (s)	5.5	81.3	71.8		9.6	9.6
Actuated g/C Ratio	0.06	0.81	0.72		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	95	4055	3259		163	146
v/s Ratio Prot	c0.02	c0.18	0.13		c0.03	
v/s Ratio Perm						0.00
v/c Ratio	0.42	0.22	0.18		0.36	0.01
Uniform Delay, d1	45.7	2.1	4.6		42.3	40.9
Progression Factor	1.00	1.00	0.96		1.00	1.00
Incremental Delay, d2	1.1	0.1	0.1		0.5	0.0
Delay (s)	46.8	2.3	4.5		42.8	40.9
Level of Service	D	A	A		D	D
Approach Delay (s)		4.2	4.5		42.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	314	368	29	159	18	330	456	349	22	116	187
Future Volume (veh/h)	96	314	368	29	159	18	330	456	349	22	116	187
Initial Q (Qb), veh	0	13	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1722	1722	1574	1574	1574	1811	1811	1811	1663	1663	1663
Adj Flow Rate, veh/h	103	338	116	31	171	15	355	490	0	24	125	13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	22	22	22	6	6	6	16	16	16
Cap, veh/h	226	408	339	85	213	19	1441	1482		164	172	139
Arrive On Green	0.04	0.07	0.07	0.06	0.15	0.15	0.45	0.45	0.00	0.10	0.10	0.10
Sat Flow, veh/h	1640	1722	1430	1499	1422	125	3346	3532	0	1584	1663	1338
Grp Volume(v), veh/h	103	338	116	31	0	186	355	490	0	24	125	13
Grp Sat Flow(s),veh/h/ln	1640	1722	1430	1499	0	1546	1673	1721	0	1584	1663	1338
Q Serve(g_s), s	6.5	20.4	8.1	2.1	0.0	12.2	6.9	9.7	0.0	1.4	7.7	0.9
Cycle Q Clear(g_c), s	6.5	20.4	8.1	2.1	0.0	12.2	6.9	9.7	0.0	1.4	7.7	0.9
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	408	339	85	0	232	1441	1482		164	172	139
V/C Ratio(X)	0.46	0.83	0.34	0.36	0.00	0.80	0.25	0.33		0.15	0.73	0.09
Avail Cap(c_a), veh/h	201	426	354	144	0	364	1492	1535		353	371	298
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	47.9	40.7	47.7	0.0	43.1	19.1	19.9	0.0	42.8	45.6	42.6
Incr Delay (d2), s/veh	0.6	10.9	0.4	1.0	0.0	3.1	0.4	0.6	0.0	0.2	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	42.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	17.0	3.0	0.8	0.0	4.8	2.8	4.0	0.0	0.6	3.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	101.5	41.1	48.7	0.0	46.2	19.5	20.5	0.0	43.0	47.8	42.7
LnGrp LOS	D	F	D	D	A	D	B	C		D	D	D
Approach Vol, veh/h		557			217			845	A		162	
Approach Delay, s/veh		78.8			46.6			20.0			46.7	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	27.8		51.4	17.4	20.3		15.8				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.6	* 4.6		4.9				
Max Green Setting (Gmax), s	10.1	26.0		27.4	11.4	* 25		23.4				
Max Q Clear Time (g_c+I1), s	4.1	22.4		11.7	8.5	14.2		9.7				
Green Ext Time (p_c), s	0.0	0.7		2.8	0.0	0.4		0.4				

Intersection Summary		
HCM 6th Ctrl Delay	44.1	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

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

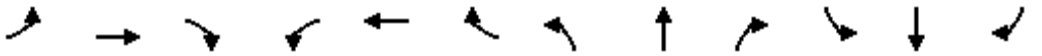
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	318	1257	291	46	402	20	172	92	127	7	16
Future Volume (vph)	1	318	1257	291	46	402	20	172	92	127	7	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91		1.00	0.91		0.91	0.91	1.00		0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00	0.93		0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Frt		1.00	0.97		1.00	0.99		1.00	1.00	0.85		0.92
Flt Protected		0.95	1.00		0.95	1.00		0.95	0.99	1.00		0.99
Satd. Flow (prot)		1752	4877		1480	4213		3042	1588	1395		2789
Flt Permitted		0.95	1.00		0.95	1.00		0.95	0.99	1.00		0.99
Satd. Flow (perm)		1752	4877		1480	4213		3042	1588	1395		2789
Peak-hour factor, PHF	0.92	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	1	361	1428	331	52	457	23	195	105	144	8	18
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	0	116	0	51
Lane Group Flow (vph)	0	362	1759	0	52	476	0	175	125	28	0	2
Confl. Peds. (#/hr)							9			51		
Confl. Bikes (#/hr)				9			1			4		
Heavy Vehicles (%)	2%	3%	3%	3%	22%	22%	22%	8%	8%	8%	17%	17%
Turn Type	Prot	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA
Protected Phases	1	1	6		5	2		4	4		7	7
Permitted Phases										4		
Actuated Green, G (s)		14.6	36.4		7.3	29.1		22.8	22.8	22.8		3.4
Effective Green, g (s)		14.6	36.4		7.3	29.1		22.8	22.8	22.8		3.4
Actuated g/C Ratio		0.12	0.31		0.06	0.24		0.19	0.19	0.19		0.03
Clearance Time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Vehicle Extension (s)		2.0	3.0		2.0	3.0		2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		214	1491		90	1030		582	304	267		79
v/s Ratio Prot		c0.21	c0.36		0.04	0.11		0.06	c0.08			c0.00
v/s Ratio Perm										0.02		
v/c Ratio		1.69	1.18		0.58	0.46		0.30	0.41	0.10		0.02
Uniform Delay, d1		52.2	41.3		54.4	38.3		41.3	42.2	39.7		56.2
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2		330.6	88.2		5.5	0.3		0.1	0.3	0.1		0.0
Delay (s)		382.8	129.5		59.8	38.6		41.4	42.5	39.7		56.2
Level of Service		F	F		E	D		D	D	D		E
Approach Delay (s)			172.7			40.7			41.2			56.2
Approach LOS			F			D			D			E

Intersection Summary			
HCM 2000 Control Delay	111.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	NER	NER2
Lane Configurations			
Traffic Volume (vph)	24	704	319
Future Volume (vph)	24	704	319
Ideal Flow (vphpl)	1900	1990	1900
Total Lost time (s)		4.5	4.5
Lane Util. Factor		*0.95	1.00
Frpb, ped/bikes		1.00	1.00
Flpb, ped/bikes		1.00	1.00
Frt		1.00	0.85
Flt Protected		1.00	1.00
Satd. Flow (prot)		3781	1615
Flt Permitted		1.00	1.00
Satd. Flow (perm)		3781	1615
Peak-hour factor, PHF	0.88	0.88	0.88
Adj. Flow (vph)	27	800	362
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	800	363
Confl. Peds. (#/hr)			63
Confl. Bikes (#/hr)	2		
Heavy Vehicles (%)	17%	0%	0%
Turn Type		Prot	Prot
Protected Phases		3	3
Permitted Phases			
Actuated Green, G (s)		28.0	28.0
Effective Green, g (s)		28.0	28.0
Actuated g/C Ratio		0.24	0.24
Clearance Time (s)		4.5	4.5
Vehicle Extension (s)		2.0	2.0
Lane Grp Cap (vph)		889	380
v/s Ratio Prot		0.21	c0.22
v/s Ratio Perm			
v/c Ratio		0.90	0.96
Uniform Delay, d1		44.1	44.9
Progression Factor		1.00	1.00
Incremental Delay, d2		11.6	34.1
Delay (s)		55.7	79.0
Level of Service		E	E
Approach Delay (s)			
Approach LOS			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	182	147	307	167	168	160	39	404	202	644	98
Future Volume (veh/h)	122	182	147	307	167	168	160	39	404	202	644	98
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	1441	1441	1441	1618	1618	1618	1796	1796	1796	1811	1811	1811
Adj Flow Rate, veh/h	107	222	0	323	176	0	168	41	0	213	678	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	31	31	31	19	19	19	7	7	7	6	6	6
Cap, veh/h	148	311		471	247		198	870		523	1551	
Arrive On Green	0.11	0.11	0.00	0.05	0.05	0.00	0.12	0.25	0.00	0.30	0.45	0.00
Sat Flow, veh/h	1372	2881	1221	3083	1618	1372	1711	3503	0	1725	3441	1535
Grp Volume(v), veh/h	107	222	0	323	176	0	168	41	0	213	678	0
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1541	1618	1372	1711	1706	0	1725	1721	1535
Q Serve(g_s), s	7.9	7.8	0.0	10.8	11.2	0.0	10.1	1.0	0.0	10.3	14.2	0.0
Cycle Q Clear(g_c), s	7.9	7.8	0.0	10.8	11.2	0.0	10.1	1.0	0.0	10.3	14.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	311		471	247		198	870		523	1551	
V/C Ratio(X)	0.72	0.71		0.69	0.71		0.85	0.05		0.41	0.44	
Avail Cap(c_a), veh/h	289	606		611	321		293	870		523	1551	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.88	0.88	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.3	45.3	0.0	47.4	47.6	0.0	45.5	29.5	0.0	29.1	19.7	0.0
Incr Delay (d2), s/veh	2.5	1.1	0.0	1.9	4.5	0.0	9.5	0.0	0.0	0.2	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.8	0.0	4.6	5.2	0.0	4.7	0.4	0.0	4.2	5.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	46.4	0.0	49.3	52.0	0.0	55.0	29.5	0.0	29.3	20.6	0.0
LnGrp LOS	D	D		D	D		D	C		C	C	
Approach Vol, veh/h		329	A		499	A		209	A		891	A
Approach Delay, s/veh		46.8			50.2			50.0			22.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.2	52.2		15.9	36.7	31.7		20.7				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	18.0	26.0		22.1	19.1	* 25		20.8				
Max Q Clear Time (g_c+I1), s	12.1	16.2		9.9	12.3	3.0		13.2				
Green Ext Time (p_c), s	0.2	3.5		0.9	0.2	0.1		1.6				

Intersection Summary		
HCM 6th Ctrl Delay		36.9
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

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

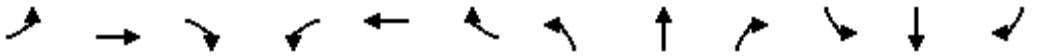
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	79	24	104	419	2	318	0	73	0	1	0
Future Vol, veh/h	3	79	24	104	419	2	318	0	73	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	22	22	22	10	10	10	7	7	7	100	100	100
Mvmt Flow	3	83	25	109	441	2	335	0	77	0	1	0
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

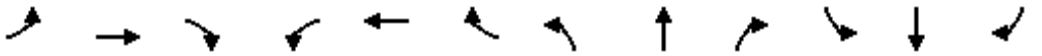
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	11	24.1	19.9	12.2
HCM LOS	B	C	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	4%	0%	100%	0%	0%
Vol Thru, %	0%	0%	96%	0%	0%	100%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	318	73	82	24	104	421	1
LT Vol	318	0	3	0	104	0	0
Through Vol	0	0	79	0	0	419	1
RT Vol	0	73	0	24	0	2	0
Lane Flow Rate	335	77	86	25	109	443	1
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.656	0.125	0.173	0.045	0.207	0.773	0.003
Departure Headway (Hd)	7.059	5.846	7.199	6.464	6.791	6.28	9.069
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	512	612	497	552	529	576	393
Service Time	4.808	3.595	4.966	4.23	4.535	4.025	7.152
HCM Lane V/C Ratio	0.654	0.126	0.173	0.045	0.206	0.769	0.003
HCM Control Delay	22.3	9.4	11.5	9.5	11.3	27.3	12.2
HCM Lane LOS	C	A	B	A	B	D	B
HCM 95th-tile Q	4.7	0.4	0.6	0.1	0.8	7.1	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	105	1	0	682	48	3	1	0	17	0	268
Future Volume (vph)	68	105	1	0	682	48	3	1	0	17	0	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95			0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.99			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.96			0.95	1.00
Satd. Flow (prot)	1492	2979			3273			1831			1719	1538
Flt Permitted	0.95	1.00			1.00			0.66			0.76	1.00
Satd. Flow (perm)	1492	2979			3273			1252			1366	1538
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	73	113	1	0	733	52	3	1	0	18	0	288
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	258
Lane Group Flow (vph)	73	113	0	0	785	0	0	4	0	0	18	30
Confl. Peds. (#/hr)			1			2						
Confl. Bikes (#/hr)						3						
Heavy Vehicles (%)	21%	21%	21%	9%	9%	9%	0%	0%	0%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	7.2	35.7			24.5			19.9			7.8	7.8
Effective Green, g (s)	7.2	35.7			24.5			19.9			7.8	7.8
Actuated g/C Ratio	0.10	0.47			0.32			0.26			0.10	0.10
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5			2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	142	1410			1063			330			141	159
v/s Ratio Prot	c0.05	0.04			c0.24							
v/s Ratio Perm								c0.00			0.01	c0.02
v/c Ratio	0.51	0.08			0.74			0.01			0.13	0.19
Uniform Delay, d1	32.4	10.9			22.6			20.5			30.7	30.9
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	1.3	0.0			2.6			0.1			0.1	0.2
Delay (s)	33.7	10.9			25.2			20.6			30.9	31.1
Level of Service	C	B			C			C			C	C
Approach Delay (s)		19.8			25.2			20.6			31.1	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



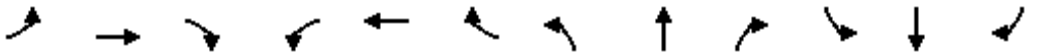
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	216	71	86	1100	14	188	34	29	36	186	374
Future Volume (veh/h)	109	216	71	86	1100	14	188	34	29	36	186	374
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.88	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1663	1856	1856	1856	1767	1767	1767	1826	1826	1826
Adj Flow Rate, veh/h	115	227	75	91	1158	14	224	0	2	38	196	166
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	16	16	16	3	3	3	9	9	9	5	5	5
Cap, veh/h	916	1266	406	161	1189	14	302	0	130	278	291	238
Arrive On Green	0.20	0.36	0.36	0.09	0.33	0.33	0.09	0.00	0.09	0.16	0.16	0.16
Sat Flow, veh/h	3072	2341	751	1767	3561	43	3365	0	1452	1739	1826	1493
Grp Volume(v), veh/h	115	151	151	91	573	599	224	0	2	38	196	166
Grp Sat Flow(s),veh/h/ln	1536	1580	1512	1767	1763	1841	1682	0	1452	1739	1826	1493
Q Serve(g_s), s	4.6	9.8	10.2	7.4	48.1	48.2	9.7	0.0	0.2	2.8	15.2	15.8
Cycle Q Clear(g_c), s	4.6	9.8	10.2	7.4	48.1	48.2	9.7	0.0	0.2	2.8	15.2	15.8
Prop In Lane	1.00		0.50	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	916	854	818	161	589	615	302	0	130	278	291	238
V/C Ratio(X)	0.13	0.18	0.18	0.56	0.97	0.97	0.74	0.00	0.02	0.14	0.67	0.70
Avail Cap(c_a), veh/h	916	854	818	284	589	615	628	0	271	475	499	408
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	25.1	25.2	65.3	49.3	49.3	66.6	0.0	62.2	54.2	59.3	59.6
Incr Delay (d2), s/veh	0.1	0.4	0.5	1.2	31.1	30.4	1.4	0.0	0.0	0.1	1.0	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(50%),veh/ln	1.8	4.0	4.0	3.4	26.2	27.3	4.2	0.0	0.1	1.3	7.1	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	25.5	25.7	66.5	80.4	79.7	67.9	0.0	62.3	54.2	60.3	61.0
LnGrp LOS	D	C	C	E	F	E	E	A	E	D	E	E
Approach Vol, veh/h		417			1263			226			400	
Approach Delay, s/veh		30.7			79.1			67.9			60.0	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	48.7	55.0		27.9	18.6	85.1		18.3				
Change Period (Y+Rc), s	4.0	4.9		4.0	4.9	4.0		4.9				
Max Green Setting (Gmax), s	13.1	50.1		41.0	24.1	39.1		28.0				
Max Q Clear Time (g_c+I1), s	6.6	50.2		17.8	9.4	12.2		11.7				
Green Ext Time (p_c), s	0.2	0.0		1.2	0.1	1.7		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		65.9	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	267	76	351	1134	177	75	122	70	59	289	183
Future Volume (veh/h)	100	267	76	351	1134	177	75	122	70	59	289	183
Initial Q (Qb), veh	0	0	0	0	34	0	0	0	0	0	32	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.95	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	1722	1722	1722	1870	1870	1870	1767	1767	1767	1856	1856	1856
Adj Flow Rate, veh/h	103	275	51	362	1169	171	77	126	0	61	298	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	12	12	2	2	2	9	9	9	3	3	3
Cap, veh/h	415	1728	308	381	1776	219	151	502		152	505	
Arrive On Green	0.28	0.46	0.46	0.43	0.77	0.77	0.09	0.12	0.00	0.09	0.11	0.00
Sat Flow, veh/h	1640	4003	714	1781	4461	652	1682	3445	0	1767	3618	0
Grp Volume(v), veh/h	103	213	113	362	892	448	77	126	0	61	298	0
Grp Sat Flow(s),veh/h/ln	1640	1567	1583	1781	1702	1710	1682	1678	0	1767	1763	0
Q Serve(g_s), s	7.2	5.9	6.2	29.4	18.7	18.7	6.5	5.1	0.0	4.9	12.3	0.0
Cycle Q Clear(g_c), s	7.2	5.9	6.2	29.4	18.7	18.7	6.5	5.1	0.0	4.9	12.3	0.0
Prop In Lane	1.00		0.45	1.00		0.38	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	415	1353	683	381	1316	669	151	502		152	505	
V/C Ratio(X)	0.25	0.16	0.17	0.95	0.68	0.67	0.51	0.25		0.40	0.59	
Avail Cap(c_a), veh/h	463	1444	729	539	1316	661	214	866		225	917	
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)	0.99	0.99	0.99	0.67	0.67	0.67	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.9	26.3	26.4	42.1	13.5	13.3	65.1	56.6	0.0	64.9	62.6	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.5	14.4	1.9	3.6	1.0	0.1	0.0	0.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	6.6	6.3	0.0	0.0	0.0	0.0	70.3	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.4	2.6	12.5	7.1	7.3	2.9	2.1	0.0	2.2	12.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	26.5	26.9	56.5	22.0	23.1	66.1	56.7	0.0	65.5	133.3	0.0
LnGrp LOS	D	C	C	E	C	C	E	E		E	F	
Approach Vol, veh/h		429			1702			203	A		359	A
Approach Delay, s/veh		31.1			29.6			60.3			121.8	
Approach LOS		C			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.1	74.0	18.3	21.5	47.2	62.9	16.9	23.0
Change Period (Y+Rc), s	4.0	4.9	4.9	* 4.6	4.9	* 4.9	4.0	4.9
Max Green Setting (Gmax), s	45.4	29.0	19.1	* 39	16.4	* 58	19.1	38.7
Max Q Clear Time (g_c+I1), s	31.4	8.2	8.5	14.3	9.2	20.7	6.9	7.1
Green Ext Time (p_c), s	0.7	1.3	0.1	1.1	0.1	7.3	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D

Notes

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

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

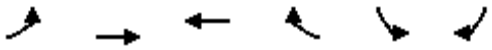
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	214	28	11	1381	233	229
Future Volume (veh/h)	214	28	11	1381	233	229
Initial Q (Qb), veh	0	0	0	0	5	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1856	1856	1781	1781
Adj Flow Rate, veh/h	216	19	11	1395	235	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	3	3	8	8
Cap, veh/h	3136	269	28	3778	296	
Arrive On Green	1.00	1.00	0.02	0.76	0.16	0.00
Sat Flow, veh/h	4706	390	1767	5233	1697	2657
Grp Volume(v), veh/h	152	83	11	1395	235	0
Grp Sat Flow(s),veh/h/ln	1621	1693	1767	1689	1697	1329
Q Serve(g_s), s	0.0	0.0	0.6	9.3	13.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.6	9.3	13.4	0.0
Prop In Lane		0.23	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2237	1168	28	3778	296	
V/C Ratio(X)	0.07	0.07	0.39	0.37	0.79	
Avail Cap(c_a), veh/h	2272	1186	141	3832	696	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.84	0.84	1.00	0.00
Uniform Delay (d), s/veh	0.1	0.1	48.7	4.6	40.1	0.0
Incr Delay (d2), s/veh	0.1	0.1	2.8	0.2	4.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	10.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	2.8	7.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.2	0.2	51.5	4.9	55.0	0.0
LnGrp LOS	A	A	D	A	E	
Approach Vol, veh/h	235			1406	235	A
Approach Delay, s/veh	0.2			5.2	55.0	
Approach LOS	A			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.6	74.1				79.6	20.4
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	39.0				51.0	41.0
Max Q Clear Time (g_c+I1), s	2.6	2.0				11.3	15.4
Green Ext Time (p_c), s	0.0	0.9				8.4	0.9

Intersection Summary			
HCM 6th Ctrl Delay		10.8	
HCM 6th LOS		B	

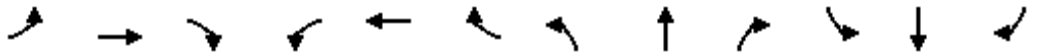
Notes

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	212	1498	116	30	60
Future Volume (vph)	66	212	1498	116	30	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1687	4848	2700		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1687	4848	5022		1770	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	67	216	1529	118	31	61
RTOR Reduction (vph)	0	0	5	0	0	55
Lane Group Flow (vph)	67	216	1642	0	31	6
Confl. Peds. (#/hr)				1		
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	7%	7%	2%	2%	2%	2%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	8.0	70.9	58.9		9.6	9.6
Effective Green, g (s)	8.0	70.9	58.9		9.6	9.6
Actuated g/C Ratio	0.08	0.71	0.59		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	134	3437	1590		169	151
v/s Ratio Prot	c0.04	0.04	c0.61		c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.50	0.06	1.03		0.18	0.04
Uniform Delay, d1	44.1	4.4	20.6		41.6	41.0
Progression Factor	1.00	1.00	0.79		1.00	1.00
Incremental Delay, d2	1.1	0.0	30.8		0.2	0.0
Delay (s)	45.2	4.5	47.1		41.8	41.1
Level of Service	D	A	D		D	D
Approach Delay (s)		14.1	47.1		41.3	
Approach LOS		B	D		D	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	100	391	58	355	14	486	192	61	5	189	521
Future Volume (veh/h)	50	100	391	58	355	14	486	192	61	5	189	521
Initial Q (Qb), veh	0	0	0	0	25	0	0	0	0	0	72	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1811	1811	1811	1767	1767	1767	1841	1841	1841
Adj Flow Rate, veh/h	53	143	131	62	378	13	517	204	0	5	201	319
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	6	6	6	9	9	9	4	4	4
Cap, veh/h	127	481	402	137	493	4	833	856		391	410	332
Arrive On Green	0.07	0.23	0.23	0.08	0.24	0.24	0.29	0.29	0.00	0.22	0.22	0.22
Sat Flow, veh/h	1697	1781	1484	1725	1739	60	3264	3445	0	1753	1841	1489
Grp Volume(v), veh/h	53	143	131	62	0	391	517	204	0	5	201	319
Grp Sat Flow(s),veh/h/ln	1697	1781	1484	1725	0	1798	1632	1678	0	1753	1841	1489
Q Serve(g_s), s	3.1	7.0	7.8	3.6	0.0	22.2	14.0	4.8	0.0	0.2	10.0	22.2
Cycle Q Clear(g_c), s	3.1	7.0	7.8	3.6	0.0	22.2	14.0	4.8	0.0	0.2	10.0	22.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	481	402	137	0	494	833	856		391	410	332
V/C Ratio(X)	0.42	0.30	0.33	0.45	0.00	0.79	0.62	0.24		0.01	0.49	0.96
Avail Cap(c_a), veh/h	179	492	410	182	0	497	955	982		391	410	332
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)	0.73	0.73	0.73	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	30.4	30.7	46.1	0.0	38.1	34.6	31.0	0.0	31.8	40.8	40.3
Incr Delay (d2), s/veh	0.6	0.2	0.3	0.9	0.0	7.8	3.5	0.7	0.0	0.0	0.3	38.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	88.7	0.0	0.0	0.0	0.0	402.4	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.9	2.7	1.6	0.0	25.6	6.1	2.1	0.0	0.1	56.3	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	30.6	30.9	47.0	0.0	134.5	38.1	31.7	0.0	31.8	443.5	79.1
LnGrp LOS	D	C	C	D	A	F	D	C		C	F	E
Approach Vol, veh/h		327			453			721	A		525	
Approach Delay, s/veh		33.4			122.5			36.3			218.1	
Approach LOS		C			F			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	29.0		35.3	11.9	29.5		28.3				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.9				
Max Green Setting (Gmax), s	11.1	29.0		23.4	11.1	29.0		23.4				
Max Q Clear Time (g_c+I1), s	5.6	9.8		16.0	5.1	24.2		24.2				
Green Ext Time (p_c), s	0.0	1.0		1.5	0.0	0.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	102.2	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

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

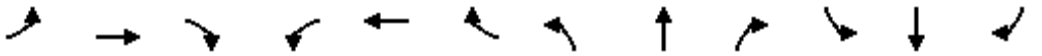
Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	49	266	63	30	1255	19	2	766	32	49	8
Future Volume (vph)	4	49	266	63	30	1255	19	2	766	32	49	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Lane Util. Factor		1.00	0.91		1.00	0.91			0.91	0.91	1.00	
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	0.94	
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Frt		1.00	0.97		1.00	1.00			1.00	1.00	0.85	
Flt Protected		0.95	1.00		0.95	1.00			0.95	0.96	1.00	
Satd. Flow (prot)		1597	4446		1770	5070			3189	1608	1480	
Flt Permitted		0.28	1.00		0.95	1.00			0.95	0.96	1.00	
Satd. Flow (perm)		467	4446		1770	5070			3189	1608	1480	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	4	51	277	66	31	1307	20	2	798	33	51	8
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	40	0
Lane Group Flow (vph)	0	55	343	0	31	1326	0	0	553	280	11	0
Confl. Peds. (#/hr)							8				37	
Confl. Bikes (#/hr)				2			5				4	
Heavy Vehicles (%)	13%	13%	13%	13%	2%	2%	2%	3%	3%	3%	3%	1%
Turn Type	custom	Prot	NA		Prot	NA		Split	Split	NA	Perm	Split
Protected Phases		1	6		5	2		4	4	4		7
Permitted Phases	1										4	
Actuated Green, G (s)		14.4	48.2		4.4	38.2			28.4	28.4	28.4	
Effective Green, g (s)		14.4	48.2		4.4	38.2			28.4	28.4	28.4	
Actuated g/C Ratio		0.11	0.37		0.03	0.30			0.22	0.22	0.22	
Clearance Time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Vehicle Extension (s)		2.0	3.0		2.0	3.0			2.0	2.0	2.0	
Lane Grp Cap (vph)		51	1656		60	1496			699	352	324	
v/s Ratio Prot			0.08		0.02	c0.26			0.17	c0.17		
v/s Ratio Perm		c0.12									0.01	
v/c Ratio		1.08	0.21		0.52	0.89			0.79	0.80	0.03	
Uniform Delay, d1		57.5	27.6		61.5	43.5			47.7	47.8	39.7	
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		149.7	0.1		3.1	6.7			5.7	11.0	0.0	
Delay (s)		207.2	27.7		64.6	50.2			53.4	58.8	39.7	
Level of Service		F	C		E	D			D	E	D	
Approach Delay (s)			52.5			50.6				54.3		
Approach LOS			D			D				D		

Intersection Summary			
HCM 2000 Control Delay	53.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	129.4	Sum of lost time (s)	21.1
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

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

Movement	SBT	SBR2	NER	NER2
Lane Configurations				
Traffic Volume (vph)	27	431	120	57
Future Volume (vph)	27	431	120	57
Ideal Flow (vphpl)	1900	1900	1990	1900
Total Lost time (s)	4.0		4.5	4.5
Lane Util. Factor	0.95		*0.95	1.00
Frpb, ped/bikes	0.97		1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00
Frt	0.86		1.00	0.85
Flt Protected	1.00		1.00	1.00
Satd. Flow (prot)	2969		3376	1442
Flt Permitted	1.00		1.00	1.00
Satd. Flow (perm)	2969		3376	1442
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	28	449	125	59
RTOR Reduction (vph)	373	0	0	0
Lane Group Flow (vph)	112	0	125	59
Confl. Peds. (#/hr)				54
Confl. Bikes (#/hr)		8		
Heavy Vehicles (%)	1%	1%	12%	12%
Turn Type	NA		Prot	Prot
Protected Phases	7		3	3
Permitted Phases				
Actuated Green, G (s)	9.1		18.2	18.2
Effective Green, g (s)	9.1		18.2	18.2
Actuated g/C Ratio	0.07		0.14	0.14
Clearance Time (s)	4.0		4.5	4.5
Vehicle Extension (s)	2.0		2.0	2.0
Lane Grp Cap (vph)	208		474	202
v/s Ratio Prot	c0.04		0.04	c0.04
v/s Ratio Perm				
v/c Ratio	0.93dr		0.26	0.29
Uniform Delay, d1	58.1		49.6	49.8
Progression Factor	1.00		1.00	1.00
Incremental Delay, d2	1.3		0.1	0.3
Delay (s)	59.5		49.7	50.1
Level of Service	E		D	D
Approach Delay (s)	59.5			
Approach LOS	E			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	169	200	760	224	378	101	15	269	158	827	130
Future Volume (veh/h)	169	169	200	760	224	378	101	15	269	158	827	130
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	1811	1811	1811	1811	1811	1811	1678	1678	1678	1856	1856	1856
Adj Flow Rate, veh/h	199	148	0	800	236	0	106	16	0	166	871	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	15	15	15	3	3	3
Cap, veh/h	381	200		878	461		142	821		387	1393	
Arrive On Green	0.11	0.11	0.00	0.25	0.25	0.00	0.09	0.26	0.00	0.22	0.40	0.00
Sat Flow, veh/h	3450	1811	1535	3450	1811	1535	1598	3272	0	1767	3526	1572
Grp Volume(v), veh/h	199	148	0	800	236	0	106	16	0	166	871	0
Grp Sat Flow(s),veh/h/ln	1725	1811	1535	1725	1811	1535	1598	1594	0	1767	1763	1572
Q Serve(g_s), s	6.5	9.5	0.0	27.0	13.4	0.0	7.8	0.4	0.0	9.7	23.8	0.0
Cycle Q Clear(g_c), s	6.5	9.5	0.0	27.0	13.4	0.0	7.8	0.4	0.0	9.7	23.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	200		878	461		142	821		387	1393	
V/C Ratio(X)	0.52	0.74		0.91	0.51		0.75	0.02		0.43	0.63	
Avail Cap(c_a), veh/h	635	334		914	480		160	821		387	1393	
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	0.47	0.47	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.4	51.7	0.0	43.4	38.3	0.0	53.3	33.2	0.0	40.4	29.1	0.0
Incr Delay (d2), s/veh	0.4	2.0	0.0	6.8	0.4	0.0	12.7	0.0	0.0	0.3	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.4	0.0	12.4	6.1	0.0	3.6	0.2	0.0	4.2	10.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	53.7	0.0	50.2	38.8	0.0	66.0	33.3	0.0	40.6	31.3	0.0
LnGrp LOS	D	D		D	D		E	C		D	C	
Approach Vol, veh/h		347	A		1036	A		122	A		1037	A
Approach Delay, s/veh		52.1			47.6			61.7			32.8	
Approach LOS		D			D			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	52.3		17.8	31.2	35.8		35.1				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	12.0	36.0		22.1	17.1	* 31		31.8				
Max Q Clear Time (g_c+I1), s	9.8	25.8		11.5	11.7	2.4		29.0				
Green Ext Time (p_c), s	0.0	4.6		0.8	0.1	0.0		1.5				

Intersection Summary		
HCM 6th Ctrl Delay		42.8
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

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

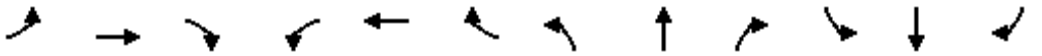
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	325	115	194	92	1	63	16	135	0	2	0
Future Vol, veh/h	5	325	115	194	92	1	63	16	135	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	4	4	4	10	10	10	16	16	16	50	50	50
Mvmt Flow	5	346	122	206	98	1	67	17	144	0	2	0
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	13.8	12	11	11
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	80%	0%	2%	0%	100%	0%	0%
Vol Thru, %	20%	0%	98%	0%	0%	99%	100%
Vol Right, %	0%	100%	0%	100%	0%	1%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	135	330	115	194	93	2
LT Vol	63	0	5	0	194	0	0
Through Vol	16	0	325	0	0	92	2
RT Vol	0	135	0	115	0	1	0
Lane Flow Rate	84	144	351	122	206	99	2
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.168	0.242	0.56	0.171	0.372	0.164	0.005
Departure Headway (Hd)	7.175	6.062	5.739	5.024	6.493	5.979	7.869
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	501	593	628	714	555	601	454
Service Time	4.911	3.797	3.467	2.752	4.226	3.712	5.923
HCM Lane V/C Ratio	0.168	0.243	0.559	0.171	0.371	0.165	0.004
HCM Control Delay	11.4	10.7	15.6	8.8	13	9.9	11
HCM Lane LOS	B	B	C	A	B	A	B
HCM 95th-tile Q	0.6	0.9	3.5	0.6	1.7	0.6	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	567	3	1	129	24	2	2	0	51	2	70
Future Volume (vph)	135	567	3	1	129	24	2	2	0	51	2	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.98			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.95	1.00
Satd. Flow (prot)	1752	3502		1378	2678			1854			1523	1357
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.73	1.00
Satd. Flow (perm)	1752	3502		1378	2678			1900			1167	1357
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	157	659	3	1	150	28	2	2	0	59	2	81
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	71
Lane Group Flow (vph)	157	662	0	1	178	0	0	4	0	0	61	10
Confl. Peds. (#/hr)						11						
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	3%	3%	3%	31%	31%	31%	0%	0%	0%	19%	19%	19%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	9.2	27.6		0.6	19.0			0.6			6.2	6.2
Effective Green, g (s)	9.2	27.6		0.6	19.0			0.6			6.2	6.2
Actuated g/C Ratio	0.18	0.54		0.01	0.37			0.01			0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	316	1895		16	997			22			141	164
v/s Ratio Prot	c0.09	c0.19		0.00	0.07							
v/s Ratio Perm								c0.00			c0.05	0.01
v/c Ratio	0.50	0.35		0.06	0.18			0.18			0.43	0.06
Uniform Delay, d1	18.8	6.6		24.9	10.8			25.0			20.8	19.8
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.4	0.1		0.6	0.1			1.4			0.8	0.1
Delay (s)	19.3	6.7		25.5	10.8			26.4			21.5	19.9
Level of Service	B	A		C	B			C			C	B
Approach Delay (s)		9.1			10.9			26.4			20.6	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Harbor Wy./Forbes Blvd. & E. Grand Ave.

04/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	440	1225	140	34	337	17	79	114	173	104	84	104
Future Volume (veh/h)	440	1225	140	34	337	17	79	114	173	104	84	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.89	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1618	1618	1618	1752	1752	1752	1663	1663	1663
Adj Flow Rate, veh/h	458	1276	146	35	351	16	82	119	14	108	88	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	19	19	19	10	10	10	16	16	16
Cap, veh/h	1510	1867	213	110	643	29	148	156	129	182	192	156
Arrive On Green	0.45	0.60	0.60	0.07	0.22	0.22	0.09	0.09	0.09	0.12	0.12	0.12
Sat Flow, veh/h	3346	3104	353	1541	2977	135	1668	1752	1448	1584	1663	1350
Grp Volume(v), veh/h	458	705	717	35	180	187	82	119	14	108	88	18
Grp Sat Flow(s),veh/h/ln	1673	1721	1737	1541	1537	1575	1668	1752	1448	1584	1663	1350
Q Serve(g_s), s	13.1	41.4	42.1	3.2	15.6	15.8	7.1	10.0	1.3	9.7	7.4	1.8
Cycle Q Clear(g_c), s	13.1	41.4	42.1	3.2	15.6	15.8	7.1	10.0	1.3	9.7	7.4	1.8
Prop In Lane	1.00		0.20	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1510	1035	1045	110	332	340	148	156	129	182	192	156
V/C Ratio(X)	0.30	0.68	0.69	0.32	0.54	0.55	0.55	0.76	0.11	0.59	0.46	0.12
Avail Cap(c_a), veh/h	1510	1035	1045	144	332	340	301	316	262	433	455	369
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)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	20.2	20.3	66.1	52.2	52.3	65.5	66.8	62.9	63.0	62.0	59.5
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.6	6.3	6.2	1.2	2.9	0.1	1.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	16.2	16.6	1.3	6.7	6.9	3.1	4.6	0.5	4.0	3.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	20.5	20.6	66.7	58.5	58.5	66.7	69.7	63.0	64.2	62.6	59.6
LnGrp LOS	C	C	C	E	E	E	E	E	E	E	E	E
Approach Vol, veh/h		1880			402			215			214	
Approach Delay, s/veh		21.9			59.2			68.1			63.2	
Approach LOS		C			E			E			E	

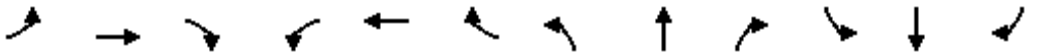
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	72.6	37.3		22.2	14.7	95.1		17.9				
Change Period (Y+Rc), s	4.9	* 4.9		4.9	4.0	4.9		4.6				
Max Green Setting (Gmax), s	31.1	* 32		41.0	14.0	50.0		27.1				
Max Q Clear Time (g_c+I1), s	15.1	17.8		11.7	5.2	44.1		12.0				
Green Ext Time (p_c), s	1.9	1.2		0.6	0.0	4.1		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		34.4
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	1298	70	118	298	104	42	151	315	192	118	88
Future Volume (veh/h)	155	1298	70	118	298	104	42	151	315	192	118	88
Initial Q (Qb), veh	5	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	969	1841	1633	1633	1633	1752	1752	1752	1767	1767	1767
Adj Flow Rate, veh/h	163	1366	71	124	314	76	44	159	0	202	124	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	18	18	18	10	10	10	9	9	9
Cap, veh/h	202	1475	77	143	1984	458	131	273		225	461	
Arrive On Green	0.11	0.57	0.57	0.09	0.56	0.56	0.08	0.08	0.00	0.13	0.14	0.00
Sat Flow, veh/h	1753	2570	134	1555	3604	832	1668	3416	0	1682	3445	0
Grp Volume(v), veh/h	163	937	500	124	256	134	44	159	0	202	124	0
Grp Sat Flow(s),veh/h/ln	1753	882	940	1555	1486	1464	1668	1664	0	1682	1678	0
Q Serve(g_s), s	13.7	72.5	72.5	11.8	6.2	6.6	3.7	6.9	0.0	17.7	5.0	0.0
Cycle Q Clear(g_c), s	13.7	72.5	72.5	11.8	6.2	6.6	3.7	6.9	0.0	17.7	5.0	0.0
Prop In Lane	1.00		0.14	1.00		0.57	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	202	1012	539	143	1637	806	131	273		225	461	
V/C Ratio(X)	0.81	0.93	0.93	0.87	0.16	0.17	0.34	0.58		0.90	0.27	
Avail Cap(c_a), veh/h	270	1012	539	170	1663	819	157	710		371	1141	
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)	0.84	0.84	0.84	0.96	0.96	0.96	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.6	29.1	29.1	67.2	16.6	16.7	65.4	66.4	0.0	64.0	58.0	0.0
Incr Delay (d2), s/veh	7.9	13.4	21.4	27.3	0.2	0.4	0.6	0.7	0.0	9.4	0.1	0.0
Initial Q Delay(d3),s/veh	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	16.8	19.1	5.8	2.3	2.4	1.6	3.0	0.0	8.2	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.5	42.5	50.5	94.6	16.8	17.1	66.0	67.1	0.0	73.4	58.1	0.0
LnGrp LOS	F	D	D	F	B	B	E	E		E	E	
Approach Vol, veh/h		1600			514			203	A		326	A
Approach Delay, s/veh		50.5			35.6			66.9			67.5	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	91.0	15.8	25.5	19.9	88.8	24.1	17.2
Change Period (Y+Rc), s	4.0	4.9	4.0	* 4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	16.4	50.7	14.1	* 51	23.1	44.0	33.1	32.0
Max Q Clear Time (g_c+I1), s	13.8	74.5	5.7	7.0	15.7	8.6	19.7	8.9
Green Ext Time (p_c), s	0.1	0.0	0.0	0.5	0.2	1.7	0.3	0.6

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

Notes

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

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

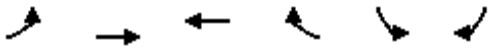
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	846	54	12	416	131	678
Future Volume (veh/h)	846	54	12	416	131	678
Initial Q (Qb), veh	45	0	0	0	10	51
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1707	1707	1811	1811
Adj Flow Rate, veh/h	920	54	13	452	142	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	13	13	6	6
Cap, veh/h	3597	199	30	3719	214	
Arrive On Green	0.25	0.25	0.02	0.82	0.10	0.00
Sat Flow, veh/h	5007	283	1626	4815	1725	2701
Grp Volume(v), veh/h	636	338	13	452	142	0
Grp Sat Flow(s),veh/h/ln	1675	1774	1626	1554	1725	1351
Q Serve(g_s), s	15.2	15.2	0.8	2.0	8.0	0.0
Cycle Q Clear(g_c), s	15.2	15.2	0.8	2.0	8.0	0.0
Prop In Lane		0.16	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2478	1318	30	3719	214	
V/C Ratio(X)	0.26	0.26	0.44	0.12	0.66	
Avail Cap(c_a), veh/h	2542	1346	130	3808	517	
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.99	0.99	1.00	0.00
Uniform Delay (d), s/veh	17.2	17.0	48.6	2.4	42.9	0.0
Incr Delay (d2), s/veh	0.2	0.5	3.7	0.1	3.5	0.0
Initial Q Delay(d3),s/veh	1.4	1.3	0.0	0.0	46.7	0.0
%ile BackOfQ(50%),veh/ln	9.1	9.6	0.4	0.5	7.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.9	18.7	52.3	2.5	93.1	0.0
LnGrp LOS	B	B	D	A	F	
Approach Vol, veh/h	974			465	142	A
Approach Delay, s/veh	18.8			3.9	93.1	
Approach LOS	B			A	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.8	79.9				85.7	14.3
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	50.0				62.0	30.0
Max Q Clear Time (g_c+I1), s	2.8	17.2				4.0	10.0
Green Ext Time (p_c), s	0.0	4.6				2.2	0.5

Intersection Summary		
HCM 6th Ctrl Delay		21.1
HCM 6th LOS		C

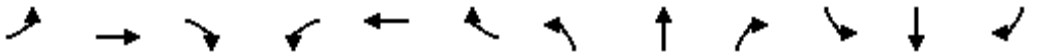
Notes

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	846	507	40	54	19
Future Volume (vph)	37	846	507	40	54	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1736	4988	4540		1703	1524
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1736	4988	4540		1703	1524
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	40	910	545	43	58	20
RTOR Reduction (vph)	0	0	3	0	0	18
Lane Group Flow (vph)	40	910	585	0	58	2
Heavy Vehicles (%)	4%	4%	13%	13%	6%	6%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	5.5	81.3	71.8		9.6	9.6
Effective Green, g (s)	5.5	81.3	71.8		9.6	9.6
Actuated g/C Ratio	0.06	0.81	0.72		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	95	4055	3259		163	146
v/s Ratio Prot	c0.02	c0.18	0.13		c0.03	
v/s Ratio Perm						0.00
v/c Ratio	0.42	0.22	0.18		0.36	0.01
Uniform Delay, d1	45.7	2.1	4.6		42.3	40.9
Progression Factor	1.00	1.00	0.91		1.00	1.00
Incremental Delay, d2	1.1	0.1	0.1		0.5	0.0
Delay (s)	46.8	2.3	4.3		42.8	40.9
Level of Service	D	A	A		D	D
Approach Delay (s)		4.1	4.3		42.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	314	368	29	159	18	330	467	349	22	116	192
Future Volume (veh/h)	96	314	368	29	159	18	330	467	349	22	116	192
Initial Q (Qb), veh	0	13	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1722	1722	1574	1574	1574	1811	1811	1811	1663	1663	1663
Adj Flow Rate, veh/h	103	338	116	31	171	15	355	502	0	24	125	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	22	22	22	6	6	6	16	16	16
Cap, veh/h	226	408	339	85	213	19	1441	1481		164	172	139
Arrive On Green	0.04	0.07	0.07	0.06	0.15	0.15	0.45	0.45	0.00	0.10	0.10	0.10
Sat Flow, veh/h	1640	1722	1430	1499	1422	125	3346	3532	0	1584	1663	1338
Grp Volume(v), veh/h	103	338	116	31	0	186	355	502	0	24	125	14
Grp Sat Flow(s),veh/h/ln	1640	1722	1430	1499	0	1546	1673	1721	0	1584	1663	1338
Q Serve(g_s), s	6.5	20.4	8.1	2.1	0.0	12.2	6.9	9.9	0.0	1.4	7.6	1.0
Cycle Q Clear(g_c), s	6.5	20.4	8.1	2.1	0.0	12.2	6.9	9.9	0.0	1.4	7.6	1.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	408	339	85	0	232	1441	1481		164	172	139
V/C Ratio(X)	0.46	0.83	0.34	0.36	0.00	0.80	0.25	0.34		0.15	0.73	0.10
Avail Cap(c_a), veh/h	201	426	354	144	0	364	1492	1535		353	371	298
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	47.9	40.7	47.7	0.0	43.1	19.1	19.9	0.0	42.8	45.6	42.6
Incr Delay (d2), s/veh	0.6	10.9	0.4	1.0	0.0	3.1	0.4	0.6	0.0	0.2	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	42.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	17.0	3.0	0.8	0.0	4.8	2.8	4.1	0.0	0.6	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	101.5	41.1	48.7	0.0	46.2	19.5	20.6	0.0	43.0	47.8	42.7
LnGrp LOS	D	F	D	D	A	D	B	C		D	D	D
Approach Vol, veh/h		557			217			857	A		163	
Approach Delay, s/veh		78.8			46.6			20.1			46.6	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	27.8		51.4	17.4	20.3		15.8				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.6	* 4.6		4.9				
Max Green Setting (Gmax), s	10.1	26.0		27.4	11.4	* 25		23.4				
Max Q Clear Time (g_c+I1), s	4.1	22.4		11.9	8.5	14.2		9.6				
Green Ext Time (p_c), s	0.0	0.7		2.8	0.0	0.4		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		43.9	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

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

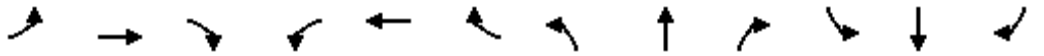
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	318	1270	291	46	403	20	177	92	127	7	16
Future Volume (vph)	1	318	1270	291	46	403	20	177	92	127	7	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91		1.00	0.91		0.91	0.91	1.00		0.95
Frpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00	0.93		0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Frt		1.00	0.97		1.00	0.99		1.00	1.00	0.85		0.92
Flt Protected		0.95	1.00		0.95	1.00		0.95	0.99	1.00		0.99
Satd. Flow (prot)		1752	4878		1480	4213		3042	1588	1395		2789
Flt Permitted		0.95	1.00		0.95	1.00		0.95	0.99	1.00		0.99
Satd. Flow (perm)		1752	4878		1480	4213		3042	1588	1395		2789
Peak-hour factor, PHF	0.92	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	1	361	1443	331	52	458	23	201	105	144	8	18
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	0	116	0	51
Lane Group Flow (vph)	0	362	1774	0	52	477	0	181	125	28	0	2
Confl. Peds. (#/hr)							9			51		
Confl. Bikes (#/hr)				9			1			4		
Heavy Vehicles (%)	2%	3%	3%	3%	22%	22%	22%	8%	8%	8%	17%	17%
Turn Type	Prot	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA
Protected Phases	1	1	6		5	2		4	4		7	7
Permitted Phases										4		
Actuated Green, G (s)		14.6	36.4		7.3	29.1		22.8	22.8	22.8		3.4
Effective Green, g (s)		14.6	36.4		7.3	29.1		22.8	22.8	22.8		3.4
Actuated g/C Ratio		0.12	0.31		0.06	0.24		0.19	0.19	0.19		0.03
Clearance Time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Vehicle Extension (s)		2.0	3.0		2.0	3.0		2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		214	1492		90	1030		582	304	267		79
v/s Ratio Prot		c0.21	c0.36		0.04	0.11		0.06	c0.08			c0.00
v/s Ratio Perm										0.02		
v/c Ratio		1.69	1.19		0.58	0.46		0.31	0.41	0.10		0.02
Uniform Delay, d1		52.2	41.3		54.4	38.3		41.3	42.2	39.7		56.2
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2		330.6	92.1		5.5	0.3		0.1	0.3	0.1		0.0
Delay (s)		382.8	133.4		59.8	38.6		41.5	42.5	39.7		56.2
Level of Service		F	F		E	D		D	D	D		E
Approach Delay (s)			175.6			40.7			41.2			56.2
Approach LOS			F			D			D			E

Intersection Summary			
HCM 2000 Control Delay	115.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	NER	NER2
Lane Configurations			
Traffic Volume (vph)	24	708	345
Future Volume (vph)	24	708	345
Ideal Flow (vphpl)	1900	1990	1900
Total Lost time (s)		4.5	4.5
Lane Util. Factor		*0.95	1.00
Frpb, ped/bikes		1.00	1.00
Flpb, ped/bikes		1.00	1.00
Frt		1.00	0.85
Flt Protected		1.00	1.00
Satd. Flow (prot)		3781	1615
Flt Permitted		1.00	1.00
Satd. Flow (perm)		3781	1615
Peak-hour factor, PHF	0.88	0.88	0.88
Adj. Flow (vph)	27	805	392
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	805	392
Confl. Peds. (#/hr)			63
Confl. Bikes (#/hr)	2		
Heavy Vehicles (%)	17%	0%	0%
Turn Type		Prot	Prot
Protected Phases		3	3
Permitted Phases			
Actuated Green, G (s)		28.0	28.0
Effective Green, g (s)		28.0	28.0
Actuated g/C Ratio		0.24	0.24
Clearance Time (s)		4.5	4.5
Vehicle Extension (s)		2.0	2.0
Lane Grp Cap (vph)		889	380
v/s Ratio Prot		0.21	c0.24
v/s Ratio Perm			
v/c Ratio		0.91	1.03
Uniform Delay, d1		44.2	45.5
Progression Factor		1.00	1.00
Incremental Delay, d2		12.3	54.5
Delay (s)		56.5	100.0
Level of Service		E	F
Approach Delay (s)			
Approach LOS			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	182	147	312	167	168	160	39	404	202	645	98
Future Volume (veh/h)	122	182	147	312	167	168	160	39	404	202	645	98
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	1441	1441	1441	1618	1618	1618	1796	1796	1796	1811	1811	1811
Adj Flow Rate, veh/h	107	222	0	328	176	0	168	41	0	213	679	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	31	31	31	19	19	19	7	7	7	6	6	6
Cap, veh/h	148	311		472	248		198	870		523	1550	
Arrive On Green	0.11	0.11	0.00	0.05	0.05	0.00	0.12	0.25	0.00	0.30	0.45	0.00
Sat Flow, veh/h	1372	2881	1221	3083	1618	1372	1711	3503	0	1725	3441	1535
Grp Volume(v), veh/h	107	222	0	328	176	0	168	41	0	213	679	0
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1541	1618	1372	1711	1706	0	1725	1721	1535
Q Serve(g_s), s	7.9	7.8	0.0	11.0	11.2	0.0	10.1	1.0	0.0	10.3	14.2	0.0
Cycle Q Clear(g_c), s	7.9	7.8	0.0	11.0	11.2	0.0	10.1	1.0	0.0	10.3	14.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	311		472	248		198	870		523	1550	
V/C Ratio(X)	0.72	0.71		0.70	0.71		0.85	0.05		0.41	0.44	
Avail Cap(c_a), veh/h	289	606		611	321		293	870		523	1550	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.88	0.88	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.3	45.3	0.0	47.4	47.6	0.0	45.5	29.5	0.0	29.1	19.7	0.0
Incr Delay (d2), s/veh	2.5	1.1	0.0	2.1	4.4	0.0	9.5	0.0	0.0	0.2	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.8	0.0	4.7	5.2	0.0	4.7	0.4	0.0	4.2	5.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	46.4	0.0	49.5	52.0	0.0	55.0	29.5	0.0	29.3	20.6	0.0
LnGrp LOS	D	D		D	D		D	C		C	C	
Approach Vol, veh/h		329	A		504	A		209	A		892	A
Approach Delay, s/veh		46.8			50.4			50.0			22.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.2	52.2		15.9	36.7	31.7		20.7				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	18.0	26.0		22.1	19.1	* 25		20.8				
Max Q Clear Time (g_c+I1), s	12.1	16.2		9.9	12.3	3.0		13.2				
Green Ext Time (p_c), s	0.2	3.5		0.9	0.2	0.1		1.6				

Intersection Summary		
HCM 6th Ctrl Delay		37.0
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

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

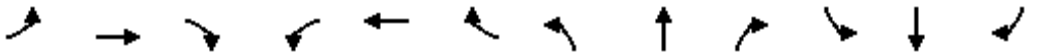
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	21.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	83	30	104	422	2	319	0	73	0	1	0
Future Vol, veh/h	3	83	30	104	422	2	319	0	73	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	22	22	22	10	10	10	7	7	7	100	100	100
Mvmt Flow	3	87	32	109	444	2	336	0	77	0	1	0
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

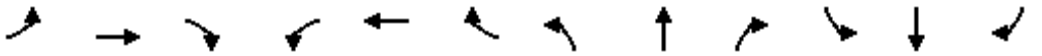
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	11.1	24.8	20.3	12.2
HCM LOS	B	C	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	3%	0%	100%	0%	0%
Vol Thru, %	0%	0%	97%	0%	0%	100%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	319	73	86	30	104	424	1
LT Vol	319	0	3	0	104	0	0
Through Vol	0	0	83	0	0	422	1
RT Vol	0	73	0	30	0	2	0
Lane Flow Rate	336	77	91	32	109	446	1
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.662	0.126	0.181	0.057	0.207	0.782	0.003
Departure Headway (Hd)	7.098	5.884	7.216	6.482	6.817	6.306	9.13
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	510	608	495	550	525	571	391
Service Time	4.847	3.633	4.988	4.253	4.568	4.057	7.218
HCM Lane V/C Ratio	0.659	0.127	0.184	0.058	0.208	0.781	0.003
HCM Control Delay	22.8	9.5	11.6	9.6	11.4	28.1	12.2
HCM Lane LOS	C	A	B	A	B	D	B
HCM 95th-tile Q	4.8	0.4	0.7	0.2	0.8	7.3	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	119	1	0	777	48	3	1	0	17	0	268
Future Volume (vph)	68	119	1	0	777	48	3	1	0	17	0	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95			0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.99			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.96			0.95	1.00
Satd. Flow (prot)	1492	2980			3278			1831			1719	1538
Flt Permitted	0.95	1.00			1.00			0.65			0.76	1.00
Satd. Flow (perm)	1492	2980			3278			1241			1366	1538
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	73	128	1	0	835	52	3	1	0	18	0	288
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	260
Lane Group Flow (vph)	73	129	0	0	887	0	0	4	0	0	18	28
Confl. Peds. (#/hr)			1			2						
Confl. Bikes (#/hr)						3						
Heavy Vehicles (%)	21%	21%	21%	9%	9%	9%	0%	0%	0%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	7.3	40.5			29.2			19.8			7.8	7.8
Effective Green, g (s)	7.3	40.5			29.2			19.8			7.8	7.8
Actuated g/C Ratio	0.09	0.51			0.36			0.25			0.10	0.10
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5			2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	135	1506			1194			306			133	149
v/s Ratio Prot	c0.05	0.04			c0.27							
v/s Ratio Perm								c0.00			0.01	c0.02
v/c Ratio	0.54	0.09			0.74			0.01			0.14	0.19
Uniform Delay, d1	34.8	10.2			22.2			22.8			33.1	33.2
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	2.4	0.0			2.4			0.1			0.2	0.2
Delay (s)	37.2	10.2			24.6			22.8			33.2	33.5
Level of Service	D	B			C			C			C	C
Approach Delay (s)		20.0			24.6			22.8			33.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



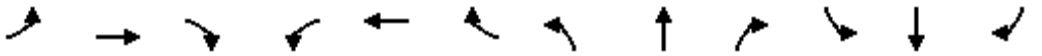
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	216	71	86	1100	14	188	34	29	36	186	425
Future Volume (veh/h)	119	216	71	86	1100	14	188	34	29	36	186	425
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.88	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1663	1856	1856	1856	1767	1767	1767	1826	1826	1826
Adj Flow Rate, veh/h	125	227	75	91	1158	14	224	0	2	38	213	207
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	16	16	16	3	3	3	9	9	9	5	5	5
Cap, veh/h	851	1216	390	161	1189	14	302	0	130	314	330	271
Arrive On Green	0.19	0.35	0.35	0.09	0.33	0.33	0.09	0.00	0.09	0.18	0.18	0.18
Sat Flow, veh/h	3072	2340	751	1767	3561	43	3365	0	1452	1739	1826	1497
Grp Volume(v), veh/h	125	151	151	91	573	599	224	0	2	38	213	207
Grp Sat Flow(s),veh/h/ln	1536	1580	1511	1767	1763	1841	1682	0	1452	1739	1826	1497
Q Serve(g_s), s	5.1	10.0	10.5	7.4	48.1	48.2	9.7	0.0	0.2	2.7	16.2	19.7
Cycle Q Clear(g_c), s	5.1	10.0	10.5	7.4	48.1	48.2	9.7	0.0	0.2	2.7	16.2	19.7
Prop In Lane	1.00		0.50	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	851	821	785	161	589	615	302	0	130	314	330	271
V/C Ratio(X)	0.15	0.18	0.19	0.56	0.97	0.97	0.74	0.00	0.02	0.12	0.65	0.77
Avail Cap(c_a), veh/h	851	821	785	284	589	615	628	0	271	475	499	409
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	26.7	26.9	65.3	49.3	49.3	66.6	0.0	62.2	51.5	57.0	58.4
Incr Delay (d2), s/veh	0.1	0.5	0.5	1.2	31.1	30.4	1.4	0.0	0.0	0.1	0.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.1	4.1	3.4	26.2	27.3	4.2	0.0	0.1	1.2	7.6	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	27.2	27.4	66.5	80.4	79.7	67.9	0.0	62.3	51.5	57.8	60.4
LnGrp LOS	D	C	C	E	F	E	E	A	E	D	E	E
Approach Vol, veh/h		427			1263			226			458	
Approach Delay, s/veh		32.9			79.1			67.9			58.4	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	45.5	55.0		31.1	18.6	82.0		18.3				
Change Period (Y+Rc), s	4.0	4.9		4.0	4.9	4.0		4.9				
Max Green Setting (Gmax), s	13.1	50.1		41.0	24.1	39.1		28.0				
Max Q Clear Time (g_c+I1), s	7.1	50.2		21.7	9.4	12.5		11.7				
Green Ext Time (p_c), s	0.2	0.0		1.4	0.1	1.7		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		65.7	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	275	76	391	1145	177	75	122	72	59	289	183
Future Volume (veh/h)	100	275	76	391	1145	177	75	122	72	59	289	183
Initial Q (Qb), veh	0	0	0	0	34	0	0	0	0	0	32	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.95	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	1722	1722	1722	1870	1870	1870	1767	1767	1767	1856	1856	1856
Adj Flow Rate, veh/h	103	284	51	403	1180	171	77	126	0	61	298	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	12	12	2	2	2	9	9	9	3	3	3
Cap, veh/h	414	1646	285	421	1779	217	151	503		152	505	
Arrive On Green	0.28	0.44	0.44	0.47	0.77	0.77	0.09	0.12	0.00	0.09	0.11	0.00
Sat Flow, veh/h	1640	4024	696	1781	4468	647	1682	3445	0	1767	3618	0
Grp Volume(v), veh/h	103	219	116	403	899	452	77	126	0	61	298	0
Grp Sat Flow(s),veh/h/ln	1640	1567	1586	1781	1702	1711	1682	1678	0	1767	1763	0
Q Serve(g_s), s	7.2	6.3	6.7	32.7	19.0	19.0	6.5	5.1	0.0	4.9	12.3	0.0
Cycle Q Clear(g_c), s	7.2	6.3	6.7	32.7	19.0	19.0	6.5	5.1	0.0	4.9	12.3	0.0
Prop In Lane	1.00		0.44	1.00		0.38	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	414	1282	648	421	1316	670	151	503		152	505	
V/C Ratio(X)	0.25	0.17	0.18	0.96	0.68	0.67	0.51	0.25		0.40	0.59	
Avail Cap(c_a), veh/h	463	1374	695	539	1316	662	214	866		225	917	
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)	0.99	0.99	0.99	0.65	0.65	0.65	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.0	28.4	28.5	38.8	13.5	13.4	65.1	56.6	0.0	64.9	62.6	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.6	17.5	1.9	3.5	1.0	0.1	0.0	0.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	6.7	6.3	0.0	0.0	0.0	0.0	70.3	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.6	2.8	14.0	7.2	7.3	2.9	2.1	0.0	2.2	12.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	28.7	29.1	56.3	22.2	23.2	66.1	56.7	0.0	65.5	133.3	0.0
LnGrp LOS	D	C	C	E	C	C	E	E		E	F	
Approach Vol, veh/h		438			1754			203	A		359	A
Approach Delay, s/veh		32.7			30.3			60.3			121.8	
Approach LOS		C			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.5	70.7	18.3	21.5	47.2	62.9	16.9	23.0
Change Period (Y+Rc), s	4.0	4.9	4.9	* 4.6	4.9	* 4.9	4.0	4.9
Max Green Setting (Gmax), s	45.4	29.0	19.1	* 39	16.4	* 58	19.1	38.7
Max Q Clear Time (g_c+I1), s	34.7	8.7	8.5	14.3	9.2	21.0	6.9	7.1
Green Ext Time (p_c), s	0.8	1.3	0.1	1.1	0.1	7.3	0.1	0.5

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 [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

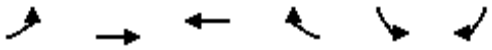
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	216	28	11	1392	233	235
Future Volume (veh/h)	216	28	11	1392	233	235
Initial Q (Qb), veh	0	0	0	0	5	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1856	1856	1781	1781
Adj Flow Rate, veh/h	218	19	11	1406	235	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	3	3	8	8
Cap, veh/h	3139	267	28	3778	296	
Arrive On Green	1.00	1.00	0.02	0.76	0.16	0.00
Sat Flow, veh/h	4710	387	1767	5233	1697	2657
Grp Volume(v), veh/h	154	83	11	1406	235	0
Grp Sat Flow(s),veh/h/ln	1621	1694	1767	1689	1697	1329
Q Serve(g_s), s	0.0	0.0	0.6	9.4	13.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.6	9.4	13.4	0.0
Prop In Lane		0.23	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2237	1169	28	3778	296	
V/C Ratio(X)	0.07	0.07	0.39	0.37	0.79	
Avail Cap(c_a), veh/h	2272	1187	141	3832	696	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.83	0.83	1.00	0.00
Uniform Delay (d), s/veh	0.1	0.1	48.7	4.6	40.1	0.0
Incr Delay (d2), s/veh	0.1	0.1	2.8	0.2	4.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	10.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	2.8	7.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.2	0.2	51.5	4.9	55.0	0.0
LnGrp LOS	A	A	D	A	E	
Approach Vol, veh/h	237			1417	235	A
Approach Delay, s/veh	0.2			5.2	55.0	
Approach LOS	A			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.6	74.1				79.6	20.4
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	39.0				51.0	41.0
Max Q Clear Time (g_c+I1), s	2.6	2.0				11.4	15.4
Green Ext Time (p_c), s	0.0	1.0				8.5	0.9

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

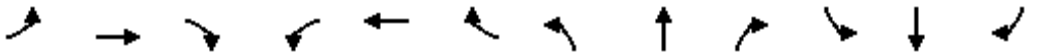
Notes

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	214	1509	116	30	60
Future Volume (vph)	66	214	1509	116	30	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1687	4848	2700		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1687	4848	5022		1770	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	67	218	1540	118	31	61
RTOR Reduction (vph)	0	0	5	0	0	55
Lane Group Flow (vph)	67	218	1653	0	31	6
Confl. Peds. (#/hr)				1		
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	7%	7%	2%	2%	2%	2%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	8.0	70.9	58.9		9.6	9.6
Effective Green, g (s)	8.0	70.9	58.9		9.6	9.6
Actuated g/C Ratio	0.08	0.71	0.59		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	134	3437	1590		169	151
v/s Ratio Prot	c0.04	0.04	c0.61		c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.50	0.06	1.04		0.18	0.04
Uniform Delay, d1	44.1	4.4	20.6		41.6	41.0
Progression Factor	1.00	1.00	0.79		1.00	1.00
Incremental Delay, d2	1.1	0.0	33.0		0.2	0.0
Delay (s)	45.2	4.5	49.3		41.8	41.1
Level of Service	D	A	D		D	D
Approach Delay (s)		14.0	49.3		41.3	
Approach LOS		B	D		D	

Intersection Summary			
HCM 2000 Control Delay	44.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	100	391	58	355	14	486	194	61	5	189	561
Future Volume (veh/h)	50	100	391	58	355	14	486	194	61	5	189	561
Initial Q (Qb), veh	0	0	0	0	25	0	0	0	0	0	72	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1811	1811	1811	1767	1767	1767	1841	1841	1841
Adj Flow Rate, veh/h	53	143	131	62	378	13	517	206	0	5	201	364
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	6	6	6	9	9	9	4	4	4
Cap, veh/h	127	482	402	137	494	4	831	855		391	410	332
Arrive On Green	0.07	0.23	0.23	0.08	0.24	0.24	0.29	0.29	0.00	0.22	0.22	0.22
Sat Flow, veh/h	1697	1781	1484	1725	1739	60	3264	3445	0	1753	1841	1489
Grp Volume(v), veh/h	53	143	131	62	0	391	517	206	0	5	201	364
Grp Sat Flow(s),veh/h/ln	1697	1781	1484	1725	0	1798	1632	1678	0	1753	1841	1489
Q Serve(g_s), s	3.1	7.0	7.8	3.6	0.0	22.2	14.0	4.9	0.0	0.2	10.0	23.4
Cycle Q Clear(g_c), s	3.1	7.0	7.8	3.6	0.0	22.2	14.0	4.9	0.0	0.2	10.0	23.4
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	482	402	137	0	494	831	855		391	410	332
V/C Ratio(X)	0.42	0.30	0.33	0.45	0.00	0.79	0.62	0.24		0.01	0.49	1.10
Avail Cap(c_a), veh/h	179	492	410	182	0	497	955	982		391	410	332
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)	0.73	0.73	0.73	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	30.4	30.6	46.1	0.0	38.1	34.7	31.1	0.0	31.8	40.8	40.8
Incr Delay (d2), s/veh	0.6	0.2	0.3	0.9	0.0	7.8	3.5	0.7	0.0	0.0	0.3	77.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	88.7	0.0	0.0	0.0	0.0	402.4	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.9	2.7	1.6	0.0	25.6	6.1	2.1	0.0	0.1	56.3	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	30.6	30.9	47.0	0.0	134.5	38.2	31.7	0.0	31.8	443.5	118.7
LnGrp LOS	D	C	C	D	A	F	D	C		C	F	F
Approach Vol, veh/h		327			453			723	A		570	
Approach Delay, s/veh		33.4			122.5			36.3			232.4	
Approach LOS		C			F			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	29.0		35.3	11.9	29.5		28.3				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.9				
Max Green Setting (Gmax), s	11.1	29.0		23.4	11.1	29.0		23.4				
Max Q Clear Time (g_c+I1), s	5.6	9.8		16.0	5.1	24.2		25.4				
Green Ext Time (p_c), s	0.0	1.0		1.6	0.0	0.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		108.6	
HCM 6th LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.

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

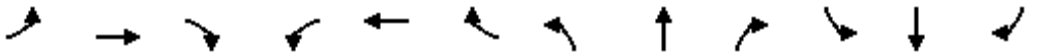
Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	49	268	63	30	1259	19	2	808	32	49	8
Future Volume (vph)	4	49	268	63	30	1259	19	2	808	32	49	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Lane Util. Factor		1.00	0.91		1.00	0.91			0.91	0.91	1.00	
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	0.94	
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Frt		1.00	0.97		1.00	1.00			1.00	1.00	0.85	
Flt Protected		0.95	1.00		0.95	1.00			0.95	0.96	1.00	
Satd. Flow (prot)		1597	4447		1770	5070			3189	1607	1480	
Flt Permitted		0.28	1.00		0.95	1.00			0.95	0.96	1.00	
Satd. Flow (perm)		467	4447		1770	5070			3189	1607	1480	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	4	51	279	66	31	1311	20	2	842	33	51	8
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	40	0
Lane Group Flow (vph)	0	55	345	0	31	1330	0	0	583	294	11	0
Confl. Peds. (#/hr)							8				37	
Confl. Bikes (#/hr)				2			5				4	
Heavy Vehicles (%)	13%	13%	13%	13%	2%	2%	2%	3%	3%	3%	3%	1%
Turn Type	custom	Prot	NA		Prot	NA		Split	Split	NA	Perm	Split
Protected Phases		1	6		5	2		4	4	4		7
Permitted Phases	1										4	
Actuated Green, G (s)		14.4	48.0		4.4	38.0			29.0	29.0	29.0	
Effective Green, g (s)		14.4	48.0		4.4	38.0			29.0	29.0	29.0	
Actuated g/C Ratio		0.11	0.37		0.03	0.29			0.22	0.22	0.22	
Clearance Time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Vehicle Extension (s)		2.0	3.0		2.0	3.0			2.0	2.0	2.0	
Lane Grp Cap (vph)		51	1644		60	1484			712	359	330	
v/s Ratio Prot			0.08		0.02	c0.26			0.18	c0.18		
v/s Ratio Perm		c0.12									0.01	
v/c Ratio		1.08	0.21		0.52	0.90			0.82	0.82	0.03	
Uniform Delay, d1		57.7	27.9		61.7	44.0			47.9	47.9	39.4	
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		149.7	0.1		3.1	7.5			6.9	12.9	0.0	
Delay (s)		207.4	28.0		64.8	51.5			54.8	60.8	39.5	
Level of Service		F	C		E	D			D	E	D	
Approach Delay (s)			52.7			51.8				55.9		
Approach LOS			D			D				E		

Intersection Summary			
HCM 2000 Control Delay	54.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	129.8	Sum of lost time (s)	21.1
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

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

Movement	SBT	SBR2	NER	NER2
Lane Configurations				
Traffic Volume (vph)	27	431	121	61
Future Volume (vph)	27	431	121	61
Ideal Flow (vphpl)	1900	1900	1990	1900
Total Lost time (s)	4.0		4.5	4.5
Lane Util. Factor	0.95		*0.95	1.00
Frpb, ped/bikes	0.97		1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00
Frt	0.86		1.00	0.85
Flt Protected	1.00		1.00	1.00
Satd. Flow (prot)	2969		3376	1442
Flt Permitted	1.00		1.00	1.00
Satd. Flow (perm)	2969		3376	1442
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	28	449	126	64
RTOR Reduction (vph)	372	0	0	0
Lane Group Flow (vph)	113	0	126	64
Confl. Peds. (#/hr)				54
Confl. Bikes (#/hr)		8		
Heavy Vehicles (%)	1%	1%	12%	12%
Turn Type	NA		Prot	Prot
Protected Phases	7		3	3
Permitted Phases				
Actuated Green, G (s)	9.1		18.2	18.2
Effective Green, g (s)	9.1		18.2	18.2
Actuated g/C Ratio	0.07		0.14	0.14
Clearance Time (s)	4.0		4.5	4.5
Vehicle Extension (s)	2.0		2.0	2.0
Lane Grp Cap (vph)	208		473	202
v/s Ratio Prot	c0.04		0.04	c0.04
v/s Ratio Perm				
v/c Ratio	0.93dr		0.27	0.32
Uniform Delay, d1	58.3		49.8	50.2
Progression Factor	1.00		1.00	1.00
Incremental Delay, d2	1.6		0.1	0.3
Delay (s)	59.9		49.9	50.5
Level of Service	E		D	D
Approach Delay (s)	59.9			
Approach LOS	E			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	169	200	800	224	378	101	15	269	158	827	130
Future Volume (veh/h)	169	169	200	800	224	378	101	15	269	158	827	130
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	1811	1811	1811	1811	1811	1811	1678	1678	1678	1856	1856	1856
Adj Flow Rate, veh/h	199	148	0	842	236	0	106	16	0	166	871	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	15	15	15	3	3	3
Cap, veh/h	381	200		901	473		142	821		376	1370	
Arrive On Green	0.11	0.11	0.00	0.26	0.26	0.00	0.09	0.26	0.00	0.21	0.39	0.00
Sat Flow, veh/h	3450	1811	1535	3450	1811	1535	1598	3272	0	1767	3526	1572
Grp Volume(v), veh/h	199	148	0	842	236	0	106	16	0	166	871	0
Grp Sat Flow(s),veh/h/ln	1725	1811	1535	1725	1811	1535	1598	1594	0	1767	1763	1572
Q Serve(g_s), s	6.5	9.5	0.0	28.6	13.3	0.0	7.8	0.4	0.0	9.8	24.1	0.0
Cycle Q Clear(g_c), s	6.5	9.5	0.0	28.6	13.3	0.0	7.8	0.4	0.0	9.8	24.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	200		901	473		142	821		376	1370	
V/C Ratio(X)	0.52	0.74		0.93	0.50		0.75	0.02		0.44	0.64	
Avail Cap(c_a), veh/h	635	334		914	480		160	821		376	1370	
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	0.41	0.41	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.4	51.7	0.0	43.3	37.7	0.0	53.3	33.2	0.0	41.1	29.8	0.0
Incr Delay (d2), s/veh	0.4	2.0	0.0	8.0	0.3	0.0	12.7	0.0	0.0	0.3	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.4	0.0	13.2	6.0	0.0	3.6	0.2	0.0	4.3	10.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	53.7	0.0	51.4	38.0	0.0	66.0	33.3	0.0	41.4	32.0	0.0
LnGrp LOS	D	D		D	D		E	C		D	C	
Approach Vol, veh/h		347	A		1078	A		122	A		1037	A
Approach Delay, s/veh		52.1			48.4			61.7			33.5	
Approach LOS		D			D			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	51.5		17.8	30.4	35.8		35.9				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	12.0	36.0		22.1	17.1	* 31		31.8				
Max Q Clear Time (g_c+I1), s	9.8	26.1		11.5	11.8	2.4		30.6				
Green Ext Time (p_c), s	0.0	4.5		0.8	0.1	0.0		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		43.6	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

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

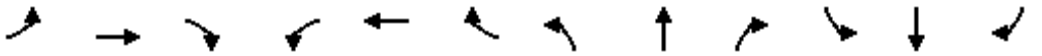
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	169.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	910	144	211	249	10	57	16	135	9	7	25
Future Vol, veh/h	21	910	144	211	249	10	57	16	135	9	7	25
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles, %	4	4	4	10	10	10	16	16	16	50	50	50
Mvmt Flow	21	919	145	213	252	10	58	16	136	9	7	25
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	273	16.1	13.7	13.8
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	78%	0%	2%	0%	100%	0%	22%
Vol Thru, %	22%	0%	98%	0%	0%	96%	17%
Vol Right, %	0%	100%	0%	100%	0%	4%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	135	931	144	211	259	41
LT Vol	57	0	21	0	211	0	9
Through Vol	16	0	910	0	0	249	7
RT Vol	0	135	0	144	0	10	25
Lane Flow Rate	74	136	940	145	213	262	41
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.168	0.269	1.643	0.225	0.419	0.477	0.098
Departure Headway (Hd)	9.173	8.044	6.29	5.567	7.764	7.223	9.738
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	394	450	583	646	467	502	370
Service Time	6.873	5.744	4.017	3.294	5.464	4.923	7.738
HCM Lane V/C Ratio	0.188	0.302	1.612	0.224	0.456	0.522	0.111
HCM Control Delay	13.7	13.7	313.7	9.9	15.9	16.3	13.8
HCM Lane LOS	B	B	F	A	C	C	B
HCM 95th-tile Q	0.6	1.1	52.5	0.9	2	2.5	0.3

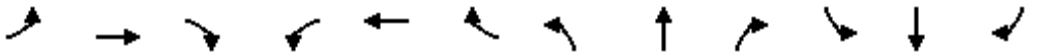


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	660	3	1	175	36	2	2	1	59	2	120
Future Volume (vph)	187	660	3	1	175	36	2	2	1	59	2	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.97			0.97			0.95	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1752	3502		1378	2672			1812			1394	1289
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.81	1.00
Satd. Flow (perm)	1752	3502		1378	2672			1849			1158	1289
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	189	667	3	1	177	36	2	2	1	60	2	121
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	16	76
Lane Group Flow (vph)	189	670	0	1	213	0	0	4	0	0	79	12
Confl. Peds. (#/hr)						11						
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	3%	3%	3%	31%	31%	31%	0%	0%	0%	19%	19%	19%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	10.7	28.0		0.5	17.8			0.6			6.9	6.9
Effective Green, g (s)	10.7	28.0		0.5	17.8			0.6			6.9	6.9
Actuated g/C Ratio	0.21	0.54		0.01	0.34			0.01			0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	360	1885		13	914			21			153	171
v/s Ratio Prot	c0.11	c0.19		0.00	0.08							
v/s Ratio Perm								c0.00			c0.07	0.01
v/c Ratio	0.53	0.36		0.08	0.23			0.19			0.52	0.07
Uniform Delay, d1	18.4	6.8		25.5	12.2			25.5			21.0	19.7
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.6	0.1		0.9	0.1			1.6			1.2	0.1
Delay (s)	19.0	6.9		26.4	12.3			27.1			22.2	19.8
Level of Service	B	A		C	B			C			C	B
Approach Delay (s)		9.6			12.4			27.1			21.1	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Harbor Wy./Forbes Blvd. & E. Grand Ave.

04/06/2020



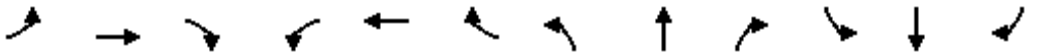
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	484	2599	183	34	644	18	168	724	260	195	84	361
Future Volume (veh/h)	484	2599	183	34	644	18	168	724	260	195	84	361
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1618	1618	1618	1752	1752	1752	1663	1663	1663
Adj Flow Rate, veh/h	489	2625	185	34	651	17	170	731	169	197	85	34
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	6	6	6	19	19	19	10	10	10	16	16	16
Cap, veh/h	845	2264	682	211	1194	31	316	630	276	252	265	382
Arrive On Green	0.25	0.46	0.46	0.07	0.27	0.27	0.19	0.19	0.19	0.16	0.16	0.16
Sat Flow, veh/h	3346	4944	1489	2990	4421	115	1668	3328	1458	1584	1663	2397
Grp Volume(v), veh/h	489	2625	185	34	433	235	170	731	169	197	85	34
Grp Sat Flow(s),veh/h/ln	1673	1648	1489	1495	1473	1590	1668	1664	1458	1584	1663	1198
Q Serve(g_s), s	19.2	68.7	11.5	1.6	18.9	19.0	13.8	28.4	15.9	17.9	6.8	1.8
Cycle Q Clear(g_c), s	19.2	68.7	11.5	1.6	18.9	19.0	13.8	28.4	15.9	17.9	6.8	1.8
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	845	2264	682	211	795	429	316	630	276	252	265	382
V/C Ratio(X)	0.58	1.16	0.27	0.16	0.54	0.55	0.54	1.16	0.61	0.78	0.32	0.09
Avail Cap(c_a), veh/h	845	2264	682	279	795	429	316	630	276	382	401	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	40.7	25.2	65.5	46.9	46.9	54.9	60.8	55.8	60.5	55.8	53.8
Incr Delay (d2), s/veh	0.1	72.3	0.1	0.1	2.7	4.9	1.0	88.8	2.9	2.7	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(50%),veh/ln	8.0	42.3	4.1	0.6	7.3	8.2	5.9	19.7	6.1	7.4	2.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	113.0	25.3	65.6	49.5	51.8	55.9	149.6	58.7	63.2	56.1	53.8
LnGrp LOS	D	F	C	E	D	D	E	F	E	E	E	D
Approach Vol, veh/h		3299			702			1070			316	
Approach Delay, s/veh		98.6			51.1			120.3			60.3	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.8	45.4		28.8	14.6	73.6		33.0				
Change Period (Y+Rc), s	4.9	* 4.9		4.9	4.0	4.9		4.6				
Max Green Setting (Gmax), s	27.0	* 41		36.2	14.0	53.5		28.4				
Max Q Clear Time (g_c+I1), s	21.2	21.0		19.9	3.6	70.7		30.4				
Green Ext Time (p_c), s	1.2	2.7		0.8	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		94.5	
HCM 6th LOS		F	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	2274	287	526	543	104	115	167	727	265	181	98
Future Volume (veh/h)	172	2274	287	526	543	104	115	167	727	265	181	98
Initial Q (Qb), veh	5	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1633	1633	1633	1752	1752	1752	1767	1767	1767
Adj Flow Rate, veh/h	174	2297	202	531	548	90	116	169	0	268	183	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	18	18	18	10	10	10	9	9	9
Cap, veh/h	214	2735	823	322	1907	307	154	205		191	463	
Arrive On Green	0.11	0.54	0.54	0.11	0.54	0.54	0.09	0.12	0.00	0.11	0.14	0.00
Sat Flow, veh/h	1753	5025	1513	3018	3857	621	1668	1752	1485	1682	3357	1497
Grp Volume(v), veh/h	174	2297	202	531	420	218	116	169	0	268	183	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1513	1509	1486	1506	1668	1752	1485	1682	1678	1497
Q Serve(g_s), s	14.7	57.6	10.5	16.0	11.4	11.7	10.2	14.1	0.0	17.0	7.5	0.0
Cycle Q Clear(g_c), s	14.7	57.6	10.5	16.0	11.4	11.7	10.2	14.1	0.0	17.0	7.5	0.0
Prop In Lane	1.00		1.00	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	2735	823	322	1470	744	154	205		191	463	
V/C Ratio(X)	0.81	0.84	0.25	1.65	0.29	0.29	0.75	0.82		1.41	0.40	
Avail Cap(c_a), veh/h	304	2735	823	322	1600	811	222	445		191	792	
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)	0.60	0.60	0.60	0.87	0.87	0.87	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.0	28.7	18.0	67.0	22.4	22.5	66.4	64.7	0.0	66.5	59.0	0.0
Incr Delay (d2), s/veh	4.5	2.0	0.4	304.2	0.4	0.9	4.1	3.2	0.0	210.8	0.2	0.0
Initial Q Delay(d3),s/veh	21.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	23.2	3.8	19.8	4.5	4.8	4.5	6.5	0.0	18.4	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.6	30.7	18.4	371.2	22.8	23.3	70.4	67.9	0.0	277.3	59.2	0.0
LnGrp LOS	F	C	B	F	C	C	E	E		F	E	
Approach Vol, veh/h		2673			1169			285	A		451	A
Approach Delay, s/veh		33.7			181.2			68.9			188.8	
Approach LOS		C			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	86.5	17.9	25.6	20.9	85.6	21.0	22.5
Change Period (Y+Rc), s	4.0	4.9	4.0	* 4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	16.0	61.1	20.0	* 35	26.0	51.1	17.0	38.1
Max Q Clear Time (g_c+I1), s	18.0	59.6	12.2	9.5	16.7	13.7	19.0	16.1
Green Ext Time (p_c), s	0.0	1.4	0.1	0.7	0.2	2.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	88.8
HCM 6th LOS	F

Notes

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

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

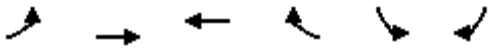
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2050	133	25	731	216	683
Future Volume (veh/h)	2050	133	25	731	216	683
Initial Q (Qb), veh	45	0	0	0	10	51
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1707	1707	1811	1811
Adj Flow Rate, veh/h	2071	128	25	738	218	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	13	13	6	6
Cap, veh/h	3200	170	49	3429	293	
Arrive On Green	0.70	0.70	0.03	0.77	0.15	0.00
Sat Flow, veh/h	4990	296	1626	4815	1725	2701
Grp Volume(v), veh/h	1434	765	25	738	218	0
Grp Sat Flow(s),veh/h/ln	1675	1771	1626	1554	1725	1351
Q Serve(g_s), s	22.4	22.8	1.5	4.3	12.3	0.0
Cycle Q Clear(g_c), s	22.4	22.8	1.5	4.3	12.3	0.0
Prop In Lane		0.17	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2198	1176	49	3429	293	
V/C Ratio(X)	0.65	0.65	0.51	0.22	0.74	
Avail Cap(c_a), veh/h	2345	1240	130	3590	517	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.95	0.95	1.00	0.00
Uniform Delay (d), s/veh	12.2	11.7	47.8	4.4	40.5	0.0
Incr Delay (d2), s/veh	1.3	2.4	2.9	0.1	3.7	0.0
Initial Q Delay(d3),s/veh	3.9	3.3	0.0	0.0	32.7	0.0
%ile BackOfQ(50%),veh/ln	12.2	12.8	0.6	1.3	9.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.3	17.4	50.7	4.5	77.0	0.0
LnGrp LOS	B	B	D	A	E	
Approach Vol, veh/h	2199			763	218	A
Approach Delay, s/veh	17.4			6.0	77.0	
Approach LOS	B			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.0	74.0				81.0	19.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	50.0				62.0	30.0
Max Q Clear Time (g_c+I1), s	3.5	24.8				6.3	14.3
Green Ext Time (p_c), s	0.0	13.3				3.8	0.7

Intersection Summary			
HCM 6th Ctrl Delay		18.7	
HCM 6th LOS		B	

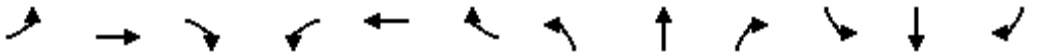
Notes

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	108	2129	906	41	54	38
Future Volume (vph)	108	2129	906	41	54	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1736	4988	4561		1703	1524
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1736	4988	4561		1703	1524
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	109	2151	915	41	55	38
RTOR Reduction (vph)	0	0	2	0	0	34
Lane Group Flow (vph)	109	2151	954	0	55	4
Heavy Vehicles (%)	4%	4%	13%	13%	6%	6%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	10.1	81.3	67.2		9.6	9.6
Effective Green, g (s)	10.1	81.3	67.2		9.6	9.6
Actuated g/C Ratio	0.10	0.81	0.67		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	175	4055	3064		163	146
v/s Ratio Prot	c0.06	c0.43	0.21		c0.03	
v/s Ratio Perm						0.00
v/c Ratio	0.62	0.53	0.31		0.34	0.02
Uniform Delay, d1	43.1	3.1	6.8		42.2	41.0
Progression Factor	1.00	1.00	1.11		1.00	1.00
Incremental Delay, d2	4.9	0.5	0.3		0.4	0.0
Delay (s)	48.0	3.6	7.8		42.7	41.0
Level of Service	D	A	A		D	D
Approach Delay (s)		5.7	7.8		42.0	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	366	456	37	417	30	466	1030	1265	22	116	653
Future Volume (veh/h)	156	366	456	37	417	30	466	1030	1265	22	116	653
Initial Q (Qb), veh	0	13	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1722	1722	1574	1574	1574	1811	1811	1811	1663	1663	1663
Adj Flow Rate, veh/h	158	370	90	37	421	3	471	1040	0	22	117	266
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	12	12	12	22	22	22	6	6	6	16	16	16
Cap, veh/h	493	410	592	94	603	181	1285	1321		226	237	339
Arrive On Green	0.05	0.08	0.08	0.06	0.14	0.14	0.39	0.39	0.00	0.14	0.14	0.14
Sat Flow, veh/h	3182	1722	2485	1499	4297	1288	3346	3532	0	1584	1663	2375
Grp Volume(v), veh/h	158	370	90	37	421	3	471	1040	0	22	117	266
Grp Sat Flow(s),veh/h/ln	1591	1722	1242	1499	1432	1288	1673	1721	0	1584	1663	1188
Q Serve(g_s), s	5.0	22.4	3.6	2.5	9.8	0.2	10.5	27.8	0.0	1.3	6.8	11.4
Cycle Q Clear(g_c), s	5.0	22.4	3.6	2.5	9.8	0.2	10.5	27.8	0.0	1.3	6.8	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	410	592	94	603	181	1285	1321		226	237	339
V/C Ratio(X)	0.32	0.90	0.15	0.39	0.70	0.02	0.37	0.79		0.10	0.49	0.78
Avail Cap(c_a), veh/h	480	410	592	143	1023	307	1298	1335		347	364	520
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	48.4	38.5	47.3	43.0	38.9	23.2	28.6	0.0	39.1	41.5	43.5
Incr Delay (d2), s/veh	0.1	15.7	0.1	1.0	0.6	0.0	0.8	4.8	0.0	0.1	0.6	1.9
Initial Q Delay(d3),s/veh	0.0	70.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	21.3	1.1	1.0	3.5	0.1	4.2	11.9	0.0	0.5	2.8	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	134.3	38.5	48.3	43.6	38.9	24.0	33.4	0.0	39.2	42.1	45.4
LnGrp LOS	D	F	D	D	D	D	C	C		D	D	D
Approach Vol, veh/h		618			461			1511	A		405	
Approach Delay, s/veh		97.4			43.9			30.4			44.1	
Approach LOS		F			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	29.2		45.3	20.5	19.3		19.9				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.6	* 4.6		4.9				
Max Green Setting (Gmax), s	10.0	25.0		28.9	10.0	* 25		23.0				
Max Q Clear Time (g_c+I1), s	4.5	24.4		29.8	7.0	11.8		13.4				
Green Ext Time (p_c), s	0.0	0.2		0.0	0.1	1.6		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		48.2	
HCM 6th LOS		D	

Notes

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

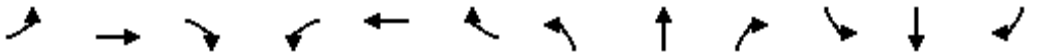
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	318	1990	833	48	887	21	529	92	127	10	16
Future Volume (vph)	1	318	1990	833	48	887	21	529	92	127	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91		1.00	0.91		0.91	0.91	1.00		0.95
Frpb, ped/bikes		1.00	0.99		1.00	1.00		1.00	1.00	0.93		0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Frt		1.00	0.96		1.00	1.00		1.00	1.00	0.85		0.91
Flt Protected		0.95	1.00		0.95	1.00		0.95	0.97	1.00		0.99
Satd. Flow (prot)		1752	4787		1480	4233		3042	1558	1390		2749
Flt Permitted		0.95	1.00		0.95	1.00		0.95	0.97	1.00		0.99
Satd. Flow (perm)		1752	4787		1480	4233		3042	1558	1390		2749
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	1	321	2010	841	48	896	21	534	93	128	10	16
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	101	0	60
Lane Group Flow (vph)	0	322	2851	0	48	916	0	417	210	27	0	2
Confl. Peds. (#/hr)							9			51		
Confl. Bikes (#/hr)				9			1			4		
Heavy Vehicles (%)	2%	3%	3%	3%	22%	22%	22%	8%	8%	8%	17%	17%
Turn Type	Prot	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA
Protected Phases	1	1	6		5	2		4	4		7	7
Permitted Phases										4		
Actuated Green, G (s)		14.3	40.9		7.4	34.0		26.9	26.9	26.9		3.5
Effective Green, g (s)		14.3	40.9		7.4	34.0		26.9	26.9	26.9		3.5
Actuated g/C Ratio		0.11	0.32		0.06	0.27		0.21	0.21	0.21		0.03
Clearance Time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Vehicle Extension (s)		2.0	3.0		2.0	3.0		2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		196	1539		86	1131		643	329	293		75
v/s Ratio Prot		c0.18	c0.60		0.03	0.22		c0.14	0.13			c0.00
v/s Ratio Perm										0.02		
v/c Ratio		1.64	1.85		0.56	0.81		0.65	0.64	0.09		0.02
Uniform Delay, d1		56.5	43.2		58.3	43.6		45.8	45.7	40.3		60.2
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2		311.1	386.2		4.4	4.4		1.7	3.0	0.1		0.0
Delay (s)		367.6	429.3		62.7	47.9		47.5	48.7	40.4		60.2
Level of Service		F	F		E	D		D	D	D		E
Approach Delay (s)			423.0			48.7			46.6			60.2
Approach LOS			F			D			D			E

Intersection Summary			
HCM 2000 Control Delay	386.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	127.2	Sum of lost time (s)	21.1
Intersection Capacity Utilization	162.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	NER	NER2
Lane Configurations			
Traffic Volume (vph)	36	1809	675
Future Volume (vph)	36	1809	675
Ideal Flow (vphpl)	1900	1990	1900
Total Lost time (s)		4.5	4.5
Lane Util. Factor		*0.95	1.00
Frpb, ped/bikes		1.00	1.00
Flpb, ped/bikes		1.00	1.00
Frt		1.00	0.85
Flt Protected		1.00	1.00
Satd. Flow (prot)		3781	1615
Flt Permitted		1.00	1.00
Satd. Flow (perm)		3781	1615
Peak-hour factor, PHF	0.99	0.99	0.99
Adj. Flow (vph)	36	1827	682
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	1827	682
Confl. Peds. (#/hr)			63
Confl. Bikes (#/hr)	2		
Heavy Vehicles (%)	17%	0%	0%
Turn Type		Prot	Prot
Protected Phases		3	3
Permitted Phases			
Actuated Green, G (s)		27.4	27.4
Effective Green, g (s)		27.4	27.4
Actuated g/C Ratio		0.22	0.22
Clearance Time (s)		4.5	4.5
Vehicle Extension (s)		2.0	2.0
Lane Grp Cap (vph)		814	347
v/s Ratio Prot		c0.48	0.42
v/s Ratio Perm			
v/c Ratio		2.24	1.97
Uniform Delay, d1		49.9	49.9
Progression Factor		1.00	1.00
Incremental Delay, d2		564.0	444.8
Delay (s)		613.9	494.7
Level of Service		F	F
Approach Delay (s)			
Approach LOS			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	289	149	1020	261	282	192	46	520	202	782	99
Future Volume (veh/h)	122	289	149	1020	261	282	192	46	520	202	782	99
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	1441	1441	1441	1618	1618	1618	1796	1796	1796	1811	1811	1811
Adj Flow Rate, veh/h	123	292	0	1030	264	0	194	46	0	204	790	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	31	31	31	19	19	19	7	7	7	6	6	6
Cap, veh/h	180	378		1093	407		196	453		524	1138	
Arrive On Green	0.13	0.13	0.00	0.08	0.08	0.00	0.11	0.13	0.00	0.30	0.33	0.00
Sat Flow, veh/h	1372	2881	1221	4347	1618	1372	1711	3413	1522	1725	3441	1535
Grp Volume(v), veh/h	123	292	0	1030	264	0	194	46	0	204	790	0
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1449	1618	1372	1711	1706	1522	1725	1721	1535
Q Serve(g_s), s	9.0	10.3	0.0	24.8	16.6	0.0	11.9	1.2	0.0	9.8	20.9	0.0
Cycle Q Clear(g_c), s	9.0	10.3	0.0	24.8	16.6	0.0	11.9	1.2	0.0	9.8	20.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	180	378		1093	407		196	453		524	1138	
V/C Ratio(X)	0.68	0.77		0.94	0.65		0.99	0.10		0.39	0.69	
Avail Cap(c_a), veh/h	287	604		1093	407		196	686		524	1138	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.70	0.70	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.5	44.1	0.0	47.4	43.7	0.0	46.5	40.0	0.0	28.9	30.5	0.0
Incr Delay (d2), s/veh	1.7	1.3	0.0	11.8	2.5	0.0	61.9	0.0	0.0	0.2	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.7	0.0	10.8	7.5	0.0	8.3	0.5	0.0	4.0	9.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	45.4	0.0	59.2	46.2	0.0	108.4	40.1	0.0	29.1	34.0	0.0
LnGrp LOS	D	D		E	D		F	D		C	C	
Approach Vol, veh/h		415	A		1294	A		240	A		994	A
Approach Delay, s/veh		45.3			56.5			95.3			33.0	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	39.6		18.4	36.8	18.8		31.0				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	12.0	26.5		22.0	17.4	* 21		26.4				
Max Q Clear Time (g_c+I1), s	13.9	22.9		12.3	11.8	3.2		26.8				
Green Ext Time (p_c), s	0.0	1.8		1.1	0.2	0.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		50.2
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

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

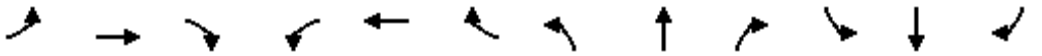
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	231.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	253	37	104	925	13	318	0	112	4	12	39
Future Vol, veh/h	8	253	37	104	925	13	318	0	112	4	12	39
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles, %	22	22	22	10	10	10	7	7	7	100	100	100
Mvmt Flow	8	256	37	105	934	13	321	0	113	4	12	39
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	21.7	386.1	27.9	17
HCM LOS	C	F	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	3%	0%	100%	0%	7%
Vol Thru, %	0%	0%	97%	0%	0%	99%	22%
Vol Right, %	0%	100%	0%	100%	0%	1%	71%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	318	112	261	37	104	938	55
LT Vol	318	0	8	0	104	0	4
Through Vol	0	0	253	0	0	925	12
RT Vol	0	112	0	37	0	13	39
Lane Flow Rate	321	113	264	37	105	947	56
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.72	0.216	0.575	0.074	0.225	1.895	0.153
Departure Headway (Hd)	9.475	8.23	8.973	8.226	7.724	7.202	11.896
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	439	406	438	464	512	303
Service Time	7.175	5.93	6.673	5.926	5.481	4.958	9.896
HCM Lane V/C Ratio	0.834	0.257	0.65	0.084	0.226	1.85	0.185
HCM Control Delay	33.1	13.2	23.1	11.6	12.7	427.5	17
HCM Lane LOS	D	B	C	B	B	F	C
HCM 95th-tile Q	5.5	0.8	3.5	0.2	0.9	61.2	0.5

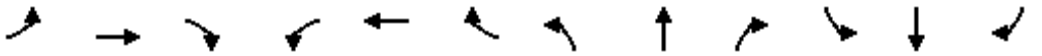


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	174	3	1	861	61	3	1	1	27	1	421
Future Volume (vph)	113	174	3	1	861	61	3	1	1	27	1	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.97			0.87	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	1.00
Satd. Flow (prot)	1492	2975		1656	3273			1795			1484	1461
Flt Permitted	0.95	1.00		0.95	1.00			0.64			0.96	1.00
Satd. Flow (perm)	1492	2975		1656	3273			1174			1431	1461
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	114	176	3	1	870	62	3	1	1	27	1	425
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	181	204
Lane Group Flow (vph)	114	179	0	1	932	0	0	4	0	0	47	21
Confl. Peds. (#/hr)			1			2						
Confl. Bikes (#/hr)						3						
Heavy Vehicles (%)	21%	21%	21%	9%	9%	9%	0%	0%	0%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	11.6	48.5		0.8	37.7			19.4			8.7	8.7
Effective Green, g (s)	11.6	48.5		0.8	37.7			19.4			8.7	8.7
Actuated g/C Ratio	0.12	0.52		0.01	0.40			0.21			0.09	0.09
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	185	1544		14	1321			243			133	136
v/s Ratio Prot	c0.08	0.06		0.00	c0.28							
v/s Ratio Perm								c0.00			c0.03	0.01
v/c Ratio	0.62	0.12		0.07	0.71			0.02			0.35	0.15
Uniform Delay, d1	38.8	11.5		45.9	23.2			29.4			39.7	39.0
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.2	0.0		0.8	1.6			0.1			0.6	0.2
Delay (s)	43.0	11.5		46.7	24.8			29.6			40.3	39.2
Level of Service	D	B		D	C			C			D	D
Approach Delay (s)		23.8			24.9			29.6			39.7	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Harbor Wy./Forbes Blvd. & E. Grand Ave.

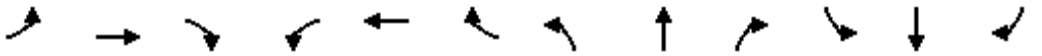
04/06/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	801	179	308	2346	14	302	60	35	43	448	545
Future Volume (veh/h)	358	801	179	308	2346	14	302	60	35	43	448	545
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.92	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1663	1856	1856	1856	1767	1767	1767	1826	1826	1826
Adj Flow Rate, veh/h	362	809	181	311	2370	13	305	61	5	43	453	287
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	16	16	16	3	3	3	9	9	9	5	5	5
Cap, veh/h	372	1468	446	360	1597	9	315	629	275	462	485	704
Arrive On Green	0.24	0.65	0.65	0.10	0.31	0.31	0.19	0.19	0.19	0.27	0.27	0.27
Sat Flow, veh/h	3072	4540	1379	3428	5196	28	1682	3357	1466	1739	1826	2652
Grp Volume(v), veh/h	362	809	181	311	1539	844	305	61	5	43	453	287
Grp Sat Flow(s),veh/h/ln	1536	1513	1379	1714	1689	1848	1682	1678	1466	1739	1826	1326
Q Serve(g_s), s	17.5	14.7	9.4	13.4	46.1	46.1	27.0	2.3	0.4	2.8	36.3	13.4
Cycle Q Clear(g_c), s	17.5	14.7	9.4	13.4	46.1	46.1	27.0	2.3	0.4	2.8	36.3	13.4
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	372	1468	446	360	1038	568	315	629	275	462	485	704
V/C Ratio(X)	0.97	0.55	0.41	0.86	1.48	1.49	0.97	0.10	0.02	0.09	0.93	0.41
Avail Cap(c_a), veh/h	372	1468	446	446	1038	568	315	629	275	487	511	743
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.6	20.5	19.6	66.1	51.9	52.0	60.5	50.4	49.7	41.5	53.8	45.4
Incr Delay (d2), s/veh	35.7	1.3	2.3	11.8	222.6	227.9	41.6	0.0	0.0	0.0	23.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	4.1	2.8	6.5	51.5	57.2	15.1	1.0	0.2	1.2	19.8	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	21.8	21.9	77.9	274.6	279.8	102.1	50.5	49.7	41.5	77.1	45.5
LnGrp LOS	F	C	C	E	F	F	F	D	D	D	E	D
Approach Vol, veh/h		1352			2694			371			783	
Approach Delay, s/veh		40.7			253.5			92.9			63.6	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.2	51.0		43.8	20.6	52.5		33.0				
Change Period (Y+Rc), s	4.0	4.9		4.0	4.9	4.0		4.9				
Max Green Setting (Gmax), s	16.0	46.1		42.0	19.5	42.6		28.1				
Max Q Clear Time (g_c+I1), s	19.5	48.1		38.3	15.4	16.7		29.0				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.4	6.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			158.1									
HCM 6th LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	800	191	722	1981	490	577	160	414	124	376	795
Future Volume (veh/h)	165	800	191	722	1981	490	577	160	414	124	376	795
Initial Q (Qb), veh	0	0	0	0	34	0	0	0	0	0	32	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.94	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	1722	1722	1722	1870	1870	1870	1767	1767	1767	1856	1856	1856
Adj Flow Rate, veh/h	167	808	44	729	2001	467	583	162	0	125	380	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	12	12	12	2	2	2	9	9	9	3	3	3
Cap, veh/h	704	2990	920	438	1563	130	314	650		164	588	
Arrive On Green	0.22	0.43	0.43	0.25	0.65	0.65	0.19	0.23	0.00	0.09	0.14	0.00
Sat Flow, veh/h	1640	4701	1440	3456	4125	915	1682	1767	1497	1767	3526	1572
Grp Volume(v), veh/h	167	808	44	729	1633	835	583	162	0	125	380	0
Grp Sat Flow(s),veh/h/ln	1640	1567	1440	1728	1702	1636	1682	1767	1497	1767	1763	1572
Q Serve(g_s), s	13.2	17.8	1.5	19.0	49.1	49.1	28.0	11.6	0.0	10.4	15.7	0.0
Cycle Q Clear(g_c), s	13.2	17.8	1.5	19.0	49.1	49.1	28.0	11.6	0.0	10.4	15.7	0.0
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	704	2990	920	438	1114	579	314	650		164	588	
V/C Ratio(X)	0.24	0.27	0.05	1.67	1.47	1.44	1.86	0.25		0.76	0.65	
Avail Cap(c_a), veh/h	363	2013	616	438	1114	535	314	625		224	1044	
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)	0.95	0.95	0.95	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	12.8	16.2	56.0	25.9	25.9	61.0	33.3	0.0	66.4	60.8	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.1	300.4	210.0	199.8	397.4	0.1	0.0	6.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	73.2	70.5	0.0	0.0	0.0	0.0	60.3	0.0
%ile BackOfQ(50%),veh/ln	3.9	4.0	0.6	25.7	57.7	57.9	46.6	4.2	0.0	5.0	14.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	13.0	16.3	356.4	309.2	296.2	458.4	33.3	0.0	72.7	121.6	0.0
LnGrp LOS	C	B	B	F	F	F	F	C		E	F	
Approach Vol, veh/h		1019			3197			745	A		505	A
Approach Delay, s/veh		15.6			316.5			366.0			109.4	
Approach LOS		B			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	69.1	32.9	25.0	38.1	54.0	17.9	40.0
Change Period (Y+Rc), s	4.0	4.9	4.9	* 4.6	4.9	* 4.9	4.0	4.9
Max Green Setting (Gmax), s	19.0	41.1	28.0	* 44	11.0	* 49	19.0	53.1
Max Q Clear Time (g_c+I1), s	21.0	19.8	30.0	17.7	15.2	51.1	12.4	13.6
Green Ext Time (p_c), s	0.0	3.9	0.0	1.5	0.0	0.0	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	248.0
HCM 6th LOS	F

Notes

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

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

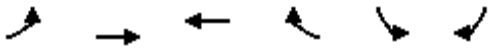
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	836	141	12	3341	422	320
Future Volume (veh/h)	836	141	12	3341	422	320
Initial Q (Qb), veh	0	0	0	0	5	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1856	1856	1781	1781
Adj Flow Rate, veh/h	844	125	12	3375	426	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	3	3	8	8
Cap, veh/h	2185	321	30	2583	489	
Arrive On Green	1.00	1.00	0.02	0.64	0.28	0.00
Sat Flow, veh/h	4414	626	1767	5233	1697	2657
Grp Volume(v), veh/h	642	327	12	3375	426	0
Grp Sat Flow(s),veh/h/ln	1621	1637	1767	1689	1697	1329
Q Serve(g_s), s	0.0	0.0	0.7	64.2	24.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.7	64.2	24.2	0.0
Prop In Lane		0.38	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1666	840	30	2583	489	
V/C Ratio(X)	0.39	0.39	0.40	1.31	0.87	
Avail Cap(c_a), veh/h	1896	957	141	3251	696	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.09	0.09	1.00	0.00
Uniform Delay (d), s/veh	1.5	1.5	48.6	24.5	34.4	0.0
Incr Delay (d2), s/veh	0.7	1.3	0.3	138.1	8.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	5.9	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	0.3	51.9	12.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.1	2.8	48.9	162.6	48.8	0.0
LnGrp LOS	A	A	D	F	D	
Approach Vol, veh/h	969			3387	426	A
Approach Delay, s/veh	2.3			162.2	48.8	
Approach LOS	A			F	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.7	62.5				68.2	31.8
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	39.0				51.0	41.0
Max Q Clear Time (g_c+I1), s	2.7	2.0				66.2	26.2
Green Ext Time (p_c), s	0.0	4.7				0.0	1.6

Intersection Summary		
HCM 6th Ctrl Delay		119.7
HCM 6th LOS		F

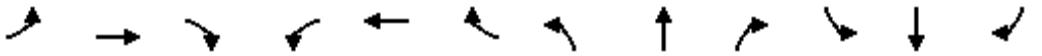
Notes

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	947	3647	116	30	75
Future Volume (vph)	66	947	3647	116	30	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1687	4848	2700		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1687	4848	5058		1770	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	67	957	3684	117	30	76
RTOR Reduction (vph)	0	0	2	0	0	69
Lane Group Flow (vph)	67	957	3799	0	30	7
Confl. Peds. (#/hr)				1		
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	7%	7%	2%	2%	2%	2%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	8.0	70.9	58.9		9.6	9.6
Effective Green, g (s)	8.0	70.9	58.9		9.6	9.6
Actuated g/C Ratio	0.08	0.71	0.59		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	134	3437	1590		169	151
v/s Ratio Prot	c0.04	0.20	c1.41		c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.50	0.28	2.39		0.18	0.05
Uniform Delay, d1	44.1	5.3	20.6		41.6	41.1
Progression Factor	1.00	1.00	1.48		1.00	1.00
Incremental Delay, d2	1.1	0.2	625.3		0.2	0.0
Delay (s)	45.2	5.5	655.7		41.8	41.1
Level of Service	D	A	F		D	D
Approach Delay (s)		8.1	655.7		41.3	
Approach LOS		A	F		D	

Intersection Summary			
HCM 2000 Control Delay	508.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	148	485	130	1119	14	468	712	175	10	260	1207
Future Volume (veh/h)	110	148	485	130	1119	14	468	712	175	10	260	1207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1811	1811	1811	1767	1767	1767	1841	1841	1841
Adj Flow Rate, veh/h	111	149	106	131	1130	3	473	719	0	10	263	926
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	6	6	6	9	9	9	4	4	4
Cap, veh/h	301	421	611	161	1177	355	752	773		469	493	705
Arrive On Green	0.09	0.24	0.24	0.09	0.24	0.24	0.23	0.23	0.00	0.27	0.27	0.27
Sat Flow, veh/h	3291	1781	2584	1725	4944	1492	3264	3445	0	1753	1841	2633
Grp Volume(v), veh/h	111	149	106	131	1130	3	473	719	0	10	263	926
Grp Sat Flow(s),veh/h/ln	1646	1781	1292	1725	1648	1492	1632	1678	0	1753	1841	1316
Q Serve(g_s), s	3.3	7.3	3.4	7.8	23.7	0.2	13.7	22.0	0.0	0.4	12.8	28.1
Cycle Q Clear(g_c), s	3.3	7.3	3.4	7.8	23.7	0.2	13.7	22.0	0.0	0.4	12.8	28.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	421	611	161	1177	355	752	773		469	493	705
V/C Ratio(X)	0.37	0.35	0.17	0.82	0.96	0.01	0.63	0.93		0.02	0.53	1.31
Avail Cap(c_a), veh/h	313	424	615	164	1177	355	752	773		469	493	705
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)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	33.4	31.9	46.7	39.5	30.5	36.4	39.6	0.0	28.3	32.9	38.5
Incr Delay (d2), s/veh	0.2	0.3	0.1	24.1	17.3	0.0	4.0	19.2	0.0	0.0	0.6	151.4
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(50%),veh/ln	1.4	3.2	1.1	4.4	11.3	0.1	5.8	10.9	0.0	0.2	5.7	23.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	33.7	32.0	70.8	56.8	30.5	40.3	58.7	0.0	28.3	33.4	189.8
LnGrp LOS	D	C	C	E	E	C	D	E		C	C	F
Approach Vol, veh/h		366			1264			1192	A		1199	
Approach Delay, s/veh		36.6			58.2			51.4			154.2	
Approach LOS		D			E			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.8	29.4		28.8	13.6	29.6		33.0
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.9
Max Green Setting (Gmax), s	10.0	25.0		23.8	10.0	25.0		28.1
Max Q Clear Time (g_c+I1), s	9.8	9.3		24.0	5.3	25.7		30.1
Green Ext Time (p_c), s	0.0	0.9		0.0	0.1	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		82.8
HCM 6th LOS		F

Notes

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

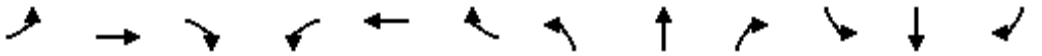
Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	49	755	262	152	3170	19	2	1677	32	80	8
Future Volume (vph)	4	49	755	262	152	3170	19	2	1677	32	80	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Lane Util. Factor		1.00	0.91		1.00	0.91			0.91	0.91	1.00	
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	0.94	
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Frt		1.00	0.96		1.00	1.00			1.00	1.00	0.85	
Flt Protected		0.95	1.00		0.95	1.00			0.95	0.95	1.00	
Satd. Flow (prot)		1597	4397		1770	5079			3189	1603	1478	
Flt Permitted		0.95	1.00		0.95	1.00			0.95	0.95	1.00	
Satd. Flow (perm)		1597	4397		1770	5079			3189	1603	1478	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	4	49	763	265	154	3202	19	2	1694	32	81	8
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	61	0
Lane Group Flow (vph)	0	53	1028	0	154	3220	0	0	1154	574	20	0
Confl. Peds. (#/hr)							8				37	
Confl. Bikes (#/hr)				2			5				4	
Heavy Vehicles (%)	13%	13%	13%	13%	2%	2%	2%	3%	3%	3%	3%	1%
Turn Type	Prot	Prot	NA		Prot	NA		Split	Split	NA	Perm	Split
Protected Phases	1	1	6		5	2		4	4	4		7
Permitted Phases											4	
Actuated Green, G (s)		7.8	35.5		13.5	41.2			34.0	34.0	34.0	
Effective Green, g (s)		7.8	35.5		13.5	41.2			34.0	34.0	34.0	
Actuated g/C Ratio		0.06	0.26		0.10	0.30			0.25	0.25	0.25	
Clearance Time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Vehicle Extension (s)		2.0	3.0		2.0	3.0			2.0	2.0	2.0	
Lane Grp Cap (vph)		91	1146		175	1536			796	400	368	
v/s Ratio Prot		0.03	0.23		c0.09	c0.63			c0.36	0.36		
v/s Ratio Perm											0.01	
v/c Ratio		0.58	0.90		0.88	2.10			1.45	1.44	0.05	
Uniform Delay, d1		62.6	48.6		60.6	47.5			51.1	51.1	38.9	
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		6.0	9.4		35.6	495.7			209.4	209.6	0.0	
Delay (s)		68.6	58.0		96.2	543.2			260.5	260.7	38.9	
Level of Service		E	E		F	F			F	F	D	
Approach Delay (s)			58.5			522.8				250.7		
Approach LOS			E			F				F		

Intersection Summary			
HCM 2000 Control Delay	318.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	136.2	Sum of lost time (s)	21.1
Intersection Capacity Utilization	140.7%	ICU Level of Service	H
Analysis Period (min)	15		

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

Movement	SBT	SBR2	NER	NER2
Lane Configurations				
Traffic Volume (vph)	27	431	443	187
Future Volume (vph)	27	431	443	187
Ideal Flow (vphpl)	1900	1900	1990	1900
Total Lost time (s)	4.0		4.5	4.5
Lane Util. Factor	0.95		*0.95	1.00
Frpb, ped/bikes	0.96		1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00
Frt	0.86		1.00	0.85
Flt Protected	1.00		1.00	1.00
Satd. Flow (prot)	2963		3376	1442
Flt Permitted	1.00		1.00	1.00
Satd. Flow (perm)	2963		3376	1442
Peak-hour factor, PHF	0.99	0.99	0.99	0.99
Adj. Flow (vph)	27	435	447	189
RTOR Reduction (vph)	372	0	0	0
Lane Group Flow (vph)	98	0	447	189
Confl. Peds. (#/hr)				54
Confl. Bikes (#/hr)		8		
Heavy Vehicles (%)	1%	1%	12%	12%
Turn Type	NA		Prot	Prot
Protected Phases	7		3	3
Permitted Phases				
Actuated Green, G (s)	8.8		23.3	23.3
Effective Green, g (s)	8.8		23.3	23.3
Actuated g/C Ratio	0.06		0.17	0.17
Clearance Time (s)	4.0		4.5	4.5
Vehicle Extension (s)	2.0		2.0	2.0
Lane Grp Cap (vph)	191		577	246
v/s Ratio Prot	c0.03		c0.13	0.13
v/s Ratio Perm				
v/c Ratio	0.92dr		0.77	0.77
Uniform Delay, d1	61.6		53.9	53.9
Progression Factor	1.00		1.00	1.00
Incremental Delay, d2	1.0		5.9	12.2
Delay (s)	62.6		59.8	66.0
Level of Service	E		E	E
Approach Delay (s)	62.6			
Approach LOS	E			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	262	208	1977	311	416	112	29	362	158	1139	183
Future Volume (veh/h)	169	262	208	1977	311	416	112	29	362	158	1139	183
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	1811	1811	1811	1811	1811	1811	1678	1678	1678	1856	1856	1856
Adj Flow Rate, veh/h	145	301	0	1997	314	0	113	29	0	160	1151	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	6	6	6	6	6	6	15	15	15	3	3	3
Cap, veh/h	199	417		1475	549		143	757		328	1203	
Arrive On Green	0.12	0.12	0.00	0.30	0.30	0.00	0.09	0.24	0.00	0.19	0.34	0.00
Sat Flow, veh/h	1725	3622	1535	4864	1811	1535	1598	3188	1422	1767	3526	1572
Grp Volume(v), veh/h	145	301	0	1997	314	0	113	29	0	160	1151	0
Grp Sat Flow(s),veh/h/ln	1725	1811	1535	1621	1811	1535	1598	1594	1422	1767	1763	1572
Q Serve(g_s), s	9.7	9.6	0.0	36.4	17.5	0.0	8.3	0.8	0.0	9.7	38.3	0.0
Cycle Q Clear(g_c), s	9.7	9.6	0.0	36.4	17.5	0.0	8.3	0.8	0.0	9.7	38.3	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	199	417		1475	549		143	757		328	1203	
V/C Ratio(X)	0.73	0.72		1.35	0.57		0.79	0.04		0.49	0.96	
Avail Cap(c_a), veh/h	316	664		1475	549		146	757		328	1203	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.3	51.2	0.0	41.8	35.2	0.0	53.5	35.2	0.0	43.7	38.7	0.0
Incr Delay (d2), s/veh	1.9	0.9	0.0	159.5	0.1	0.0	22.2	0.1	0.0	0.4	17.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	4.4	0.0	36.3	7.8	0.0	4.2	0.3	0.0	4.3	19.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	52.1	0.0	201.3	35.4	0.0	75.7	35.3	0.0	44.2	56.2	0.0
LnGrp LOS	D	D		F	D		E	D		D	E	
Approach Vol, veh/h		446	A		2311	A		142	A		1311	A
Approach Delay, s/veh		52.5			178.8			67.5			54.7	
Approach LOS		D			F			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	45.8		18.4	27.2	33.4		41.0				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	11.0	32.5		22.0	15.0	* 29		36.4				
Max Q Clear Time (g_c+I1), s	10.3	40.3		11.7	11.7	2.8		38.4				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.1	0.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	123.0	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

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

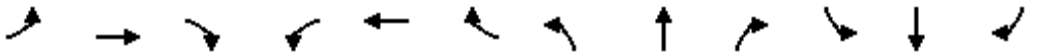
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	171.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	911	145	211	265	10	63	16	135	9	7	25
Future Vol, veh/h	21	911	145	211	265	10	63	16	135	9	7	25
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles, %	4	4	4	10	10	10	16	16	16	50	50	50
Mvmt Flow	21	920	146	213	268	10	64	16	136	9	7	25
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	279	16.8	13.8	13.9
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	80%	0%	2%	0%	100%	0%	22%
Vol Thru, %	20%	0%	98%	0%	0%	96%	17%
Vol Right, %	0%	100%	0%	100%	0%	4%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	135	932	145	211	275	41
LT Vol	63	0	21	0	211	0	9
Through Vol	16	0	911	0	0	265	7
RT Vol	0	135	0	145	0	10	25
Lane Flow Rate	80	136	941	146	213	278	41
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.183	0.27	1.659	0.229	0.421	0.508	0.099
Departure Headway (Hd)	9.225	8.086	6.345	5.622	7.817	7.277	9.824
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	392	447	574	639	465	500	367
Service Time	6.925	5.786	4.076	3.353	5.517	4.977	7.824
HCM Lane V/C Ratio	0.204	0.304	1.639	0.228	0.458	0.556	0.112
HCM Control Delay	14	13.7	320.9	10	16.1	17.3	13.9
HCM Lane LOS	B	B	F	A	C	C	B
HCM 95th-tile Q	0.7	1.1	53.1	0.9	2.1	2.8	0.3

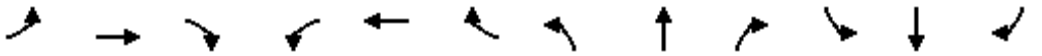


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	750	3	1	188	36	2	2	1	59	2	120
Future Volume (vph)	187	750	3	1	188	36	2	2	1	59	2	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.98			0.97			0.95	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1752	3502		1378	2676			1812			1394	1289
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.81	1.00
Satd. Flow (perm)	1752	3502		1378	2676			1849			1158	1289
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	189	758	3	1	190	36	2	2	1	60	2	121
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	16	76
Lane Group Flow (vph)	189	761	0	1	226	0	0	4	0	0	79	12
Confl. Peds. (#/hr)						11						
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	3%	3%	3%	31%	31%	31%	0%	0%	0%	19%	19%	19%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	10.8	28.1		0.5	17.8			0.6			6.9	6.9
Effective Green, g (s)	10.8	28.1		0.5	17.8			0.6			6.9	6.9
Actuated g/C Ratio	0.21	0.54		0.01	0.34			0.01			0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	363	1888		13	914			21			153	170
v/s Ratio Prot	c0.11	c0.22		0.00	0.08							
v/s Ratio Perm								c0.00			c0.07	0.01
v/c Ratio	0.52	0.40		0.08	0.25			0.19			0.52	0.07
Uniform Delay, d1	18.3	7.1		25.6	12.3			25.5			21.1	19.8
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.6	0.1		0.9	0.1			1.6			1.2	0.1
Delay (s)	19.0	7.2		26.5	12.4			27.1			22.3	19.8
Level of Service	B	A		C	B			C			C	B
Approach Delay (s)		9.5			12.5			27.1			21.1	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Harbor Wy./Forbes Blvd. & E. Grand Ave.

04/06/2020



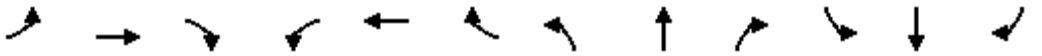
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	546	2599	183	34	644	18	168	724	260	195	84	369
Future Volume (veh/h)	546	2599	183	34	644	18	168	724	260	195	84	369
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.94	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1618	1618	1618	1752	1752	1752	1663	1663	1663
Adj Flow Rate, veh/h	552	2625	185	34	651	17	170	731	169	197	85	50
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	6	6	6	19	19	19	10	10	10	16	16	16
Cap, veh/h	911	2263	681	211	1105	29	316	630	276	253	266	383
Arrive On Green	0.27	0.46	0.46	0.07	0.25	0.25	0.19	0.19	0.19	0.16	0.16	0.16
Sat Flow, veh/h	3346	4944	1489	2990	4420	115	1668	3328	1458	1584	1663	2397
Grp Volume(v), veh/h	552	2625	185	34	433	235	170	731	169	197	85	50
Grp Sat Flow(s),veh/h/ln	1673	1648	1489	1495	1473	1590	1668	1664	1458	1584	1663	1198
Q Serve(g_s), s	21.6	68.6	11.5	1.6	19.4	19.5	13.8	28.4	15.9	17.9	6.8	2.7
Cycle Q Clear(g_c), s	21.6	68.6	11.5	1.6	19.4	19.5	13.8	28.4	15.9	17.9	6.8	2.7
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	911	2263	681	211	736	397	316	630	276	253	266	383
V/C Ratio(X)	0.61	1.16	0.27	0.16	0.59	0.59	0.54	1.16	0.61	0.78	0.32	0.13
Avail Cap(c_a), veh/h	911	2263	681	279	736	397	316	630	276	382	401	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	40.7	25.2	65.5	49.5	49.5	54.9	60.8	55.8	60.5	55.8	54.1
Incr Delay (d2), s/veh	0.1	72.6	0.1	0.1	3.4	6.3	1.0	88.8	2.9	2.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	42.3	4.1	0.6	7.5	8.5	5.9	19.7	6.1	7.4	2.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	113.3	25.3	65.6	52.9	55.8	55.9	149.6	58.7	63.1	56.1	54.1
LnGrp LOS	D	F	C	E	D	E	E	F	E	E	E	D
Approach Vol, veh/h		3362			702			1070			332	
Approach Delay, s/veh		97.7			54.5			120.3			60.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	45.7	42.4		28.9	14.6	73.5		33.0				
Change Period (Y+Rc), s	4.9	* 4.9		4.9	4.0	4.9		4.6				
Max Green Setting (Gmax), s	30.0	* 38		36.2	14.0	53.5		28.4				
Max Q Clear Time (g_c+I1), s	23.6	21.5		19.9	3.6	70.6		30.4				
Green Ext Time (p_c), s	1.5	2.6		0.8	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		94.3
HCM 6th LOS		F

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	2325	287	531	546	104	125	167	738	265	181	98
Future Volume (veh/h)	172	2325	287	531	546	104	125	167	738	265	181	98
Initial Q (Qb), veh	5	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1633	1633	1633	1752	1752	1752	1767	1767	1767
Adj Flow Rate, veh/h	174	2348	204	536	552	88	126	169	0	268	183	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	18	18	18	10	10	10	9	9	9
Cap, veh/h	214	2802	844	302	1942	304	155	205		179	440	
Arrive On Green	0.11	0.56	0.56	0.10	0.54	0.54	0.09	0.12	0.00	0.11	0.13	0.00
Sat Flow, veh/h	1753	5025	1514	3018	3875	606	1668	1752	1485	1682	3357	1497
Grp Volume(v), veh/h	174	2348	204	536	421	219	126	169	0	268	183	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1514	1509	1486	1509	1668	1752	1485	1682	1678	1497
Q Serve(g_s), s	14.7	58.2	10.3	15.0	11.3	11.6	11.1	14.1	0.0	16.0	7.5	0.0
Cycle Q Clear(g_c), s	14.7	58.2	10.3	15.0	11.3	11.6	11.1	14.1	0.0	16.0	7.5	0.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	2802	844	302	1490	756	155	205		179	440	
V/C Ratio(X)	0.81	0.84	0.24	1.78	0.28	0.29	0.81	0.82		1.49	0.42	
Avail Cap(c_a), veh/h	304	2802	844	302	1620	822	200	445		179	815	
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)	0.58	0.58	0.58	0.86	0.86	0.86	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.0	27.6	17.0	67.5	21.8	21.9	66.8	64.7	0.0	67.0	59.9	0.0
Incr Delay (d2), s/veh	4.3	1.9	0.4	360.7	0.4	0.8	13.8	3.2	0.0	249.1	0.2	0.0
Initial Q Delay(d3),s/veh	21.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	23.3	3.7	20.9	4.5	4.8	5.3	6.5	0.0	19.3	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.5	29.4	17.4	428.2	22.2	22.7	80.6	67.9	0.0	316.1	60.1	0.0
LnGrp LOS	F	C	B	F	C	C	F	E		F	E	
Approach Vol, veh/h		2726			1176			295	A		451	A
Approach Delay, s/veh		32.4			207.3			73.3			212.2	
Approach LOS		C			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	88.5	17.9	24.5	20.9	86.6	20.0	22.5
Change Period (Y+Rc), s	4.0	4.9	4.0	* 4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	15.0	63.1	18.0	* 36	26.0	52.1	16.0	38.1
Max Q Clear Time (g_c+I1), s	17.0	60.2	13.1	9.5	16.7	13.6	18.0	16.1
Green Ext Time (p_c), s	0.0	2.6	0.1	0.7	0.2	2.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	96.7
HCM 6th LOS	F

Notes

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

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

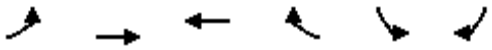
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2062	133	25	744	216	722
Future Volume (veh/h)	2062	133	25	744	216	722
Initial Q (Qb), veh	45	0	0	0	10	51
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1707	1707	1811	1811
Adj Flow Rate, veh/h	2083	128	25	752	218	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	13	13	6	6
Cap, veh/h	3198	169	49	3427	293	
Arrive On Green	0.23	0.23	0.03	0.77	0.15	0.00
Sat Flow, veh/h	4992	295	1626	4815	1725	2701
Grp Volume(v), veh/h	1441	770	25	752	218	0
Grp Sat Flow(s),veh/h/ln	1675	1771	1626	1554	1725	1351
Q Serve(g_s), s	38.6	39.0	1.5	4.4	12.3	0.0
Cycle Q Clear(g_c), s	38.6	39.0	1.5	4.4	12.3	0.0
Prop In Lane		0.17	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2195	1175	49	3427	293	
V/C Ratio(X)	0.66	0.65	0.51	0.22	0.74	
Avail Cap(c_a), veh/h	2345	1240	130	3590	517	
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.94	0.94	1.00	0.00
Uniform Delay (d), s/veh	30.7	30.3	47.8	4.4	40.5	0.0
Incr Delay (d2), s/veh	1.3	2.4	2.9	0.1	3.7	0.0
Initial Q Delay(d3),s/veh	3.9	3.4	0.0	0.0	32.7	0.0
%ile BackOfQ(50%),veh/ln	21.0	22.4	0.6	1.4	9.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.0	36.2	50.7	4.6	77.0	0.0
LnGrp LOS	D	D	D	A	E	
Approach Vol, veh/h	2211			777	218	A
Approach Delay, s/veh	36.0			6.0	77.0	
Approach LOS	D			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.0	74.0				81.0	19.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	50.0				62.0	30.0
Max Q Clear Time (g_c+I1), s	3.5	41.0				6.4	14.3
Green Ext Time (p_c), s	0.0	6.6				3.9	0.7

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

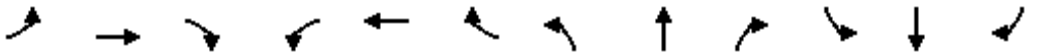
Notes

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	108	2141	918	42	54	38
Future Volume (vph)	108	2141	918	42	54	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1736	4988	4560		1703	1524
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1736	4988	4560		1703	1524
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	109	2163	927	42	55	38
RTOR Reduction (vph)	0	0	2	0	0	34
Lane Group Flow (vph)	109	2163	967	0	55	4
Heavy Vehicles (%)	4%	4%	13%	13%	6%	6%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	10.1	81.3	67.2		9.6	9.6
Effective Green, g (s)	10.1	81.3	67.2		9.6	9.6
Actuated g/C Ratio	0.10	0.81	0.67		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	175	4055	3064		163	146
v/s Ratio Prot	c0.06	c0.43	0.21		c0.03	
v/s Ratio Perm						0.00
v/c Ratio	0.62	0.53	0.32		0.34	0.02
Uniform Delay, d1	43.1	3.1	6.8		42.2	41.0
Progression Factor	1.00	1.00	1.05		1.00	1.00
Incremental Delay, d2	4.9	0.5	0.3		0.4	0.0
Delay (s)	48.0	3.6	7.4		42.7	41.0
Level of Service	D	A	A		D	D
Approach Delay (s)		5.7	7.4		42.0	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	366	456	37	417	30	466	1041	1265	22	116	658
Future Volume (veh/h)	156	366	456	37	417	30	466	1041	1265	22	116	658
Initial Q (Qb), veh	0	13	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1722	1722	1574	1574	1574	1811	1811	1811	1663	1663	1663
Adj Flow Rate, veh/h	158	370	90	37	421	3	471	1052	0	22	117	272
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	12	12	12	22	22	22	6	6	6	16	16	16
Cap, veh/h	493	410	592	94	603	181	1277	1313		230	241	344
Arrive On Green	0.05	0.08	0.08	0.06	0.14	0.14	0.39	0.39	0.00	0.14	0.14	0.14
Sat Flow, veh/h	3182	1722	2485	1499	4297	1288	3346	3532	0	1584	1663	2376
Grp Volume(v), veh/h	158	370	90	37	421	3	471	1052	0	22	117	272
Grp Sat Flow(s),veh/h/ln	1591	1722	1242	1499	1432	1288	1673	1721	0	1584	1663	1188
Q Serve(g_s), s	5.0	22.4	3.6	2.5	9.8	0.2	10.6	28.4	0.0	1.3	6.8	11.6
Cycle Q Clear(g_c), s	5.0	22.4	3.6	2.5	9.8	0.2	10.6	28.4	0.0	1.3	6.8	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	410	592	94	603	181	1277	1313		230	241	344
V/C Ratio(X)	0.32	0.90	0.15	0.39	0.70	0.02	0.37	0.80		0.10	0.49	0.79
Avail Cap(c_a), veh/h	480	410	592	143	1023	307	1291	1327		347	364	521
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	48.4	38.5	47.3	43.0	38.9	23.4	28.9	0.0	38.9	41.3	43.3
Incr Delay (d2), s/veh	0.1	15.7	0.1	1.0	0.6	0.0	0.8	5.2	0.0	0.1	0.6	2.3
Initial Q Delay(d3),s/veh	0.0	70.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	21.3	1.1	1.0	3.5	0.1	4.2	12.3	0.0	0.5	2.8	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	134.3	38.5	48.3	43.6	38.9	24.2	34.1	0.0	39.0	41.8	45.7
LnGrp LOS	D	F	D	D	D	D	C	C		D	D	D
Approach Vol, veh/h		618			461			1523	A		411	
Approach Delay, s/veh		97.4			43.9			31.0			44.2	
Approach LOS		F			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	29.2		45.1	20.5	19.3		20.1				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.6	* 4.6		4.9				
Max Green Setting (Gmax), s	10.0	25.0		28.9	10.0	* 25		23.0				
Max Q Clear Time (g_c+I1), s	4.5	24.4		30.4	7.0	11.8		13.6				
Green Ext Time (p_c), s	0.0	0.2		0.0	0.1	1.6		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		48.4	
HCM 6th LOS		D	

Notes

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

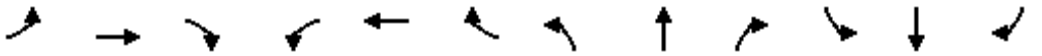
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	320	2016	839	48	887	21	532	92	127	10	16
Future Volume (vph)	1	320	2016	839	48	887	21	532	92	127	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91		1.00	0.91		0.91	0.91	1.00		0.95
Frpb, ped/bikes		1.00	0.99		1.00	1.00		1.00	1.00	0.93		0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Frt		1.00	0.96		1.00	1.00		1.00	1.00	0.85		0.91
Flt Protected		0.95	1.00		0.95	1.00		0.95	0.97	1.00		0.99
Satd. Flow (prot)		1752	4788		1480	4233		3042	1557	1390		2749
Flt Permitted		0.95	1.00		0.95	1.00		0.95	0.97	1.00		0.99
Satd. Flow (perm)		1752	4788		1480	4233		3042	1557	1390		2749
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	1	323	2036	847	48	896	21	537	93	128	10	16
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	101	0	60
Lane Group Flow (vph)	0	324	2883	0	48	916	0	419	211	27	0	2
Confl. Peds. (#/hr)							9			51		
Confl. Bikes (#/hr)				9			1			4		
Heavy Vehicles (%)	2%	3%	3%	3%	22%	22%	22%	8%	8%	8%	17%	17%
Turn Type	Prot	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA
Protected Phases	1	1	6		5	2		4	4		7	7
Permitted Phases										4		
Actuated Green, G (s)		14.3	40.9		7.4	34.0		26.9	26.9	26.9		3.5
Effective Green, g (s)		14.3	40.9		7.4	34.0		26.9	26.9	26.9		3.5
Actuated g/C Ratio		0.11	0.32		0.06	0.27		0.21	0.21	0.21		0.03
Clearance Time (s)		4.0	4.6		4.0	4.6		4.0	4.0	4.0		4.0
Vehicle Extension (s)		2.0	3.0		2.0	3.0		2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		196	1539		86	1131		643	329	293		75
v/s Ratio Prot		c0.18	c0.60		0.03	0.22		c0.14	0.14			c0.00
v/s Ratio Perm										0.02		
v/c Ratio		1.65	1.87		0.56	0.81		0.65	0.64	0.09		0.02
Uniform Delay, d1		56.5	43.2		58.3	43.6		45.9	45.7	40.3		60.2
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2		315.5	395.5		4.4	4.4		1.8	3.2	0.1		0.0
Delay (s)		372.0	438.6		62.7	47.9		47.7	48.9	40.4		60.2
Level of Service		F	F		E	D		D	D	D		E
Approach Delay (s)			431.9			48.7			46.8			60.2
Approach LOS			F			D			D			E

Intersection Summary			
HCM 2000 Control Delay	394.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	127.2	Sum of lost time (s)	21.1
Intersection Capacity Utilization	163.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	NER	NER2
Lane Configurations			
Traffic Volume (vph)	36	1813	701
Future Volume (vph)	36	1813	701
Ideal Flow (vphpl)	1900	1990	1900
Total Lost time (s)		4.5	4.5
Lane Util. Factor		*0.95	1.00
Frpb, ped/bikes		1.00	1.00
Flpb, ped/bikes		1.00	1.00
Frt		1.00	0.85
Flt Protected		1.00	1.00
Satd. Flow (prot)		3781	1615
Flt Permitted		1.00	1.00
Satd. Flow (perm)		3781	1615
Peak-hour factor, PHF	0.99	0.99	0.99
Adj. Flow (vph)	36	1831	708
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	1831	708
Confl. Peds. (#/hr)			63
Confl. Bikes (#/hr)	2		
Heavy Vehicles (%)	17%	0%	0%
Turn Type		Prot	Prot
Protected Phases		3	3
Permitted Phases			
Actuated Green, G (s)		27.4	27.4
Effective Green, g (s)		27.4	27.4
Actuated g/C Ratio		0.22	0.22
Clearance Time (s)		4.5	4.5
Vehicle Extension (s)		2.0	2.0
Lane Grp Cap (vph)		814	347
v/s Ratio Prot		c0.48	0.44
v/s Ratio Perm			
v/c Ratio		2.25	2.04
Uniform Delay, d1		49.9	49.9
Progression Factor		1.00	1.00
Incremental Delay, d2		566.2	478.1
Delay (s)		616.1	528.0
Level of Service		F	F
Approach Delay (s)			
Approach LOS			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	289	149	1025	261	282	192	46	520	202	783	99
Future Volume (veh/h)	122	289	149	1025	261	282	192	46	520	202	783	99
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	1441	1441	1441	1618	1618	1618	1796	1796	1796	1811	1811	1811
Adj Flow Rate, veh/h	123	292	0	1035	264	0	194	46	0	204	791	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	31	31	31	19	19	19	7	7	7	6	6	6
Cap, veh/h	180	378		1093	407		196	453		524	1138	
Arrive On Green	0.13	0.13	0.00	0.08	0.08	0.00	0.11	0.13	0.00	0.30	0.33	0.00
Sat Flow, veh/h	1372	2881	1221	4347	1618	1372	1711	3413	1522	1725	3441	1535
Grp Volume(v), veh/h	123	292	0	1035	264	0	194	46	0	204	791	0
Grp Sat Flow(s),veh/h/ln	1372	1441	1221	1449	1618	1372	1711	1706	1522	1725	1721	1535
Q Serve(g_s), s	9.0	10.3	0.0	24.9	16.6	0.0	11.9	1.2	0.0	9.8	21.0	0.0
Cycle Q Clear(g_c), s	9.0	10.3	0.0	24.9	16.6	0.0	11.9	1.2	0.0	9.8	21.0	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	180	378		1093	407		196	453		524	1138	
V/C Ratio(X)	0.68	0.77		0.95	0.65		0.99	0.10		0.39	0.70	
Avail Cap(c_a), veh/h	287	604		1093	407		196	686		524	1138	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.70	0.70	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.5	44.1	0.0	47.4	43.7	0.0	46.5	40.0	0.0	28.9	30.5	0.0
Incr Delay (d2), s/veh	1.7	1.3	0.0	12.4	2.5	0.0	61.9	0.0	0.0	0.2	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.7	0.0	10.9	7.5	0.0	8.3	0.5	0.0	4.0	9.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	45.4	0.0	59.9	46.2	0.0	108.4	40.1	0.0	29.1	34.1	0.0
LnGrp LOS	D	D		E	D		F	D		C	C	
Approach Vol, veh/h		415	A		1299	A		240	A		995	A
Approach Delay, s/veh		45.3			57.1			95.3			33.0	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	39.6		18.4	36.8	18.8		31.0				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	12.0	26.5		22.0	17.4	* 21		26.4				
Max Q Clear Time (g_c+I1), s	13.9	23.0		12.3	11.8	3.2		26.9				
Green Ext Time (p_c), s	0.0	1.8		1.1	0.2	0.1		0.0				

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

Notes

User approved volume balancing among the lanes for turning movement.

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

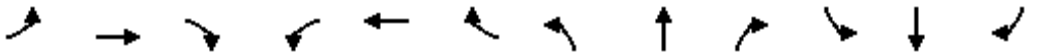
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	233.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	257	43	104	928	13	319	0	112	4	12	39
Future Vol, veh/h	8	257	43	104	928	13	319	0	112	4	12	39
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles, %	22	22	22	10	10	10	7	7	7	100	100	100
Mvmt Flow	8	260	43	105	937	13	322	0	113	4	12	39
Number of Lanes	0	1	1	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	21.9	391.5	28.2	17.1
HCM LOS	C	F	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	3%	0%	100%	0%	7%
Vol Thru, %	0%	0%	97%	0%	0%	99%	22%
Vol Right, %	0%	100%	0%	100%	0%	1%	71%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	319	112	265	43	104	941	55
LT Vol	319	0	8	0	104	0	4
Through Vol	0	0	257	0	0	928	12
RT Vol	0	112	0	43	0	13	39
Lane Flow Rate	322	113	268	43	105	951	56
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.724	0.217	0.585	0.086	0.226	1.908	0.154
Departure Headway (Hd)	9.508	8.262	8.999	8.252	7.749	7.227	11.964
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	438	404	437	462	504	302
Service Time	7.208	5.962	6.699	5.952	5.512	4.989	9.964
HCM Lane V/C Ratio	0.841	0.258	0.663	0.098	0.227	1.887	0.185
HCM Control Delay	33.5	13.2	23.6	11.7	12.8	433.4	17.1
HCM Lane LOS	D	B	C	B	B	F	C
HCM 95th-tile Q	5.5	0.8	3.6	0.3	0.9	61.8	0.5

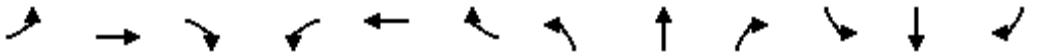


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	188	3	1	956	61	3	1	1	27	1	421
Future Volume (vph)	113	188	3	1	956	61	3	1	1	27	1	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.97			0.87	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	1.00
Satd. Flow (prot)	1492	2976		1656	3277			1795			1484	1461
Flt Permitted	0.95	1.00		0.95	1.00			0.63			0.96	1.00
Satd. Flow (perm)	1492	2976		1656	3277			1158			1430	1461
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	114	190	3	1	966	62	3	1	1	27	1	425
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	182	205
Lane Group Flow (vph)	114	193	0	1	1028	0	0	4	0	0	46	20
Confl. Peds. (#/hr)			1			2						
Confl. Bikes (#/hr)						3						
Heavy Vehicles (%)	21%	21%	21%	9%	9%	9%	0%	0%	0%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			3			4	
Permitted Phases							3			4		4
Actuated Green, G (s)	11.7	54.4		0.9	43.6			19.1			8.7	8.7
Effective Green, g (s)	11.7	54.4		0.9	43.6			19.1			8.7	8.7
Actuated g/C Ratio	0.12	0.55		0.01	0.44			0.19			0.09	0.09
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0			2.0	2.0
Lane Grp Cap (vph)	176	1633		15	1441			223			125	128
v/s Ratio Prot	c0.08	0.06		0.00	c0.31							
v/s Ratio Perm								c0.00			c0.03	0.01
v/c Ratio	0.65	0.12		0.07	0.71			0.02			0.36	0.15
Uniform Delay, d1	41.7	10.8		48.7	22.7			32.4			42.6	41.8
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	6.0	0.0		0.7	1.6			0.2			0.7	0.2
Delay (s)	47.7	10.8		49.4	24.2			32.6			43.3	42.0
Level of Service	D	B		D	C			C			D	D
Approach Delay (s)		24.5			24.3			32.6			42.6	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Harbor Wy./Forbes Blvd. & E. Grand Ave.

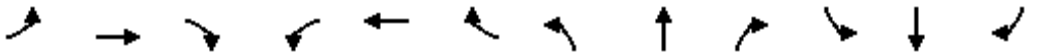
04/06/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	368	801	179	308	2346	14	302	60	35	43	448	596
Future Volume (veh/h)	368	801	179	308	2346	14	302	60	35	43	448	596
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.92	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1663	1856	1856	1856	1767	1767	1767	1826	1826	1826
Adj Flow Rate, veh/h	372	809	181	311	2370	13	305	61	5	43	453	338
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	16	16	16	3	3	3	9	9	9	5	5	5
Cap, veh/h	434	1436	436	362	1458	8	324	646	282	464	488	708
Arrive On Green	0.28	0.63	0.63	0.11	0.28	0.28	0.19	0.19	0.19	0.27	0.27	0.27
Sat Flow, veh/h	3072	4540	1378	3428	5196	28	1682	3357	1467	1739	1826	2652
Grp Volume(v), veh/h	372	809	181	311	1539	844	305	61	5	43	453	338
Grp Sat Flow(s),veh/h/ln	1536	1513	1378	1714	1689	1847	1682	1678	1467	1739	1826	1326
Q Serve(g_s), s	17.2	15.3	9.8	13.4	42.1	42.1	26.8	2.2	0.4	2.8	36.3	16.1
Cycle Q Clear(g_c), s	17.2	15.3	9.8	13.4	42.1	42.1	26.8	2.2	0.4	2.8	36.3	16.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	434	1436	436	362	948	519	324	646	282	464	488	708
V/C Ratio(X)	0.86	0.56	0.42	0.86	1.62	1.63	0.94	0.09	0.02	0.09	0.93	0.48
Avail Cap(c_a), veh/h	434	1436	436	494	948	519	326	651	285	498	523	760
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	21.7	20.7	66.0	53.9	54.0	59.7	49.8	49.1	41.3	53.6	46.2
Incr Delay (d2), s/veh	13.3	1.3	2.4	8.5	285.7	290.9	34.4	0.0	0.0	0.0	21.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	4.2	2.9	6.3	55.5	61.4	14.5	1.0	0.2	1.2	19.6	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.6	23.0	23.1	74.4	339.7	344.8	94.1	49.8	49.1	41.3	75.3	46.4
LnGrp LOS	E	C	C	E	F	F	F	D	D	D	E	D
Approach Vol, veh/h		1362			2694			371			834	
Approach Delay, s/veh		34.7			310.7			86.2			61.8	
Approach LOS		C			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.2	47.0		44.1	20.8	51.4		33.8				
Change Period (Y+Rc), s	4.0	4.9		4.0	4.9	4.0		4.9				
Max Green Setting (Gmax), s	18.0	42.1		43.0	21.6	38.5		29.1				
Max Q Clear Time (g_c+I1), s	19.2	44.1		38.3	15.4	17.3		28.8				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.5	6.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			183.9									
HCM 6th LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	808	191	762	1992	490	577	160	416	124	376	795
Future Volume (veh/h)	165	808	191	762	1992	490	577	160	416	124	376	795
Initial Q (Qb), veh	0	0	0	0	34	0	0	0	0	0	32	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.94	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	1722	1722	1722	1870	1870	1870	1767	1767	1767	1856	1856	1856
Adj Flow Rate, veh/h	167	816	41	770	2012	467	583	162	0	125	380	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	12	12	12	2	2	2	9	9	9	3	3	3
Cap, veh/h	704	2990	920	438	1563	130	314	650		164	588	
Arrive On Green	0.22	0.43	0.43	0.17	0.44	0.44	0.19	0.23	0.00	0.09	0.14	0.00
Sat Flow, veh/h	1640	4701	1440	3456	4130	911	1682	1767	1497	1767	3526	1572
Grp Volume(v), veh/h	167	816	41	770	1639	840	583	162	0	125	380	0
Grp Sat Flow(s),veh/h/ln	1640	1567	1440	1728	1702	1637	1682	1767	1497	1767	1763	1572
Q Serve(g_s), s	13.2	18.0	1.4	19.0	49.1	49.1	28.0	11.6	0.0	10.4	15.7	0.0
Cycle Q Clear(g_c), s	13.2	18.0	1.4	19.0	49.1	49.1	28.0	11.6	0.0	10.4	15.7	0.0
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	704	2990	920	438	1114	579	314	650		164	588	
V/C Ratio(X)	0.24	0.27	0.04	1.76	1.47	1.45	1.86	0.25		0.76	0.65	
Avail Cap(c_a), veh/h	363	2013	616	438	1114	536	314	625		224	1044	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	12.8	16.2	62.4	42.3	42.3	61.0	33.3	0.0	66.4	60.8	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.1	342.5	212.6	203.5	397.4	0.1	0.0	6.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	73.2	70.5	0.0	0.0	0.0	0.0	60.3	0.0
%ile BackOfQ(50%),veh/ln	3.9	4.1	0.5	28.9	63.6	64.2	46.6	4.2	0.0	5.0	14.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	13.0	16.3	404.8	328.1	316.3	458.4	33.3	0.0	72.7	121.6	0.0
LnGrp LOS	C	B	B	F	F	F	F	C		E	F	
Approach Vol, veh/h		1024			3249			745	A		505	A
Approach Delay, s/veh		15.6			343.3			366.0			109.4	
Approach LOS		B			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	69.1	32.9	25.0	38.1	54.0	17.9	40.0
Change Period (Y+Rc), s	4.0	4.9	4.9	* 4.6	4.9	* 4.9	4.0	4.9
Max Green Setting (Gmax), s	19.0	41.1	28.0	* 44	11.0	* 49	19.0	53.1
Max Q Clear Time (g_c+I1), s	21.0	20.0	30.0	17.7	15.2	51.1	12.4	13.6
Green Ext Time (p_c), s	0.0	3.9	0.0	1.5	0.0	0.0	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	264.2
HCM 6th LOS	F

Notes

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

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

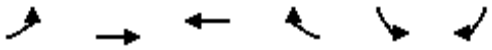
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	838	141	12	3352	422	326
Future Volume (veh/h)	838	141	12	3352	422	326
Initial Q (Qb), veh	0	0	0	0	5	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1856	1856	1781	1781
Adj Flow Rate, veh/h	846	125	12	3386	426	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	3	3	8	8
Cap, veh/h	2186	321	30	2583	489	
Arrive On Green	1.00	1.00	0.02	0.64	0.28	0.00
Sat Flow, veh/h	4415	624	1767	5233	1697	2657
Grp Volume(v), veh/h	643	328	12	3386	426	0
Grp Sat Flow(s),veh/h/ln	1621	1637	1767	1689	1697	1329
Q Serve(g_s), s	0.0	0.0	0.7	64.2	24.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.7	64.2	24.2	0.0
Prop In Lane		0.38	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1666	840	30	2583	489	
V/C Ratio(X)	0.39	0.39	0.40	1.31	0.87	
Avail Cap(c_a), veh/h	1896	957	141	3251	696	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.09	0.09	1.00	0.00
Uniform Delay (d), s/veh	1.5	1.5	48.6	24.5	34.4	0.0
Incr Delay (d2), s/veh	0.7	1.3	0.3	140.1	8.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	5.9	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	0.3	52.3	12.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.1	2.8	48.9	164.6	48.8	0.0
LnGrp LOS	A	A	D	F	D	
Approach Vol, veh/h	971			3398	426	A
Approach Delay, s/veh	2.4			164.1	48.8	
Approach LOS	A			F	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.7	62.5				68.2	31.8
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	39.0				51.0	41.0
Max Q Clear Time (g_c+I1), s	2.7	2.0				66.2	26.2
Green Ext Time (p_c), s	0.0	4.7				0.0	1.6

Intersection Summary		
HCM 6th Ctrl Delay		121.1
HCM 6th LOS		F

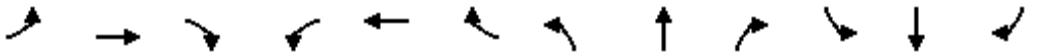
Notes

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	949	3658	116	30	75
Future Volume (vph)	66	949	3658	116	30	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.9	4.9		4.2	4.2
Lane Util. Factor	1.00	0.91	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1687	4848	2700		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1687	4848	5058		1770	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	67	959	3695	117	30	76
RTOR Reduction (vph)	0	0	2	0	0	69
Lane Group Flow (vph)	67	959	3810	0	30	7
Confl. Peds. (#/hr)				1		
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	7%	7%	2%	2%	2%	2%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases						3
Actuated Green, G (s)	8.0	70.9	58.9		9.6	9.6
Effective Green, g (s)	8.0	70.9	58.9		9.6	9.6
Actuated g/C Ratio	0.08	0.71	0.59		0.10	0.10
Clearance Time (s)	4.0	4.9	4.9		4.2	4.2
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	134	3437	1590		169	151
v/s Ratio Prot	c0.04	0.20	c1.41		c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.50	0.28	2.40		0.18	0.05
Uniform Delay, d1	44.1	5.3	20.6		41.6	41.1
Progression Factor	1.00	1.00	1.48		1.00	1.00
Incremental Delay, d2	1.1	0.2	628.5		0.2	0.0
Delay (s)	45.2	5.5	658.8		41.8	41.1
Level of Service	D	A	F		D	D
Approach Delay (s)		8.1	658.8		41.3	
Approach LOS		A	F		D	

Intersection Summary			
HCM 2000 Control Delay	510.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	148	485	130	1119	14	486	714	175	10	260	1247
Future Volume (veh/h)	110	148	485	130	1119	14	486	714	175	10	260	1247
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1811	1811	1811	1767	1767	1767	1841	1841	1841
Adj Flow Rate, veh/h	111	149	106	131	1130	3	491	721	0	10	263	970
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	6	6	6	9	9	9	4	4	4
Cap, veh/h	301	421	611	161	1177	355	752	773		469	493	705
Arrive On Green	0.09	0.24	0.24	0.09	0.24	0.24	0.23	0.23	0.00	0.27	0.27	0.27
Sat Flow, veh/h	3291	1781	2584	1725	4944	1492	3264	3445	0	1753	1841	2633
Grp Volume(v), veh/h	111	149	106	131	1130	3	491	721	0	10	263	970
Grp Sat Flow(s),veh/h/ln	1646	1781	1292	1725	1648	1492	1632	1678	0	1753	1841	1316
Q Serve(g_s), s	3.3	7.3	3.4	7.8	23.7	0.2	14.3	22.1	0.0	0.4	12.8	28.1
Cycle Q Clear(g_c), s	3.3	7.3	3.4	7.8	23.7	0.2	14.3	22.1	0.0	0.4	12.8	28.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	421	611	161	1177	355	752	773		469	493	705
V/C Ratio(X)	0.37	0.35	0.17	0.82	0.96	0.01	0.65	0.93		0.02	0.53	1.38
Avail Cap(c_a), veh/h	313	424	615	164	1177	355	752	773		469	493	705
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)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	33.4	31.9	46.7	39.5	30.5	36.6	39.6	0.0	28.3	32.9	38.5
Incr Delay (d2), s/veh	0.2	0.3	0.1	24.1	17.3	0.0	4.4	19.5	0.0	0.0	0.6	178.4
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(50%),veh/ln	1.4	3.2	1.1	4.4	11.3	0.1	6.0	11.0	0.0	0.2	5.7	26.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	33.7	32.0	70.8	56.8	30.5	41.0	59.1	0.0	28.3	33.4	216.8
LnGrp LOS	D	C	C	E	E	C	D	E		C	C	F
Approach Vol, veh/h		366			1264			1212	A		1243	
Approach Delay, s/veh		36.6			58.2			51.8			176.5	
Approach LOS		D			E			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.8	29.4		28.8	13.6	29.6		33.0
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.9
Max Green Setting (Gmax), s	10.0	25.0		23.8	10.0	25.0		28.1
Max Q Clear Time (g_c+I1), s	9.8	9.3		24.1	5.3	25.7		30.1
Green Ext Time (p_c), s	0.0	0.9		0.0	0.1	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		90.4
HCM 6th LOS		F

Notes

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

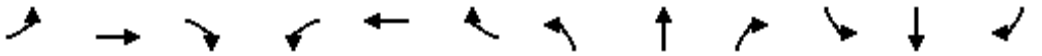
Movement	EBU	EBL	EBT	EBR	WBL2	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	49	757	262	152	3174	19	2	1719	32	80	8
Future Volume (vph)	4	49	757	262	152	3174	19	2	1719	32	80	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Lane Util. Factor		1.00	0.91		1.00	0.91			0.91	0.91	1.00	
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	0.94	
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Frt		1.00	0.96		1.00	1.00			1.00	1.00	0.85	
Flt Protected		0.95	1.00		0.95	1.00			0.95	0.95	1.00	
Satd. Flow (prot)		1597	4398		1770	5079			3189	1603	1478	
Flt Permitted		0.95	1.00		0.95	1.00			0.95	0.95	1.00	
Satd. Flow (perm)		1597	4398		1770	5079			3189	1603	1478	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	4	49	765	265	154	3206	19	2	1736	32	81	8
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	61	0
Lane Group Flow (vph)	0	53	1030	0	154	3224	0	0	1182	588	20	0
Confl. Peds. (#/hr)							8				37	
Confl. Bikes (#/hr)				2			5				4	
Heavy Vehicles (%)	13%	13%	13%	13%	2%	2%	2%	3%	3%	3%	3%	1%
Turn Type	Prot	Prot	NA		Prot	NA		Split	Split	NA	Perm	Split
Protected Phases	1	1	6		5	2		4	4	4		7
Permitted Phases											4	
Actuated Green, G (s)		7.8	35.6		13.5	41.3			33.9	33.9	33.9	
Effective Green, g (s)		7.8	35.6		13.5	41.3			33.9	33.9	33.9	
Actuated g/C Ratio		0.06	0.26		0.10	0.30			0.25	0.25	0.25	
Clearance Time (s)		4.0	4.6		4.0	4.6			4.0	4.0	4.0	
Vehicle Extension (s)		2.0	3.0		2.0	3.0			2.0	2.0	2.0	
Lane Grp Cap (vph)		91	1149		175	1540			793	398	367	
v/s Ratio Prot		0.03	0.23		c0.09	c0.63			c0.37	0.37		
v/s Ratio Perm											0.01	
v/c Ratio		0.58	0.90		0.88	2.09			1.49	1.48	0.05	
Uniform Delay, d1		62.6	48.5		60.6	47.4			51.1	51.1	39.0	
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		6.0	9.3		35.6	494.4			227.4	228.0	0.0	
Delay (s)		68.6	57.8		96.2	541.8			278.6	279.2	39.0	
Level of Service		E	E		F	F			F	F	D	
Approach Delay (s)			58.4			521.5				268.3		
Approach LOS			E			F				F		

Intersection Summary			
HCM 2000 Control Delay	322.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	136.2	Sum of lost time (s)	21.1
Intersection Capacity Utilization	141.6%	ICU Level of Service	H
Analysis Period (min)	15		

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

Movement	SBT	SBR2	NER	NER2
Lane Configurations				
Traffic Volume (vph)	27	431	444	191
Future Volume (vph)	27	431	444	191
Ideal Flow (vphpl)	1900	1900	1990	1900
Total Lost time (s)	4.0		4.5	4.5
Lane Util. Factor	0.95		*0.95	1.00
Frpb, ped/bikes	0.96		1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00
Frt	0.86		1.00	0.85
Flt Protected	1.00		1.00	1.00
Satd. Flow (prot)	2963		3376	1442
Flt Permitted	1.00		1.00	1.00
Satd. Flow (perm)	2963		3376	1442
Peak-hour factor, PHF	0.99	0.99	0.99	0.99
Adj. Flow (vph)	27	435	448	193
RTOR Reduction (vph)	372	0	0	0
Lane Group Flow (vph)	98	0	448	193
Confl. Peds. (#/hr)				54
Confl. Bikes (#/hr)		8		
Heavy Vehicles (%)	1%	1%	12%	12%
Turn Type	NA		Prot	Prot
Protected Phases	7		3	3
Permitted Phases				
Actuated Green, G (s)	8.8		23.3	23.3
Effective Green, g (s)	8.8		23.3	23.3
Actuated g/C Ratio	0.06		0.17	0.17
Clearance Time (s)	4.0		4.5	4.5
Vehicle Extension (s)	2.0		2.0	2.0
Lane Grp Cap (vph)	191		577	246
v/s Ratio Prot	c0.03		0.13	c0.13
v/s Ratio Perm				
v/c Ratio	0.92dr		0.78	0.78
Uniform Delay, d1	61.6		54.0	54.0
Progression Factor	1.00		1.00	1.00
Incremental Delay, d2	1.0		5.9	14.0
Delay (s)	62.6		59.9	68.0
Level of Service	E		E	E
Approach Delay (s)	62.6			
Approach LOS	E			

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	262	208	2017	311	416	112	29	362	158	1139	183
Future Volume (veh/h)	169	262	208	2017	311	416	112	29	362	158	1139	183
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	1811	1811	1811	1811	1811	1811	1678	1678	1678	1856	1856	1856
Adj Flow Rate, veh/h	145	301	0	2037	314	0	113	29	0	160	1151	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	6	6	6	6	6	6	15	15	15	3	3	3
Cap, veh/h	199	417		1475	549		143	757		328	1203	
Arrive On Green	0.12	0.12	0.00	0.30	0.30	0.00	0.09	0.24	0.00	0.19	0.34	0.00
Sat Flow, veh/h	1725	3622	1535	4864	1811	1535	1598	3188	1422	1767	3526	1572
Grp Volume(v), veh/h	145	301	0	2037	314	0	113	29	0	160	1151	0
Grp Sat Flow(s),veh/h/ln	1725	1811	1535	1621	1811	1535	1598	1594	1422	1767	1763	1572
Q Serve(g_s), s	9.7	9.6	0.0	36.4	17.5	0.0	8.3	0.8	0.0	9.7	38.3	0.0
Cycle Q Clear(g_c), s	9.7	9.6	0.0	36.4	17.5	0.0	8.3	0.8	0.0	9.7	38.3	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	199	417		1475	549		143	757		328	1203	
V/C Ratio(X)	0.73	0.72		1.38	0.57		0.79	0.04		0.49	0.96	
Avail Cap(c_a), veh/h	316	664		1475	549		146	757		328	1203	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.3	51.2	0.0	41.8	35.2	0.0	53.5	35.2	0.0	43.7	38.7	0.0
Incr Delay (d2), s/veh	1.9	0.9	0.0	171.7	0.1	0.0	22.2	0.1	0.0	0.4	17.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	4.4	0.0	38.0	7.8	0.0	4.2	0.3	0.0	4.3	19.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	52.1	0.0	213.5	35.4	0.0	75.7	35.3	0.0	44.2	56.2	0.0
LnGrp LOS	D	D		F	D		E	D		D	E	
Approach Vol, veh/h		446	A		2351	A		142	A		1311	A
Approach Delay, s/veh		52.5			189.7			67.5			54.7	
Approach LOS		D			F			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	45.8		18.4	27.2	33.4		41.0				
Change Period (Y+Rc), s	4.0	4.9		4.6	4.9	* 4.9		4.6				
Max Green Setting (Gmax), s	11.0	32.5		22.0	15.0	* 29		36.4				
Max Q Clear Time (g_c+I1), s	10.3	40.3		11.7	11.7	2.8		38.4				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.1	0.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			129.6									
HCM 6th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Appendix E: Traffic Volume Data

Location: Driveway 7, E/O Oyster Point Blvd
Date Range: 11/13/2019 - 11/19/2019
Site Code: 07

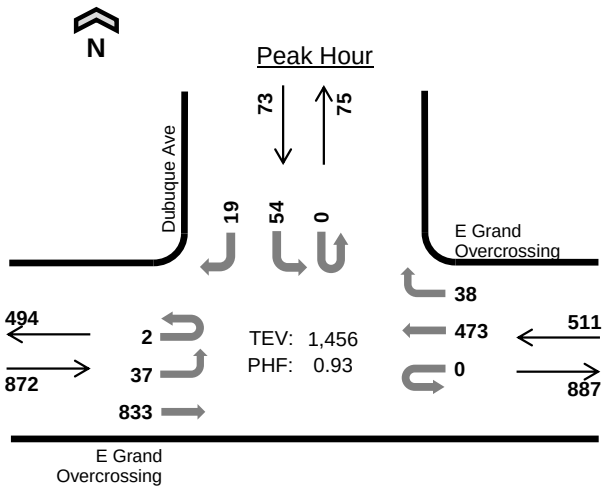
	Wednesday			Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Mid-Week Average		
	11/13/2019			11/14/2019			11/15/2019			11/16/2019			11/17/2019			11/18/2019			11/19/2019					
Time	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	1	10	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	11
1:00 AM	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	4
2:00 AM	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
3:00 AM	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0	3
4:00 AM	16	2	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	2	18
5:00 AM	29	4	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	4	33
6:00 AM	60	9	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	9	69
7:00 AM	139	20	159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139	20	159
8:00 AM	**270**	30	**300**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**270**	30	**300**
9:00 AM	210	43	253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	210	43	253
10:00 AM	105	35	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105	35	140
11:00 AM	85	**86**	171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	**86**	171
12:00 PM	**107**	105	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**107**	105	212
1:00 PM	84	97	181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	97	181
2:00 PM	47	94	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	94	141
3:00 PM	36	137	173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	137	173
4:00 PM	37	**214**	**251**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	**214**	**251**
5:00 PM	29	207	236	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	207	236
6:00 PM	7	118	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	118	125
7:00 PM	9	43	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	43	52
8:00 PM	11	24	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	24	35
9:00 PM	6	6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	12
10:00 PM	6	9	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	9	15
11:00 PM	3	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	6
Total	1,302	1,299	2,601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,302	1,299	2,601
Percent	50%	50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50%	50%	-
AM Peak	08:00	11:00	08:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	08:00	11:00	08:00
Vol.	270	86	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270	86	300
PM Peak	12:00	16:00	16:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12:00	16:00	16:00
Vol.	107	214	251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	107	214	251

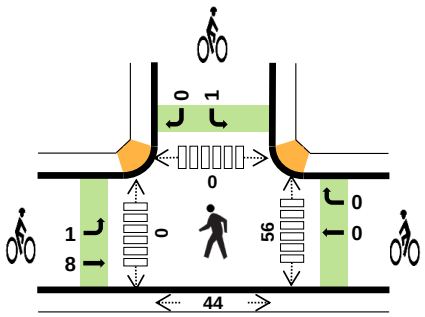
1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Dubuque Ave
E Grand Overcrossing

Date: 07-24-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	3.6%	0.85
WB	13.1%	0.87
NB	-	-
SB	5.5%	0.87
TOTAL	7.0%	0.93

Two-Hour Count Summaries

Interval Start		E Grand Overcrossing Eastbound				E Grand Overcrossing Westbound				n/a Northbound				Dubuque Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	9	136	0	0	0	80	7	0	0	0	0	0	8	0	4	244	0
7:15 AM		2	10	164	0	0	0	83	8	0	0	0	0	0	9	0	5	281	0
7:30 AM		0	7	168	0	0	0	112	6	0	0	0	0	0	7	0	5	305	0
7:45 AM		1	10	223	0	0	0	101	5	0	0	0	0	0	9	0	9	358	1,188
8:00 AM		**0**	**8**	**186**	**0**	**0**	**0**	**127**	**11**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**5**	**353**	1,297
8:15 AM		**1**	**17**	**212**	**0**	**0**	**0**	**138**	**9**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**6**	**393**	1,409
8:30 AM		**0**	**1**	**192**	**0**	**0**	**0**	**106**	**10**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**5**	**328**	1,432
8:45 AM		**1**	**11**	**243**	**0**	**0**	**0**	**102**	**8**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**3**	**382**	**1,456**
Count Total		5	73	1,524	0	0	0	849	64	0	0	0	0	0	87	0	42	2,644	0
Peak Hour	**All**	**2**	**37**	**833**	**0**	**0**	**0**	**473**	**38**	**0**	**0**	**0**	**0**	**0**	**54**	**0**	**19**	**1,456**	**0**
	HV	**1**	**2**	**28**	**0**	**0**	**0**	**63**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**1**	**102**	**0**
	HV%	**50%**	**5%**	**3%**	**-**	**-**	**-**	**13%**	**11%**	**-**	**-**	**-**	**-**	**-**	**6%**	**-**	**5%**	**7%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	4	13	0	0	*17*	0	0	0	0	*0*	11	0	0	12	*23*
7:15 AM	8	12	0	1	*21*	2	1	0	0	*3*	10	0	0	18	*28*
7:30 AM	7	13	0	2	*22*	2	0	0	0	*2*	12	0	0	13	*25*
7:45 AM	8	12	0	5	*25*	3	0	0	0	*3*	10	0	0	18	*28*
8:00 AM	**8**	**14**	**0**	**0**	***22***	**4**	**0**	**0**	**0**	***4***	**21**	**0**	**0**	**17**	*38*
8:15 AM	**8**	**19**	**0**	**1**	***28***	**0**	**0**	**0**	**0**	***0***	**9**	**0**	**0**	**12**	*21*
8:30 AM	**7**	**20**	**0**	**1**	***28***	**2**	**0**	**0**	**1**	***3***	**14**	**0**	**0**	**12**	*26*
8:45 AM	**8**	**14**	**0**	**2**	***24***	**3**	**0**	**0**	**0**	***3***	**12**	**0**	**0**	**3**	***15***
Count Total	58	117	0	12	*187*	16	1	0	1	*18*	99	0	0	105	*204*
Peak Hr	**31**	**67**	**0**	**4**	***102***	**9**	**0**	**0**	**1**	***10***	**56**	**0**	**0**	**44**	***100***

Two-Hour Count Summaries - Heavy Vehicles

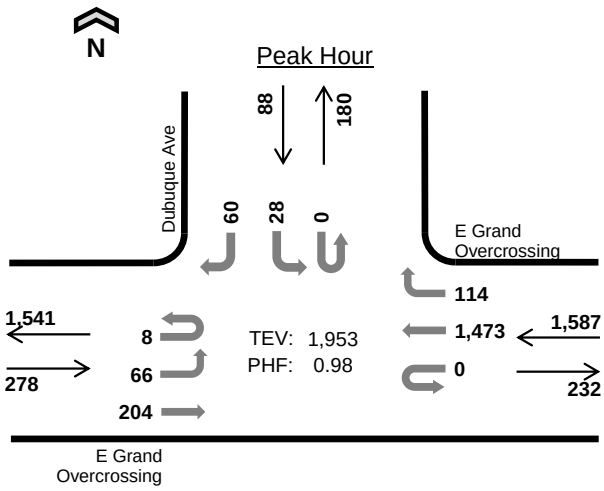
Interval Start	E Grand Overcrossing				E Grand Overcrossing				n/a				Dubuque Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	0	0	0	11	2	0	0	0	0	0	0	0	0	17	0
7:15 AM	0	1	7	0	0	0	11	1	0	0	0	0	0	1	0	0	21	0
7:30 AM	0	1	6	0	0	0	12	1	0	0	0	0	0	1	0	1	22	0
7:45 AM	0	0	8	0	0	0	11	1	0	0	0	0	0	1	0	4	25	85
8:00 AM	**0**	**1**	**7**	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	90
8:15 AM	**1**	**1**	**6**	**0**	**0**	**0**	**18**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**28**	97
8:30 AM	**0**	**0**	**7**	**0**	**0**	**0**	**18**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**28**	103
8:45 AM	**0**	**0**	**8**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**24**	**102**
Count Total	1	4	53	0	0	0	108	9	0	0	0	0	0	6	0	6	187	0
Peak Hour	**1**	**2**	**28**	**0**	**0**	**0**	**63**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**1**	**102**	**0**

Two-Hour Count Summaries - Bikes

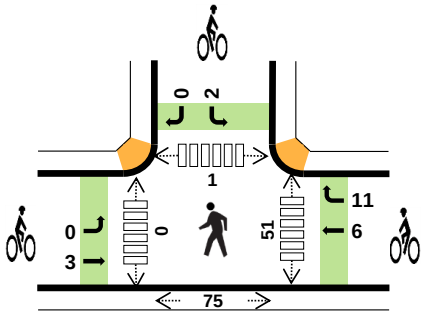
Interval Start	E Grand Overcrossing			E Grand Overcrossing			n/a			Dubuque Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	0	0	1	0	0	0	0	0	0	0	3	0
7:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0
7:45 AM	1	2	0	0	0	0	0	0	0	0	0	0	3	8
8:00 AM	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	12
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	9
8:30 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	10
8:45 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**10**
Count Total	4	12	0	0	1	0	0	0	0	1	0	0	18	0
Peak Hour	**1**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Dubuque Ave
E Grand Overcrossing



Date: 07-24-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	6.8%	0.87
WB	2.3%	0.95
NB	-	-
SB	2.3%	0.73
TOTAL	3.0%	0.98

Two-Hour Count Summaries

Interval Start	E Grand Overcrossing Eastbound				E Grand Overcrossing Westbound				n/a Northbound				Dubuque Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	3	7	60	0	0	0	333	24	0	0	0	0	0	8	0	10	445	0
4:15 PM	3	18	43	0	0	0	309	19	0	0	0	0	0	5	0	10	407	0
4:30 PM	2	9	51	0	0	0	363	23	0	0	0	0	0	7	0	15	470	0
4:45 PM	1	11	43	0	0	0	361	21	0	0	0	0	0	9	0	16	462	1,784
5:00 PM	**2**	**20**	**57**	**0**	**0**	**0**	**356**	**30**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**20**	**492**	1,831
5:15 PM	**0**	**19**	**36**	**0**	**0**	**0**	**386**	**32**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**10**	**488**	1,912
5:30 PM	**3**	**9**	**52**	**0**	**0**	**0**	**384**	**33**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**11**	**497**	1,939
5:45 PM	**3**	**18**	**59**	**0**	**0**	**0**	**347**	**19**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**19**	**476**	**1,953**
Count Total	17	111	401	0	0	0	2,839	201	0	0	0	0	0	57	0	111	3,737	0
Peak Hour All	**8**	**66**	**204**	**0**	**0**	**0**	**1,473**	**114**	**0**	**0**	**0**	**0**	**0**	**28**	**0**	**60**	**1,953**	**0**
Peak Hour HV	**2**	**3**	**14**	**0**	**0**	**0**	**36**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**58**	**0**
Peak Hour HV%	**25%**	**5%**	**7%**	**-**	**-**	**-**	**2%**	**1%**	**-**	**-**	**-**	**-**	**-**	**7%**	**-**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	7	5	0	1	*13*	0	1	0	0	*1*	3	1	0	8	*12*
4:15 PM	3	6	0	0	*9*	1	2	0	0	*3*	4	0	2	10	*16*
4:30 PM	8	8	0	2	*18*	0	5	0	0	*5*	12	0	1	30	*43*
4:45 PM	4	9	0	0	*13*	1	7	0	2	*10*	17	0	0	23	*40*
5:00 PM	**7**	**14**	**0**	**1**	***22***	**1**	**8**	**0**	**2**	***11***	**19**	**0**	**0**	**27**	*46*
5:15 PM	**5**	**9**	**0**	**0**	***14***	**0**	**3**	**0**	**0**	***3***	**13**	**0**	**0**	**16**	*29*
5:30 PM	**4**	**8**	**0**	**1**	***13***	**0**	**0**	**0**	**0**	***0***	**7**	**0**	**1**	**12**	*20*
5:45 PM	**3**	**6**	**0**	**0**	***9***	**2**	**6**	**0**	**0**	***8***	**12**	**0**	**0**	**20**	***32***
Count Total	41	65	0	5	*111*	5	32	0	4	*41*	87	1	4	146	*238*
Peak Hr	**19**	**37**	**0**	**2**	***58***	**3**	**17**	**0**	**2**	***22***	**51**	**0**	**1**	**75**	***127***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Grand Overcrossing				E Grand Overcrossing				n/a				Dubuque Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	7	0	0	0	4	1	0	0	0	0	0	1	0	0	13	0
4:15 PM	0	1	2	0	0	0	6	0	0	0	0	0	0	0	0	0	9	0
4:30 PM	0	2	6	0	0	0	8	0	0	0	0	0	0	2	0	0	18	0
4:45 PM	0	1	3	0	0	0	9	0	0	0	0	0	0	0	0	0	13	53
5:00 PM	**2**	**1**	**4**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**22**	62
5:15 PM	**0**	**1**	**4**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	67
5:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**13**	62
5:45 PM	**0**	**1**	**2**	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**58**
Count Total	2	7	32	0	0	0	63	2	0	0	0	0	0	5	0	0	111	0
Peak Hour	**2**	**3**	**14**	**0**	**0**	**0**	**36**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**58**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	E Grand Overcrossing			E Grand Overcrossing			n/a			Dubuque Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:15 PM	0	1	0	0	1	1	0	0	0	0	0	0	3	0
4:30 PM	0	0	0	0	2	3	0	0	0	0	0	0	5	0
4:45 PM	0	1	0	0	1	6	0	0	0	0	0	2	10	19
5:00 PM	**0**	**1**	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**2**	**0**	**0**	**11**	29
5:15 PM	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	29
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	24
5:45 PM	**0**	**2**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**22**
Count Total	0	5	0	0	11	21	0	0	0	2	0	2	41	0
Peak Hour	**0**	**3**	**0**	**0**	**6**	**11**	**0**	**0**	**0**	**2**	**0**	**0**	**22**	**0**

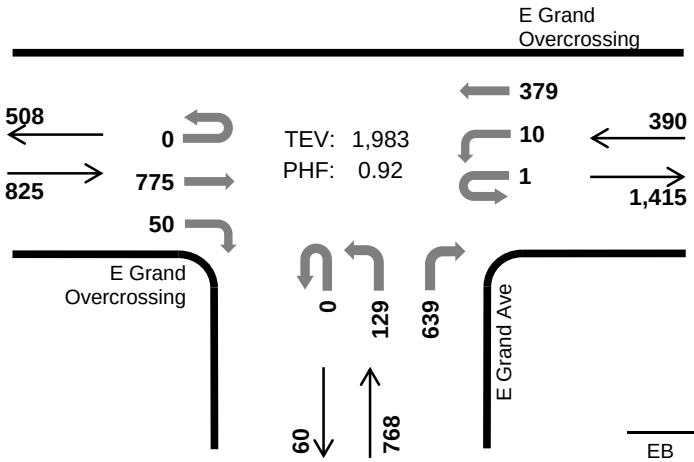
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

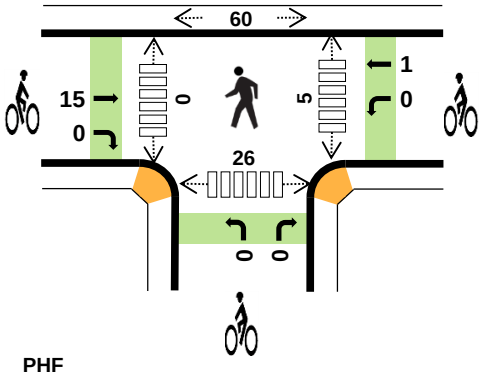
E Grand Ave
E Grand Overcrossing

N

Peak Hour

Date: 07-24-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	3.8%	0.88
WB	13.3%	0.89
NB	6.1%	0.93
SB	-	-
TOTAL	6.6%	0.92

Two-Hour Count Summaries

Interval Start	E Grand Overcrossing Eastbound				E Grand Overcrossing Westbound				E Grand Ave Northbound				n/a Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	128	9	0	2	65	0	0	21	0	168	0	0	0	0	393	0
7:15 AM	0	0	167	13	0	0	65	0	0	35	0	141	0	0	0	0	421	0
7:30 AM	**0**	**0**	**155**	**11**	**0**	**4**	**86**	**0**	**0**	**28**	**0**	**166**	**0**	**0**	**0**	**0**	**450**	0
7:45 AM	**0**	**0**	**220**	**15**	**0**	**1**	**81**	**0**	**0**	**28**	**0**	**134**	**0**	**0**	**0**	**0**	**479**	1,743
8:00 AM	**0**	**0**	**187**	**16**	**1**	**1**	**106**	**0**	**0**	**36**	**0**	**171**	**0**	**0**	**0**	**0**	**518**	1,868
8:15 AM	**0**	**0**	**213**	**8**	**0**	**4**	**106**	**0**	**0**	**37**	**0**	**168**	**0**	**0**	**0**	**0**	**536**	**1,983**
8:30 AM	1	0	192	7	4	4	88	0	0	26	0	125	0	0	0	0	447	1,980
8:45 AM	0	0	242	15	1	4	99	0	0	21	0	75	0	0	0	0	457	1,958
Count Total	1	0	1,504	94	6	20	696	0	0	232	0	1,148	0	0	0	0	3,701	0
Peak Hour All	**0**	**0**	**775**	**50**	**1**	**10**	**379**	**0**	**0**	**129**	**0**	**639**	**0**	**0**	**0**	**0**	**1,983**	**0**
Peak Hour HV	**0**	**0**	**24**	**7**	**0**	**2**	**50**	**0**	**0**	**8**	**0**	**39**	**0**	**0**	**0**	**0**	**130**	**0**
Peak Hour HV%	**-**	**-**	**3%**	**14%**	**0%**	**20%**	**13%**	**-**	**-**	**6%**	**-**	**6%**	**-**	**-**	**-**	**-**	**7%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	9	16	0	*27*	2	0	0	0	*2*	0	0	9	4	*13*
7:15 AM	8	12	12	0	*32*	0	1	0	0	*1*	2	0	4	4	*10*
7:30 AM	**8**	**12**	**10**	**0**	***30***	**4**	**0**	**0**	**0**	***4***	**2**	**0**	**22**	**7**	*31*
7:45 AM	**9**	**13**	**13**	**0**	***35***	**2**	**0**	**0**	**0**	***2***	**2**	**0**	**8**	**12**	*22*
8:00 AM	**7**	**15**	**11**	**0**	***33***	**7**	**1**	**0**	**0**	***8***	**1**	**0**	**12**	**2**	*15*
8:15 AM	**7**	**12**	**13**	**0**	***32***	**2**	**0**	**0**	**0**	***2***	**0**	**0**	**18**	**5**	***23***
8:30 AM	8	20	13	0	*41*	0	0	0	0	*0*	0	0	17	3	*20*
8:45 AM	10	13	0	0	*23*	4	0	0	0	*4*	0	0	13	6	*19*
Count Total	59	106	88	0	*253*	21	2	0	0	*23*	7	0	103	43	*153*
Peak Hr	**31**	**52**	**47**	**0**	***130***	**15**	**1**	**0**	**0**	***16***	**5**	**0**	**60**	**26**	***91***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Grand Overcrossing				E Grand Overcrossing				E Grand Ave				n/a				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	1	0	0	9	0	0	2	0	14	0	0	0	0	27	0
7:15 AM	0	0	7	1	0	0	12	0	0	1	0	11	0	0	0	0	32	0
7:30 AM	**0**	**0**	**5**	**3**	**0**	**1**	**11**	**0**	**0**	**1**	**0**	**9**	**0**	**0**	**0**	**0**	**30**	0
7:45 AM	**0**	**0**	**8**	**1**	**0**	**0**	**13**	**0**	**0**	**2**	**0**	**11**	**0**	**0**	**0**	**0**	**35**	124
8:00 AM	**0**	**0**	**4**	**3**	**0**	**1**	**14**	**0**	**0**	**2**	**0**	**9**	**0**	**0**	**0**	**0**	**33**	130
8:15 AM	**0**	**0**	**7**	**0**	**0**	**0**	**12**	**0**	**0**	**3**	**0**	**10**	**0**	**0**	**0**	**0**	**32**	**130**
8:30 AM	0	0	7	1	0	1	19	0	0	1	0	12	0	0	0	0	41	141
8:45 AM	0	0	9	1	0	0	13	0	0	0	0	0	0	0	0	0	23	129
Count Total	0	0	48	11	0	3	103	0	0	12	0	76	0	0	0	0	253	0
Peak Hour	**0**	**0**	**24**	**7**	**0**	**2**	**50**	**0**	**0**	**8**	**0**	**39**	**0**	**0**	**0**	**0**	**130**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	E Grand Overcrossing			E Grand Overcrossing			E Grand Ave			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	0
7:45 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	9
8:00 AM	**0**	**7**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	15
8:15 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**16**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:45 AM	0	4	0	0	0	0	0	0	0	0	0	0	4	14
Count Total	0	21	0	0	2	0	0	0	0	0	0	0	23	0
Peak Hour	**0**	**15**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**

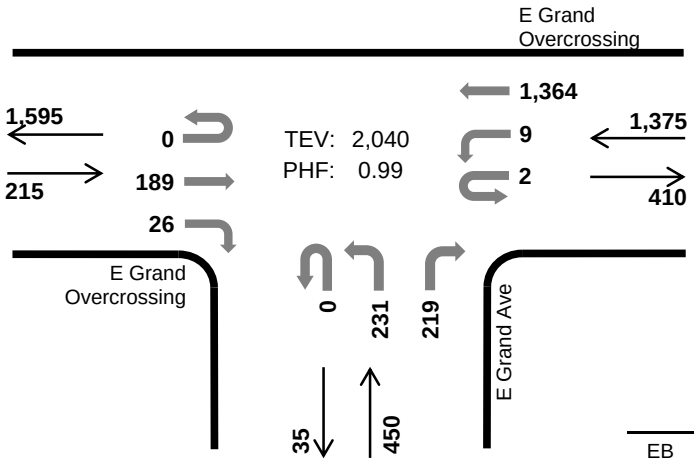
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

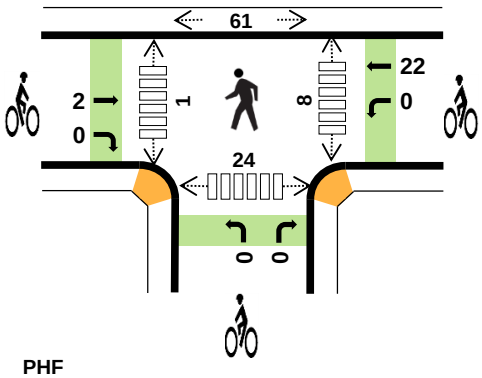
E Grand Ave
E Grand Overcrossing

N

Peak Hour

Date: 07-24-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	7.9%	0.87
WB	2.7%	0.94
NB	8.2%	0.89
SB	-	-
TOTAL	4.5%	0.99

Two-Hour Count Summaries

Interval Start		E Grand Overcrossing Eastbound				E Grand Overcrossing Westbound				E Grand Ave Northbound				n/a Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	56	10	0	0	287	0	0	77	0	48	0	0	0	0	478	0
4:15 PM		0	0	41	7	1	1	281	0	0	47	0	72	0	0	0	0	450	0
4:30 PM		0	0	53	5	0	3	326	0	0	68	0	45	0	0	0	0	500	0
4:45 PM		**0**	**0**	**47**	**8**	**0**	**2**	**316**	**0**	**0**	**62**	**0**	**62**	**0**	**0**	**0**	**0**	**497**	1,925
5:00 PM		**0**	**0**	**56**	**6**	**1**	**2**	**323**	**0**	**0**	**67**	**0**	**60**	**0**	**0**	**0**	**0**	**515**	1,962
5:15 PM		**0**	**0**	**37**	**4**	**1**	**1**	**363**	**0**	**0**	**60**	**0**	**47**	**0**	**0**	**0**	**0**	**513**	2,025
5:30 PM		**0**	**0**	**49**	**8**	**0**	**4**	**362**	**0**	**0**	**42**	**0**	**50**	**0**	**0**	**0**	**0**	**515**	**2,040**
5:45 PM		0	0	62	7	1	3	253	0	0	65	0	36	0	0	0	0	427	1,970
Count Total		0	0	401	55	4	16	2,511	0	0	488	0	420	0	0	0	0	3,895	0
Peak Hour	**All**	**0**	**0**	**189**	**26**	**2**	**9**	**1,364**	**0**	**0**	**231**	**0**	**219**	**0**	**0**	**0**	**0**	**2,040**	**0**
	HV	**0**	**0**	**14**	**3**	**0**	**1**	**36**	**0**	**0**	**3**	**0**	**34**	**0**	**0**	**0**	**0**	**91**	**0**
	HV%	**-**	**-**	**7%**	**12%**	**0%**	**11%**	**3%**	**-**	**-**	**1%**	**-**	**16%**	**-**	**-**	**-**	**-**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	7	4	10	0	*21*	0	0	0	0	*0*	0	0	2	5	*7*
4:15 PM	2	6	11	0	*19*	1	3	1	0	*5*	3	0	7	6	*16*
4:30 PM	8	8	4	0	*20*	0	5	0	0	*5*	1	0	17	6	*24*
4:45 PM	**3**	**12**	**12**	**0**	***27***	**0**	**9**	**0**	**0**	***9***	**1**	**0**	**18**	**6**	*25*
5:00 PM	**5**	**11**	**11**	**0**	***27***	**2**	**7**	**0**	**0**	***9***	**4**	**0**	**21**	**6**	*31*
5:15 PM	**4**	**8**	**8**	**0**	***20***	**0**	**2**	**0**	**0**	***2***	**2**	**1**	**5**	**7**	*15*
5:30 PM	**5**	**6**	**6**	**0**	***17***	**0**	**4**	**0**	**0**	***4***	**1**	**0**	**17**	**5**	***23***
5:45 PM	2	5	3	0	*10*	0	3	0	0	*3*	0	0	6	4	*10*
Count Total	36	60	65	0	*161*	3	33	1	0	*37*	12	1	93	45	*151*
Peak Hr	**17**	**37**	**37**	**0**	***91***	**2**	**22**	**0**	**0**	***24***	**8**	**1**	**61**	**24**	***94***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Grand Overcrossing				E Grand Overcrossing				E Grand Ave				n/a				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	5	2	0	0	4	0	0	2	0	8	0	0	0	0	21	0
4:15 PM	0	0	2	0	0	0	6	0	0	1	0	10	0	0	0	0	19	0
4:30 PM	0	0	7	1	0	1	7	0	0	0	0	4	0	0	0	0	20	0
4:45 PM	**0**	**0**	**3**	**0**	**0**	**1**	**11**	**0**	**0**	**1**	**0**	**11**	**0**	**0**	**0**	**0**	**27**	87
5:00 PM	**0**	**0**	**4**	**1**	**0**	**0**	**11**	**0**	**0**	**2**	**0**	**9**	**0**	**0**	**0**	**0**	**27**	93
5:15 PM	**0**	**0**	**2**	**2**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**20**	94
5:30 PM	**0**	**0**	**5**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**17**	**91**
5:45 PM	0	0	2	0	0	1	4	0	0	1	0	2	0	0	0	0	10	74
Count Total	0	0	30	6	0	3	57	0	0	7	0	58	0	0	0	0	161	0
Peak Hour	**0**	**0**	**14**	**3**	**0**	**1**	**36**	**0**	**0**	**3**	**0**	**34**	**0**	**0**	**0**	**0**	**91**	**0**

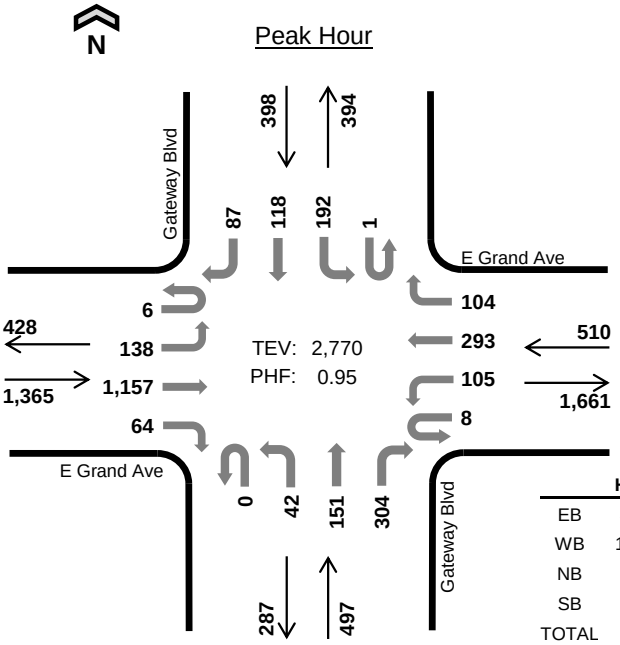
Two-Hour Count Summaries - Bikes

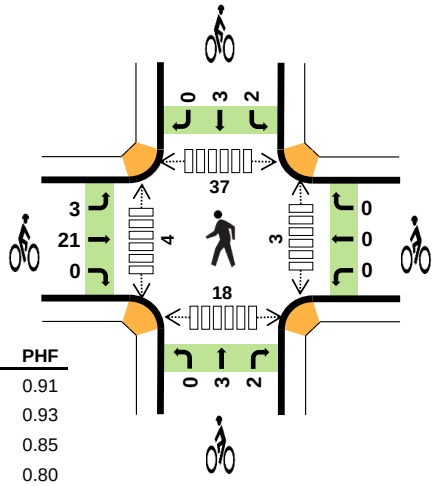
Interval Start	E Grand Overcrossing			E Grand Overcrossing			E Grand Ave			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	3	0	0	0	1	0	0	0	5	0
4:30 PM	0	0	0	0	5	0	0	0	0	0	0	0	5	0
4:45 PM	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	19
5:00 PM	**0**	**2**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	28
5:15 PM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	25
5:30 PM	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**24**
5:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	3	18
Count Total	0	3	0	0	33	0	0	0	1	0	0	0	37	0
Peak Hour	**0**	**2**	**0**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Gateway Blvd
E Grand Ave

Date: 07-24-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	4.4%	0.91
WB	18.0%	0.93
NB	9.7%	0.85
SB	9.0%	0.80
TOTAL	8.5%	0.95

Two-Hour Count Summaries

Interval Start	E Grand Ave Eastbound				E Grand Ave Westbound				Gateway Blvd Northbound				Gateway Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	1	24	239	18	1	20	45	19	0	14	20	38	1	31	23	6	500	0
7:15 AM	1	22	260	19	3	20	46	23	0	12	31	54	0	39	19	6	555	0
7:30 AM	2	39	250	18	1	22	59	36	1	21	33	53	0	48	25	10	618	0
7:45 AM	1	39	285	24	0	19	54	24	0	13	31	76	0	54	17	12	649	2,322
8:00 AM	**1**	**33**	**308**	**25**	**1**	**26**	**71**	**27**	**0**	**9**	**36**	**65**	**1**	**50**	**41**	**33**	**727**	2,549
8:15 AM	**0**	**33**	**325**	**16**	**2**	**19**	**71**	**28**	**0**	**12**	**27**	**73**	**0**	**54**	**25**	**28**	**713**	2,707
8:30 AM	**3**	**37**	**265**	**12**	**2**	**29**	**77**	**29**	**0**	**6**	**36**	**86**	**0**	**39**	**29**	**14**	**664**	2,753
8:45 AM	**2**	**35**	**259**	**11**	**3**	**31**	**74**	**20**	**0**	**15**	**52**	**80**	**0**	**49**	**23**	**12**	**666**	**2,770**
Count Total	11	262	2,191	143	13	186	497	206	1	102	266	525	2	364	202	121	5,092	0
Peak Hour All	**6**	**138**	**1,157**	**64**	**8**	**105**	**293**	**104**	**0**	**42**	**151**	**304**	**1**	**192**	**118**	**87**	**2,770**	**0**
Peak Hour HV	**0**	**5**	**43**	**12**	**2**	**21**	**51**	**18**	**0**	**6**	**14**	**28**	**0**	**23**	**10**	**3**	**236**	**0**
Peak Hour HV%	**0%**	**4%**	**4%**	**19%**	**25%**	**20%**	**17%**	**17%**	**-**	**14%**	**9%**	**9%**	**0%**	**12%**	**8%**	**3%**	**9%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	15	20	19	9	*63*	3	0	1	10	*14*	0	0	4	1	*5*
7:15 AM	17	23	13	12	*65*	1	1	1	1	*4*	3	0	5	2	*10*
7:30 AM	16	22	13	11	*62*	6	0	1	2	*9*	0	0	17	4	*21*
7:45 AM	17	22	12	15	*66*	2	0	2	0	*4*	0	1	2	3	*6*
8:00 AM	**12**	**26**	**11**	**9**	***58***	**5**	**0**	**3**	**2**	***10***	**1**	**0**	**4**	**2**	*7*
8:15 AM	**20**	**21**	**6**	**8**	***55***	**5**	**0**	**0**	**1**	***6***	**2**	**2**	**17**	**6**	*27*
8:30 AM	**19**	**22**	**17**	**11**	***69***	**7**	**0**	**2**	**0**	***9***	**0**	**1**	**9**	**5**	*15*
8:45 AM	**9**	**23**	**14**	**8**	***54***	**7**	**0**	**0**	**2**	***9***	**0**	**1**	**7**	**5**	***13***
Count Total	125	179	105	83	*492*	36	1	10	18	*65*	6	5	65	28	*104*
Peak Hour	**60**	**92**	**48**	**36**	***236***	**24**	**0**	**5**	**5**	***34***	**3**	**4**	**37**	**18**	***62***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Grand Ave				E Grand Ave				Gateway Blvd				Gateway Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	11	2	0	5	9	6	0	2	5	12	0	5	4	0	63	0
7:15 AM	0	0	16	1	1	7	9	6	0	3	5	5	0	9	3	0	65	0
7:30 AM	0	3	9	4	1	5	6	10	0	6	2	5	0	10	1	0	62	0
7:45 AM	0	2	14	1	0	5	8	9	0	3	3	6	0	11	3	1	66	256
8:00 AM	**0**	**0**	**7**	**5**	**0**	**6**	**12**	**8**	**0**	**2**	**3**	**6**	**0**	**7**	**1**	**1**	**58**	251
8:15 AM	**0**	**3**	**15**	**2**	**1**	**4**	**11**	**5**	**0**	**1**	**3**	**2**	**0**	**5**	**3**	**0**	**55**	241
8:30 AM	**0**	**2**	**14**	**3**	**0**	**4**	**16**	**2**	**0**	**2**	**3**	**12**	**0**	**6**	**4**	**1**	**69**	248
8:45 AM	**0**	**0**	**7**	**2**	**1**	**7**	**12**	**3**	**0**	**1**	**5**	**8**	**0**	**5**	**2**	**1**	**54**	**236**
Count Total	0	12	93	20	4	43	83	49	0	20	29	56	0	58	21	4	492	0
Peak Hour	**0**	**5**	**43**	**12**	**2**	**21**	**51**	**18**	**0**	**6**	**14**	**28**	**0**	**23**	**10**	**3**	**236**	**0**

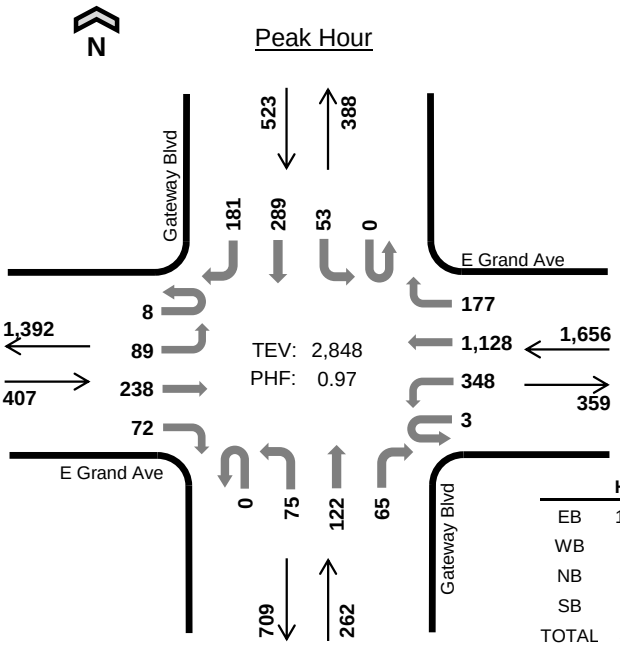
Two-Hour Count Summaries - Bikes

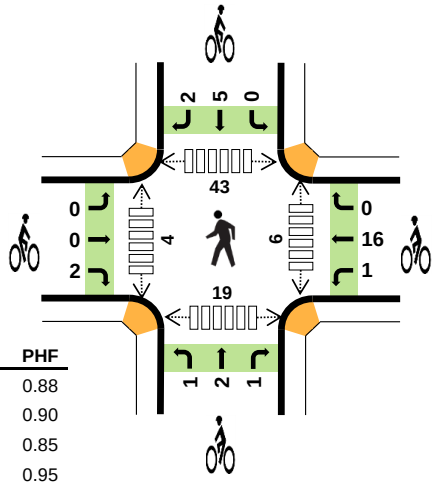
Interval Start	E Grand Ave			E Grand Ave			Gateway Blvd			Gateway Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	2	1	0	0	0	0	1	0	0	10	0	14	0
7:15 AM	0	0	1	0	1	0	0	1	0	0	1	0	4	0
7:30 AM	0	5	1	0	0	0	0	1	0	0	2	0	9	0
7:45 AM	1	1	0	0	0	0	0	2	0	0	0	0	4	31
8:00 AM	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**2**	**0**	**10**	27
8:15 AM	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**6**	29
8:30 AM	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**9**	29
8:45 AM	**2**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**9**	**34**
Count Total	4	29	3	0	1	0	0	8	2	2	16	0	65	0
Peak Hour	**3**	**21**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**2**	**3**	**0**	**34**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Gateway Blvd
E Grand Ave

Date: 07-24-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	11.8%	0.88
WB	2.2%	0.90
NB	8.8%	0.85
SB	3.4%	0.95
TOTAL	4.4%	0.97

Two-Hour Count Summaries

Interval Start	E Grand Ave Eastbound				E Grand Ave Westbound				Gateway Blvd Northbound				Gateway Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	3	19	64	17	1	94	235	49	1	20	18	19	0	20	64	28	652	0
4:15 PM	1	23	65	21	0	93	238	43	0	20	23	20	0	23	77	33	680	0
4:30 PM	2	14	58	24	0	100	267	43	0	16	33	19	1	18	62	42	699	0
4:45 PM	**1**	**17**	**70**	**20**	**1**	**77**	**254**	**37**	**0**	**26**	**33**	**18**	**0**	**16**	**55**	**48**	**673**	2,704
5:00 PM	**2**	**20**	**69**	**25**	**0**	**84**	**266**	**47**	**0**	**12**	**25**	**20**	**0**	**12**	**73**	**50**	**705**	2,757
5:15 PM	**3**	**24**	**46**	**12**	**0**	**98**	**314**	**47**	**0**	**18**	**30**	**11**	**0**	**15**	**80**	**36**	**734**	2,811
5:30 PM	**2**	**28**	**53**	**15**	**2**	**89**	**294**	**46**	**0**	**19**	**34**	**16**	**0**	**10**	**81**	**47**	**736**	**2,848**
5:45 PM	2	21	54	21	2	68	209	31	0	17	44	16	1	11	51	32	580	2,755
Count Total	16	166	479	155	6	703	2,077	343	1	148	240	139	2	125	543	316	5,459	0
Peak Hour All	**8**	**89**	**238**	**72**	**3**	**348**	**1,128**	**177**	**0**	**75**	**122**	**65**	**0**	**53**	**289**	**181**	**2,848**	**0**
Peak Hour HV	**0**	**4**	**38**	**6**	**0**	**6**	**27**	**4**	**0**	**7**	**8**	**8**	**0**	**10**	**6**	**2**	**126**	**0**
Peak Hour HV%	**0%**	**4%**	**16%**	**8%**	**0%**	**2%**	**2%**	**2%**	**-**	**9%**	**7%**	**12%**	**-**	**19%**	**2%**	**1%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	15	10	6	6	*37*	0	1	0	1	*2*	0	2	1	3	*6*
4:15 PM	12	7	6	10	*35*	1	4	0	1	*6*	3	0	2	4	*9*
4:30 PM	10	12	6	8	*36*	0	3	0	1	*4*	4	1	17	3	*25*
4:45 PM	**14**	**10**	**10**	**3**	***37***	**0**	**7**	**2**	**1**	***10***	**1**	**1**	**14**	**5**	*21*
5:00 PM	**13**	**12**	**5**	**4**	***34***	**2**	**5**	**1**	**3**	***11***	**4**	**3**	**9**	**6**	*22*
5:15 PM	**9**	**10**	**5**	**5**	***29***	**0**	**3**	**0**	**2**	***5***	**0**	**0**	**3**	**3**	*6*
5:30 PM	**12**	**5**	**3**	**6**	***26***	**0**	**2**	**1**	**1**	***4***	**1**	**0**	**17**	**5**	***23***
5:45 PM	4	7	4	3	*18*	1	4	0	1	*6*	1	2	6	6	*15*
Count Total	89	73	45	45	*252*	4	29	4	11	*48*	14	9	69	35	*127*
Peak Hour	**48**	**37**	**23**	**18**	***126***	**2**	**17**	**4**	**7**	***30***	**6**	**4**	**43**	**19**	***72***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Grand Ave				E Grand Ave				Gateway Blvd				Gateway Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	12	2	0	4	5	1	0	0	0	6	0	5	1	0	37	0
4:15 PM	0	0	11	1	0	1	5	1	0	0	2	4	0	4	5	1	35	0
4:30 PM	0	0	10	0	0	4	6	2	0	2	3	1	0	5	3	0	36	0
4:45 PM	**0**	**3**	**10**	**1**	**0**	**1**	**7**	**2**	**0**	**5**	**2**	**3**	**0**	**2**	**1**	**0**	**37**	145
5:00 PM	**0**	**0**	**10**	**3**	**0**	**2**	**10**	**0**	**0**	**0**	**3**	**2**	**0**	**2**	**1**	**1**	**34**	142
5:15 PM	**0**	**1**	**6**	**2**	**0**	**3**	**5**	**2**	**0**	**1**	**2**	**2**	**0**	**3**	**1**	**1**	**29**	136
5:30 PM	**0**	**0**	**12**	**0**	**0**	**0**	**5**	**0**	**0**	**1**	**1**	**1**	**0**	**3**	**3**	**0**	**26**	**126**
5:45 PM	0	0	4	0	0	3	3	1	0	1	1	2	0	2	1	0	18	107
Count Total	0	5	75	9	0	18	46	9	0	10	14	21	0	26	16	3	252	0
Peak Hour	**0**	**4**	**38**	**6**	**0**	**6**	**27**	**4**	**0**	**7**	**8**	**8**	**0**	**10**	**6**	**2**	**126**	**0**

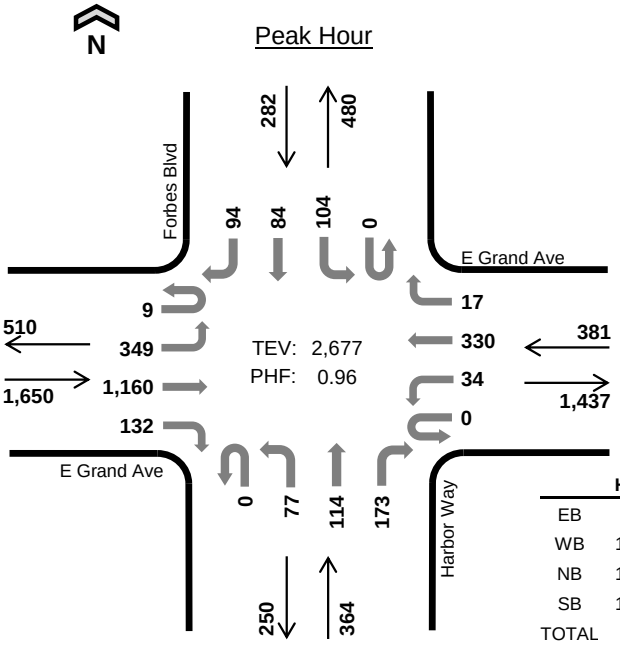
Two-Hour Count Summaries - Bikes

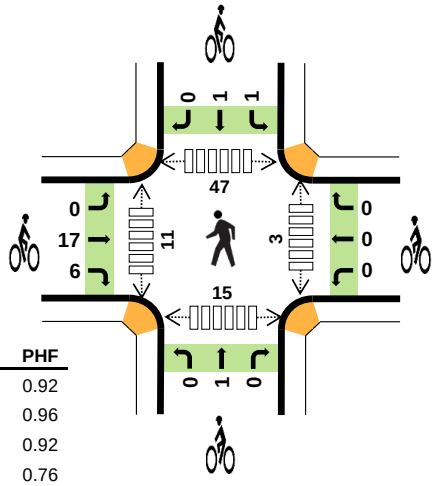
Interval Start	E Grand Ave			E Grand Ave			Gateway Blvd			Gateway Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2	0
4:15 PM	0	1	0	0	3	1	0	0	0	0	1	0	6	0
4:30 PM	0	0	0	0	3	0	0	0	0	0	0	1	4	0
4:45 PM	**0**	**0**	**0**	**0**	**7**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**10**	22
5:00 PM	**0**	**0**	**2**	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**11**	31
5:15 PM	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**5**	30
5:30 PM	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**4**	**30**
5:45 PM	0	1	0	0	3	1	0	0	0	0	1	0	6	26
Count Total	0	2	2	1	26	2	1	2	1	0	8	3	48	0
Peak Hour	**0**	**0**	**2**	**1**	**16**	**0**	**1**	**2**	**1**	**0**	**5**	**2**	**30**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Forbes Blvd
E Grand Ave

Date: 07-24-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	6.1%	0.92
WB	18.6%	0.96
NB	10.2%	0.92
SB	15.6%	0.76
TOTAL	9.4%	0.96

Two-Hour Count Summaries

Interval Start	E Grand Ave Eastbound				E Grand Ave Westbound				Harbor Way Northbound				Forbes Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	1	77	195	24	0	5	48	0	0	25	14	19	0	10	9	10	437	0
7:15 AM	2	71	223	41	0	4	60	2	0	13	21	30	0	16	9	13	505	0
7:30 AM	2	74	237	39	0	10	75	1	0	20	26	26	0	7	7	24	548	0
7:45 AM	3	80	294	47	0	6	70	4	0	11	22	32	0	16	11	16	612	2,102
8:00 AM	**3**	**94**	**308**	**32**	**0**	**8**	**84**	**5**	**0**	**18**	**21**	**42**	**0**	**15**	**17**	**19**	**666**	2,331
8:15 AM	**1**	**88**	**323**	**34**	**0**	**9**	**73**	**5**	**0**	**22**	**28**	**43**	**0**	**25**	**24**	**19**	**694**	2,520
8:30 AM	**4**	**80**	**261**	**38**	**0**	**5**	**88**	**5**	**0**	**21**	**33**	**45**	**0**	**33**	**15**	**22**	**650**	2,622
8:45 AM	**1**	**87**	**268**	**28**	**0**	**12**	**85**	**2**	**0**	**16**	**32**	**43**	**0**	**31**	**28**	**34**	**667**	**2,677**
Count Total	17	651	2,109	283	0	59	583	24	0	146	197	280	0	153	120	157	4,779	0
Peak Hour All	**9**	**349**	**1,160**	**132**	**0**	**34**	**330**	**17**	**0**	**77**	**114**	**173**	**0**	**104**	**84**	**94**	**2,677**	**0**
Peak Hour HV	**0**	**23**	**56**	**21**	**0**	**4**	**62**	**5**	**0**	**20**	**7**	**10**	**0**	**10**	**16**	**18**	**252**	**0**
Peak Hour HV%	**0%**	**7%**	**5%**	**16%**	**-**	**12%**	**19%**	**29%**	**-**	**26%**	**6%**	**6%**	**-**	**10%**	**19%**	**19%**	**9%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	29	16	4	6	*55*	2	0	0	0	*2*	1	0	2	0	*3*
7:15 AM	32	14	9	7	*62*	0	1	0	0	*1*	1	2	12	2	*17*
7:30 AM	24	20	6	9	*59*	5	0	1	1	*7*	1	5	9	3	*18*
7:45 AM	38	20	6	11	*75*	1	0	0	0	*1*	0	1	14	4	*19*
8:00 AM	**23**	**15**	**12**	**12**	***62***	**4**	**0**	**0**	**0**	***4***	**0**	**4**	**7**	**4**	*15*
8:15 AM	**23**	**17**	**6**	**8**	***54***	**7**	**0**	**0**	**1**	***8***	**0**	**0**	**13**	**3**	*16*
8:30 AM	**32**	**24**	**6**	**12**	***74***	**3**	**0**	**1**	**0**	***4***	**2**	**5**	**15**	**7**	*29*
8:45 AM	**22**	**15**	**13**	**12**	***62***	**9**	**0**	**0**	**1**	***10***	**1**	**2**	**12**	**1**	***16***
Count Total	223	141	62	77	*503*	31	1	2	3	*37*	6	19	84	24	*133*
Peak Hour	**100**	**71**	**37**	**44**	***252***	**23**	**0**	**1**	**2**	***26***	**3**	**11**	**47**	**15**	***76***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Grand Ave				E Grand Ave				Harbor Way				Forbes Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	5	20	4	0	2	14	0	0	4	0	0	0	1	2	3	55	0
7:15 AM	0	3	19	10	0	1	13	0	0	3	3	3	0	0	3	4	62	0
7:30 AM	1	5	13	5	0	2	18	0	0	3	2	1	0	2	4	3	59	0
7:45 AM	0	6	18	14	0	3	16	1	0	3	2	1	0	1	6	4	75	251
8:00 AM	**0**	**8**	**12**	**3**	**0**	**1**	**13**	**1**	**0**	**8**	**2**	**2**	**0**	**2**	**4**	**6**	**62**	258
8:15 AM	**0**	**5**	**14**	**4**	**0**	**1**	**16**	**0**	**0**	**3**	**2**	**1**	**0**	**1**	**5**	**2**	**54**	250
8:30 AM	**0**	**5**	**20**	**7**	**0**	**1**	**20**	**3**	**0**	**3**	**1**	**2**	**0**	**3**	**6**	**3**	**74**	265
8:45 AM	**0**	**5**	**10**	**7**	**0**	**1**	**13**	**1**	**0**	**6**	**2**	**5**	**0**	**4**	**1**	**7**	**62**	**252**
Count Total	1	42	126	54	0	12	123	6	0	33	14	15	0	14	31	32	503	0
Peak Hour	**0**	**23**	**56**	**21**	**0**	**4**	**62**	**5**	**0**	**20**	**7**	**10**	**0**	**10**	**16**	**18**	**252**	**0**

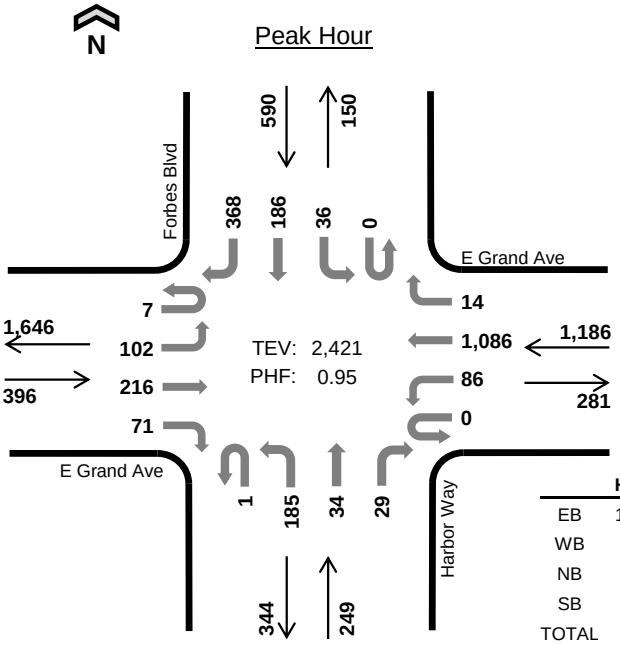
Two-Hour Count Summaries - Bikes

Interval Start	E Grand Ave			E Grand Ave			Harbor Way			Forbes Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	3	2	0	0	0	0	1	0	1	0	0	7	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	11
8:00 AM	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	13
8:15 AM	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**8**	20
8:30 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	17
8:45 AM	**0**	**5**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**10**	**26**
Count Total	1	22	8	0	1	0	0	2	0	2	1	0	37	0
Peak Hour	**0**	**17**	**6**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**26**	**0**

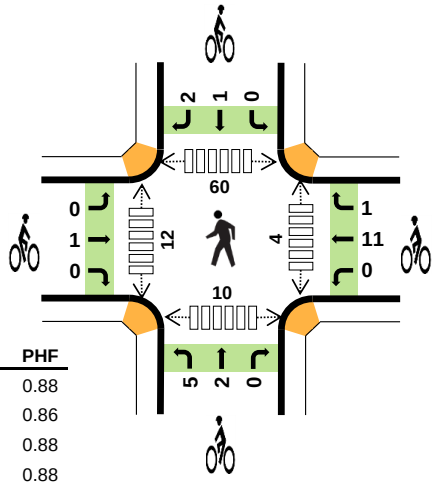
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Forbes Blvd
E Grand Ave

Date: 07-24-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	16.2%	0.88
WB	2.7%	0.86
NB	9.2%	0.88
SB	5.4%	0.88
TOTAL	6.2%	0.95



Two-Hour Count Summaries

Interval Start	E Grand Ave Eastbound				E Grand Ave Westbound				Harbor Way Northbound				Forbes Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	26	63	24	0	22	258	6	0	38	6	11	0	19	23	86	582	0
4:15 PM	0	31	50	16	0	16	254	1	0	37	7	4	0	9	34	83	542	0
4:30 PM	**3**	**23**	**68**	**18**	**0**	**25**	**279**	**6**	**0**	**49**	**5**	**7**	**0**	**10**	**32**	**85**	**610**	0
4:45 PM	**1**	**27**	**51**	**17**	**0**	**20**	**247**	**2**	**0**	**34**	**10**	**10**	**0**	**12**	**57**	**79**	**567**	2,301
5:00 PM	**1**	**28**	**57**	**22**	**0**	**19**	**237**	**5**	**1**	**50**	**13**	**7**	**0**	**8**	**48**	**111**	**607**	2,326
5:15 PM	**2**	**24**	**40**	**14**	**0**	**22**	**323**	**1**	**0**	**52**	**6**	**5**	**0**	**6**	**49**	**93**	**637**	**2,421**
5:30 PM	3	21	46	16	0	19	270	6	0	37	9	7	0	1	44	114	593	2,404
5:45 PM	3	14	44	18	0	15	208	1	1	31	8	6	0	5	21	67	442	2,279
Count Total	13	194	419	145	0	158	2,076	28	2	328	64	57	0	70	308	718	4,580	0
Peak Hour All	**7**	**102**	**216**	**71**	**0**	**86**	**1,086**	**14**	**1**	**185**	**34**	**29**	**0**	**36**	**186**	**368**	**2,421**	**0**
Peak Hour HV	**0**	**27**	**23**	**14**	**0**	**4**	**27**	**1**	**0**	**7**	**13**	**3**	**0**	**7**	**15**	**10**	**151**	**0**
Peak Hour HV%	**0%**	**26%**	**11%**	**20%**	**-**	**5%**	**2%**	**7%**	**0%**	**4%**	**38%**	**10%**	**-**	**19%**	**8%**	**3%**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	23	7	8	5	*43*	0	1	1	0	*2*	0	1	5	2	*8*
4:15 PM	19	5	4	5	*33*	1	5	0	0	*6*	1	1	5	3	*10*
4:30 PM	**22**	**9**	**4**	**4**	***39***	**0**	**3**	**0**	**0**	***3***	**0**	**3**	**25**	**3**	*31*
4:45 PM	**15**	**7**	**4**	**11**	***37***	**1**	**3**	**2**	**1**	***7***	**2**	**2**	**21**	**0**	*25*
5:00 PM	**16**	**10**	**10**	**8**	***44***	**0**	**4**	**2**	**1**	***7***	**2**	**5**	**8**	**5**	*20*
5:15 PM	**11**	**6**	**5**	**9**	***31***	**0**	**2**	**3**	**1**	***6***	**0**	**2**	**6**	**2**	***10***
5:30 PM	15	8	4	4	*31*	0	1	2	0	*3*	0	0	16	2	*18*
5:45 PM	9	3	2	9	*23*	1	3	0	1	*5*	0	1	5	2	*8*
Count Total	130	55	41	55	*281*	3	22	10	4	*39*	5	15	91	19	*130*
Peak Hour	**64**	**32**	**23**	**32**	***151***	**1**	**12**	**7**	**3**	***23***	**4**	**12**	**60**	**10**	***86***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Grand Ave				E Grand Ave				Harbor Way				Forbes Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	8	10	0	0	7	0	0	1	3	4	0	2	1	2	43	0
4:15 PM	0	4	9	6	0	0	5	0	0	2	2	0	0	1	2	2	33	0
4:30 PM	**0**	**6**	**11**	**5**	**0**	**0**	**8**	**1**	**0**	**2**	**2**	**0**	**0**	**1**	**2**	**1**	**39**	0
4:45 PM	**0**	**9**	**5**	**1**	**0**	**3**	**4**	**0**	**0**	**2**	**2**	**0**	**0**	**3**	**4**	**4**	**37**	152
5:00 PM	**0**	**7**	**4**	**5**	**0**	**1**	**9**	**0**	**0**	**2**	**7**	**1**	**0**	**3**	**4**	**1**	**44**	153
5:15 PM	**0**	**5**	**3**	**3**	**0**	**0**	**6**	**0**	**0**	**1**	**2**	**2**	**0**	**0**	**5**	**4**	**31**	**151**
5:30 PM	0	6	5	4	0	1	5	2	0	0	3	1	0	0	3	1	31	143
5:45 PM	0	4	2	3	0	1	2	0	0	1	1	0	0	1	5	3	23	129
Count Total	0	46	47	37	0	6	46	3	0	11	22	8	0	11	26	18	281	0
Peak Hour	**0**	**27**	**23**	**14**	**0**	**4**	**27**	**1**	**0**	**7**	**13**	**3**	**0**	**7**	**15**	**10**	**151**	**0**

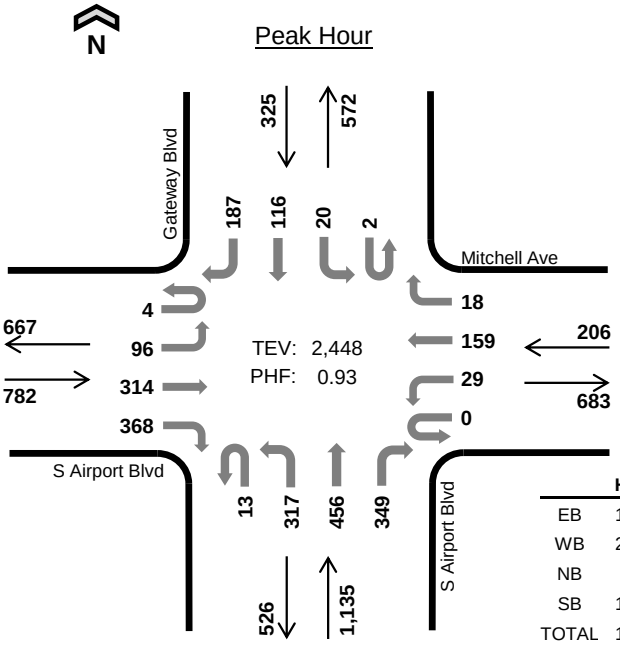
Two-Hour Count Summaries - Bikes

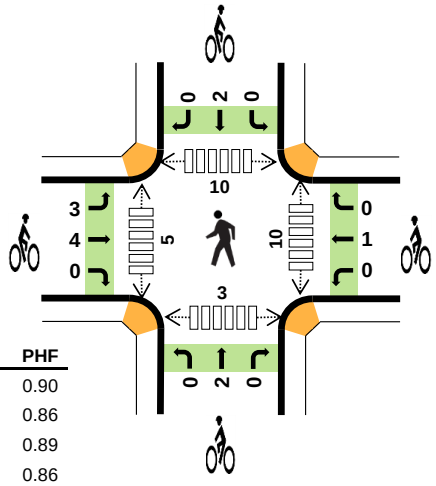
Interval Start	E Grand Ave			E Grand Ave			Harbor Way			Forbes Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	2	0
4:15 PM	0	1	0	0	5	0	0	0	0	0	0	0	6	0
4:30 PM	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	0
4:45 PM	**0**	**1**	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**7**	18
5:00 PM	**0**	**0**	**0**	**0**	**3**	**1**	**2**	**0**	**0**	**0**	**1**	**0**	**7**	23
5:15 PM	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**6**	**23**
5:30 PM	0	0	0	0	1	0	2	0	0	0	0	0	3	23
5:45 PM	1	0	0	0	3	0	0	0	0	0	1	0	5	21
Count Total	1	2	0	0	20	2	8	2	0	0	2	2	39	0
Peak Hour	**0**	**1**	**0**	**0**	**11**	**1**	**5**	**2**	**0**	**0**	**1**	**2**	**23**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Airport Blvd
Gateway Blvd

Date: 07-24-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	11.6%	0.90
WB	22.3%	0.86
NB	8.5%	0.89
SB	16.3%	0.86
TOTAL	11.7%	0.93

Two-Hour Count Summaries

Interval Start	S Airport Blvd Eastbound				Mitchell Ave Westbound				S Airport Blvd Northbound				Gateway Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	1	26	54	83	0	13	38	14	3	74	66	38	0	2	14	23	449	0
7:15 AM	1	31	50	72	0	10	32	7	2	79	63	52	0	3	27	26	455	0
7:30 AM	1	27	61	67	0	5	34	7	5	77	97	61	0	5	25	37	509	0
7:45 AM	1	24	79	100	0	17	34	5	1	86	89	73	0	4	33	39	585	1,998
8:00 AM	**2**	**20**	**57**	**74**	**0**	**5**	**34**	**4**	**3**	**81**	**106**	**79**	**1**	**5**	**41**	**47**	**559**	2,108
8:15 AM	**1**	**33**	**95**	**88**	**0**	**11**	**44**	**5**	**2**	**66**	**102**	**79**	**0**	**3**	**23**	**55**	**607**	2,260
8:30 AM	**0**	**23**	**66**	**108**	**0**	**2**	**42**	**2**	**3**	**86**	**105**	**103**	**0**	**8**	**33**	**40**	**621**	2,372
8:45 AM	**1**	**20**	**96**	**98**	**0**	**11**	**39**	**7**	**5**	**84**	**143**	**88**	**1**	**4**	**19**	**45**	**661**	**2,448**
Count Total	8	204	558	690	0	74	297	51	24	633	771	573	2	34	215	312	4,446	0
Peak Hour All	**4**	**96**	**314**	**368**	**0**	**29**	**159**	**18**	**13**	**317**	**456**	**349**	**2**	**20**	**116**	**187**	**2,448**	**0**
Peak Hour HV	**0**	**22**	**16**	**53**	**0**	**5**	**35**	**6**	**0**	**46**	**40**	**10**	**0**	**3**	**12**	**38**	**286**	**0**
Peak Hour HV%	**0%**	**23%**	**5%**	**14%**	**-**	**17%**	**22%**	**33%**	**0%**	**15%**	**9%**	**3%**	**0%**	**15%**	**10%**	**20%**	**12%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	12	18	32	9	*71*	0	0	0	9	*9*	2	2	3	0	*7*
7:15 AM	17	16	15	13	*61*	0	0	1	3	*4*	3	4	0	3	*10*
7:30 AM	13	11	26	10	*60*	0	1	1	2	*4*	3	2	5	0	*10*
7:45 AM	18	17	19	16	*70*	0	0	2	0	*2*	5	0	6	4	*15*
8:00 AM	**14**	**13**	**26**	**12**	***65***	**2**	**1**	**1**	**1**	***5***	**3**	**1**	**6**	**0**	*10*
8:15 AM	**18**	**13**	**18**	**13**	***62***	**2**	**0**	**0**	**1**	***3***	**2**	**0**	**3**	**2**	*7*
8:30 AM	**31**	**6**	**24**	**13**	***74***	**2**	**0**	**1**	**0**	***3***	**4**	**4**	**0**	**0**	*8*
8:45 AM	**28**	**14**	**28**	**15**	***85***	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**1**	**1**	***3***
Count Total	151	108	188	101	*548*	7	2	6	16	*31*	23	13	24	10	*70*
Peak Hour	**91**	**46**	**96**	**53**	***286***	**7**	**1**	**2**	**2**	***12***	**10**	**5**	**10**	**3**	***28***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	S Airport Blvd				Mitchell Ave				S Airport Blvd				Gateway Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	6	1	5	0	4	8	6	0	15	16	1	0	1	4	4	71	0
7:15 AM	0	6	3	8	0	4	7	5	0	11	3	1	0	0	5	8	61	0
7:30 AM	0	4	5	4	0	1	9	1	0	20	4	2	0	0	2	8	60	0
7:45 AM	0	8	1	9	0	5	10	2	0	12	7	0	0	0	5	11	70	262
8:00 AM	**0**	**4**	**5**	**5**	**0**	**0**	**11**	**2**	**0**	**16**	**9**	**1**	**0**	**2**	**3**	**7**	**65**	256
8:15 AM	**0**	**6**	**3**	**9**	**0**	**1**	**11**	**1**	**0**	**8**	**7**	**3**	**0**	**1**	**3**	**9**	**62**	257
8:30 AM	**0**	**8**	**5**	**18**	**0**	**1**	**5**	**0**	**0**	**12**	**9**	**3**	**0**	**0**	**3**	**10**	**74**	271
8:45 AM	**0**	**4**	**3**	**21**	**0**	**3**	**8**	**3**	**0**	**10**	**15**	**3**	**0**	**0**	**3**	**12**	**85**	**286**
Count Total	0	46	26	79	0	19	69	20	0	104	70	14	0	4	28	69	548	0
Peak Hour	**0**	**22**	**16**	**53**	**0**	**5**	**35**	**6**	**0**	**46**	**40**	**10**	**0**	**3**	**12**	**38**	**286**	**0**

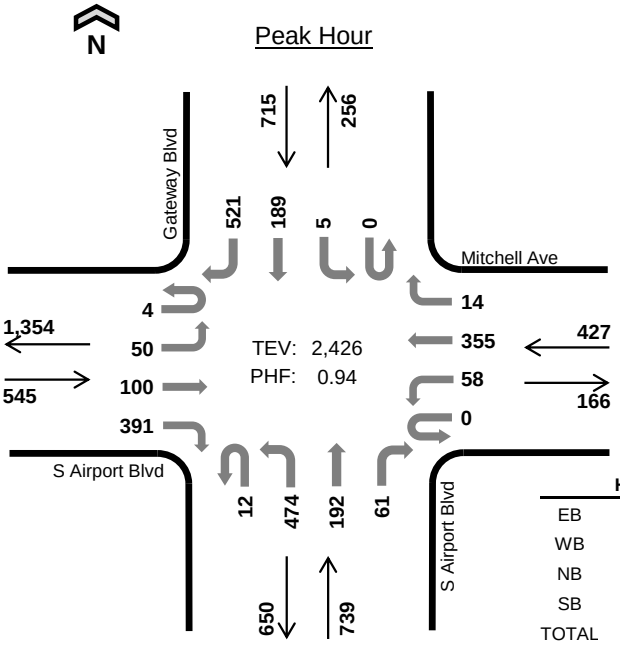
Two-Hour Count Summaries - Bikes

Interval Start	S Airport Blvd			Mitchell Ave			S Airport Blvd			Gateway Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	9	0	9	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	3	0	4	0
7:30 AM	0	0	0	0	1	0	0	1	0	0	2	0	4	0
7:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	19
8:00 AM	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**5**	15
8:15 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	14
8:30 AM	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	13
8:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**12**
Count Total	3	4	0	0	2	0	0	6	0	0	16	0	31	0
Peak Hour	**3**	**4**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**12**	**0**

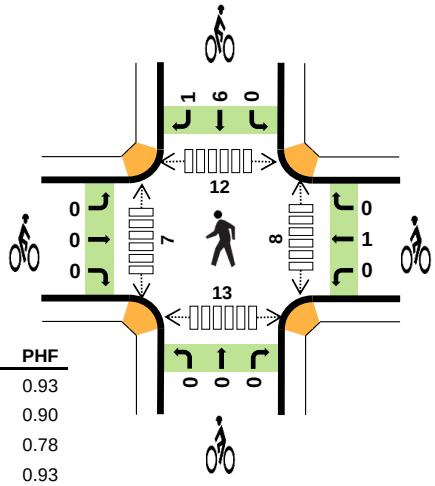
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Airport Blvd
Gateway Blvd

Date: 07-24-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	7.7%	0.93
WB	5.6%	0.90
NB	8.9%	0.78
SB	3.5%	0.93
TOTAL	6.5%	0.94



Two-Hour Count Summaries

Interval Start		S Airport Blvd Eastbound				Mitchell Ave Westbound				S Airport Blvd Northbound				Gateway Blvd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		4	12	31	81	0	16	77	3	6	124	43	15	0	1	53	121	587	0
4:15 PM		2	9	28	94	0	15	93	3	2	103	53	10	0	0	47	115	574	0
4:30 PM		**0**	**11**	**16**	**100**	**0**	**14**	**76**	**3**	**4**	**146**	**66**	**22**	**0**	**3**	**50**	**136**	**647**	0
4:45 PM		**0**	**10**	**38**	**99**	**0**	**13**	**82**	**8**	**2**	**113**	**35**	**12**	**0**	**0**	**29**	**127**	**568**	2,376
5:00 PM		**2**	**13**	**15**	**97**	**0**	**19**	**96**	**3**	**2**	**104**	**43**	**20**	**0**	**1**	**55**	**137**	**607**	2,396
5:15 PM		**2**	**16**	**31**	**95**	**0**	**12**	**101**	**0**	**4**	**111**	**48**	**7**	**0**	**1**	**55**	**121**	**604**	**2,426**
5:30 PM		1	20	25	101	0	33	100	3	2	106	54	11	0	4	50	123	633	2,412
5:45 PM		0	15	31	85	0	10	66	5	4	102	51	10	0	1	58	132	570	2,414
Count Total		11	106	215	752	0	132	691	28	26	909	393	107	0	11	397	1,012	4,790	0
Peak Hour	**All**	**4**	**50**	**100**	**391**	**0**	**58**	**355**	**14**	**12**	**474**	**192**	**61**	**0**	**5**	**189**	**521**	**2,426**	**0**
	HV	**0**	**8**	**16**	**18**	**0**	**3**	**20**	**1**	**0**	**42**	**15**	**9**	**0**	**1**	**7**	**17**	**157**	**0**
	HV%	**0%**	**16%**	**16%**	**5%**	**-**	**5%**	**6%**	**7%**	**0%**	**9%**	**8%**	**15%**	**-**	**20%**	**4%**	**3%**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	15	3	21	8	*47*	0	0	0	2	*2*	2	1	2	2	*7*
4:15 PM	10	10	18	5	*43*	0	1	0	0	*1*	2	1	3	2	*8*
4:30 PM	**16**	**4**	**16**	**10**	***46***	**0**	**0**	**0**	**0**	***0***	**4**	**4**	**5**	**6**	*19*
4:45 PM	**6**	**6**	**15**	**2**	***29***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**1**	**2**	*5*
5:00 PM	**6**	**9**	**19**	**8**	***42***	**0**	**0**	**0**	**5**	***5***	**1**	**0**	**3**	**3**	*7*
5:15 PM	**14**	**5**	**16**	**5**	***40***	**0**	**1**	**0**	**2**	***3***	**2**	**2**	**3**	**2**	***9***
5:30 PM	13	6	15	6	*40*	0	0	0	0	*0*	4	1	9	6	*20*
5:45 PM	9	5	14	3	*31*	1	2	0	2	*5*	2	0	3	0	*5*
Count Total	89	48	134	47	*318*	1	4	0	11	*16*	18	10	29	23	*80*
Peak Hour	**42**	**24**	**66**	**25**	***157***	**0**	**1**	**0**	**7**	***8***	**8**	**7**	**12**	**13**	***40***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	S Airport Blvd				Mitchell Ave				S Airport Blvd				Gateway Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	7	7	0	0	3	0	0	13	6	2	0	0	2	6	47	0
4:15 PM	0	2	5	3	0	1	8	1	0	5	13	0	0	0	1	4	43	0
4:30 PM	**0**	**2**	**6**	**8**	**0**	**0**	**4**	**0**	**0**	**6**	**6**	**4**	**0**	**1**	**2**	**7**	**46**	0
4:45 PM	**0**	**1**	**2**	**3**	**0**	**1**	**4**	**1**	**0**	**13**	**2**	**0**	**0**	**0**	**0**	**2**	**29**	165
5:00 PM	**0**	**2**	**0**	**4**	**0**	**1**	**8**	**0**	**0**	**11**	**3**	**5**	**0**	**0**	**2**	**6**	**42**	160
5:15 PM	**0**	**3**	**8**	**3**	**0**	**1**	**4**	**0**	**0**	**12**	**4**	**0**	**0**	**0**	**3**	**2**	**40**	**157**
5:30 PM	0	1	9	3	0	1	4	1	0	8	6	1	0	1	1	4	40	151
5:45 PM	0	0	6	3	0	1	4	0	0	11	3	0	0	0	0	3	31	153
Count Total	0	12	43	34	0	6	39	3	0	79	43	12	0	2	11	34	318	0
Peak Hour	**0**	**8**	**16**	**18**	**0**	**3**	**20**	**1**	**0**	**42**	**15**	**9**	**0**	**1**	**7**	**17**	**157**	**0**

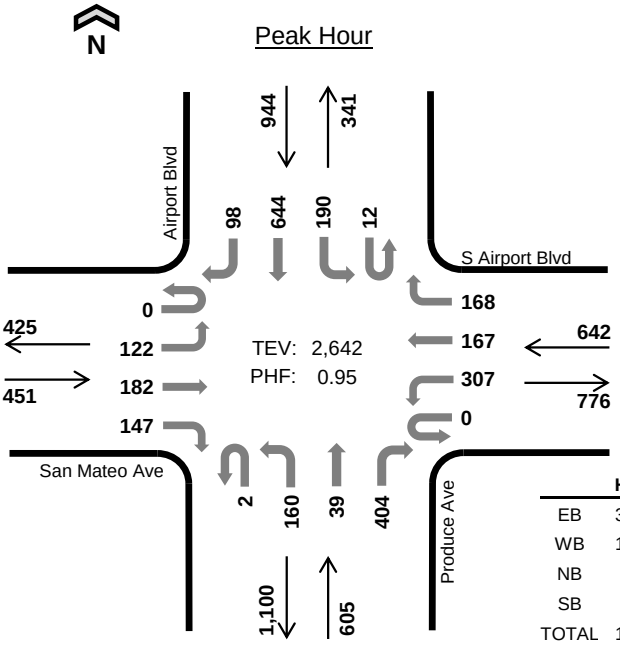
Two-Hour Count Summaries - Bikes

Interval Start	S Airport Blvd			Mitchell Ave			S Airport Blvd			Gateway Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**5**	6
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**3**	**8**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:45 PM	0	0	1	0	2	0	0	0	0	0	1	1	5	13
Count Total	0	0	1	0	4	0	0	0	0	0	9	2	16	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**8**	**0**

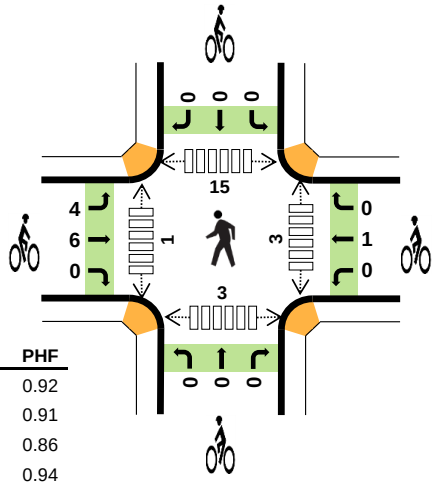
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Airport Blvd
San Mateo Ave

Date: 07-24-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	30.6%	0.92
WB	18.5%	0.91
NB	6.8%	0.86
SB	5.8%	0.94
TOTAL	13.4%	0.95



Two-Hour Count Summaries

Interval Start		San Mateo Ave Eastbound				S Airport Blvd Westbound				Produce Ave Northbound				Airport Blvd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	9	39	22	0	61	38	30	0	38	5	98	3	34	149	15	541	0
7:15 AM		0	25	50	18	0	75	34	31	0	27	5	79	2	41	167	15	569	0
7:30 AM		0	14	41	23	2	72	43	30	0	51	11	100	3	32	180	16	618	0
7:45 AM		0	25	45	25	0	77	57	30	1	40	8	96	2	51	137	26	620	2,348
8:00 AM		**0**	**21**	**35**	**43**	**0**	**72**	**38**	**40**	**0**	**46**	**10**	**75**	**3**	**43**	**166**	**26**	**618**	2,425
8:15 AM		**0**	**34**	**54**	**34**	**0**	**86**	**50**	**41**	**1**	**40**	**14**	**120**	**1**	**45**	**159**	**15**	**694**	2,550
8:30 AM		**0**	**38**	**53**	**29**	**0**	**70**	**40**	**48**	**1**	**36**	**5**	**103**	**5**	**46**	**173**	**28**	**675**	2,607
8:45 AM		**0**	**29**	**40**	**41**	**0**	**79**	**39**	**39**	**0**	**38**	**10**	**106**	**3**	**56**	**146**	**29**	**655**	**2,642**
Count Total		0	195	357	235	2	592	339	289	3	316	68	777	22	348	1,277	170	4,990	0
Peak Hour	**All**	**0**	**122**	**182**	**147**	**0**	**307**	**167**	**168**	**2**	**160**	**39**	**404**	**12**	**190**	**644**	**98**	**2,642**	**0**
	HV	**0**	**23**	**61**	**54**	**0**	**72**	**33**	**14**	**0**	**17**	**5**	**19**	**2**	**4**	**44**	**5**	**353**	**0**
	HV%	**-**	**19%**	**34%**	**37%**	**-**	**23%**	**20%**	**8%**	**0%**	**11%**	**13%**	**5%**	**17%**	**2%**	**7%**	**5%**	**13%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	24	25	7	11	*67*	0	0	0	0	*0*	0	0	5	0	*5*
7:15 AM	28	29	11	14	*82*	0	0	0	0	*0*	0	1	7	2	*10*
7:30 AM	28	34	18	8	*88*	0	1	0	0	*1*	1	1	6	3	*11*
7:45 AM	28	36	10	8	*82*	1	0	0	0	*1*	2	1	3	1	*7*
8:00 AM	**33**	**31**	**9**	**15**	***88***	**3**	**1**	**0**	**0**	***4***	**1**	**0**	**9**	**1**	*11*
8:15 AM	**31**	**31**	**8**	**8**	***78***	**4**	**0**	**0**	**0**	***4***	**1**	**0**	**3**	**1**	*5*
8:30 AM	**39**	**27**	**15**	**23**	***104***	**2**	**0**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**35**	**30**	**9**	**9**	***83***	**1**	**0**	**0**	**0**	***1***	**1**	**1**	**3**	**1**	***6***
Count Total	246	243	87	96	*672*	11	2	0	0	*13*	6	4	36	9	*55*
Peak Hour	**138**	**119**	**41**	**55**	***353***	**10**	**1**	**0**	**0**	***11***	**3**	**1**	**15**	**3**	***22***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	San Mateo Ave Eastbound				S Airport Blvd Westbound				Produce Ave Northbound				Airport Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	11	12	0	13	7	5	0	6	0	1	0	0	10	1	67	0
7:15 AM	0	7	13	8	0	21	6	2	0	6	1	4	0	2	10	2	82	0
7:30 AM	0	3	15	10	0	22	8	4	0	17	0	1	0	2	5	1	88	0
7:45 AM	0	7	14	7	0	21	15	0	0	7	2	1	0	1	5	2	82	319
8:00 AM	**0**	**5**	**11**	**17**	**0**	**19**	**6**	**6**	**0**	**6**	**0**	**3**	**1**	**1**	**10**	**3**	**88**	340
8:15 AM	**0**	**6**	**13**	**12**	**0**	**19**	**9**	**3**	**0**	**1**	**3**	**4**	**0**	**0**	**8**	**0**	**78**	336
8:30 AM	**0**	**6**	**22**	**11**	**0**	**16**	**9**	**2**	**0**	**6**	**1**	**8**	**0**	**3**	**18**	**2**	**104**	352
8:45 AM	**0**	**6**	**15**	**14**	**0**	**18**	**9**	**3**	**0**	**4**	**1**	**4**	**1**	**0**	**8**	**0**	**83**	**353**
Count Total	0	41	114	91	0	149	69	25	0	53	8	26	2	9	74	11	672	0
Peak Hour	**0**	**23**	**61**	**54**	**0**	**72**	**33**	**14**	**0**	**17**	**5**	**19**	**2**	**4**	**44**	**5**	**353**	**0**

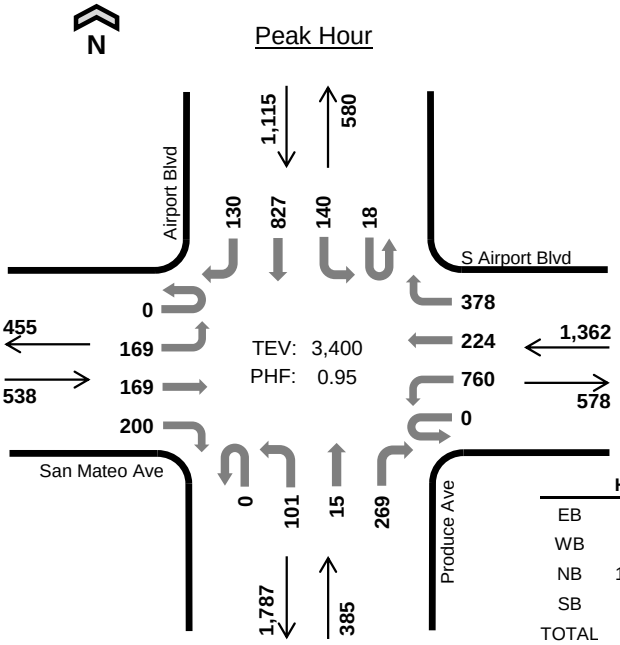
Two-Hour Count Summaries - Bikes

Interval Start	San Mateo Ave Eastbound			S Airport Blvd Westbound			Produce Ave Northbound			Airport Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	2
8:00 AM	**1**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	6
8:15 AM	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	10
8:30 AM	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	11
8:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**11**
Count Total	4	7	0	0	1	1	0	0	0	0	0	0	13	0
Peak Hour	**4**	**6**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**

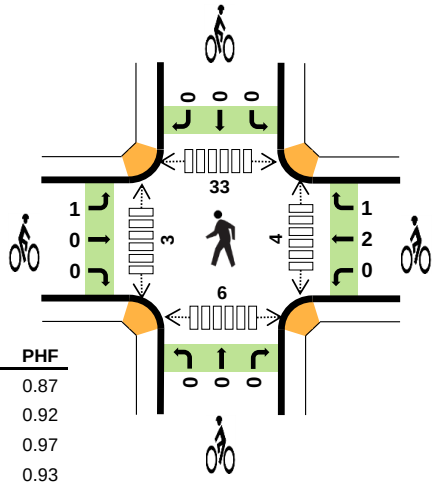
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Airport Blvd
San Mateo Ave

Date: 07-24-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	5.6%	0.87
WB	5.8%	0.92
NB	14.8%	0.97
SB	3.1%	0.93
TOTAL	5.9%	0.95



Two-Hour Count Summaries

Interval Start	San Mateo Ave Eastbound				S Airport Blvd Westbound				Produce Ave Northbound				Airport Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	37	33	51	0	181	47	108	1	42	6	66	5	30	179	24	810	0
4:15 PM	0	25	41	37	0	180	34	83	0	32	6	67	4	29	209	26	773	0
4:30 PM	**0**	**27**	**41**	**47**	**0**	**198**	**68**	**106**	**0**	**31**	**4**	**61**	**4**	**37**	**207**	**26**	**857**	0
4:45 PM	**0**	**36**	**43**	**37**	**0**	**179**	**51**	**69**	**0**	**24**	**2**	**67**	**2**	**33**	**210**	**38**	**791**	3,231
5:00 PM	**0**	**58**	**35**	**62**	**0**	**204**	**44**	**103**	**0**	**25**	**5**	**67**	**5**	**35**	**195**	**23**	**861**	3,282
5:15 PM	**0**	**48**	**50**	**54**	**0**	**179**	**61**	**100**	**0**	**21**	**4**	**74**	**7**	**35**	**215**	**43**	**891**	**3,400**
5:30 PM	0	38	32	51	1	190	55	95	0	20	3	75	5	26	215	33	839	3,382
5:45 PM	0	41	28	31	0	172	45	99	0	18	5	67	4	35	181	30	756	3,347
Count Total	0	310	303	370	1	1,483	405	763	1	213	35	544	36	260	1,611	243	6,578	0
Peak Hour All	**0**	**169**	**169**	**200**	**0**	**760**	**224**	**378**	**0**	**101**	**15**	**269**	**18**	**140**	**827**	**130**	**3,400**	**0**
Peak Hour HV	**0**	**5**	**15**	**10**	**0**	**33**	**29**	**17**	**0**	**32**	**0**	**25**	**0**	**5**	**20**	**10**	**201**	**0**
Peak Hour HV%	**-**	**3%**	**9%**	**5%**	**-**	**4%**	**13%**	**4%**	**-**	**32%**	**0%**	**9%**	**0%**	**4%**	**2%**	**8%**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	13	22	21	4	*60*	0	0	0	0	*0*	2	0	0	0	*2*
4:15 PM	9	15	13	7	*44*	0	0	0	0	*0*	1	1	4	1	*7*
4:30 PM	**7**	**18**	**20**	**6**	***51***	**0**	**1**	**0**	**0**	***1***	**0**	**1**	**7**	**3**	*11*
4:45 PM	**7**	**18**	**8**	**8**	***41***	**1**	**0**	**0**	**0**	***1***	**2**	**1**	**7**	**1**	*11*
5:00 PM	**8**	**22**	**12**	**9**	***51***	**0**	**1**	**0**	**0**	***1***	**1**	**1**	**7**	**2**	*11*
5:15 PM	**8**	**21**	**17**	**12**	***58***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**12**	**0**	***13***
5:30 PM	6	16	11	6	*39*	0	0	0	0	*0*	3	0	10	1	*14*
5:45 PM	5	19	9	5	*38*	1	3	0	0	*4*	0	1	4	1	*6*
Count Total	63	151	111	57	*382*	2	6	0	0	*8*	10	5	51	9	*75*
Peak Hour	**30**	**79**	**57**	**35**	***201***	**1**	**3**	**0**	**0**	***4***	**4**	**3**	**33**	**6**	***46***

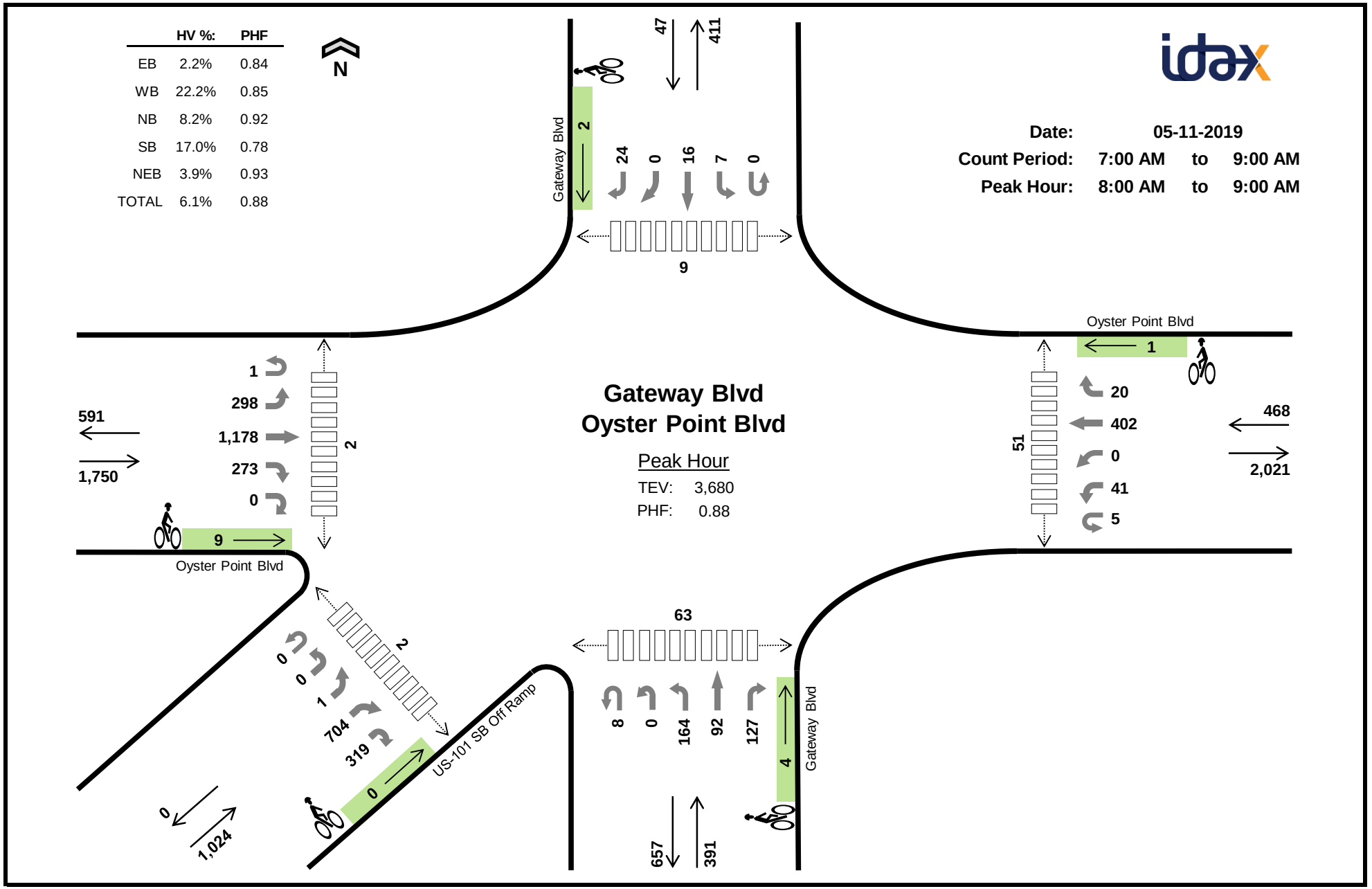
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	San Mateo Ave				S Airport Blvd				Produce Ave				Airport Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	8	4	0	7	9	6	0	13	2	6	0	1	2	1	60	0
4:15 PM	0	2	4	3	0	5	5	5	0	10	0	3	0	4	1	2	44	0
4:30 PM	**0**	**1**	**4**	**2**	**0**	**8**	**7**	**3**	**0**	**10**	**0**	**10**	**0**	**2**	**3**	**1**	**51**	0
4:45 PM	**0**	**2**	**2**	**3**	**0**	**6**	**9**	**3**	**0**	**4**	**0**	**4**	**0**	**0**	**7**	**1**	**41**	196
5:00 PM	**0**	**2**	**3**	**3**	**0**	**10**	**6**	**6**	**0**	**8**	**0**	**4**	**0**	**2**	**5**	**2**	**51**	187
5:15 PM	**0**	**0**	**6**	**2**	**0**	**9**	**7**	**5**	**0**	**10**	**0**	**7**	**0**	**1**	**5**	**6**	**58**	**201**
5:30 PM	0	2	2	2	0	9	5	2	0	4	0	7	0	2	2	2	39	189
5:45 PM	0	1	1	3	0	9	5	5	0	4	0	5	0	2	3	0	38	186
Count Total	0	11	30	22	0	63	53	35	0	63	2	46	0	14	28	15	382	0
Peak Hour	**0**	**5**	**15**	**10**	**0**	**33**	**29**	**17**	**0**	**32**	**0**	**25**	**0**	**5**	**20**	**10**	**201**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	San Mateo Ave			S Airport Blvd			Produce Ave			Airport Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	3	0	0	0	0	0	0	0	4	6
Count Total	1	1	0	0	5	1	0	0	0	0	0	0	8	0
Peak Hour	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.


HV %: PHF
EB 2.2% 0.84
WB 22.2% 0.85
NB 8.2% 0.92
SB 17.0% 0.78
NEB 3.9% 0.93
TOTAL 6.1% 0.88
N
Date: 05-11-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM
Gateway Blvd
Oyster Point Blvd
Peak Hour
TEV: 3,680
PHF: 0.88
Gateway Blvd
2
47
411
24
0
16
7
0
9
Oyster Point Blvd
1
20
402
0
41
5
51
468
2,021
591
1,750
1
298
1,178
273
0
2
9
Oyster Point Blvd
63
8
0
164
92
127
4
Gateway Blvd
657
391
0
704
319
2
0
US-101 SB Off Ramp
0
1,024

Two-Hour Count Summaries

Interval Start		Oyster Point Blvd Eastbound					Oyster Point Blvd Westbound					Gateway Blvd Northbound					Gateway Blvd Southbound					US-101 SB Off Ramp Northeastbound					15-min Total	Rolling One Hour
		UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	HL	BL	BR	HR		
7:00 AM		0	56	145	35	0	0	10	0	53	1	0	0	26	5	10	0	0	1	0	9	0	0	0	92	58	501	0
7:15 AM		1	46	164	65	0	0	12	0	66	3	1	0	41	11	21	0	1	3	0	11	0	0	0	110	65	621	0
7:30 AM		0	63	174	53	0	1	8	0	58	4	2	0	58	15	19	0	3	3	0	8	0	0	0	125	53	647	0
7:45 AM		1	73	280	92	0	0	8	0	82	2	3	0	24	13	33	0	3	5	0	13	0	0	0	168	65	865	2,634
8:00 AM		**0**	**57**	**249**	**73**	**0**	**1**	**9**	**0**	**93**	**5**	**3**	**0**	**41**	**13**	**35**	**0**	**2**	**2**	**0**	**8**	**0**	**0**	**1**	**177**	**85**	**854**	2,987
8:15 AM		**0**	**73**	**250**	**62**	**0**	**2**	**16**	**0**	**76**	**3**	**1**	**0**	**39**	**20**	**33**	**0**	**1**	**7**	**0**	**5**	**0**	**0**	**0**	**169**	**84**	**841**	3,207
8:30 AM		**1**	**77**	**316**	**72**	**0**	**1**	**10**	**0**	**108**	**6**	**1**	**0**	**41**	**33**	**31**	**0**	**4**	**7**	**0**	**4**	**0**	**0**	**0**	**166**	**66**	**944**	3,504
8:45 AM		**0**	**91**	**363**	**66**	**0**	**1**	**6**	**0**	**125**	**6**	**3**	**0**	**43**	**26**	**28**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**192**	**84**	**1,041**	**3,680**
Count Total		3	536	1,941	518	0	6	79	0	661	30	14	0	313	136	210	0	14	28	0	65	0	0	1	1,199	560	6,314	0
Peak Hour	**All**	**1**	**298**	**1,178**	**273**	**0**	**5**	**41**	**0**	**402**	**20**	**8**	**0**	**164**	**92**	**127**	**0**	**7**	**16**	**0**	**24**	**0**	**0**	**1**	**704**	**319**	**3,680**	**0**
	HV	**0**	**6**	**23**	**10**	**0**	**2**	**10**	**0**	**91**	**1**	**7**	**0**	**13**	**3**	**9**	**0**	**1**	**3**	**0**	**4**	**0**	**0**	**0**	**19**	**21**	**223**	**0**
	HV%	**0%**	**2%**	**2%**	**4%**	**-**	**40%**	**24%**	**-**	**23%**	**5%**	**88%**	**-**	**8%**	**3%**	**7%**	**-**	**14%**	**19%**	**-**	**17%**	**-**	**-**	**0%**	**3%**	**7%**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

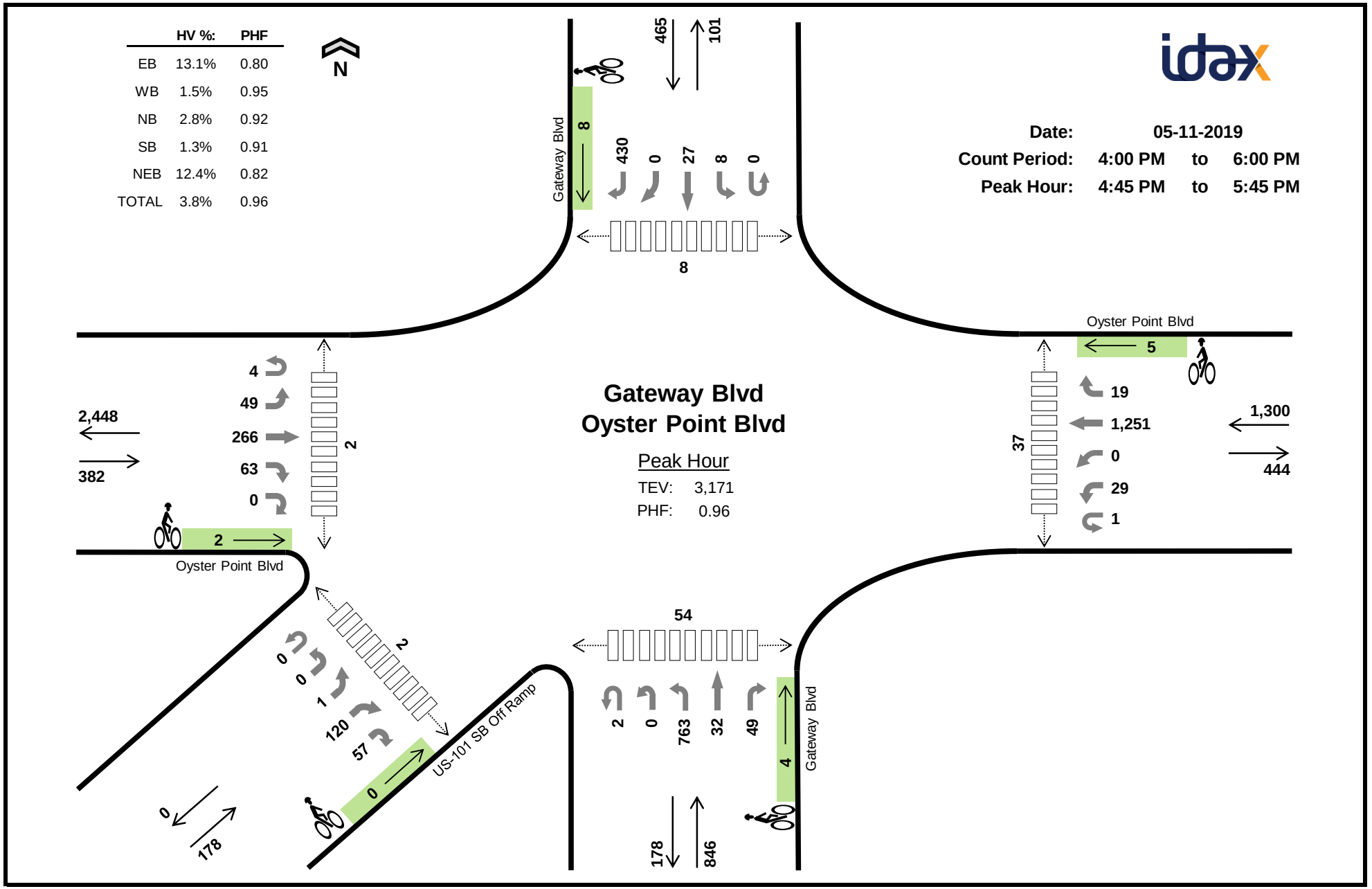
Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	NEB	Total	Bicycles EB	WB	NB	SB	NEB	Total	Pedestrians (Crossing Leg) East	West	North	South	Southwest	Total
7:00 AM	12	14	5	2	9	*42*	3	1	2	15	0	*21*	3	0	3	5	0	*11*
7:15 AM	5	18	10	2	8	*43*	0	2	0	2	0	*4*	8	1	3	9	1	*22*
7:30 AM	7	14	9	2	6	*38*	2	0	1	0	0	*3*	10	1	0	13	1	*25*
7:45 AM	13	16	11	3	12	*55*	1	1	1	0	0	*3*	17	0	3	27	0	*47*
8:00 AM	**9**	**13**	**11**	**2**	**15**	***50***	**1**	**0**	**2**	**1**	**0**	***4***	**10**	**0**	**2**	**15**	**0**	***27***
8:15 AM	**9**	**23**	**8**	**3**	**5**	***48***	**1**	**1**	**0**	**1**	**0**	***3***	**10**	**0**	**2**	**13**	**0**	***25***
8:30 AM	**11**	**45**	**6**	**2**	**12**	***76***	**5**	**0**	**2**	**0**	**0**	***7***	**19**	**1**	**3**	**23**	**1**	***47***
8:45 AM	**10**	**23**	**7**	**1**	**8**	***49***	**2**	**0**	**0**	**0**	**0**	***2***	**12**	**1**	**2**	**12**	**1**	***28***
Count Total	76	166	67	17	75	*401*	15	5	8	19	0	*47*	89	4	18	117	4	*232*
Peak Hr	**39**	**104**	**32**	**8**	**40**	***223***	**9**	**1**	**4**	**2**	**0**	***16***	**51**	**2**	**9**	**63**	**2**	*127*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oyster Point Blvd Eastbound					Oyster Point Blvd Westbound					Gateway Blvd Northbound					Gateway Blvd Southbound					US-101 SB Off Ramp Northeastbound					15-min Total	Rolling One Hour
	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	HL	BL	BR	HR		
7:00 AM	0	3	6	3	0	0	2	0	12	0	0	0	4	0	1	0	0	1	0	1	0	0	0	5	4	42	0
7:15 AM	0	1	1	3	0	0	2	0	16	0	1	0	5	1	3	0	0	1	0	1	0	0	0	3	5	43	0
7:30 AM	0	2	3	2	0	0	2	0	10	2	2	0	6	0	1	0	1	0	0	1	0	0	0	0	6	38	0
7:45 AM	0	3	6	4	0	0	2	0	14	0	3	0	2	0	6	0	1	1	0	1	0	0	0	6	6	55	178
8:00 AM	**0**	**1**	**6**	**2**	**0**	**0**	**3**	**0**	**10**	**0**	**3**	**0**	**6**	**1**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**8**	**7**	**50**	186
8:15 AM	**0**	**3**	**3**	**3**	**0**	**1**	**4**	**0**	**18**	**0**	**1**	**0**	**4**	**2**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**48**	191
8:30 AM	**0**	**1**	**8**	**2**	**0**	**1**	**2**	**0**	**42**	**0**	**1**	**0**	**1**	**0**	**4**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**7**	**76**	229
8:45 AM	**0**	**1**	**6**	**3**	**0**	**0**	**1**	**0**	**21**	**1**	**2**	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**3**	**49**	**223**
Count Total	0	15	39	22	0	2	18	0	143	3	13	0	30	4	20	0	3	6	0	8	0	0	0	33	42	401	0
Peak Hour	**0**	**6**	**23**	**10**	**0**	**2**	**10**	**0**	**91**	**1**	**7**	**0**	**13**	**3**	**9**	**0**	**1**	**3**	**0**	**4**	**0**	**0**	**0**	**19**	**21**	223	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Oyster Point Blvd Eastbound					Oyster Point Blvd Westbound					Gateway Blvd Northbound					Gateway Blvd Southbound					US-101 SB Off Ramp Northeastbound					15-min Total	Rolling One Hour
	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	HL	BL	BR	HR		
7:00 AM	0	1	2	0	0	0	0	0	1	0	0	0	0	1	1	0	1	14	0	0	0	0	0	0	0	21	0
7:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0
7:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0
7:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	31
8:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	14
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	13
8:30 AM	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	17
8:45 AM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**16**
Count Total	0	4	9	2	0	0	3	0	2	0	0	0	0	5	3	0	1	18	0	0	0	0	0	0	0	47	0
Peak Hour	**0**	**2**	**5**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	16	**0**



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Two-Hour Count Summaries

Interval Start		Oyster Point Blvd Eastbound					Oyster Point Blvd Westbound					Gateway Blvd Northbound					Gateway Blvd Southbound					US-101 SB Off Ramp Northeastbound					15-min Total	Rolling One Hour
		UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	HL	BL	BR	HR		
4:00 PM		1	10	61	8	0	0	8	0	306	2	1	0	158	4	14	0	4	5	0	54	0	0	1	27	12	676	0
4:15 PM		1	14	76	15	0	0	15	0	280	1	1	0	122	5	15	0	2	9	0	74	0	0	0	29	29	688	0
4:30 PM		3	7	49	12	0	0	3	0	297	7	0	0	175	7	9	0	1	7	0	90	0	0	0	26	11	704	0
4:45 PM		**0**	**12**	**91**	**17**	**0**	**0**	**5**	**0**	**331**	**6**	**0**	**0**	**184**	**6**	**11**	**0**	**2**	**6**	**0**	**103**	**0**	**0**	**0**	**39**	**15**	**828**	2,896
5:00 PM		**2**	**10**	**61**	**11**	**0**	**0**	**9**	**0**	**313**	**5**	**1**	**0**	**209**	**6**	**14**	**0**	**6**	**9**	**0**	**113**	**0**	**0**	**1**	**25**	**11**	**806**	3,026
5:15 PM		**1**	**10**	**63**	**19**	**0**	**1**	**5**	**0**	**323**	**3**	**1**	**0**	**174**	**8**	**12**	**0**	**0**	**8**	**0**	**104**	**0**	**0**	**0**	**33**	**14**	**779**	3,117
5:30 PM		**1**	**17**	**51**	**16**	**0**	**0**	**10**	**0**	**284**	**5**	**0**	**0**	**196**	**12**	**12**	**0**	**0**	**4**	**0**	**110**	**0**	**0**	**0**	**23**	**17**	**758**	**3,171**
5:45 PM		0	17	68	11	0	0	6	0	325	5	1	0	153	9	15	0	1	8	0	105	0	0	0	30	13	767	3,110
Count Total		9	97	520	109	0	1	61	0	2,459	34	5	0	1,371	57	102	0	16	56	0	753	0	0	2	232	122	6,006	0
Peak Hour	**All**	**4**	**49**	**266**	**63**	**0**	**1**	**29**	**0**	**1,251**	**19**	**2**	**0**	**763**	**32**	**49**	**0**	**8**	**27**	**0**	**430**	**0**	**0**	**1**	**120**	**57**	**3,171**	**0**
	HV	**0**	**1**	**41**	**8**	**0**	**0**	**5**	**0**	**13**	**1**	**0**	**0**	**17**	**2**	**5**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**18**	**4**	**121**	**0**
	HV%	**0%**	**2%**	**15%**	**13%**	**-**	**0%**	**17%**	**-**	**1%**	**5%**	**0%**	**-**	**2%**	**6%**	**10%**	**-**	**0%**	**0%**	**-**	**1%**	**-**	**-**	**0%**	**15%**	**7%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

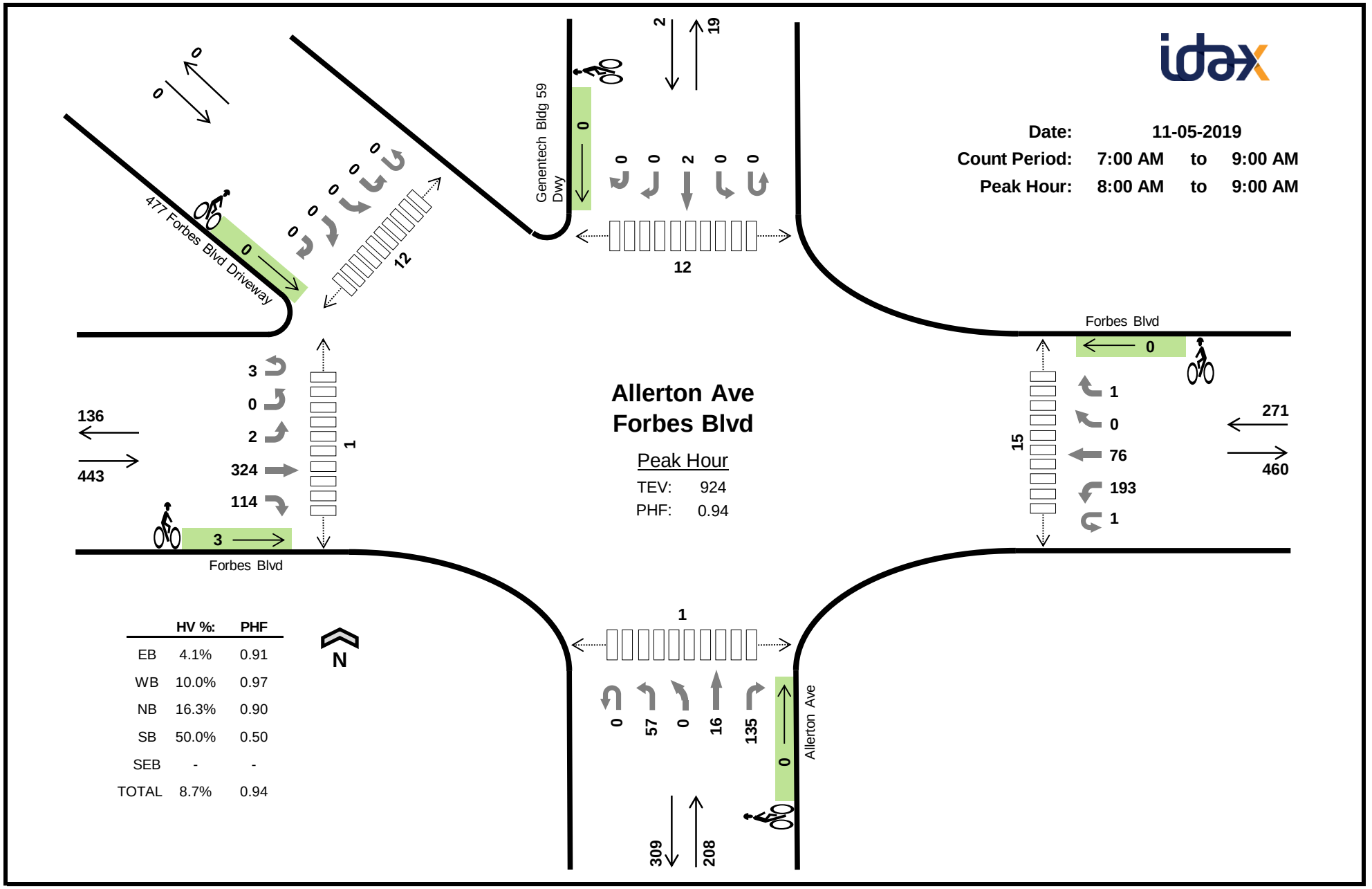
Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	NEB	Total	EB	WB	NB	SB	NEB	Total	East	West	North	South	Southwest	Total
4:00 PM	4	8	5	2	6	*25*	0	1	1	0	0	*2*	12	0	1	18	0	*31*
4:15 PM	6	8	9	1	7	*31*	0	2	0	1	0	*3*	9	0	3	13	0	*25*
4:30 PM	10	2	10	1	2	*25*	0	0	4	0	0	*4*	10	0	0	11	0	*21*
4:45 PM	**14**	**3**	**9**	**3**	**6**	***35***	**2**	**5**	**0**	**4**	**0**	***11***	**9**	**0**	**0**	**11**	**0**	***20***
5:00 PM	**12**	**3**	**3**	**1**	**3**	***22***	**0**	**0**	**2**	**1**	**0**	***3***	**6**	**2**	**2**	**14**	**2**	***26***
5:15 PM	**15**	**7**	**4**	**0**	**9**	***35***	**0**	**0**	**2**	**0**	**0**	***2***	**15**	**0**	**0**	**13**	**0**	***28***
5:30 PM	**9**	**6**	**8**	**2**	**4**	***29***	**0**	**0**	**0**	**3**	**0**	***3***	**7**	**0**	**6**	**16**	**0**	***29***
5:45 PM	3	6	10	3	4	*26*	0	1	0	1	0	*2*	1	0	1	6	0	*8*
Count Total	73	43	58	13	41	*228*	2	9	9	10	0	*30*	69	2	13	102	2	*188*
Peak Hr	**50**	**19**	**24**	**6**	**22**	***121***	**2**	**5**	**4**	**8**	**0**	***19***	**37**	**2**	**8**	**54**	**2**	*103*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oyster Point Blvd					Oyster Point Blvd					Gateway Blvd					Gateway Blvd					US-101 SB Off Ramp					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northeastbound						
	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	4	0	0	0	1	0	7	0	0	0	3	1	1	0	0	0	0	2	0	0	0	4	2	25	0
4:15 PM	0	0	6	0	0	0	2	0	6	0	0	0	8	0	1	0	0	0	0	1	0	0	0	3	4	31	0
4:30 PM	1	0	5	4	0	0	0	0	2	0	0	0	8	1	1	0	0	0	0	1	0	0	0	1	1	25	0
4:45 PM	**0**	**1**	**9**	**4**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**5**	**1**	**35**	116
5:00 PM	**0**	**0**	**11**	**1**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**22**	113
5:15 PM	**0**	**0**	**14**	**1**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**2**	**35**	117
5:30 PM	**0**	**0**	**7**	**2**	**0**	**0**	**3**	**0**	**2**	**1**	**0**	**0**	**5**	**1**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**1**	**29**	**121**
5:45 PM	0	1	1	1	0	0	0	0	5	1	0	0	9	0	1	0	0	0	0	3	0	0	0	3	1	26	112
Count Total	1	2	57	13	0	0	8	0	33	2	0	0	45	4	9	0	0	0	0	13	0	0	0	29	12	227	0
Peak Hour	**0**	**1**	**41**	**8**	**0**	**0**	**5**	**0**	**13**	**1**	**0**	**0**	**17**	**2**	**5**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**18**	**4**	121	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Oyster Point Blvd					Oyster Point Blvd					Gateway Blvd					Gateway Blvd					US-101 SB Off Ramp					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northeastbound						
	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
4:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**11**	20
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	21
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	20
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**19**
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	10
Count Total	0	0	1	1	0	0	4	0	5	0	0	0	0	3	6	0	0	7	0	3	0	0	0	0	0	30	0
Peak Hour	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**5**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	19	**0**



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Two-Hour Count Summaries

Interval Start		Forbes Blvd Eastbound					Forbes Blvd Westbound					Allerton Ave Northbound					Genentech Bldg 59 Dwy Southbound					477 Forbes Blvd Driveway Southeastbound					15-min Total	Rolling One Hour
		UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
7:00 AM		0	0	0	42	8	0	23	9	1	0	0	9	0	4	11	0	0	0	0	0	0	0	0	0	0	107	0
7:15 AM		0	0	1	39	14	0	30	15	0	0	0	13	0	1	16	0	0	0	0	0	0	0	0	0	0	129	0
7:30 AM		0	0	0	33	15	0	32	20	0	1	0	9	0	2	23	0	0	0	0	0	0	0	0	0	0	135	0
7:45 AM		0	0	1	60	17	0	39	14	0	0	0	7	0	4	35	0	1	0	0	0	0	0	0	0	0	178	549
8:00 AM		**0**	**0**	**0**	**59**	**27**	**0**	**61**	**9**	**0**	**0**	**0**	**13**	**0**	**9**	**29**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**208**	650
8:15 AM		**2**	**0**	**0**	**83**	**29**	**0**	**50**	**18**	**0**	**1**	**0**	**18**	**0**	**4**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**241**	762
8:30 AM		**1**	**0**	**1**	**87**	**33**	**1**	**40**	**27**	**0**	**0**	**0**	**13**	**0**	**2**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**245**	872
8:45 AM		**0**	**0**	**1**	**95**	**25**	**0**	**42**	**22**	**0**	**0**	**0**	**13**	**0**	**1**	**30**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**230**	**924**
Count Total		3	0	4	498	168	1	317	134	1	2	0	95	0	27	220	0	1	2	0	0	0	0	0	0	0	1,473	0
Peak Hour	**All**	**3**	**0**	**2**	**324**	**114**	**1**	**193**	**76**	**0**	**1**	**0**	**57**	**0**	**16**	**135**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**924**	**0**
	HV	**0**	**0**	**2**	**10**	**6**	**0**	**4**	**23**	**0**	**0**	**0**	**16**	**0**	**14**	**4**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**0**
	HV%	**0%**	**-**	**100%**	**3%**	**5%**	**0%**	**2%**	**30%**	**-**	**0%**	**-**	**28%**	**-**	**88%**	**3%**	**-**	**-**	**50%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**9%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

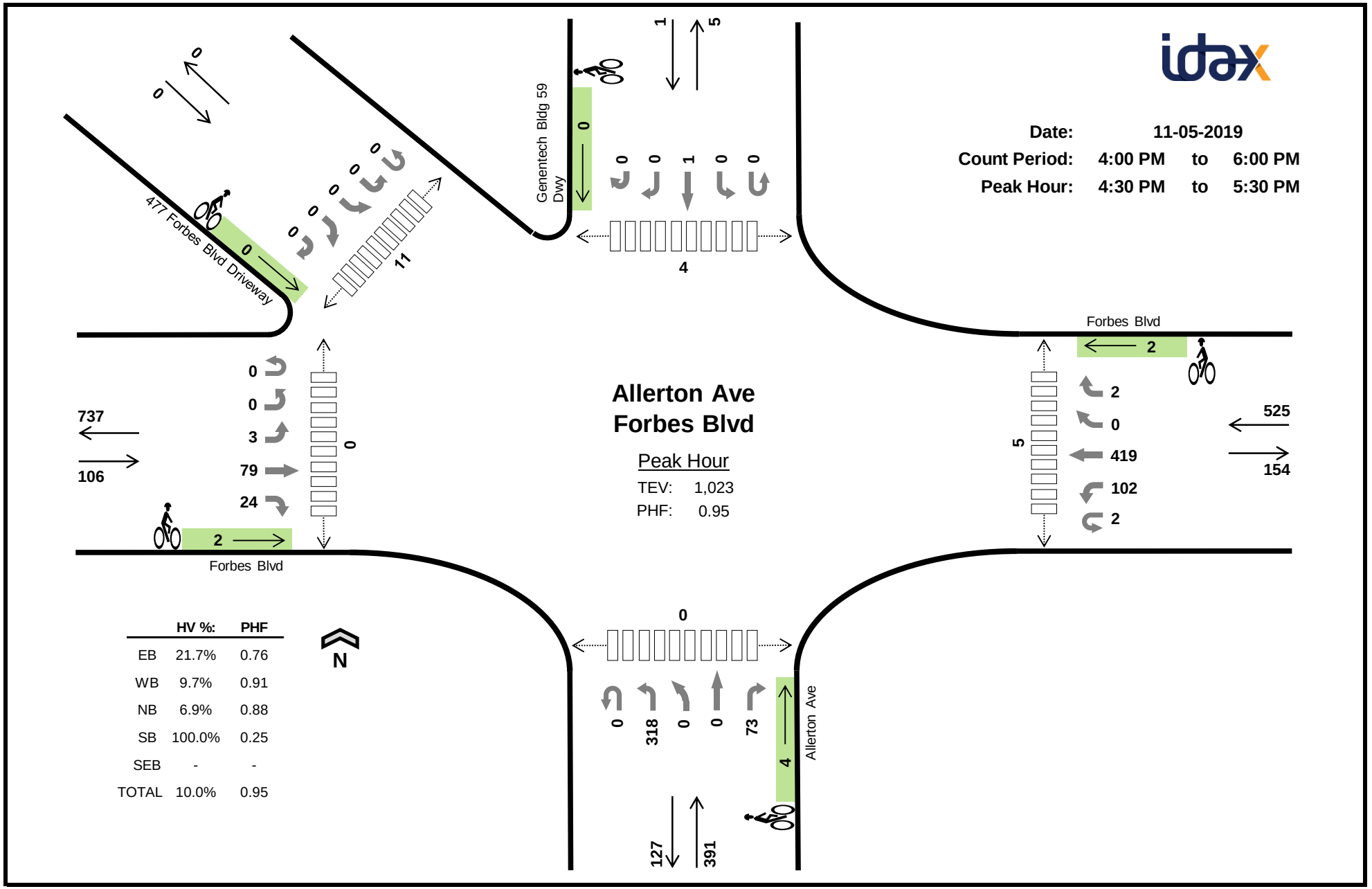
Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SEB	Total	EB	WB	NB	SB	SEB	Total	East	West	North	South	Northwest	Total
7:00 AM	2	7	6	0	0	*15*	1	0	0	0	0	*1*	0	0	0	0	0	*0*
7:15 AM	3	13	4	0	0	*20*	1	3	0	0	0	*4*	0	0	1	0	1	*2*
7:30 AM	2	11	8	0	0	*21*	0	0	0	0	0	*0*	1	0	0	1	0	*2*
7:45 AM	4	6	6	0	0	*16*	0	0	0	0	0	*0*	5	0	2	0	2	*9*
8:00 AM	**3**	**4**	**15**	**0**	**0**	***22***	**1**	**0**	**0**	**0**	**0**	***1***	**2**	**0**	**5**	**0**	**5**	***12***
8:15 AM	**6**	**6**	**10**	**0**	**0**	***22***	**2**	**0**	**0**	**0**	**0**	***2***	**1**	**0**	**2**	**0**	**1**	***4***
8:30 AM	**6**	**13**	**6**	**0**	**0**	***25***	**0**	**0**	**0**	**0**	**0**	***0***	**6**	**1**	**2**	**0**	**3**	***12***
8:45 AM	**3**	**4**	**3**	**1**	**0**	***11***	**0**	**0**	**0**	**0**	**0**	***0***	**6**	**0**	**3**	**1**	**3**	***13***
Count Total	29	64	58	1	0	*152*	5	3	0	0	0	*8*	21	1	15	2	15	*54*
Peak Hr	**18**	**27**	**34**	**1**	**0**	***80***	**3**	**0**	**0**	**0**	**0**	***3***	**15**	**1**	**12**	**1**	**12**	*41*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Forbes Blvd					Forbes Blvd					Allerton Ave					Genentech Bldg 59 Dwy					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	1	1	0	1	6	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	15	0
7:15 AM	0	0	1	2	0	0	3	10	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	20	0
7:30 AM	0	0	0	2	0	0	1	10	0	0	0	4	0	2	2	0	0	0	0	0	0	0	0	0	0	21	0
7:45 AM	0	0	0	4	0	0	0	6	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	16	72
8:00 AM	**0**	**0**	**0**	**2**	**1**	**0**	**1**	**3**	**0**	**0**	**0**	**5**	**0**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	79
8:15 AM	**0**	**0**	**0**	**5**	**1**	**0**	**1**	**5**	**0**	**0**	**0**	**5**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	81
8:30 AM	**0**	**0**	**1**	**2**	**3**	**0**	**2**	**11**	**0**	**0**	**0**	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	85
8:45 AM	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**80**
Count Total	0	0	3	19	7	0	9	55	0	0	0	28	0	24	6	0	0	1	0	0	0	0	0	0	0	152	0
Peak Hour	**0**	**0**	**2**	**10**	**6**	**0**	**4**	**23**	**0**	**0**	**0**	**16**	**0**	**14**	**4**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	80	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Forbes Blvd					Forbes Blvd					Allerton Ave					Genentech Bldg 59 Dwy					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
8:15 AM	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	3
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Count Total	0	0	0	3	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
Peak Hour	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3	**0**



Project Manager: (415) 310-6469

project.manager.ca@idaxdata.com

Two-Hour Count Summaries

Interval Start		Forbes Blvd Eastbound					Forbes Blvd Westbound					Allerton Ave Northbound					Genentech Bldg 59 Dwy Southbound					477 Forbes Blvd Driveway Southeastbound					15-min Total	Rolling One Hour
		UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
4:00 PM		0	0	0	22	5	0	22	59	0	0	0	41	0	1	25	0	0	0	0	0	0	0	0	0	0	175	0
4:15 PM		0	0	0	15	6	0	24	72	0	1	0	47	0	0	18	0	0	0	0	0	0	0	0	0	0	183	0
4:30 PM		**0**	**0**	**2**	**22**	**3**	**1**	**26**	**104**	**0**	**0**	**0**	**66**	**0**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**242**	0
4:45 PM		**0**	**0**	**0**	**24**	**11**	**0**	**26**	**87**	**0**	**0**	**0**	**78**	**0**	**0**	**19**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**246**	846
5:00 PM		**0**	**0**	**1**	**14**	**5**	**1**	**19**	**116**	**0**	**0**	**0**	**92**	**0**	**0**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**267**	938
5:15 PM		**0**	**0**	**0**	**19**	**5**	**0**	**31**	**112**	**0**	**2**	**0**	**82**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**268**	**1,023**
5:30 PM		0	0	0	18	4	0	21	91	0	1	0	58	0	0	11	0	0	0	0	0	0	0	0	0	0	204	985
5:45 PM		0	0	2	27	3	0	17	49	0	0	0	33	0	0	22	0	0	0	0	0	0	0	0	0	0	153	892
Count Total		0	0	5	161	42	2	186	690	0	4	0	497	0	1	149	0	0	1	0	0	0	0	0	0	0	1,738	0
Peak Hour	**All**	**0**	**0**	**3**	**79**	**24**	**2**	**102**	**419**	**0**	**2**	**0**	**318**	**0**	**0**	**73**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,023**	**0**
	HV	**0**	**0**	**2**	**21**	**0**	**0**	**6**	**43**	**0**	**2**	**0**	**22**	**0**	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**102**	**0**
	HV%	**-**	**-**	**67%**	**27%**	**0%**	**0%**	**6%**	**10%**	**-**	**100%**	**-**	**7%**	**-**	**-**	**7%**	**-**	**-**	**100%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**10%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SEB	Total	EB	WB	NB	SB	SEB	Total	East	West	North	South	Northwest	Total
4:00 PM	6	17	11	0	0	*34*	1	0	0	0	0	*1*	4	0	1	0	1	*6*
4:15 PM	2	12	9	0	0	*23*	0	0	3	0	0	*3*	3	0	3	0	3	*9*
4:30 PM	**7**	**17**	**5**	**0**	**0**	***29***	**0**	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**3**	**0**	**3**	***6***
4:45 PM	**8**	**9**	**6**	**1**	**0**	***24***	**1**	**1**	**0**	**0**	**0**	***2***	**3**	**0**	**0**	**0**	**5**	***8***
5:00 PM	**5**	**10**	**6**	**0**	**0**	***21***	**1**	**1**	**2**	**0**	**0**	***4***	**1**	**0**	**0**	**0**	**2**	***3***
5:15 PM	**3**	**15**	**10**	**0**	**0**	***28***	**0**	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**0**	**1**	***3***
5:30 PM	4	10	6	0	0	*20*	0	0	0	0	0	*0*	1	0	2	0	2	*5*
5:45 PM	5	6	6	0	0	*17*	0	0	1	0	0	*1*	3	0	0	0	0	*3*
Count Total	40	96	59	1	0	*196*	3	2	8	0	0	*13*	16	0	10	0	17	*43*
Peak Hr	**23**	**51**	**27**	**1**	**0**	***102***	**2**	**2**	**4**	**0**	**0**	***8***	**5**	**0**	**4**	**0**	**11**	*20*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Forbes Blvd					Forbes Blvd					Allerton Ave					Genentech Bldg 59 Dwy					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	6	0	0	3	14	0	0	0	7	0	1	3	0	0	0	0	0	0	0	0	0	0	34	0
4:15 PM	0	0	0	2	0	0	1	10	0	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
4:30 PM	**0**	**0**	**1**	**6**	**0**	**0**	**2**	**15**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	0
4:45 PM	**0**	**0**	**0**	**8**	**0**	**0**	**2**	**7**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	110
5:00 PM	**0**	**0**	**1**	**4**	**0**	**0**	**1**	**9**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	97
5:15 PM	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**12**	**0**	**2**	**0**	**9**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**28**	**102**
5:30 PM	0	0	0	3	1	0	0	9	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	20	93
5:45 PM	0	0	2	3	0	0	0	6	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	17	86
Count Total	0	0	4	35	1	0	10	82	0	4	0	44	0	1	14	0	0	1	0	0	0	0	0	0	0	196	0
Peak Hour	**0**	**0**	**2**	**21**	**0**	**0**	**6**	**43**	**0**	**2**	**0**	**22**	**0**	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	102	**0**

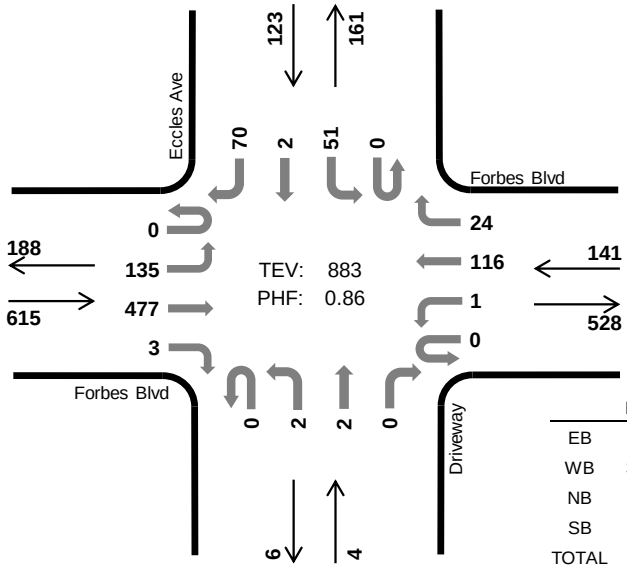
Two-Hour Count Summaries - Bikes

Interval Start	Forbes Blvd					Forbes Blvd					Allerton Ave					Genentech Bldg 59 Dwy					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	8
5:00 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	11
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
Count Total	0	0	0	3	0	0	0	2	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	13	0
Peak Hour	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	8	**0**

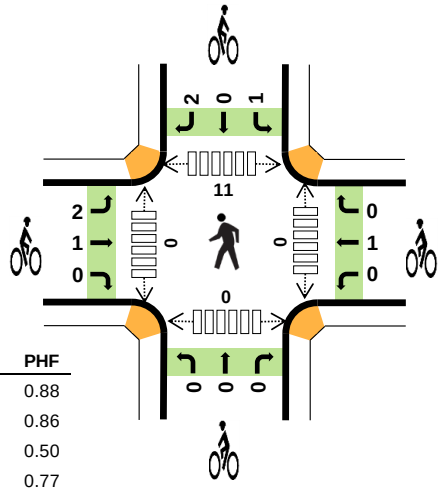
Eccles Ave
Forbes Blvd

Date: 11-05-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

Peak Hour



	HV %:	PHF
EB	2.6%	0.88
WB	31.2%	0.86
NB	0.0%	0.50
SB	18.7%	0.77
TOTAL	9.4%	0.86



Two-Hour Count Summaries

Interval Start	Forbes Blvd Eastbound				Forbes Blvd Westbound				Driveway Northbound				Eccles Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	28	51	1	0	0	14	10	0	0	0	0	0	7	1	6	118	0
7:15 AM	0	26	67	0	0	0	20	5	0	1	0	0	0	7	0	13	139	0
7:30 AM	0	31	51	0	0	0	32	5	0	0	0	0	0	16	0	5	140	0
7:45 AM	0	25	82	2	0	0	21	4	0	0	0	0	0	12	0	20	166	563
8:00 AM	**0**	**33**	**91**	**1**	**0**	**0**	**20**	**8**	**0**	**0**	**0**	**0**	**0**	**17**	**1**	**12**	**183**	628
8:15 AM	**0**	**30**	**123**	**0**	**0**	**0**	**28**	**5**	**0**	**0**	**1**	**0**	**0**	**13**	**0**	**13**	**213**	702
8:30 AM	**0**	**36**	**138**	**1**	**0**	**0**	**34**	**7**	**0**	**1**	**0**	**0**	**0**	**11**	**0**	**29**	**257**	819
8:45 AM	**0**	**36**	**125**	**1**	**0**	**1**	**34**	**4**	**0**	**1**	**1**	**0**	**0**	**10**	**1**	**16**	**230**	**883**
Count Total	0	245	728	6	0	1	203	48	0	3	2	0	0	93	3	114	1,446	0
Peak Hour All	**0**	**135**	**477**	**3**	**0**	**1**	**116**	**24**	**0**	**2**	**2**	**0**	**0**	**51**	**2**	**70**	**883**	**0**
Peak Hour HV	**0**	**6**	**10**	**0**	**0**	**0**	**31**	**13**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**19**	**83**	**0**
Peak Hour HV%	**-**	**4%**	**2%**	**0%**	**-**	**0%**	**27%**	**54%**	**-**	**0%**	**0%**	**-**	**-**	**6%**	**50%**	**27%**	**9%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	13	0	2	*17*	0	0	0	1	*1*	0	0	0	0	*0*
7:15 AM	3	13	0	2	*18*	0	2	0	0	*2*	0	0	0	0	*0*
7:30 AM	4	15	0	1	*20*	4	0	0	2	*6*	0	0	0	0	*0*
7:45 AM	4	12	0	8	*24*	0	0	0	0	*0*	0	0	4	0	*4*
8:00 AM	**3**	**10**	**0**	**5**	***18***	**1**	**0**	**0**	**2**	***3***	**0**	**0**	**2**	**0**	*2*
8:15 AM	**5**	**12**	**0**	**5**	***22***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**2**	**0**	*2*
8:30 AM	**3**	**14**	**0**	**8**	***25***	**0**	**1**	**0**	**1**	***2***	**0**	**0**	**4**	**0**	*4*
8:45 AM	**5**	**8**	**0**	**5**	***18***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**3**	**0**	***3***
Count Total	29	97	0	36	*162*	7	3	0	6	*16*	0	0	15	0	*15*
Peak Hour	**16**	**44**	**0**	**23**	***83***	**3**	**1**	**0**	**3**	***7***	**0**	**0**	**11**	**0**	***11***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Forbes Blvd				Forbes Blvd				Driveway				Eccles Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	0	0	0	7	6	0	0	0	0	0	0	0	2	17	0
7:15 AM	0	0	3	0	0	0	11	2	0	0	0	0	0	0	0	2	18	0
7:30 AM	0	1	3	0	0	0	10	5	0	0	0	0	0	0	0	1	20	0
7:45 AM	0	1	3	0	0	0	10	2	0	0	0	0	0	1	0	7	24	79
8:00 AM	**0**	**1**	**2**	**0**	**0**	**0**	**7**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**18**	80
8:15 AM	**0**	**2**	**3**	**0**	**0**	**0**	**8**	**4**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**22**	84
8:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**9**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**7**	**25**	89
8:45 AM	**0**	**3**	**2**	**0**	**0**	**0**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**3**	**18**	**83**
Count Total	0	10	19	0	0	0	69	28	0	0	0	0	0	4	1	31	162	0
Peak Hour	**0**	**6**	**10**	**0**	**0**	**0**	**31**	**13**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**19**	**83**	**0**

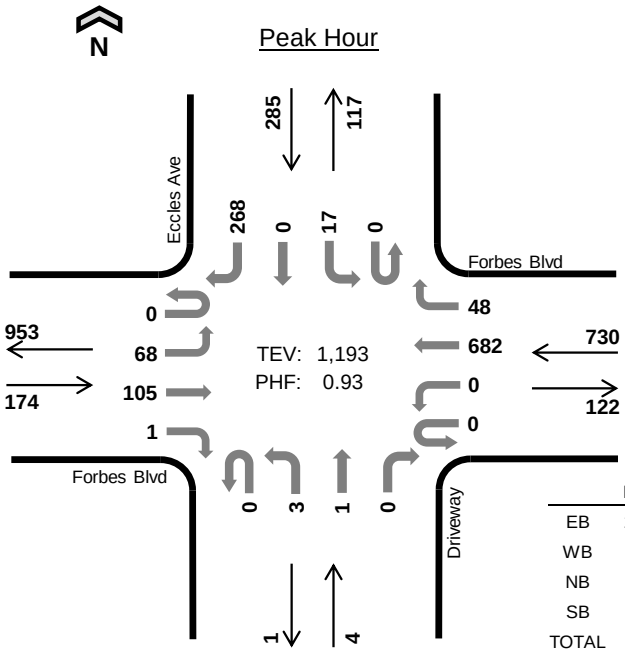
Two-Hour Count Summaries - Bikes

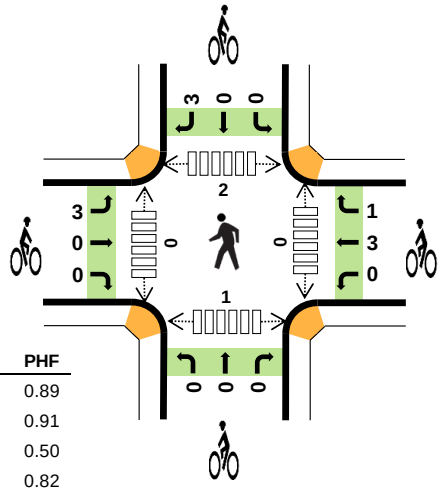
Interval Start	Forbes Blvd			Forbes Blvd			Driveway			Eccles Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	2	0
7:30 AM	4	0	0	0	0	0	0	0	0	0	0	2	6	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	9
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**3**	11
8:15 AM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	10
8:30 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	6
8:45 AM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**
Count Total	6	1	0	0	3	0	0	0	0	2	0	4	16	0
Peak Hour	**2**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Eccles Ave
Forbes Blvd

Date: 11-05-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	20.7%	0.89
WB	9.0%	0.91
NB	0.0%	0.50
SB	4.6%	0.82
TOTAL	9.6%	0.93

Two-Hour Count Summaries

Interval Start	Forbes Blvd Eastbound				Forbes Blvd Westbound				Driveway Northbound				Eccles Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	10	25	1	0	0	109	8	0	3	0	0	0	9	0	39	204	0
4:15 PM	0	17	23	0	0	0	110	8	0	1	0	0	0	4	0	36	199	0
4:30 PM	**0**	**16**	**25**	**0**	**0**	**0**	**167**	**11**	**0**	**1**	**1**	**0**	**0**	**3**	**0**	**71**	**295**	0
4:45 PM	**0**	**14**	**34**	**1**	**0**	**0**	**150**	**3**	**0**	**1**	**0**	**0**	**0**	**6**	**0**	**59**	**268**	966
5:00 PM	**0**	**16**	**19**	**0**	**0**	**0**	**188**	**12**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**81**	**322**	1,084
5:15 PM	**0**	**22**	**27**	**0**	**0**	**0**	**177**	**22**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**57**	**308**	**1,193**
5:30 PM	0	14	17	0	0	0	158	5	0	0	0	0	0	4	0	37	235	1,133
5:45 PM	0	8	27	1	0	0	82	6	0	0	0	0	0	5	0	27	156	1,021
Count Total	0	117	197	3	0	0	1,141	75	0	7	1	0	0	39	0	407	1,987	0
Peak Hour All	**0**	**68**	**105**	**1**	**0**	**0**	**682**	**48**	**0**	**3**	**1**	**0**	**0**	**17**	**0**	**268**	**1,193**	**0**
Peak Hour HV	**0**	**10**	**26**	**0**	**0**	**0**	**55**	**11**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**9**	**115**	**0**
Peak Hour HV%	**-**	**15%**	**25%**	**0%**	**-**	**-**	**8%**	**23%**	**-**	**0%**	**0%**	**-**	**-**	**24%**	**-**	**3%**	**10%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	9	22	1	5	*37*	0	0	0	0	*0*	0	1	1	1	*3*
4:15 PM	11	19	0	2	*32*	0	0	0	1	*1*	0	0	3	0	*3*
4:30 PM	**11**	**19**	**0**	**3**	***33***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**11**	**10**	**0**	**4**	***25***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**10**	**16**	**0**	**3**	***29***	**3**	**3**	**0**	**2**	***8***	**0**	**0**	**1**	**1**	*2*
5:15 PM	**4**	**21**	**0**	**3**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
5:30 PM	6	16	0	2	*24*	0	0	0	1	*1*	0	0	8	1	*9*
5:45 PM	4	9	0	1	*14*	0	0	0	1	*1*	0	0	0	0	*0*
Count Total	66	132	1	23	*222*	3	4	0	6	*13*	0	1	14	3	*18*
Peak Hour	**36**	**66**	**0**	**13**	***115***	**3**	**4**	**0**	**3**	***10***	**0**	**0**	**2**	**1**	***3***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Forbes Blvd				Forbes Blvd				Driveway				Eccles Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	6	1	0	0	19	3	0	1	0	0	0	2	0	3	37	0
4:15 PM	0	7	4	0	0	0	17	2	0	0	0	0	0	1	0	1	32	0
4:30 PM	**0**	**4**	**7**	**0**	**0**	**0**	**16**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**33**	0
4:45 PM	**0**	**1**	**10**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**25**	127
5:00 PM	**0**	**5**	**5**	**0**	**0**	**0**	**13**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**29**	119
5:15 PM	**0**	**0**	**4**	**0**	**0**	**0**	**16**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**28**	**115**
5:30 PM	0	4	2	0	0	0	15	1	0	0	0	0	0	1	0	1	24	106
5:45 PM	0	0	4	0	0	0	8	1	0	0	0	0	0	0	0	1	14	95
Count Total	0	23	42	1	0	0	114	18	0	1	0	0	0	8	0	15	222	0
Peak Hour	**0**	**10**	**26**	**0**	**0**	**0**	**55**	**11**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**9**	**115**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Forbes Blvd			Forbes Blvd			Driveway			Eccles Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:00 PM	**3**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	11
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	10
Count Total	3	0	0	0	3	1	0	0	0	0	0	6	13	0
Peak Hour	**3**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**10**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.